



GASTON COUNTY SCHOOLS

December 12, 2014

GASTON COUNTY SCHOOLS COMPREHENSIVE FACILITIES STUDY



YATES ■ CHREITZBERG ■ HUGHES

GASTON COUNTY SCHOOLS COMPREHENSIVE FACILITIES STUDY



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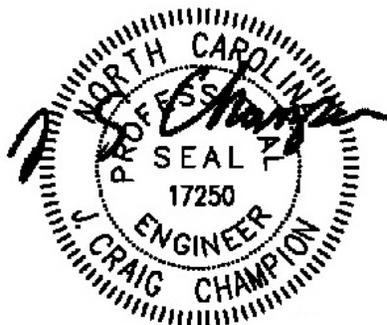
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INTRODUCTION

The Comprehensive Facility Assessment was commissioned by Gaston County Schools for the purpose of documenting the needs at 13 of the existing facilities and budgeting costs for selected scopes of work in those facilities. Needs identified at the existing facilities are recorded in a “Existing Condition Assessment” specific to each facility.

The Scope of the Project shall assist and help define for GCS a Long-Term Business Plan for the purpose of improving school facilities. The Goals of the Assessment are to identify conditions which will enhance the Equality of Education for all Students and provide Safety and Security for all who attend, work, service or manage the school facilities.

Information contained within the CFS package is based on the following: (a) on-site surveys conducted during the 2014-2015 school year; (b) use of the facility spaces as presented to the CFS Team during each site visit; (c) current enrollment at time of site visit; (d) classroom space standard based on GCS and / or NCDPI Standards, and (e) other Standards developed by GCS and previously reported in the "Goals and Standards" document dated August 20, 2014.

Upon approval of the Comprehensive Facility Assessment, a Comprehensive Facility Program phase will be initiated. This phase will encompass long range planning and programming for each facility, verification of priorities and needs with the current administration of each school in planning for any future addition/renovation projects, identifying similar high priority projects, and combining those similar projects as submittals for future funding programs.

GASTON COUNTY SCHOOLS COMPREHENSIVE FACILITIES STUDY



GENERAL DISCLAIMER

Work provided within this document was developed with the input of the Owner, his Consultants, and others as may be identified in the Work Product and is a collaboration of the Project Team. As such, not any one Design Professional has complete authorship over the document, which is a compilation of input from the Project Team. The Work Product is developed using a recognized Standard of Care of the Professional Practice of Architecture and Engineering.

Opinions of Cost and other Project Assumptions and Allowances are for a perceived Scope of Work and were not developed using exact or developed design documents or detailed take-offs of proposed improvements. Information contained herein was gained from site visits, the Owner's existing documentation of plans, and other descriptive documents. Professional cost estimating services or other budget pricing considerations were not utilized or performed for this project. As such, estimates and opinions were provided utilizing perceived cost of goods and services at the time of documentation of this work.

Information provided herein will require continued evaluation and development in order to evaluate specific compliance with codes, budgets, hazardous materials, issues of accessibility, and existing conditions of the facilities in question prior to proceeding with each project provided herein.

Accessibility evaluations and surveys were determined by actual site visits of the Project Team using visual observation to determine perceived elements of non-compliance. The International Code Council ANSI A117.1-2009, Accessible and Useable Buildings and Facilities, as referenced within the 2012 North Carolina State Building Code, was utilized as the basis of evaluation. The recommendations provided therein may or may not be fully compliant with the Americans with Disabilities Act (ADA) effective at the time of the preparation of this document.

The Project Team did not evaluate any reviews regarding hazardous waste or materials on the project sites provided herein. Interviews were conducted with personnel at each project site and when hazardous material information was provided to the Project Team, it is so documented herein. The Project Team recommends that prior to proceeding with the development of any project, that compliance with NC Statutes regarding current evaluations of asbestos and other hazardous materials be performed by GCS.



ELEMENTARY SCHOOL ASSESSMENT REPORTS

Gaston County Schools Comprehensive Facilities Study



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ELEMENTARY SCHOOLS

GASTON COUNTY ELEMENTARY SCHOOL ASSESSMENT REPORTS



CARR ELEMENTARY
307 South Pine Street | Dallas, NC 28034



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A S S E S S M E N T

CARR ELEMENTARY

Carr Elementary School

Existing Condition Assessment

PART 1: General Narrative of Facility

- 1. **Survey Date:** August 2014
- 2. **School Address:** 307 South Pine Street, Dallas, NC
- 3. **Total Building Area:** 72,050 square feet
- 4. **Total Site Area:** 19.62 acres
- 5. **Instructional Capacity:** 743 students
- 6. **Enrollment 2014-2015:** 633 students
- 7. **Current Utilization:** 85%
- 8. **Area per Student Enrolled:** 97 sf / student

9. Building Size and Dates of Construction:

Building A: 1956 (31,265 sf) Building C: 1961(22,025 sf)
Building B: 1989 (8,250 sf) Building D: 2007 (10,510 sf)

10. General Description of Facility:

The original school was constructed in approximately 1956 (the original drawings are not available to determine the exact date), with three subsequent additions for various Classrooms, Media Center and Multipurpose Room. The majority of the facility consists of load bearing masonry walls with steel bar joist roof structure and low sloped roofing. Exterior walls consist of brick veneer and significant windows in the older classroom areas, and hard coat stucco on upper parts of the Multipurpose Building. The facility consists of one attached building and does not require exterior access between wings.

The site contains limited staff and visitor parking, a bus drive, car rider drive, and bus parking area. Play areas consist of various playgrounds and one multipurpose field for school use. The site also contains four baseball / softball fields which are used and maintained by the City of Dallas Parks and Recreation Department.

Part 2: General Space Standards

11. General Purpose Classrooms

Room Description	No. of Rooms	Typical Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
Pre-Kindergarten	1	930 sf	1,200 sf	77%	Poor
Kindergarten	5	910 - 930 sf	1,200 sf	77%	Poor
1st Grade	6	910 - 940sf	1,000 sf	92%	Good
2nd Grade	6	830 - 940 sf	1,000 sf	88%	Fair
3rd Grade	5	810 sf	1,000 sf	81%	Fair
4th Grade	5	830 sf	1,000 sf	83%	Fair
5th Grade	5	810 sf	1,000 sf	81%	Fair

Comments: The general purpose classrooms are arranged into 4 areas, which are connected by an interior corridor. Overall, the classrooms vary significantly in size, depending on the area of the building in which they are located.

- The Pre-Kindergarten and Kindergarten classrooms are located in a wing of Building A and are significantly smaller than space standards. Each contains toilet room and hand wash sink within the classroom, but only one of the Kindergarten is handicap accessible. Each of the classrooms contain doors to the exterior. The classrooms also contain outdated casework with countertop sinks, which is not consistent with GCS standards.
- All of the 1st Grade classrooms are located in a wing of Building A and are close to the space standards. Each classroom contains a toilet, only one of which is handicap accessible. The classrooms also contain outdated casework with countertop sinks, which is not consistent with GCS standards.
- Two of the 2nd Grade classrooms are located in a wing of Building A, which is the oldest building. Each classroom contains a toilet, which is not required by code for 2nd Grade and should be removed to make the classrooms larger, or turned into storage. Each classroom also contains an exterior door, which is not required by code for 2nd Grade and should be removed for security reasons. The classrooms also contain minimal casework with countertop sink, which is not consistent with GCS standards.
- Three 2nd Grade and all of the 4th Grade classrooms are located in Building C, the newest building, and are smaller than space standards. Each classroom contains casework of adequate size and layout, general storage cabinets, student cubbies and full height teacher storage units. The classrooms contain wall mounted sinks within the room.
- All of the 3rd and 5th Grade classrooms are located in Building D and are smaller than the space standards. The classrooms also contain outdated casework with countertop sinks, which is not consistent with GCS standards.

12. Science Classrooms

Science is taught within 4th and 5th Grade classrooms and does not require dedicated Science Rooms or Labs in Elementary Education. 4th grade classrooms contain casework, and a small wall mounted sink within the classrooms, and are generally adequate for science instruction. The 5th grade classrooms contain countertop sinks, but not adequate casework for science instruction.

13. Exceptional Children and AIG / ESL Classrooms

Room Description	No. of Rooms	Typical Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
EC Cluster	0	N / A	1,200 sf	0%	Poor
EC Resource	2	810 - 910 sf	1,200 sf	72%	Fair
AIG / ESL	1	930	1,000 sf	93%	Good

Comments: EC Resource classrooms are significantly smaller than GCS / NCDPI standards. However, they are approximately of the same area as the general purpose classrooms. The EC classrooms are not located together, but are at opposite sides of the building. The AIG / ESL classroom is located in the First Grade wing.

- EC Resource classroom 20 does not contain a toilet within the classrooms, but is directly adjacent to group toilets near the main school entry which are handicap accessible. EC classroom 15 contains a toilet room within the classroom, which is handicap accessible.
- The school previously included an EC Cluster classroom, but this program was removed and the room used for a general purpose classroom, due to capacity needs. Staff would like to incorporate an EC Cluster room in the future, which would also require a dedicated toilet, built in casework, counter, sink and student cubbies.
- EC does not have access to a shower / changing or laundry room, as the school does not contain these anywhere within the building.
- AIG / ESL utilizes a standard classroom in the First grade wing, and is of adequate size.

14. Arts Education

Room Description	No. of Rooms	Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
Music	1	500 sf	1,000 sf	50%	Poor
Art	1	810 sf	1,000 sf	81%	Fair

Comments: Music does not have a dedicated room, but utilizes the stage of the Multipurpose room, which is half the size of GCS / NCDPI standards. The Art room is smaller than standards by 20%, but is generally of the same size as the smaller general purpose classrooms.

- The school does not contain a dedicated Music classroom, but utilizes the stage in the Multipurpose room, which is not of adequate size or acoustically appropriate for music instruction.
- The school does not contain a dedicated Music storage room. When the stage is to be used for assemblies or performances, the music equipment must be stored in the small office shared by Music and PE, which is not adequate for music storage.
- The Art room is a former classroom and does not contain adequate built in casework or storage.
- The Art kiln and storage are located in on office within the Multipurpose building, which is located at the opposite end of the school from the Art classroom. This room is also shared with Music and PE for office / storage.

15. Career and Technical Education Classrooms / Shops

CTE is not provided Elementary Education, therefore no facilities are necessary.

16. Media Center

Room Description	No. of Rooms	Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
Main Room	1	1,600sf	2,400 sf	66%	Poor
Support Areas	Various	575 sf	1,200 sf	48%	Poor

Comments: The Media Center Main Room and Support areas are both significantly smaller than GCS / NCDPI standards.

- The Media Center Office is currently being utilized by the Guidance counselor, and needs to be dedicated back to the Media Center, since it does not currently have a dedicated office.
- The Circulation Desk is not adequately sized and is not handicap accessible.
- The Media Center does not contain a secure storage room.
- The Media Center does not contain a meeting room.
- The Media Center does not contain a video production room.
- The Main Room does not contain adequate space for a Computer Instructional Area.
- The Media Center is located within an area of the school that cannot be secured for after-hours community use.

17. Physical Education

Room Description	Area	Court Size	NCDPI Standard Area	Relation to Standard	Adequacy Rating
Multipurpose / Indoor PE	4,200 sf	42 x 62	3,600 sf	117%	Excellent

Comments: The Multipurpose / PE Building is free standing and connected to the classroom wing with an enclosed corridor. This building includes a separate entrance with a small lobby, and doors at the end of the corridor that can be locked to secure it from the rest of the school for after hours use.

- The Multipurpose room contains an elevated stage, which is handicap accessible via a ramp from the corridor and through an office, but not directly from the MP room.
- The stage is also used for Music instruction. The stage contains an accordion style folding wall which does not offer acoustical separation from the Multipurpose room for Music instruction. When the stage is to be used for assemblies or performances, the music equipment must be moved and stored in a Storage room, which is also shared as a PE office and not of adequate size for music instrument / equipment storage.
- The Multipurpose Building includes dedicated toilets, in which the stalls are not handicap accessible.
- The basketball court is 62 feet long, which is 10 feet short of the recommended 72 foot length, and only has 3 feet of safety space on the ends. The safety space on one side is 8 feet (which is adequate) and only 6 feet on the other side to the steps of the stage, which is a safety concern.
- The corridor connecting the Multipurpose and Classroom Buildings contains two exit doors to the exterior, both of which lead to exterior stairs down to grade. One of these must be handicap accessible.

18. Administration Excellent Good Fair Poor

Comments: The Administration area includes approximately 1,500 square feet and consists of the following rooms: (1) Main Office / Reception, (1) Secretary Office, (1) Principal's Office with Toilet, (1) Assistant Principal's Office with Toilet, (1) Staff Lounge / Mail Room with Toilet, (1) Unisex Staff Toilet and (1) Kitchenette. The Administration area is very limited in space, but is difficult to expand in its current position due to the location of the main corridors.

- The Administration area is located on the interior of the school, and not directly adjacent to main school entrance. The school does not contain a secure vestibule for the main entrance. Design of a new secure entry vestibule with access directly into the Reception area is not possible within the current layout, without relocating the Administration offices closer to the main school entry. A secure vestibule can be added at the main entry to the school. However, with the current location of the Administration area, the new vestibule would need to be monitored by camera.
- Due to its location on the interior of the school, the Administration area does not have visibility of the main entry doors, visitor parking or student drop off areas.
- The school does not have a dedicated SRO Office, which should be located near the main school entry and Administration area.
- The Administration area does not include a Conference Room.
- The Administration area does not contain a dedicated Work / Mail Room. Currently, the copier is located in the Reception waiting area and the mail is in the Staff Lounge.
- The Administration area does not contain a secure records storage room and only two small storage closets, which are not adequate.
- The Assistant Principal's Office is located with a door directly off the Main Office / Reception area, providing little privacy.
- The Principal's Office is not connected to the Main Administration area, and is accessed from the main building corridor leading to the Cafeteria, providing little privacy.
- Both the Principal and Assistant Principal Offices contain private Toilet Rooms, which are not handicap accessible.
- The Administration area contains a single unisex staff Toilet, which is not handicap accessible.
- The Mail Room is located in the Staff Lounge, is not connected to the Main Office area, and is accessed from the main building corridor leading to the Cafeteria, providing little privacy or security.

19. Student Support Excellent Good Fair Poor

Comments: The Student Support Spaces consist of (1) Guidance Office and (1) Office shared by both the School Nurse and Social Worker.

- The current Guidance Office is located in the Media Center, and is accessed directly from the main hallway, providing little privacy. This office needs to be dedicated back to the Media Center, and provide 2 dedicated Guidance Counselor offices with a separate entrance and waiting area from the Administration..
- The Social Worker and Nurse share a very small office in the Multipurpose Building, which is located very far away from the Administration area. Each should have a dedicated office, the Social Worker needs a dedicated office located closer to the Administration area.
- The Health Services area should be near, but separate from the Admin. area and should include a dedicated Nurse's Office, Holding Room, dedicated Toilet, Shower and Changing area and

wheelchair storage. The school does not have a washer and dryer which could be shared by Health Services and Exceptional Children.

- The school does not have a washer and dryer which could be shared by Health Services and Exceptional Children.
- The school does not have a School Therapist Office.

20. Staff Support Excellent Good Fair Poor

Comments: The Staff Support Spaces consist of (1) Teacher Teaming / Work Room in the 3rd / 5th Grade wing, (1) small Teacher Work Room in the new 2nd / 4th grade wing and (1) Teacher Lounge near the Administration area.

- The Teacher Lounge should be moved out of the Administration Area.
- The small Teacher Work Room is only a copy room and does not contain enough space for meeting or teaming.
- The large Teacher Work Room in the 3rd / 5th Grade wing also contains the main IT MDF rack, which should be converted a secure and fire rated room with a gaseous fire suppression system.
- Additional Teacher Teaming / Work Rooms should be located in each grouping of classrooms.

21. Cafeteria

Students per Seating *	Dining Room Area	Area per Student	NCDPI Standard Area	Capacity of Dining Room	Relation to Standard
288	3,880 sf	13.4 sf / student	14 sf / student	271	96% Good

* Students per Seating equals the 2014 - 2015 student enrollment for the school divided by 2.5 seatings for continuous serving ($676 / 2.5 = 288$), as recommended by NCDPI Guidelines.

Comments: The Cafeteria was renovated and the Dining Room enlarged in 2009. The serving area is located within the Cafeteria.

- In prior years, the Cafeteria only contained one serving line, which was not adequate for the number of students served. This year a secondary serving line has been added to reduce serving times.
- The Cafeteria and serving area are close to the NCDPI space guidelines. However, due to the configuration of the addition not being one large open room, the seating layout is not very efficient.
- The Cafeteria does not have an exterior door for access to the loading dock area for removal of trash.

22. Kitchen

Lunches Served per Day	Kitchen Area	NCDPI Standard Area	Relation to Standard
648*	1,670 sf	1,518 (for 500 to 750 lunches served)	110% Excellent

* Lunches Served per Day equals the 2014 - 2015 student enrollment for the school times 90% participation factor ($720 \times .90 = 648$). This school experiences an elevated participation rate due to free and reduced lunches.

Comments: The Kitchen slightly exceeds the NCDPI guidelines of overall area for the number of students served. However, the Kitchen does not include some needed spaces. See the Section 7: Food Service Assessment for additional information.

- The Kitchen does not include a secure Manager's Office, the kitchen manager's desk is located in the dry storage room. A dedicated Manager's Office needs to be provided.
- The kitchen staff locker area is too small.
- The kitchen toilet is not handicap accessible.
- Kitchen does not have a washer and dryer.
- The walk-in cooler freezer is located on the exterior of the building, with a wood lean-to roof structure constructed over it. This needs to be enclosed in a more permanent structure.
- The loading dock is elevated, with adequate access to the dumpster. The dock and contains a metal ramp, which is not handicap accessible and the guardrail does not meet code. This ramp and rail should be replaced.

23. Toilet Facilities

 Excellent

 Good

 Fair

 Poor

- Kindergarten, 1st and 2nd Grade classrooms are not located within 200 feet of a group toilet. Small toilet rooms are provided in each of the classrooms, but most are not handicap accessible and not suitable for use by the whole class as a group. A group toilet should be added in this area.
- Group toilets are not located near the Cafeteria, and need to be added. These could be located to also serve the lower grade classrooms noted above.
- Group toilets are located near the 3rd Grade classrooms and main school entry, which have been recently upgraded, are in good condition, and are also handicap accessible.
- Building C contains group toilets that are in good condition and handicap accessible. However, these toilets are located at the farthest end away from the classrooms, placing them more than 200 feet away from 1st and 2nd Grade classrooms.
- Group toilets in the 5th Grade classroom wing are in poor condition and also not handicap accessible. These toilets should be upgraded, and the rooms are of sufficient overall size that the stalls can be replaced with handicap accessible partitions and fixtures.
- Group toilets in the Multipurpose Building are in poor condition and also not handicap accessible. These toilets should be upgraded, and the rooms are of sufficient overall size that the stalls can be replaced with handicap accessible partitions and fixtures.
- Staff are only provided with 3 single toilets. One in the Administration area and one near the Cafeteria that are both in poor condition and also not handicap accessible. One Staff toilet is off the Teacher Work Room in the 4th Grade wing that is in excellent condition and handicap accessible. Staff toilets need to be included within any new Teacher Teaming / Work Rooms noted above.

24. Other Spaces

- The school has very little general purpose storage. Many electrical rooms are used for storage, which violates code.
- The MDF is located in a Teacher Work Room, which should be converted into a secure, access controlled room with a gaseous fire suppression system. The IDF's are located throughout the school in classrooms and corridors, most of which will be difficult to relocate into secure rooms due to existing data cabling.

25. Additional Considerations

- None at this time

Part 3: School Site**26. Parking** Excellent Good Fair Poor

Description	Current Number of Spaces	Number of Spaces Needed	Relation to Number of Spaces Needed
Staff (North)	62	80 Staff (70 employees plus 10 transient)	+ 100
Staff (South)	117		
Total Staff	180		
Visitor (East)	19	25	- 6
Bus	8	8	0

Comments: Although the total number of spaces is more than adequate, parking on the school site is generally poor, with poor locations of parking, parking located within pick up /drop off stacking lanes. Most of the asphalt paving is in poor condition.

- The north parking area contains 60 parking spaces, which are used by both Staff and Visitors. Many of these spaces are located along the one-way drive used for bus unloading and carpool rider loading, which presents safety concerns and also makes most of these spaces unusable when the bus / car rider line is stacked. 12 of the visitor parking spaces are accessed directly from W. Carpenter Street, which also serves as a rear entrance to the busy Ingles shopping center, and presents an unsafe condition.
- The asphalt paving in the north parking lot and drive is in very poor condition, with significant wear and deterioration, and should be replaced.
- The pavement in the north parking area is sloped toward the school in some areas and contains no underground storm drainage, which results in ponding near one of the building entries and at the kitchen service drive. Storm drainage should be added to the parking lot when it is replaced.
- The east parking area contains 19 striped parallel parking spaces designated reserved and handicap, which are located along the main car rider drop off and pick up drive. These spaces are not useable when the car rider line is stacked, and should be eliminated if possible due to safety concerns, so that the drive is dedicated to student drop off and pick up only.
- The asphalt paving in the east drive and parking area is in poor condition in most areas and is in need of replacement. This area only has one storm drain inlet and additional storm drainage should be added when the asphalt is replaced.
- The south parking area contains 117 parking spaces, which is more than adequate for staff, however this parking lot is located far from the main school entry, and also used for bus rider pick up. This parking lot is also used for bus pick up in the afternoons, and presents a safety concern of children walking between cars. The bus drive should be separated from the staff parking, if possible. The south side of the site contains area in which the Staff parking and the bus pick up drive can be expanded.
- The asphalt paving in the south parking lot is in good condition, but needs re-striping.

- The site contains a small bus parking lot adjacent to the south parking lot, which is in fair, but deteriorating condition, and should be replaced soon.

27. Vehicular Circulation Excellent Good Fair Poor

Comments: Vehicular Circulation on the school site is generally poor, with inadequate stacking for cars and busses, parking located within pick up /drop off stacking lanes, kitchen service drive located within a parking area, and poor condition of paving. Site area is limited for expansion of parking and drives, except to the south, behind the Multipurpose Building.

- The north parking and drive is used for bus drop off in the mornings and carpool rider pick up in the afternoons. This drive does not contain enough space for stacking, with cars and busses regularly backing up onto W. Carpenter Street. Parking, which is utilized by both Staff and Visitors, is also located along this one way drive. Parking included within a student drop off / pick up drive presents safety concerns and also renders approximately half of the parking spaces inaccessible during drop off and pick up times (as previously noted in the Parking section). The asphalt paving at the north drive is in very poor condition with significant wear and deterioration and is in need of replacement. The drive also has small turning radiuses and no curb and gutter at the curb cuts to W. Carpenter Street
- The east drive is used for car rider drop off in the mornings and single car rider pick up in the afternoons. This drive is one way and utilizes two parallel lanes, but does not contain enough space for stacking with cars regularly backing up onto S. Pine Street. With two lanes, students are required to move between cars, which is a safety concern, even if assisted by staff.
- The east drive also contains 19 striped reserved and handicap designated parallel parking spaces. Parking included within a student drop off / pick up drive presents safety concerns and also renders most of the parking spaces inaccessible during drop off and pick up times (as previously noted in the Parking section). The asphalt paving at the east drive is in poor condition with significant rutting, wear and deterioration, and is in need of replacement.
- The south drive is used for bus pick up in the afternoons and does not allow for adequate stacking. The Staff parking is also located in this area, and presents a safety concern of children walking between cars (as previously noted in the Parking Section).
- The kitchen does not have a dedicated service drive and is accessed from the north parking area. This requires backing movements within the Staff / Visitor parking area for deliveries and trash pick up, which is a safety concern. However, the site does not currently contain adequate area to provided a dedicated service drive.
- The concrete drive at the kitchen loading dock and trash area is in poor condition and in need of replacement. This area also ponds water, needing storm drainage when the concrete is replaced.

28. Pedestrian Circulation Excellent Good Fair Poor

Comments: The pedestrian circulation on the school site is generally poor, with inadequate sidewalks and poor condition of the existing concrete walks.

- The site includes concrete sidewalks along W. Carpenter Street and S. Pine Street, which are in very poor condition and in need of replacement.
- The sidewalk along the north side of the building is in poor condition and in need of replacement. At the northeast corner of the building, this sidewalk is on grade with the asphalt paving, which leads to ponding water on the walk. The sidewalk should be replaced with a walk that is 4" above the asphalt with handicap curb ramps at building entries to better facilitate storm drainage.

- The sidewalk along the east side of the building is in poor condition and in need of replacement. This sidewalk should be replaced with a concrete walk that is 12-15 feet wide to better accommodate pick up and drop off at the main entry to the school.
- Some of the main building exits, such as from the 1st grade wing, do not include a paved handicap accessible route which leads to a safe zone away from the building. Additional sidewalks should be added to accommodate this.
- Several areas of concrete sidewalks in the courtyard between classrooms buildings are spawling and deteriorated, and are in need of replacement.
- All of the exterior doors from the Pre-K, Kindergarten, 1st and 2nd Grade classrooms contain a 6" step down to the concrete pads, which is not handicap accessible or safe for the lower grades. These pads should be replaced to be on level with the classrooms floors, and ramped down to grade.
- Three of the main entry / exits to the exterior of Building D contain stairs down to grade. Handicap accessible ramps need to be added to these exits.
- Two of entry / exits to the exterior of Building B contain stairs down to grade. Only one of these exits is needed for code purposes. A handicap accessible ramp needs to be added to this exit.

29. Walkway Canopies Excellent Good Fair Poor

- The north parking and drive area, which is used for bus drop off in the morning and carpool rider pick up in the afternoon, has a short covered canopy to the Cafeteria doors. This canopy is in fair condition, but not of substantial construction, or long enough and should be replaced with a more durable system. This canopy also gives the impression that this is the main entry to the school, which it is not. The main entry is located on the east side and does not have a covered canopy as noted below.
- The main entry to the school, which also serves as the car rider drop off on the east side of the site does not contain a covered canopy, and only a small covered entry. A covered canopy should be provided at this location.
- The front of the Multipurpose Building contains a covered entry, which serves adequately as a canopy for car rider pick up in this area.
- The rear of the Multipurpose room, which is used for afternoon bus loading does not contain a covered canopy, which should be provided at this location.

30. Outdoor Play Excellent Good Fair Poor

- The single Pre-Kindergarten room has a dedicated, fenced play area located in a courtyard between building wings, which contains limited play equipment and is in generally good condition. The area has no storm drainage, which should be added to help drainage, as the area is slow to drain.
- Two small playgrounds are located near the Kindergarten, 1st, 2nd and 4th grade classrooms. The play equipment is in generally good condition, however the mulch and edging is in poor condition and needs to be replaced. These playgrounds are located in a grassed area and do not have handicap access, or any other type of pedestrian path.
- An additional playground for 5th grade is located across the bus parking area from the school and is in good condition. However, this playground should be relocated due to its close proximity to the bus parking area, and limits the potential expansion of the staff and bus parking. This playground also does not have handicap access, or any other type of pedestrian path.
- None of the playgrounds contain handicap accessible equipment, which should be added in at least one area.
- The site contains one multipurpose ball field with back stop that is in fair condition, but located far from the school building. The field and infield are in poor condition, with numerous bare spots.

- The school does not contain a walking track, which could added around the ball field with the clearing of some wooded areas.
- The site does not contain a dedicated hard surface play area, student use the bus parking lot for this. A hard surface play area should be added for safety reasons.

31. Athletic Facilities

The site contains 4 baseball / softball fields, which are maintained by the City of Dallas Parks and Recreation Department and are not included within this assessment. The school does not generally use these ball fields.

32. Athletic Spectator Areas

The baseball / softball fields include some bleachers, which are maintained by the City of Dallas Parks and Recreation Department and are not included within this assessment. The school does not generally use these spectator areas.

33. Landscaping Excellent Good Fair Poor

- The site contains minimal landscaping, consisting mostly of moderately mature trees sparsely located throughout the site. Some foundation shrubs are planted near the gym and 3rd / 5th grade wing. Landscaping is maintained in good condition, and not significantly overgrown.
- Low growing and low maintenance foundation plantings could be added near building entries and recessed alcoves to help define entries, add aesthetic interest and aide in providing pervious areas for roof drainage.

34. Utilities Excellent Good Fair Poor

- The school is served by the City of Dallas for water and sewer, and does not have a backflow preventer for domestic water, which should be added by code.
- The school does not have a grease interceptor on the sanitary sewer line for the kitchen, which should be added by code.
- The sewer line is reported to be terra cotta and in poor condition, and should be replaced with PVC.
- Portions of the domestic water line have been replaced due to leaks in the past. This entire line should be replaced.
- Only one fire hydrant is located in the general area of the school, at the corner of West Carpenter Street and South Pine Street, and is across the street from the school. This hydrant does not provide adequate coverage of the school. More fire hydrants should be added on the school site to provide adequate coverage.
- Overhead power lines run through the rear of the site behind the Multipurpose Building and 5th grade classroom wing, presenting a safety concern. Further investigations with the service provider should occur about relocating these power lines across the street or burying underground.

35. Storm Drainage Excellent Good Fair Poor

- The site does not have a stormwater management pond, which is not required by the municipality unless additional impervious area is added.
- The site has very minimal underground storm drainage, as the majority of the water sheet flows across both paved and grassed areas.

- The north paved area has no underground storm drainage and sheet flows into a ditch, and has significant areas of ponding near the northeast corner of the building and at the loading dock. Underground storm drainage should be added in this area.
- The east paved area has only one stormwater inlet, which is not adequate for the amount of paving. Additional storm drains should be added.
- The site contains several open ditches for storm drainage which is a safety concern, especially in an elementary school. These ditches should be converted to underground piping where possible.
- Downspouts from classroom wings spill onto grade in two courtyard areas, which leads to ponding due to the lack of storm drainage. The downspouts should drain into underground storm drainage piping where possible, and area drains added to the courtyard areas.
- Roof drains of the Multipurpose Building outlet onto grade with no way to drain, creating ponding directly against the building. In addition, the grade in several areas around this building is higher than finish floor and slopes down toward the building. Minimal storm drainage is provided near the rear of this building, and additional storm drainage needs to be added in additional areas around the building to alleviate ponding.
- In several areas, downspouts spill directly onto grade in recessed entry areas, causing ponding. The downspouts should drain into underground storm drainage piping where possible.

36. Emergency Access Excellent Good Fair Poor

- The site has a emergency access drive around all sides via paved roads and a gravel access drive, which is fairly well maintained.

37. Site Security Excellent Good Fair Poor

- The site is located in a predominately medium density residential area, with an Ingles grocery store shopping center nearby to the North. The Principal and school SRO Officer indicated that the surrounding areas do not typically include significant crime and vandalism at the school is rare.
- The north, east and south sides of the building and site have good visibility from public roads. The parking and gravel emergency access drive offer visibility of the entire building perimeter for police patrol.
- The site contains chain link fencing around most of the perimeter, but is not continuous. Additional fencing should be added to be continuous. Also, wooded areas have significantly overgrown the fencing in some areas and should be cut back.
- The stairs down to the basement level Boiler Room are not secured. A security fence around the area well and gate should be added for safety and security.

38. Additional Considerations

- None at this time.

Part 4: Building Envelope

39. Construction Type Non-Combustible Combustible

40. Structural Floors

Material: Reinforced Concrete Slab on Grade

<input checked="" type="checkbox"/>	Concrete on Metal Deck over Steel Structure
<input type="checkbox"/>	Wood Deck on Wood Joists
<input type="checkbox"/>	Other
Evidence of Structural Concerns:	<input type="checkbox"/> Prevalent <input type="checkbox"/> Isolated <input checked="" type="checkbox"/> None Visible
Overall Condition of Structural Floors:	<input type="checkbox"/> Excellent <input checked="" type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> Poor

Comments: The structural floors consist predominately of concrete slab on grade, with areas of elevated concrete slabs over a crawl space in the southern end of Building D, and over a mechanical room below the kitchen.

- Concrete floors generally appear to be in good condition with no major cracks telegraphing through the floor coverings.
- The Multipurpose Building contains one area where a rectangular section of the concrete slab is elevated approximately 1/2" and is telegraphing through the carpet. This area should be further investigated to determine the nature of the elevation change, but requires removing of a portion of carpet.

41. Exterior Walls / Cladding

Material:	<input checked="" type="checkbox"/> Masonry	<input checked="" type="checkbox"/> EIFS / Stucco	<input type="checkbox"/> Metal	<input type="checkbox"/> Other
Evidence of Structural Cracking:	<input type="checkbox"/> Prevalent	<input type="checkbox"/> Isolated	<input checked="" type="checkbox"/> None Visible	
Evidence of Concern with Exterior Cladding:				
Cracks / Gaps	<input type="checkbox"/> Prevalent	<input checked="" type="checkbox"/> Isolated	<input type="checkbox"/> None Visible	
Efflorescence (Masonry)	<input type="checkbox"/> Prevalent	<input type="checkbox"/> Isolated	<input checked="" type="checkbox"/> None Visible	
Moisture Penetration	<input type="checkbox"/> Prevalent	<input checked="" type="checkbox"/> Isolated	<input type="checkbox"/> None Visible	
Rot/Decay/Corrosion	<input type="checkbox"/> Prevalent	<input type="checkbox"/> Isolated	<input checked="" type="checkbox"/> None Visible	
Other	Significant leaching of cementitious material from stucco on Multipurpose Building and soffits on Main Building			

Overall Condition of Exterior Walls: Excellent Good Fair Poor

Comments: The exterior walls of the older Buildings A and D appear to consist of multi wythe brick construction that most likely does not include insulation, an air space or flashing. The newer Buildings B and C consist of brick veneer with CMU backup, insulation and an air space.

- The brick veneer appears to be in generally good condition, except for areas in Building D in which the horizontal mortar bed joints have deteriorated and rusting reinforcement is visible. These areas should be further investigated for water intrusion and repaired with mortar.
- Building B contains a hard coat stucco EIFS system around the top of the building, which does not appear to be a drainable system. There is significant leaching of cementitious material from the stucco that is causing a light colored stain on the brick veneer below. The EIFS should be recoated, or replaced with a drainable system.
- Buildings A and D contain exterior hard coat stucco soffits with areas of deterioration, and should be replaced. These soffits are suspected to contain asbestos, although they have not yet been tested.
- Two areas of water penetration are evident from the interior of the south wall of the Multipurpose Building, where paint is peeling from the CMU. The source of the water intrusion is not readily apparent, but is expected to be from a previous roof leak that is reported to have been repaired.

42. Exterior Glazing

Frame Material: Aluminum Steel Wood Other
 Glazing Material: Un-insulated Insulated Glass Block

Evidence of Concern with Exterior Glazing:

Moisture Penetration Prevalent Isolated None Visible
 Rot/Decay/Corrosion Prevalent Isolated None Visible
 Other

Glass Block in the Multipurpose Building is damaged in several places

Overall Condition of Exterior Glazing: Excellent Good Fair Poor

Comments: Due to the differing ages of the various building wings, the condition of the exterior glazing systems varies substantially, but the majority of glazing is in poor condition.

- The exterior glazing in most areas of the older Buildings A and D consists of 1/4" un-insulated glass in a thermally continuous framing system, which is very energy inefficient and past its useful life. In addition, this glass appear to standard plate glass, which presents a safety concern. All of this glazing should be replaced with insulating glass in a thermally broken aluminum storefront framing system to be more energy efficient and provide better thermal control of the classrooms in particular. The glass should be safety tempered in areas required by code. Some areas could be infilled with insulated metal panels or solid wall instead of glass to reduce the amount of glazing on the east and west exposures of the building, particularly in classrooms.
- The glazing in Building B is in fairly good condition and consists mostly of insulating glass in an aluminum storefront framing system.
- Building B contains glass block in the Multipurpose room and Toilets. This glass block is damaged in several places and also not energy efficient. This glass block should be replaced with opaque insulated panels. The Multipurpose room also contains one area of glass block which extends to the floor level. This lower portion of this opening should be infilled with solid wall for safety reasons.
- The glazing in Building C consists insulating glass in an aluminum framing system and is in good condition.

43. Exterior Entry / Exit Doors

Door Material: Aluminum Steel Wood Other

Evidence of Concern with Entry / Exit Doors:

Moisture Penetration Prevalent Isolated None Visible
 Rot/Decay/Corrosion Prevalent Isolated None Visible
 Other None at this time

Overall Condition Doors: Excellent Good Fair Poor

Overall Condition of Hardware: Excellent Good Fair Poor

Comments: Due to the differing ages of the various building wings, the condition of the entry / exit doors varies substantially, but the majority of doors are in poor condition. None of the exterior doors include access control hardware, which should be added for security.

- The entry / exit doors in most areas of the older Buildings A and D appear to be original and are in poor condition, do not have code compliant panic devices and have no access control for security. These doors should be replaced to include code compliant door hardware and access control for security.

- The main exterior doors to the cafeteria are in good condition, but do not have access control hardware, which should be added for security.
- The entry / exit doors in Building B are in fair condition, but do not have access control hardware, which should be added for security. The pair of exterior doors and hardware in the Multipurpose room which are used for bus rider pick up in the afternoons should be replaced.
- The entry / exit doors in Building C are in very good condition, but contain too much glass for security concerns and do not have access control hardware. These doors should be replaced.
- The main front entry doors should have secure access control with buzz-in and security camera tied into the Administration area reception desk.

44. Exterior Classroom Doors

Door Material: Aluminum Steel Wood Other

Evidence of Concern with Classroom Doors:

Moisture Penetration	<input type="checkbox"/> Prevalent	<input type="checkbox"/> Isolated	<input checked="" type="checkbox"/> None Visible
Rot/Decay/Corrosion	<input type="checkbox"/> Prevalent	<input type="checkbox"/> Isolated	<input checked="" type="checkbox"/> None Visible
Other	None at this time		

Overall Condition of Doors: Excellent Good Fair Poor

Overall Condition of Hardware: Excellent Good Fair Poor

Comments: All classrooms in Building A have doors that open to the exterior, which include Pre-Kindergarten, Kindergarten, 1st Grade, half of the 2nd grade classrooms, and one EC Resource Room.

- The exterior classroom doors and hardware have been replaced from the original and are in good condition.

45. Roofing

An independent roof assessment was performed for Gaston County Schools by Roof Engineering, Inc. (REI) in 2006. The report indicates the following needs regarding the replacement of roofs:

- Building A: Replace in 2010 (Classroom area)
- Building A: Replace in 2023 (Cafeteria area)
- Building B: Replace in 2010
- Building C: Replace in 2028
- Building D: Replace in 2010

46. Additional Considerations

- Remove existing brick chimney, which is not used anymore, for safety reasons.

Part 5: Building Interior

47. Interior Walls

Overall Condition of Walls: Excellent Good Fair Poor

Comments: The majority of interior walls are painted CMU or brick and are in good condition. The classroom demising walls in Building C are drywall and are also in good condition.

48. Floor Finishes

Classrooms Flooring Type: VCT (VAT in 5 classrooms of Building A)

Classrooms	Condition:	<input type="checkbox"/> Excellent	<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Fair	<input type="checkbox"/> Poor
	Flooring Type:	Carpet (in one half of Pre-K and Kindergarten rooms)			
Corridors	Condition:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor
	Flooring Type:	VCT			
Cafeteria	Condition:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input checked="" type="checkbox"/> Fair	<input type="checkbox"/> Poor
	Flooring Type:	VCT			
Multipurpose Room	Condition:	<input type="checkbox"/> Excellent	<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Fair	<input type="checkbox"/> Poor
	Flooring Type:	Carpet			
Media Center	Condition:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor
	Flooring Type:	Carpet			
Administration	Condition:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor
	Flooring Type:	Carpet			
	Condition:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor

Comments: The majority of interior floor finishes are VCT and appear to have been installed within the last 10 years.

- Building A has 5 classrooms which contain exposed VAT (Vinyl Asbestos Tile). This tile should be abated and replaced with VCT.
- The Pre-Kindergarten and Kindergarten classrooms contain both carpet and VCT. The VCT is in fair condition, but the carpet is generally in poor condition and should be replaced with VCT for the whole room.
- The carpet in the Multipurpose room should be replaced with rubber flooring.
- The carpet in the Media Center and Administration areas is in generally poor condition, with areas of significant wear in high traffic areas and should be replaced.

49. Ceilings

Lay-in	Locations:	Building B, Building C			
	Condition:	<input type="checkbox"/> Excellent	<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Fair	<input type="checkbox"/> Poor
Plaster	Locations:	Building A, Building D			
	Condition:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input checked="" type="checkbox"/> Fair	<input type="checkbox"/> Poor
Drywall	Locations:	Toilets			
	Condition:	<input type="checkbox"/> Excellent	<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Fair	<input type="checkbox"/> Poor

Comments:

- The ceilings in Buildings A and D are a type of textured plaster coating applied to a sheathing material attached directly to the underside of the roof joists. The continuous plaster coated ceilings do not offer any access to the plenum space and all light fixtures, conduit, piping, etc. are surface mounted. These ceilings should be removed and replaced with 2x2 lay-in, for better acoustics, reflectivity, installation of new light fixtures and concealment of conduit and piping.
- Building C contains 2x2 lay-in ceilings, which are in good condition.
- Building B contains 2x2 lay-in ceilings throughout. The ceilings in the Multipurpose room are in good condition. The ceiling tile in the corridor and entrance lobby are sagging and in need of replacement.
- Group toilets contain drywall ceilings, which are in generally good condition. The toilet in the 5th grade wing contains a plaster coated ceiling, which should be removed and replaced with drywall.

50. Casework

Classrooms	Casework Type:	Wood and Plastic Laminate			
	Condition:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor

Media Center	Casework Type: Wood and Plastic Laminate	Condition: <input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor
Administration	Casework Type: Wood and Plastic Laminate	Condition: <input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor

Comments: The majority casework in the building is inadequate and in poor condition.

- Most of the classrooms, except those in Building C, contain inadequate and dated wood cabinets and counters of various configurations, and no student cubbies. Casework in all of these classrooms needs to be replaced with a standard configuration, including student cubbies, a lockable teacher storage unit and countertop sinks.
- The casework in Building C is of adequate size and layout, including student cubbies and full height teacher storage units, but do not contain countertop sinks. This casework is in generally good condition.
- The Media Center and Media Support rooms contain a variety of very dated casework, which is inadequate.
- The Administration area contains inadequate and dated casework, which needs to be replaced. The main reception counter is not handicap accessible.

51. Interior Doors

Overall Condition Doors:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor
Overall Condition of Hardware:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor

Comments: Due to the differing ages of the various building wings, the condition of the interior doors and hardware varies substantially, but the majority are in poor condition.

- The interior doors and hardware in most areas of the older Buildings A and D (which comprise the majority of doors in the building) appear to be original and do not have code compliant lever style hardware. These doors should be replaced, and the classroom doors should also include lockdown hardware.
- The interior doors and hardware in Building B are in generally fair condition.
- The interior doors in Building C are in generally good condition and have lever style hardware, but should be upgraded with lockdown hardware in classrooms for security.

52. Additional Considerations

- Most of the window blinds, except those in Building C, are in poor condition and in need of replacement.
- The ramp guardrail in the Corridor near the Multipurpose room does not meet current code for picket / rail spacing and should be replaced.

Part 6: Handicap Accessibility

53. Exterior Handicap Accessibility

Accessible Parking:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor
Accessible Route to Building(s):	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor
Accessible Entrances / Egress:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor
Accessible Routes between Buildings:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor
Accessible Play Areas:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor

Comments: The overall exterior handicap accessibility for the school is poor, with most parking and several entrances / egresses from the building not meeting handicap accessibility requirements.

- The site does not contain the proper number or arrangement of accessible parking spaces and loading aisles. Most of the designated handicap parking spaces are parallel parking spaces located in the east car rider drop off / pick up drive with no access aisles and do not conform to code. Most of the parking areas do not have accessible paths to the building.
- Almost half of the building main entrances / means of egress (5 of 12) are not handicap accessible. The main school entry is not accessible and is accessed only by stairs with approximately 4 feet of total vertical rise. Accessible ramps should be added at all building entries and exits that currently contain stairs.
- The two exits from the 1st Grade wing in Building A are accessible, however do not include an accessible path to a safe zone away from the building.
- None of the playgrounds have handicap access, or any other type of pedestrian path. A handicap accessible concrete sidewalk should be added to at least one of the playgrounds.

54. Interior Handicap Accessibility

Accessible Routes:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input checked="" type="checkbox"/> Fair	<input type="checkbox"/> Poor
Accessible Doors and Hardware:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input checked="" type="checkbox"/> Fair	<input type="checkbox"/> Poor
Accessible Signage:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input checked="" type="checkbox"/> Fair	<input type="checkbox"/> Poor

Comments: The interior of the school is on three different finished floor levels, with ramps to each level.

- The ramp near the Cafeteria is too steep and slightly exceeds the 1:12 code required rise/run. This ramp is approximately 56" wide and also contains an adjacent stair. Both the ramp and stair should be removed and replaced with a full width ramp with code compliant rise/run, so that the clear accessible egress width is not reduced by a stair.
- The majority of classroom doors in the school are 3'-0" wide. However, doors in Buildings A and C have knob style hardware, and should be replaced with code compliant levers.
- The Administration area reception counter and Media Center circulation counter are both not handicap accessible.
- Most of the signage in Buildings A and D does not meet current accessibility requirements and should be replaced.

55. Toilet Rooms Accessibility

Accessible Classroom Toilets:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input checked="" type="checkbox"/> Fair	<input type="checkbox"/> Poor
Accessible Group Toilets:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input checked="" type="checkbox"/> Fair	<input type="checkbox"/> Poor
Accessible Staff Toilets:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor

Comments: The overall handicap accessibility of student toilet rooms for the school is generally fair. In 2008, some (but not all) of the toilet rooms were upgraded for handicap accessibility. Only one staff toilet is handicap accessible.

- The Pre-K classroom contains toilet room, which is not handicap accessible and should be enlarged. The Kindergarten classrooms include toilet rooms within each of the classrooms, only one of which is handicap accessible. Each toilet in the Kindergarten rooms should be enlarged to be accessible.
- Kindergarten and 1st Grade classrooms include toilet rooms with in each of the classrooms. Only 4 of the toilet rooms are handicap accessible, including one each in Kindergarten, First Grade and EC Resource classrooms. Each classrooms should contain a handicap accessible toilet.

- The group toilets located near the main school entry have been previously upgraded and are handicap accessible.
- The Building C contains group toilets that are handicap accessible.
- Group toilets in the Multipurpose Building do not contain handicap accessible stalls. However, the rooms are of sufficient overall size and should be upgraded to include handicap accessible partitions and fixtures, which would reduce the watercloset fixture count.
- Group toilets in the 5th Grade classroom wing do not contain handicap accessible stalls. However, the rooms are of sufficient overall size and should be upgraded to include handicap accessible partitions and fixtures, which would reduce the watercloset fixture count.
- The school contains a total of 3 Staff toilets, only one of which is handicap accessible and is located at the far end of Building C. Accessible Staff toilets should be provide in each classroom wing.
- The Principal and Assistant Principal both have private toilets within their offices, neither of which are handicap accessible, and are difficult to expand in their current locations.
- The Administration area does not have close access to a handicap accessible toilet room, and should contain dedicated accessible toilets for men and women.

Part 7: Food Service

56. Observations and Recommendations

Storage:

- Cold Storage Assembly freezer door needs new heater wire at the door to prevent freezing. Box needs be trimmed and sealed on exterior. Size of assembly is adequate.
- Dry storage shelving is built in wood type with painted shelves. Shelving needs to get replaced with individual shelving units with antimicrobial protection.
- Cold storage shelving to be replaced as it is rusting

Food Preparation:

- Prep machines are in good working condition.
- Replace (1) 2-Compartment sink with NSF approved unit.
- Ice Machine is in good working condition but needs new water filter and floor sink is not in appropriate location as the indirect waste line run is longer than max requirement for code compliance.
- Replace (1) worktable as it has galvanized base. Replace with unit with pot rack attached to it.
- Remove ceiling hung pot rack.
- Add hand sinks (2) to meet DHEC code requirements.
- Replace (3) Hot cabinets of the (5) total as they are old and not keeping temperature.

Cooking:

- Steamers (2) are in good condition and are new.
- Braising pan to be replaced with 30 gallon unit and relocated to fit under hood.
- Convection Oven in good condition but is to be relocated to fit under hood.
- Hood and fire system is to be replace as it does meet NFPA96. Filters need to be cleaned and the painted hood is chipping.

Dishwash:

- Soiled return table does not meet NSF standards as it needs to be replaced and properly trimmed.
- 3-Compartment sink in good condition. Direct waste to be converted to indirect waste and run to floor sink per code requirements.

Serving:

- Milk Box has a dent in the front of unit with sharp edges. Needs to get fixed or replaced.
- Cold food counter is not keeping temperature. Service call is to be provided and unit is to be fixed or replaced.
- The serving lines are in good condition and is adequate size for capacity of school.

Auxiliary Spaces:

- Floor has cleanouts and drains that are trip hazards. Floor needs to be fixed or replaced with DHEC approved and properly sloped floor.
- Ceiling has soffit with non washable ceiling tiles. Replace with DHEC approved ceiling tiles.
- Grease traps are in floor of kitchen but have been abandoned. Plumbing section to address code requirements for grease traps.

Part 8: Plumbing Systems

57. Observations

Site Utilities: The following site utilities were identified: Domestic Water, Sanitary Sewer, Natural Gas.

- Storm water collection at the top of the boiler room stairs continues to be problematic. During heavy rainfalls, water travels down the boiler room stairwell. The water collects faster than the floor drains and sump pump can remove it and eventually makes its way into the boiler room.
- Roof drainage is a gutter and downspout system.
- A backflow prevention device could not be located on the domestic water service.

Piping:

- Terracotta drain piping is installed outside
- Copper water supply piping installed inside, some exposed and uninsulated (e.g. in Teacher's lounge and Pre-K toilets). Galvanized water supply pipe outside.
- Water piping was found to penetrate directly through the bottom of a mop sink in the Janitor's closet, creating a source for leaks below.

Fixtures:

- Restrooms had flush valve type water closets and urinals, and lavatory fixtures. Restrooms appeared to have proper ventilation, floor drain, installed fixture heights, and hose bibb installed for housekeeping.
- Building D had waterless urinals. It's been reported that these fixtures have been maintenance intensive.

Water Heaters:

- A 199 MBH gas fired storage type unit in boiler room provides hot water to the kitchen. Other miscellaneous water heaters observed at point-of-use areas. Hot water is not provided to all fixtures at this time.
- An electric water heater is shelf mounted in the Teacher's Lounge with exposed piping.

Kitchen:

- No grease interceptor installed. A few fixture grease traps were installed below the kitchen floor but they are not connected to the sewer.

58. Recommendations

- Install a grease interceptor outside of building in an accessible location.
- Install backflow preventer on incoming water service.
- Re-route water pipe serving mop sink noted above.
- Re-locate electric water heater, serving teacher's lounge, to a janitor's closet.
- Insulate all domestic cold and hot water piping.

Part 9: HVAC Systems**59. Observations**

Central Plant Cooling: The system below provides chilled water to Buildings A and C.

- Two chillers, (1)-nominal 70 ton air cooled scroll and (1)-nominal 150 ton air cooled screw
- Two primary loop pumps
- Two secondary building loop pumps
- Cooling for the gymnasium and stage areas (Building B), is provided by two split system DX AHUs.
- Cooling for each classroom in Building D is provided by an individual split system heat pumps.

Central Plant Heating: The system below provides hot water to Buildings A and C.

- Two boilers, (2) gas fired, sectional cast iron water boilers at 1358 MBH each
- Two boiler pumps
- Two secondary building loop pumps

Heating hot water for the gymnasium and stage areas (Building B) is provided by a local, dedicated gas fired water boiler and pump.

Heating for each classroom in Building D is provided by the heat pump reverse cycle and auxiliary electric heat.

Distribution Systems:

- A 4-pipe system delivers chilled water and hot water to individual unit ventilators and single zone air handling units. Unit ventilators are located in classrooms, corridor, offices, kitchen, cafeteria, and restrooms. Air handling systems are located in the gymnasium. A few ductless split systems are installed in the Administration areas.
- Constant volume AHUs serving Gymnasium are located in a mezzanine with extremely limited access for service.
- Ductwork is constructed of galvanized metal.
- Several Janitors closets had door grilles for air transfer but no exhaust air.
- CHW/HW piping material is a combination of steel and copper. Maintenance personnel have reported that many leaks have been repaired on the hydronic systems, particularly at the expansion loops.
- Piping is wrapped with fiberglass insulation.

Controls:

- A pneumatic control system provides valve and damper actuation in the central plant and at AHU systems. Unit ventilators are controlled by a pneumatic wall thermostat.
- Hot water and chilled water building loops are connected to VFDs but it's been reported that the pressure controls are not working.

Kitchen:

- Unit ventilator provides conditioned air to the food preparation areas.
- Roof mounted grease hood exhaust fan installed and in good condition. Exhaust is provided above the 3-compartment dish wash sink by a sidewall mounted fan.
- Janitor's closet opens directly into kitchen. There is no exhaust present in the janitor's closet.
- No direct makeup air is provided for the kitchen hood or dishwasher exhaust. It is assumed that it is provided from the outside air connected to the Cafeteria unit ventilators.
- Locker room and toilet room, opening up to kitchen, do not have supply or exhaust air.
- Dry storage and office is a shared space served by a unit ventilator.

60. Recommendations

- Keep door to loading dock closed. Keep door to loading dock closed. The screen door is a source of unconditioned and unfiltered makeup air. With truck deliveries and can wash directly outside, fumes and odors can migrate into the kitchen.
- Replace antiquated pneumatic controls at the plant, AHUs, and unit ventilators with a Direct Digital Control (DDC).
- Replace chilled water and hot water pumps and respective VFDs. Retro-commission hydronic system controls.
- Replace split system DX AHU serving Gymnasium / Multipurpose rooms. Replace gas fired boiler. Units are at the end of their serviceable life, do not have adequate access space for maintenance, and are not energy efficient.
- Review makeup air source for the kitchen. Provide direct makeup air at the grease hood as required. Introduce exhaust air to all janitor's closets and toilet rooms.

Part 10: Fire Protection**61. Observations**

- Sprinkler system installed (Y/N) - N
- System type? Wet, dry, preaction, etc.? – N/A
- Full or Partial Coverage? – N/A
- Standpipes installed (Y/N) - N
- Fire Pump installed (Y/N) – N

62. Recommendations

- Provide a full coverage sprinkler system in accordance with the NC Fire Code and NFPA Standard 13.

Part 11: Electrical, Fire Alarm, Security and Communications Systems

63. Observations

Service Entrance

This facility has two (2) electric services. One is located on the exterior of the building near the Kitchen and Boiler Room and is rated 1200 amperes at 480GrY277-volts. This service appears not to have a Surge Protection Device (SPD). This service switchboard (designated MSB) has four (4) sub-mains, room for two (2) additional devices

The other is located at the 2006 Classroom Addition, it is rated 600 amperes at 480GrY277-volts, and does have a SPD. It is designated MDP. It has a 600A/3P main circuit breaker. Provisions for additional circuit breakers.

The capacities of the services appear to be adequate, but the physical layout could be more efficient. Most of the added or modified service equipment is located on the exterior of the buildings in NEMA 3R enclosures, which are painted. Some of this equipment is rusting badly. Labeling of the equipment is confusing and should be addressed.

Distribution

The power distribution consists of dry transformers, distribution panelboards and lighting panelboards fed by copper wire in conduit. The main service equipment and some of the distribution and lighting panelboards are well within their life expectancy. There are still some original panelboards that are in poor condition and should be replaced. Replacement circuit breakers for these panelboards may not be available, and the existing breakers may not be providing the protection necessary.

Panelboard labeling, including panelboard directories, is not up to date, some labeling is missing and duplicate panels designations were found – three (3) panels were found to be designated as “Panel A.” Quantities of duplex receptacles in some areas are insufficient. In some cases, there are standard duplex receptacles too near sinks, which should have GFI type receptacles. Additional receptacle circuits are needed.

Grounding

Proper grounding is one of the most important factors in an electrical system. Not only is it essential for safety, it is also required for proper operation of electronic equipment. It can also cause fluorescent lights not to operate properly. The grounding systems in the facility are in question. The original building uses the metal conduit system to distribute grounding throughout the facility. This was legal at the time the building was constructed, but not now. The problem is that the underground conduits installed at that time were galvanized steel, which could have deteriorated in the last 40+ years, which could result in an increase in ground resistance, or loss of grounding entirely. An earth grounding study needs to be made and corrective measures taken.

The NEC (National Electric Code) requires a minimum ground resistance of 25 ohms. For electronic systems (data rooms, computers, etc.) a minimum ground resistance of 5 ohms is needed.

Lighting

Most of the fluorescent lighting in the project consists of T12 lamps and magnetic ballasts. DPI recommends T8 lamps and electronic ballasts as a minimum, but suggests T5 and LED as alternates. The latest additions have T8 lamps and electronic ballasts and some corridor and toilet lighting has

been upgraded. The exterior lighting is insufficient in most areas. Exit signs and egress lighting do not meet current codes. Many of the exit signs are not lighted.

Lighting levels are, in most cases, below the levels recommended by DPI. In some cases, General classroom lighting varies from 26 to 35 footcandles on the task areas, DPI recommends 50 footcandles for task areas. The lighting levels in the Kitchen range from 10 to 28 footcandles. These levels are recommended, not required. The North Carolina Department of Health requires 50 footcandles minimum in areas where food is handled, prepared and served, and where utensils are washed.

Emergency Power

Emergency power is supplied by unit battery devices, but as mentioned above, many exit signs are not lighted.

Fire Alarm

The existing fire alarm system has an updated (1988) Notifier addressable control panel. Although the layout of devices in some areas have been updated, much of the layout and distribution of alarm initiating and notification devices does not meet current codes and ADA requirements.

Security

The security system does not meet current Gaston County School guidelines. No access card readers on exterior doors. Video surveillance needs to be incorporated per GCS guidelines.

Data/Communications

The data system currently does not meet GCS criteria. The MDF and IDF's are not in secure locations. The MDF is located in a Work Room, the IDF's are located in various unsecured rooms and even in the corridor. Data wiring is run exposed in most cases, with conductors not properly supported and protected. Cables in corridors are sagging down several inches between supports. It was not evident whether all the cables were active or not.

Sound Systems

The sound system used in the Gym needs to be replaced.

64. Recommendations

Service Entrance

A SPD system should be installed on Switchboard "MSB.". The switchboard can be expanded. It should be cleaned, painted and re-labeled. All exterior mounted equipment needs to be cleaned and painted with rust resistant paint.

Distribution

All original panels and panels by manufacturers that are no longer in business should be replaced. All equipment should be properly labeled, including directories showing loads for all circuits.

Lighting

Most lighting in the original building (except some corridors, toilets and newest addition) should be replaced. Additional exterior lighting needs to be added – some on building walls and some on poles. Additional exit signs and egress lighting needs to be installed. All exit signs and egress lighting shall have battery backup with self-diagnostic system.

Fire Alarm

The fire alarm system should be upgraded to meet current codes using the existing Notifier control panel

Security

Security system needs to be upgraded to latest GCS criteria.

Data/Communications

The wiring system should be updated to current GCS criteria. The main data rack MDF needs to be secured. The IDS locations need to be secured.

The intercom system is outdated, but appears to operate satisfactorily. Suggest system be updated to a VoIP based system.

Sound Systems

Provide new sound system in Multipurpose area. This system shall be ADA compliant.

End of Assessment



CHERRYVILLE ELEMENTARY
700 East Academy Street | Cherryville, NC



YATES ■ CHREITZBERG ■ HUGHES

A S S E S S M E N T

CHERRYVILLE ELEMENTARY

Cherryville Elementary School

Existing Condition Assessment

PART 1: General Narrative of Facility

- 1. **Survey Date:** September 2014
- 2. **School Address:** 700 East Academy St. Cherryville, NC
- 3. **Total Building Area:** 58,129 square feet
- 4. **Total Site Area:** 17 acres
- 5. **Instructional Capacity:** 518 students
- 6. **Enrollment 2014-2015:** 422 students
- 7. **Current Utilization:** 81%
- 8. **Area per Student Enrolled:** 112 sf / student

9. Building Size and Dates of Construction:

Building A: 1956 (27,435 sf)	Building B: 1963 (5,159 sf)
Building C: 1975 (12,176 sf)	Building D: 1996 (11,409 sf)

10. General Description of Facility:

The original school was constructed in 1956, with three subsequent additions for various Classrooms, Media Center and Dining Room expansion. The majority of the facility consists of load bearing masonry walls with steel bar joist roof structure and low sloped roofing. Exterior walls consist of brick veneer and significant windows in the older classroom areas, with more moderate windows in the newest classroom wing. The facility consists of one attached building and does not require exterior access between wings.

The site contains shared staff and visitor parking and a bus drive. Car rider pick up and drop off occurs on East Academy Street at the front of the school. Play areas consist of various playgrounds and one multipurpose field.

The school is utilized for Pre-Kindergarten through 3rd Grade only.

Part 2: General Space Standards

11. General Purpose Classrooms

Room Description	No. of Rooms	Typical Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
Pre-Kindergarten	1	960 sf	1,200 sf	80%	Fair
Kindergarten	5	960 sf	1,200 sf	80%	Fair
1st Grade	5	1,015 sf	1,000 sf	101%	Excellent
2nd Grade	5	1,000 sf	1,000 sf	100%	Excellent
3rd Grade	5	820 sf	1,000 sf	82%	Fair
4th Grade	Not provided at this school				N / A
5th Grade	Not provided at this school				N / A

Comments: The general purpose classrooms are arranged into 3 areas, which are connected by an interior corridor, except between Buildings B and D, where access is on the exterior through a courtyard. Overall, the classrooms vary significantly in size, depending on the area of the building in which they are located.

All of the classrooms contain smart boards, wireless technology and at least four hardwired computer drops.

- The Pre-Kindergarten and Kindergarten classrooms are significantly smaller than space standards. Each contains toilet room and hand wash sink within the classrooms, but only the Pre-K is handicap accessible. Each of the classrooms contain doors to the exterior. The classrooms also contain outdated casework with countertop sinks, which is not consistent with GCS standards.
- All of the 1st and three of the 2nd Grade classrooms are located in Building D, the newest building, and meet space standards. Each classroom contains casework of adequate size and layout, including countertop sinks, general storage cabinets, student cubbies and full height teacher storage units.
- Two 2nd Grade classrooms are located in Building B and meet space standards. Each classroom contains a toilet, which is not required by code for 2nd or 3rd Grade and should be removed to make the classrooms larger, or turned into storage. The classrooms also contain outdated casework with countertop sinks, which is not consistent with GCS standards.
- All of the 3rd Grade classrooms are located in Building A, which is the oldest building, and are smaller than the space standards. The classrooms also contain outdated casework with countertop sinks, which is not consistent with GCS standards.

12. Science Classrooms

Science is taught within 4th and 5th Grade classrooms and does not require dedicated Science Rooms or Labs in Elementary Education. This school does not include 4th and 5th Grade education.

13. Exceptional Children Classrooms and AIG / ESL

Room Description	No. of Rooms	Typical Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
EC Resource	2	900 sf (1,800 sf total)	1,200 sf	150%	Excellent
AIG	1	1,000 sf	1,000 sf	100%	Good
ESL	0	0 sf	1,000 sf	0%	Poor

Comments: Both of the EC Resource classrooms are located in Building C, near the Computer, Art and Music rooms. The school does not include an EC Cluster classroom, which the Staff does not currently project a need for. ESL does not have a dedicated classroom and is taught in a small room that is shared with the Media Center. The AIG room is located in the 2nd Grade wing.

One of the EC classrooms is accessed through the other one, and does not have a separate entrance from the corridor, limiting use of the room. One of the classrooms has a door directly to the exterior.

- Each EC classroom contains toilet room, which is not handicap accessible. The classrooms also contain minimal casework, which is not consistent with GCS standards, and should be upgraded.
- EC does not have access to a shower / changing or laundry room, as the school does not contain these anywhere within the building.

14. Arts Education

Room Description	No. of Rooms	Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
Music	1	900 sf	1,000 sf	90%	Good
Art	1	900 sf	1,000 sf	90%	Good

Comments: Music and Art both have dedicated rooms located in Building C, which are close to space standards.

- The Art room is accessed through the Music room, and does not have a separate entrance from the corridor, limiting use of the room. The Art room has a door directly to the exterior.
- Both the Music and Art rooms do not have adequate building in casework, or any dedicated secure storage outside of the room.
- The Art room does not contain a kiln.

15. Career and Technical Education Classrooms / Shops

CTE is not provided Elementary Education, therefore no facilities are necessary.

16. Media Center

Room Description	No. of Rooms	Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
Main Room	1	2,970 sf	2,400 sf	123%	Excellent
Support Areas	Various	760 sf	1,200 sf	63%	Poor

Comments: The Media Center is located centrally within the school and has direct access to an exterior enclosed courtyard. The Main Room is larger than the space standards, however the Support Areas are significantly smaller.

- The Media Center Support spaces are one third smaller than the space standards and does not contain a Conference Room and only a very small Work Room. In addition, the main IT MDF rack is located in the Media Center office, rendering it almost unusable, and should be in a secure, fire rated room with a gaseous fire suppression system. Due to the location within the school, the support areas are very difficult to expand.
- The Media Center does not contain a video production room. However, the small classroom off of the Media Center, which is currently used by Speech, could be used for this if Speech is relocated.
- The Media Center does not contain a meeting room.
- The Media Center does not contain an area for computer / technology instruction.
- The Media Center is located within an area of the school that cannot be secured for after-hours community use.

17. Physical Education

Room Description	Area	Court Size	NCDPI Standard Area	Relation to Standard	Adequacy Rating
Multipurpose / Indoor PE	2,210 sf	28' x 42'	3,600 sf	61%	Poor

Comments: The Multipurpose / PE Room is located adjacent to the main entry doors near the Administration area.

- The Multipurpose room is significantly smaller than GCS / NCDPI standards.
- The room is of irregular shape and does not contain fixed basketball goals. Due to the low ceilings and location of the stage opening, the room is not adequate for basketball or volleyball.
- The Multipurpose room does not contain an elevated stage, however does include a stage opening and curtain.
- The Multipurpose room cannot be utilized for after hours use, since it and the nearby toilets cannot be secured from the rest of the school.

18. Administration

Excellent Good Fair Poor

Comments: The Administration area includes approximately 2,800 square feet, but also contains Health and Guidance spaces directly within the Admin. area. Administration consists of the following rooms: (1) Main Office / Reception / Mail, (1) Principal's Office with Toilet, (1) Assistant Principal's Office, (1)

Secretary's Office, (1) Staff Lounge with two Toilets, (1) Conference Room, (1) Conference / Work Room and (1) Records Storage Room. The Administration area contains fairly adequate space.

- The Administration area is located directly adjacent to main school entry. The school does not contain a secure vestibule for the main entrance. Design of a new secure entry vestibule with access directly into the Reception area is possible within the current layout, however an elevation change between the finished floor of the entry and the office area would require a handicap accessible ramp between the main entry and the Administration area, or the addition of an exterior vestibule with direct access into the Administration area.
- The Administration area is located at the front of the school and had good visibility of the main entry doors and car rider drop off area, but not the visitor parking.
- The Administration offices are separated on each side of a main school corridor, with the Principal's Office and Conference room located across the hall from the main Administration area. The Principal's office should be relocated to be within the main Admin. offices.
- The school does not have a dedicated SRO Office, which should be located near the main school entry and Administration area.
- The Administration area does not contain a dedicated Mail Room. Currently, the staff mail is located in the Administration area and is not secure from the public.
- The Administration area does not contain a dedicated men's and women's Toilet.
- The Administration area does not include a dedicated private Staff Room.
- The Administration area contains a Guidance Office and Nurse / Social Worker office directly within the Admin. area. These spaces should be relocated to separate areas near, but separate from the Administration offices.

19. Student Support

 Excellent

 Good

 Fair

 Poor

Comments: The Student Support Spaces consist of (1) Guidance Office and (1) Office shared by both the School Nurse and Social Worker, both are within the Administration area.

- The current Guidance Office is within the Administration area. Guidance should include 2 dedicated Guidance Counselor offices with a separate entrance and waiting area from the Administration.
- The Social Worker and Nurse share a room with a Toilet in the Administration area. Each should have a dedicated spaces.
- The Health Services area should be near, but separate from the Admin. area and should include a dedicated Nurse's Office, Holding Room, dedicated Toilet, Shower and Changing area and wheelchair storage. The school does not have a washer and dryer which could be shared by Health Services and Exceptional Children.
- The school does not have a School Therapist Office.

20. Staff Support

 Excellent

 Good

 Fair

 Poor

Comments: The Staff Support Spaces consist of (1) Teacher Lounge on the Admin. Corridor, (1) Teacher Lounge near the Media Center and (1) Teacher Work / Planning room in the 1st / 2nd Grade wing.

- The Teacher Lounge should be moved out of the Administration Area.
- The Teacher Lounge near the Media Center is very small and does not contain room for meeting or teaming.

- The Teacher Planning room in the 1st / 2nd Grade wing contains adequate space for meeting and teaming. It also contains 5 built in carrels that are not utilized and should be removed to provide more space within the room.
- Additional Teacher Teaming / Work Rooms should be located in each grouping of classrooms.

21. Cafeteria

Students per Seating *	Dining Room Area	Area per Student	NCDPI Standard Area	Capacity of Dining Room	Relation to Standard
176	2,255 sf	12.8 sf / student	14 sf / student	161	91% Good

* Students per Seating equals the 2014 - 2015 student enrollment for the school divided by 2.5 seatings for continuous serving ($440 / 2.5 = 176$), as recommended by NCDPI Guidelines.

Comments: The Cafeteria was renovated and the Dining Room enlarged from the original building.

- The Cafeteria is close to NCDPI standards, but is of a long and narrow proportion, which limits the efficiency of the area due to circulation for serving and tray return.
- The Cafeteria contains a door to the exterior near the dock area for trash removal.

22. Kitchen

Lunches Served per Day *	Kitchen Area	NCDPI Standard Area	Relation to Standard
396	1,250 sf	1,261 (for 250 to 500 lunches served)	100% Good

* Lunches Served per Day equals the 2014 - 2015 student enrollment for the school times 90% participation factor ($440 \times .90 = 330$). This school experiences an elevated participation rate due to free and reduced lunches.

Comments: The Kitchen meets the NCDPI guidelines of overall area for the number of number of students served, but does not contain some needed spaces, and is in generally poor condition. The serving area is also located within the Kitchen. See the Section 7: Food Service Assessment for additional information.

- The Kitchen contains one serving line, which provides adequate serving capacity for the number of students.
- The Kitchen does not include a secure Manager's Office, as the manager's desk is located in a corner of the kitchen. A dedicated Manager's Office needs to be provided.
- The Kitchen does not include a locker area, which should be provided.
- The Kitchen toilet is very small and not handicap accessible.
- The Kitchen does not have a washer and dryer.
- The loading dock is on grade and contains a wood framed screen enclosure, which should be replaced with a metal canopy. The loading dock contains very little area for deliveries, but is difficult to expand in its current location, due to limited site area on this side of the building.

23. Toilet Facilities

 Excellent

 Good

 Fair

 Poor

- The school only has two group toilets, with none located near the Pre-Kindergarten and Kindergarten classrooms, although group toilets are within 200 feet. Small toilet rooms are provided in each of the classrooms, but most are not handicap accessible and not suitable for use by the whole class as a group. A group toilet should be added in this area, if possible.
- Group toilets are not located near the Cafeteria. However, toilets cannot be added in this area without displacing a classroom.
- The group toilets located near the 3rd Grade classrooms and Multi-purpose Room have been recently upgraded, are in good condition and are also handicap accessible.
- Building D, constructed in 1996, contains group toilets that are in fair condition and handicap accessible.
- Staff are provided with 5 single toilets. One in the Administration area shared with Health Services, two in the Teacher's Lounge near the Admin area, one in the Teacher's Lounge near the Media Center and one near the group toilets in Building D. None of these meet current handicap accessibility and should be upgraded.

24. Other Spaces

- The school has very little general purpose storage. Many electrical rooms are used for storage, which violates code.
- The school currently has one classroom in the 3rd Grade wing (Room 15) which is not currently utilized for a classroom, but for storage and teacher planning.
- The MDF is located in the Media Center Office, which should be converted into a secure, access controlled room with a gaseous fire suppression system. The IDF's are located throughout the school in classrooms and corridors, most of which will be difficult to relocate into secure rooms due to existing data cabling.

25. Additional Considerations

- None at this time

Part 3: School Site

26. Parking Excellent Good Fair Poor

Description	Current Number of Spaces	Number of Spaces Needed	Relation to Number of Spaces Needed
Staff (West)	15	70 Staff (60 employees plus 10 transient)	+9
Staff (East)	64		
Total Staff	79		
Visitor	9	25	- 16
Bus	0	0	Not Required

Comments: Parking on the school site is very poor, with Visitor parking located in the bus drive area and Staff parking located a long distance from the school. Most of the asphalt paving is in poor condition.

- The west Staff parking area, which is utilized mostly by kitchen and maintenance staff is in very poor condition with significant cracking and potholes, and needs replacing.

- 9 striped Visitor spaces are located directly in the bus drop off area and should be relocated due to safety concerns.
- The east Staff parking area contains an adequate number of spaces, but is located a long distance from any of the school entries and does not provide any handicap accessibility. The asphalt paving is mostly in fair condition.
- All of the parking areas should be redesigned to be more efficient, handicap accessible and located closer to the school.

27. Vehicular Circulation Excellent Good Fair Poor

Comments: Vehicular Circulation on the school site is very poor, with car rider drop off / pick up occurring along a public street, and not on site. All of the drives are located on East Academy Street and are not separated by proper distances, causing many back-ups.

- The school does not contain an on-site car rider drop off / pick up drive. This occurs at the front on the site East Academy Street, which is a significant safety concern. Stacking occurs within the street and requires extensive supervision and traffic management by the Staff. An area of car rider drop off / pick up with adequate stacking should be provided on site.
- The bus drive asphalt paving is in poor condition and should be replaced. Visitor parking spaces are located in the bus drive area, which is a safety concern and should be relocated. The bus drive, and the Staff parking area should be redesigned to provide dedicated car and bus drives with adequate stacking.
- The asphalt service drive to the east side of the school is in very poor condition with significant cracking and potholes. The loading dock and trash areas are of asphalt in very poor condition also. This whole area should be replaced, with the loading dock and trash being concrete.

28. Pedestrian Circulation Excellent Good Fair Poor

Comments: The pedestrian circulation on the school site is generally poor, with inadequate sidewalks and poor condition of the existing concrete walks.

- The site includes a concrete sidewalks along East Academy Street, which is in very poor condition and in need of replacement.
- The sidewalks around the building and throughout the site, including within the courtyard site are in generally poor condition, with significant cracking and should be replaced.

29. Walkway Canopies Excellent Good Fair Poor

- The school contains walkway canopies at both the car rider and bus rider areas, which are all in fair condition, but not of substantial construction and should be replaced with more durable systems.

30. Outdoor Play Excellent Good Fair Poor

- The Pre-Kindergarten room has a dedicated, large fenced play area containing both mulch and grass. The fixed play equipment is very limited, but in generally fair condition and also contains moveable plastic equipment also. Both the mulch and grass are in poor condition, with bare spots and need to be replaced.
- Four other playgrounds are located on the site, one of which is accessed by a paved concrete walk for handicap accessibility. However, none of the playgrounds contain handicap accessible equipment, which should be added in at least one area. Each of these playgrounds and equipment

are in generally good condition. However, the mulch and edging in the large playground to the west of the school are in poor condition and need to be replaced.

- Some very large mature trees are located close to all but one of the playgrounds, with limbs overhanging the play area. These trees should be removed for safety reasons to limit the potential of large limbs falling and potentially injuring children and staff.
- The site contains one multipurpose ball field with back stop that is in fair condition. This field is accessed by a concrete walk to the proximity of the backstop. The field and infield are in poor condition, with numerous bare spots.
- The school does not contain a walking track, which could added around the ball field with the clearing of some wooded areas.
- The site contains a hard surface play area with basketball goals. The asphalt surface is in poor condition and both of the goals broken. This area should be replaced.

31. Athletic Facilities

The site does not contain dedicated athletic fields, which are not needed for an Elementary School.

32. Athletic Spectator Areas

The site does not contain dedicated athletic fields or spectator areas, which are not needed for an Elementary School.

33. Grounds / Landscaping Excellent Good Fair Poor

- The perimeter of the site is significantly overgrown on the east, west and south sides and should be trimmed back for safety and security purposes.
- The front of the school site contains several large, mature trees, most of which appear to be in good condition, but are located too close to the building. A very large tree is also located near the main entry / exit between Buildings C and D. These trees should be removed and replaced with new lower growing trees for safety considerations of large limbs or the trees falling on the school and for maintenance concerns of leaves clogging the roof gutters.
- Some very large mature trees overhang all but one of the playgrounds. These trees should be removed for safety reasons to limit the potential of large limbs falling and potentially injuring children and staff, as noted previously in the Outdoor Play section.
- The interior courtyard is significantly overgrown with both trees and shrubs, which should be removed and replaced with lower growing plants.
- Foundation shrubs minimal at intermittent places around the various buildings, most of which are significantly overgrown and should be trimmed, or removed and replaced with lower growing plants.
- The site contains fairly steep banks that have eroded, leaving drainage ditches and tree roots exposed. These banks should be stabilized for safety reasons.

34. Utilities Excellent Good Fair Poor

- The school is served by the City of Gastonia for water and sewer, and has a backflow preventer for domestic water, which is reported to be in working condition.
- The school does not have a grease interceptor on the sanitary sewer line for the kitchen, which should be added by code. The sewer line serving Buildings A, B and C is reported to be terra cotta and in poor condition, and should be replaced with PVC.
- Only two fire hydrants are located in the general area of the school, across the road on Academy Street. These hydrants do not provide adequate coverage of the school. More fire hydrants should be added on the school site to provide adequate coverage.

- Overhead power lines run from across Academy Street to serve the building, and presents a safety concern. Further investigations with the service provider should occur about relocating these power lines across the street or burying underground.
- The school is served by natural gas, which is metered separately for the kitchen and the buildings.
- An abandoned underground oil storage tank is located near the front of the building and should be removed.

35. Storm Drainage Excellent Good Fair Poor

- The site does not have a stormwater management pond, which is not required by the municipality unless additional impervious area is added.
- The site contains no underground storm drainage, other than for the roof downspouts and within the courtyard. The majority of the water sheet flows across both paved and grassed areas.
- None of the paved parking areas contain underground storm drainage, and show evidence of significant areas of ponding in several areas. Underground storm drainage should be added to all paved areas if replaced or redesigned.
- Most of the downspouts throughout the school are connected directly to the underground stormwater piping system, which is assumed to run to daylight. This connection should be made indirect, with the downspouts spilling above grade into catch basins to prevent clogging.

36. Emergency Access Excellent Good Fair Poor

- The site does not have a paved road, or any other type of vehicular access around most of the building. The paved drives and parking areas only offer access to the main building entries / exits at the front of the school.
- An emergency access drive to the south cannot be added due to grades and limited site for play areas.

37. Site Security Excellent Good Fair Poor

- The site is located in a predominately residential area, with a Pharmacy directly across the street. The Principal and school SRO Officer indicated that the surrounding areas do not typically include significant crime and vandalism at the school is rare.
- The site contains chain link fencing around the perimeter, many areas of which are damaged and should be replaced. In addition, wooded areas have significantly overgrown the fencing and should be cut back.
- Only the front portion of the school can be seen from a public road or parking area. Most of the school perimeter does not have vehicular access for police patrol.
- The stairs down to the basement level Boiler Room are not secured. A security fence around the area well and gate should be added for safety and security.

38. Additional Considerations

- Directional signage on the school site is poor and should be replaced.
- All of the exterior steel handrails and guardrails need painting.

Part 4: Building Envelope

39. Construction Type Non-Combustible Combustible

40. Structural Floors

Material: Concrete Slab on Grade
 Concrete on Metal Deck over Steel Structure
 Wood Deck on Wood Joists
 Other

Evidence of Structural Concerns: Prevalent Isolated None Visible

Overall Condition of Structural Floors: Excellent Good Fair Poor

Comments: The structural floors consist predominately of concrete slab on grade, with an area of elevated concrete slabs over a mechanical room below Building B.

- Concrete floors generally appear to be in good condition with no major cracks telegraphing through the floor coverings, except in Building B as noted below.
- An area of Building B appears to have terrazzo flooring applied over an access panel in the floor, which has caused the terrazzo to crack. This access panel should be removed and infilled with concrete on metal deck.

41. Exterior Walls / Cladding

Material: Masonry EIFS / Stucco Metal Other

Evidence of Structural Cracking: Prevalent Isolated None Visible

Evidence of Concern with Exterior Cladding:

Cracks / Gaps	<input type="checkbox"/> Prevalent	<input type="checkbox"/> Isolated	<input checked="" type="checkbox"/> None Visible
Efflorescence (Masonry)	<input type="checkbox"/> Prevalent	<input checked="" type="checkbox"/> Isolated	<input type="checkbox"/> None Visible
Moisture Penetration	<input type="checkbox"/> Prevalent	<input checked="" type="checkbox"/> Isolated	<input type="checkbox"/> None Visible
Rot/Decay/Corrosion	<input type="checkbox"/> Prevalent	<input checked="" type="checkbox"/> Isolated	<input type="checkbox"/> None Visible

Overall Condition of Exterior Walls: Excellent Good Fair Poor

Comments: The exterior walls of the older Buildings A, B and C appear to consist of multi wythe brick construction that most likely does not include insulation, an air space or flashing. The Building D consists of brick veneer with CMU backup, and an air space.

- The brick veneer appears to be in generally fair condition, with isolated areas of concern noted below.
- One area of biological growth is evident on the exterior brick in the corner of the kitchen where the walk in freezer is located. This is most likely due to the vapor transmission through the brick due to temperature differential from interior to exterior, and should be addressed with additional insulation when replacing the freezer.
- Building C contains a type of gravel veneer panels over the window recesses, which appear to be deteriorating. These panels should all be replaced with a more durable material, such as metal panels.
- Building C contains a thru wall drain on the south side of the building which is flush with the brick and causing significant water stains. The origin of this drain is not known, but may be a condensate line, and should be piped down the wall to grade.

- The brick veneer below of the concrete patio in Building C is significantly water stained, especially at areas of the overhead canopy drains. This is also causing deterioration of the mortar joints, which should be repaired.
- Buildings A and B contain exterior hard coat stucco soffits with areas of deterioration, and should be replaced. These soffits are suspected to contain asbestos, although they have not yet been tested.

42. Exterior Glazing

Frame Material: Aluminum Steel Wood Other
 Glazing Material: Un-insulated Insulated Glass Block
 Evidence of Concern with Exterior Glazing:
 Moisture Penetration Prevalent Isolated None Visible
 Rot/Decay/Corrosion Prevalent Isolated None Visible
 Overall Condition of Exterior Glazing: Excellent Good Fair Poor

Comments: Due to the differing ages of the various building wings, the condition of the exterior glazing systems varies substantially, but the majority of glazing is in poor condition.

- The exterior glazing in most areas of the older Buildings A, B and C consists of 1/4" un-insulated glass in a thermally continuous steel framing system, which is very energy inefficient and past its useful life. In addition, this glass appear to standard plate glass, which presents a safety concern as it is easily broken. All of this glazing should be replaced with insulating glass in a thermally broken aluminum storefront framing system to be more energy efficient and provide better thermal control of the classrooms in particular. The glass should be safety tempered in areas required by code. Some areas could be infilled with insulated metal panels or solid wall instead of glass to reduce the amount of glazing, particularly in classrooms.
- The glazing in the Cafeteria, front of the Administration area and Building D consists of insulating glass in an aluminum framing system and ins in good condition.

43. Exterior Entry / Exit Doors

Door Material: Aluminum Steel Wood Other
 Evidence of Concern with Entry / Exit Doors:
 Moisture Penetration Prevalent Isolated None Visible
 Rot/Decay/Corrosion Prevalent Isolated None Visible
 Other None at this time
 Overall Condition Doors: Excellent Good Fair Poor
 Overall Condition of Hardware: Excellent Good Fair Poor

Comments: Due to the differing ages of the various building wings, the condition of the entry / exit doors varies substantially, but the majority of doors are in poor condition. None of the exterior doors include access control hardware, which should be added for security.

- Most of the entry / exit doors in most areas of the older Buildings A, B and C appear to be original and are in poor condition, do not have code compliant panic devices and have no access control for security. These doors should be replaced to include code compliant door hardware and access control for security.
- The entry / exit doors in Building D are in good condition, but contain too much glass for security concerns and do not have access control hardware. These doors should be replaced.

- The main front entry doors should have secure access control with buzz-in and security camera tied into the Administration area reception desk.

44. Exterior Classroom Doors

Door Material: Aluminum Steel Wood Other

Evidence of Concern with Classroom Doors:

Moisture Penetration	<input type="checkbox"/> Prevalent	<input checked="" type="checkbox"/> Isolated	<input type="checkbox"/> None Visible
Rot/Decay/Corrosion	<input type="checkbox"/> Prevalent	<input checked="" type="checkbox"/> Isolated	<input type="checkbox"/> None Visible
Other	None at this time		

Overall Condition of Doors: Excellent Good Fair Poor

Overall Condition of Hardware: Excellent Good Fair Poor

Comments: All classrooms in Building A have doors that open to the exterior, which include Pre-K and Kindergarten.

- The exterior classroom doors are wood with several coats of paint and knob style hardware. These should all be replaced with insulated hollow metal doors and lever style hardware with new locks.

45. Roofing

An independent roof assessment was performed for Gaston County Schools by Roof Engineering, Inc. (REI) in 2006. The report indicates the following needs regarding the replacement of roofs:

- Building A: Asphalt Built-up Replace in 2010 (Classrooms, Admin. area)
- Building A: Asphalt Built-up Replace in 2019 (Multi-purpose Room)
- Building B: Asphalt Built-up Replace in 2010
- Building C: Asphalt Built-up Replace in 2010 (Classrooms)
- Building C: Asphalt Built-up Replace in 2019 (Media Center)
- Building D: Asphalt Built-up Replace in 2019

46. Additional Considerations

- One of the downspouts on the south side of Building B has separated and should be replaced.

Part 5: Building Interior

47. Interior Walls

Overall Condition of Walls: Excellent Good Fair Poor

Comments: The majority of interior walls are painted CMU or brick and are in fair condition. The classroom demising walls in Building D are drywall and in good condition. The paint also appears to be in generally fair condition.

48. Floor Finishes

Classrooms	Flooring Type: VCT (Pre-K and Kindergarten classrooms)
	Condition: <input type="checkbox"/> Excellent <input checked="" type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> Poor
Classrooms	Flooring Type: Carpet (1st - 3rd Grade classrooms, EC, AIG, Art Music, Computer)
	Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor

Corridors	Flooring Type: Terrazzo (Buildings A, B and C) Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Corridors	Flooring Type: VCT (Building D) Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Cafeteria	Flooring Type: VCT Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor
Multipurpose Room	Flooring Type: Wood Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Media Center	Flooring Type: Carpet Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor
Administration	Flooring Type: Carpet Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor

Comments: The majority of interior floor finishes are in poor condition, except for the terrazzo flooring in most of the corridors and the VCT in the newer Building D. Many classrooms contain carpet.

- All of the classrooms in Buildings A, B and C, except Pre-K and Kindergarten, are mostly carpet, which is in poor condition and should be replaced with VCT.
- Vinyl asbestos tile (VAT) is located beneath the carpet in the 3rd Grade classroom wing and should be abated when the carpet is replaced with VCT.
- The carpet in the Media Center is in poor condition and should be replaced.
- The wood floor in the Multipurpose Room is in fair condition. An curved area of VCT is located near the entry doors that is worn and should be replaced.
- The VCT flooring in the Cafeteria is in poor condition and contains areas of patches with several different colors of tile, and should be replaced. Two layers of vinyl asbestos tile (VAT) are located beneath the carpet and should be abated when the VCT is replaced.
- The Epoxy flooring in the Kitchen is worn and should be replaced.
- The carpet in the Administration area is in generally poor condition, with areas of significant wear in high traffic areas and should be replaced.

49. Ceilings

Lay-in	Locations: Building C, Building D, Multi-purpose and Admin area Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Plaster	Locations: Building A, Building B Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Drywall	Locations: Toilets Condition: <input type="checkbox"/> Excellent <input checked="" type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> Poor

Comments:

- The ceilings in Buildings A and B are a type of textured plaster coating applied to a sheathing material attached directly to the underside of the roof joists. These continuous plaster coated ceilings do not offer any access to the plenum space and all light fixtures, conduit, piping, etc. are surface mounted. These ceilings should be removed and replaced with 2x2 lay-in, for better acoustics, reflectivity, installation of new light fixtures and concealment of conduit and piping.
- Building C contains 2x2 lay-in ceilings, which are in good condition.
- The Multipurpose room contains a 2x4 lay-in ceiling, which is in fair condition, but is not high enough for basketball play.
- Group toilets contain both washable lay-in and drywall ceilings, which are in good condition.

- The Kitchen contains 2x4 lay-in ceilings that are not washable and in poor condition, and need to be replaced.

50. Casework

Classrooms	Casework Type: Wood and Plastic Laminate Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor
Media Center	Casework Type: Wood and Plastic Laminate Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Administration	Casework Type: Wood and Plastic Laminate Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor

Comments: The majority of the casework in the school is inadequate and in poor condition.

- Most of the classrooms, except those in Building D, contain inadequate and dated wood cabinets and counters of various configurations, and no student cubbies. Casework in all of these classrooms needs to be replaced with a standard configuration, including student cubbies, a lockable teacher storage unit and countertop sinks.
- The casework in Building D is of adequate size and layout, including student cubbies, full height teacher storage units and countertop sinks. This casework is in generally good condition.
- The Art room does not contain adequate built in casework for storage of materials.
- The Media Center and Media Support rooms contain a variety of very dated casework, which is inadequate.
- The Administration area contains fairly adequate casework, and the main reception counter is also handicap accessible.

51. Interior Doors

Overall Condition Doors:	<input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor
Overall Condition of Hardware:	<input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor

Comments: Due to the differing ages of the various building wings, the condition of the interior doors and hardware varies substantially, but the majority are in poor condition.

- The interior doors and hardware in most areas of the older Buildings A, B, and C appear to be original and do not have code compliant lever style hardware, although the Administration area has been renovated and contains newer doors and hardware. These original doors should be replaced, and the classroom doors should also include lockdown hardware.
- The interior doors and hardware in Building D are in generally good condition and have lever style hardware, but should be upgraded with lockdown hardware in classrooms for security purposes.
- The pairs of doors in the Cafeteria and Multipurpose Room all open outwards directly into the main corridor, reducing the exit width and causing safety concerns. These doors should all be pocketed.

52. Additional Considerations

- Most of the window blinds, except those in Building D, and at the front of the Administration area are in poor condition and in need of replacement.

Part 6: Handicap Accessibility

53. Exterior Handicap Accessibility

Accessible Parking:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor
Accessible Route to Building(s):	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor
Accessible Entrances / Egress:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input checked="" type="checkbox"/> Fair	<input type="checkbox"/> Poor
Accessible Routes between Buildings:	N / A (no exterior access between buildings required)			
Accessible Play Areas:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input checked="" type="checkbox"/> Fair	<input type="checkbox"/> Poor

Comments: The overall exterior handicap accessibility for the school is poor, with most parking and several entrances / egresses from the building not being accessible.

- The site does not contain any designated accessible parking spaces. Neither the main parking or staff parking lot contain any handicap spaces, or an accessible route to the building, which should be added.
- The exterior exit between Building A and Building C, and both of the exterior exits from Building B contain stairs to the exterior. Accessible ramps should be added at all exterior exits that only contain stairs.
- The exterior exit from Building D is accessible, but does not include an accessible path to a safe zone away from the building due to the existing grades.
- One of the playgrounds has a concrete sidewalk for handicap access. This walk also provides access to the multipurpose field.

54. Interior Handicap Accessibility

Accessible Routes:	<input type="checkbox"/> Excellent	<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Fair	<input type="checkbox"/> Poor
Accessible Doors and Hardware:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input checked="" type="checkbox"/> Fair	<input type="checkbox"/> Poor
Accessible Signage:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input checked="" type="checkbox"/> Fair	<input type="checkbox"/> Poor

Comments: The interior of the school is on three different finished floor levels.

- The school contains 3 interior ramps, which include a 1:12 rise/run, meeting code, and are full width of the corridors. These ramps connect each of the building wings, except as noted below.
- The route directly between Building B and D is through an exterior enclosed courtyard that contains stairs. However, an alternate accessible route is available through the main interior corridor. An accessible ramp should be added to provide a continuous interior accessible route.
- The majority of classroom doors in the school are 3'-0" wide. However, most of the doors in Buildings A, B and C have knob style hardware, and should be replaced with code compliant levers.
- The Administration area reception counter and the Media Center circulation counter are both handicap accessible.
- Most of the signage in Buildings A, B and C does not meet current accessibility requirements and should be replaced.

55. Toilet Rooms Accessibility

Accessible Classroom Toilets:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor
Accessible Group Toilets:	<input type="checkbox"/> Excellent	<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Fair	<input type="checkbox"/> Poor
Accessible Staff Toilets:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor

Comments: The handicap accessibility of the student group toilets is generally good, as both group toilets are handicap accessible. Most of the classroom and Staff toilets are not handicap accessible.

- The Pre-K classroom contains a handicap accessible toilet room. The Kindergarten classrooms include toilet rooms within each of the classrooms, none of which are handicap accessible and should be enlarged.
- Both of the EC Resource classrooms include toilet rooms, neither of which are accessible and should be enlarged.
- Both of the group toilets are handicap accessible.
- The school contains a total of 5 Staff toilets, none of which are handicap accessible. Accessible Staff toilets should be provide in each classroom wing.
- The Principal has a private toilet the office, which is not handicap accessible and difficult to expand in the current location.
- The Administration area shares a Toilet with Health Services, which is not handicap accessible. The Administration area should contain dedicated accessible toilets for men and women.

Part 7: Food Service

56. Observations and Recommendations

Storage:

- Cold Storage Assembly cooler and freezer door needs to be replaced. The Manufacturer is no longer in business, and the freezer has galvanized metal floor panels which are not NSF compliant. Wall panels are worn and damaged.
- While the outdoor compressors appear to be working order, it is advised to replace the refrigeration systems for these compartments to insure conforming to current CFC regulations.
- Receiving door should be provided with an air-curtain fan.
- Lockable cabinet needs to be added for proper separation of chemicals from dry food storage.

Food Preparation:

- 2-Compartment sink in good condition. Direct waste to be converted to indirect waste and run to floor sink per code requirements.
- Ice Machine is in good working condition.
- Painted Galvanized legs and under shelves for all worktables are in good condition.
- Add second hand sink.

Cooking:

- The double stack Convection oven is in good repair.
- Need to add a convection steamer.
- The 40 gallon braising pan is very old and larger than needed with the addition of a new steamer. Advise replacing this with a new 30 gallon model.
- Six-burner range is in good condition, but should be reduced to an 18" wide hot top model to make room for the needed steamer.
- Exhaust hood is in good condition, and is adequate in size.
- The outdated dry chemical hood fire system is to be replaced with a wet chemical system.

Dishwash:

- Existing dish wash tables, and the dishwasher are in fair condition. The dishwasher is not currently being used. The dishwasher exhaust ducts are not connected, and there is no condensate hood above the dishwasher. It is advised to connect the dishwasher vent ducts to properly balanced exhaust ductwork to allow the use of the dishwasher for food pan sanitizing.

- 3-Compartment sink in good condition. Direct waste to be converted to indirect waste and run to floor sink per code requirements. Add hand sink in wash area.

Serving:

- Replace Milk Box.
- Serving counter is in good condition. The tray slides are set higher than typical for use by elementary school students. It is suggested to lower the tray slides on the student side to conform to current SC guidelines.

Auxiliary Spaces:

- Floor has epoxy finish, which appears to be in good condition.
- Plumbing section to address code requirements for grease traps.

Part 8: Plumbing Systems

57. Observations

Roof drainage is largely a gutter and downspout system. Some flat roof areas with parapet walls have internal roof drainage without any emergency overflows or scuppers installed.

A backflow preventer is installed on the incoming domestic water service.

Hot water is not available at some of the private toilet rooms. It was noted that some of the hot water systems do not have a recirculation loop installed, significantly delaying the arrival of hot water at the fixtures and wasting water in the process.

Gas service is provided to the kitchen appliances, water heaters, heating boiler, and rooftop mechanical units. Gas service to the kitchen is metered independently from the rest of the building.

Water coolers are non-compliant with current code for accessibility.

An emergency eyewash station has been installed in Boiler Rm, 325. The eyewash is dangerously close to wall mounted electrical disconnects.

Piping:

- Copper water supply piping installed inside, some exposed and uninsulated. Galvanized water supply pipe installed outside.
- Shut-off valves on the domestic water supply to the gang toilets are not accessible in their current location.
- Gas piping on the roof shows advanced signs of corrosion.

Fixtures:

- Restrooms have flush valve type water closets and urinals, and lavatory fixtures. Restrooms appeared to have proper ventilation, floor drains, installed fixture heights, and hose bibbs for housekeeping and priming the floor drain trap.

Water Heaters:

- A 199 MBH gas fired storage type unit provides 140°F hot water to the kitchen. Other miscellaneous water heaters (gas fired and electric) were observed at point-of-use areas.

- Hot water is not provided to all fixtures at this time.

Kitchen:

- No grease interceptor installed.
- Sanitary waste from 2- and 3- compartment sinks were observed to be direct connections with no air gaps.

58. Recommendations

- Install a grease interceptor outside of building in an accessible location.
- Provide hot water to fixtures excluding Pre-K rooms
- Insulate all domestic cold and hot water piping.
- Install recirculating loop on hot water systems.
- Provide emergency roof overflow drains or scuppers.
- Replace water coolers
- Remove eyewash station from boiler room
- Relocate domestic water shutoff valves so they can be accessed
- Replace gas piping on the roof
- Install indirect waste connections as required by code
- Install funnels or floor sinks at locations where piping terminates at a drain.

Part 9: HVAC Systems

59. Observations

School administration and maintenance personnel reported concerns with temperature control in the Administration area and Teacher's lounge. High humidity has been an ongoing issue, particularly in the Media center where mold was found. Individual dehumidifiers have been installed in classrooms and media center.

Central Plant Cooling: There is not a central cooling plant. Systems are unique to the portion of the building that they serve.

Central Plant Heating: There is not a central heating plant. Systems are unique to the portion of the building that they serve.

Building "A" Administration Area is served by two split system DX AHUs. It would appear that some of the temperature control problems are related to zoning and improper thermostat locations. (For example, the unit serving the exterior offices also serves a conference room. The thermostat is located in the conference room. The teacher's lounge contains two packaged terminal air conditioners and a ductless split system, all with their own thermostat). The Workroom was warm and did not have any supply or return air. It was reported that fire dampers in these systems continue to trip, restricting airflow until maintenance can address.

Building "A" Auditorium and Cafeteria areas are served by packaged rooftop units with gas heat.

Building "A" and Building "B" classrooms are served by a dedicated outside air system and split system heat pump ventilators.

Building “C” classrooms are served by split system ceiling mounted split system dx cooling with roof condensing units. Outside air is introduced at each indoor unit. Heating is electric strip heat. Building “C” media room is served by a packaged RTU installed approximately 4 years ago. The unit is believed to be oversized for the space served. As-built drawings did not reflect this unit and nameplate data could not be found to verify capacity.

Building “D” classrooms are served by a split system dx unit ventilators and hot water heat. Hot water for the wing is generated by a 405 MBH gas fired boiler.

Corridors throughout the building are not cooled. A few “heating only” fan coil units are located near the exit doors.

Distribution Systems:

- Ductwork is constructed of galvanized metal.
- Several Janitors closets had no exhaust air.
- HW piping material is copper. Piping is wrapped with fiberglass insulation.

Controls:

- Unit ventilators are controlled by individual wall thermostats. Many of the units serving classrooms have large cooling capacities with no part load control. Therefore, units are likely cycling off when there is not a call for cooling before they have time to remove the moisture from the space.

Kitchen:

- A standalone 3-ton DX unit with local supply discharge plenum provides conditioned air to the food preparation areas. Two existing overhead unit ventilators have been taken out of service.
- Two roof mounted upblast exhaust fans are installed serving the grease hood. Grease cups are not installed on the fans. Nameplate and UL listing could not be found.
- No direct makeup air is provided for the kitchen hood or dishwasher exhaust. It is assumed that it is provided from the outside air connected to the Cafeteria.
- Toilet room does not have exhaust air.
- Dishwasher is not directly tied into any exhaust ductwork.
- Abandoned steam piping and radiators were observed in the kitchen and dry storage areas.
- A combustion air source could not be found for the water heater serving the kitchen.

60. Recommendations:

- Provide a building automation system utilizing direct digital controls.
- Review makeup air source for the kitchen. Provide direct makeup air at the grease hood as required.
- Replace kitchen grease hood exhaust fans
- Provide a new exhaust fan and associated ductwork for the kitchen dishwasher.
- Add supply air ductwork to Kitchen AHU to more evenly distribute air throughout the space.
- Introduce exhaust air to all janitor’s closets and toilet rooms. Provide an unobstructed path for transfer air if makeup is taken from an adjacent space.
- Re-zone and relocate thermostats in Administration area.
- Place the IT rack in media room office in a separate closet with dedicated cooling.
- Verify building air balance, especially on exhaust systems. Replace or clean exhaust grilles. Confirm building is appropriately pressurized.

- Route the RTU condensate drains to nearest roof drain or gutter. Drains currently terminate beside the RTU causing water to pond on the roof.
- Condensing unit above the kitchen loading dock is within 3' of the roof edge. Either relocate unit or provide fall protection.
- Determine cooling capacity of RTU serving the Media room and compare against system load. Consider replacing RTU if capacity is too large, providing capacity modulation for part load control or adding hot gas bypass and reheat to the system. Verify outside air quantity through a TAB company. Ensure the building envelope has not been compromised allowing unconditioned outside air to infiltrate the building.
- Evaluate unit ventilator cooling capacity and controls in Building D. Most every room contained a portable dehumidifier. Retro commission the dedicated outside air units.
- Provide combustion air openings in the room where the kitchen water heater is located.

Part 10: Fire Protection

61. Observations

- Sprinkler system installed (Y/N) - N
- System type? Wet, dry, preaction, etc.? – N/A
- Full or Partial Coverage? – N/A
- Standpipes installed (Y/N) - N
- Fire Pump installed (Y/N) – N

62. Recommendations

- Provide a full coverage sprinkler system in accordance with the NC Fire Code and NFPA Standard 13.

Part 11: Electrical, Fire Alarm, Security and Communications Systems

63. Observations

Service Entrance

This facility is fed by one (1) pad-mounted transformer furnished by the City of Gastonia. There is one (1) building service from this transformer. It is located on the exterior wall of Building “B” and is designated “MDP.” It is a 1200-ampere NEMA 3R panelboard rated 208GrY120 volts. It has a 1200-ampere main circuit breaker. This board feeds all buildings.

The capacities of the services appear to be adequate, but some refinement of the labeling on Panel “MDP” should be done.

Distribution

The power distribution consists of distribution panelboards and lighting panelboards fed by copper wire in conduit. The main service equipment and some of the distribution and lighting panelboards are well within their life expectancy. There are still some original panelboards that are in poor condition and should be replaced. Replacement circuit breakers for these panelboards may not be available, and the existing breakers may not be providing the protection necessary. There are some panelboards (actually loadcenters) that have been “tacked” on as new circuits have been needed. These need to be replaced with proper panelboards.

Panelboard labeling, including panelboard directories, is not up to date in some cases. Quantities of duplex receptacles in some areas are insufficient. In some cases, there are standard duplex receptacles too near sinks, which should have GFI protection. Additional receptacle circuits may be needed.

Grounding

Proper grounding is one of the most important factors in an electrical system. Not only is it essential for safety, it is also required for proper operation of electronic equipment. The grounding systems in the older portions of the facility are in question. The original building uses the metal conduit system to distribute grounding throughout the facility. This was legal at the time the building was constructed, but not now. The problem is that the underground conduits installed at that time were galvanized steel, which could have deteriorated in the nearly 50 years since the original facility was constructed, which could result in an increase in ground resistance, or loss of grounding entirely. An earth grounding study needs to be made and corrective measures taken.

The NEC (National Electric Code) requires a minimum ground resistance of 25 ohms. For electronic systems (data rooms, computers, etc.) a minimum ground resistance of 5 ohms is needed.

Lighting

Some of the fluorescent lighting in the project consists of T12 lamps and magnetic ballasts. DPI recommends T8 lamps and electronic ballasts as a minimum, but suggests T5 and LED as alternates. The latest additions have T8 lamps and electronic ballasts and some corridor and toilet lighting has been upgraded. The exterior lighting is insufficient and in poor condition in most areas. Exit signs and egress lighting do not meet current codes. Some of the exit signs are not lighted.

Lighting levels are, in most cases, below the levels recommended by DPI. In some instances, General classroom lighting varies from 22 to 25 footcandles on the task areas, DPI recommends 50 footcandles for task areas. These levels are recommended, not required. The lighting levels in the Kitchen appear to be in accordance with North Carolina Department of Health which requires 50 footcandles minimum in areas where food is handled, prepared and served, and where utensils are washed.

Emergency Power

Emergency power is supplied by unit battery devices, but as mentioned above, some exit signs are not lighted. There is no standby generator. A standby generator should be installed to comply with GCS standards.

Fire Alarm

The existing fire alarm system has a FireLite AFP-100 addressable control panel. This is current model, but should be updated. Although the layout of devices in some areas have been updated, much of the layout and distribution of alarm initiating and notification devices does not meet current codes and ADA requirements.

Security

The security system does not meet current Gaston County School guidelines. No access card readers on exterior doors. Video surveillance needs to be upgraded per GCS guidelines. Facility has 32 cameras installed and a control system capable of 32 cameras. Some upgrade of the Video Surveillance system should be made.

Data/Communications

The data system currently does not meet GCS criteria. The MDF is not dedicated and in secure locations. The MDF is located in a Office in Building C. There is no standby generator to supply data and security power needs.

Sound Systems

The sound system used in the Multi-Purpose are appears to be adequate.

Concerns

It was noted in several areas where panels are located that materials, furniture, etc. have been stored too close to the equipment. This is both illegal and dangerous. The National Electrical Code requires a minimum of 36 inches clear in front of these items. We feel that this issue should be addressed as soon as possible.

64. Recommendations**Service Entrance**

Panel “MDP” needs to be labeled and the brush cleaned from around it.

Distribution

All original panels and panels by manufacturers that are no longer in business should be replaced. All equipment should be properly labeled, including directories showing loads for all circuits. All electrical panelboards need to be scanned with an infrared scanner to be sure that there are no “hot” spots, which can indicate that there is an overload, faulty device or connection. Based on the scanning results, corrections need to be made.

Lighting

Most lighting in the original building (except where recently updated) should be replaced. Additional exterior lighting needs to be added – some on building walls and some on poles. New exterior lighting should be LED with protective enclosures without the use of polycarbonate lenses. Additional exit signs and egress lighting needs to be installed. All exit signs and egress lighting shall have battery backup with self-diagnostic system.

Fire Alarm

The fire alarm system should be upgraded to meet current codes using the existing FireLite control panel

Security

Security system needs to be upgraded to latest GCS criteria. A building access system needs to be installed, as well as a Mass Notification System.

Data/Communications

The wiring system should be updated to current GCS criteria. The main data rack MDF needs to be secured and connected to a standby generator.

Sound Systems

The intercom system is outdated, but appears to operate satisfactorily. Suggest system be updated to a VoIP based system.

End of Assessment



COSTNER ELEMENTARY
353 Old 277 Loop | Dallas, NC



YATES ■ CHREITZBERG ■ HUGHES

A S S E S S M E N T

COSTNER ELEMENTARY

Costner Elementary School

Existing Condition Assessment

PART 1: General Narrative of Facility

- 1. **Survey Date:** September 2014
- 2. **School Address:** 353 Old 277 Loop Road, Dallas, NC
- 3. **Total Building Area:** 56,929 square feet
- 4. **Total Site Area:** 11.54 acres
- 5. **Instructional Capacity:** 489 students
- 6. **Enrollment 2014-2015:** 565 students
- 7. **Current Utilization:** 116%
- 8. **Area per Student Enrolled:** 116 sf / student

9. Building Size and Dates of Construction:

Building A: 1965 (18,458 sf) Building B: 1974 (4,782 sf) Building C: 1987 (10,442)
Building D: 1987 (5,352 sf) Building E: 2000 (17,895 sf)

10. General Description of Facility:

The original school was constructed in 1965, with four subsequent additions for various Classrooms, Media Center, Multipurpose room and Dining room expansion. The majority of the facility consists of load bearing masonry walls with steel bar joist roof structure and low sloped roofing. Exterior walls consist of brick veneer and significant windows in the older classroom areas, with more moderate windows in the newest classroom wing. The facility consists of 2 detached buildings, which require exterior access between them.

The site contains shared staff and visitor parking, separate bus and car rider drives, and no bus parking area. Play areas consist of various playgrounds and one multipurpose field.

The school currently has 4 mobile units on site, two of which are used for 3rd Grade classrooms and two that are used for storage.

Part 2: General Space Standards

11. General Purpose Classrooms

Room Description	No. of Rooms	Typical Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
Pre-Kindergarten	1	780 sf	1,200 sf	65%	Poor
Kindergarten	4	1,240 sf	1,200 sf	103%	Excellent
1st Grade (100, 102)	2	1,020 sf	1,000 sf	102%	Excellent
1st Grade (105, 107)	2	780 sf	1,000 sf	78%	Poor
2nd Grade	5	810 - 880 sf	1,000 sf	81% - 88%	Fair
3rd Grade	3	810 - 880 sf	1,000 sf	81% - 88%	Fair
3rd Grade	2	Located in Mobile Units			Poor
4th Grade	4	870 sf	1,000 sf	87%	Fair
5th Grade	4	870 sf	1,000 sf	87%	Fair

Comments: The general purpose classrooms are arranged into 4 areas, one of which is a free standing detached building for one half of 3rd Grade and all of 4th and 5th Grade classrooms, and requires exterior access. Overall, the classrooms vary significantly in size, depending on the area of the building in which they are located. Two of the Third Grade classes are located in mobile units due to capacity constraints. All of the classrooms contain smart boards, wireless technology and at least four hardwired computer drops.

- The Pre-Kindergarten and two of the 1st Grade classrooms are significantly smaller than GCS / NCDPI standards and contain small alcove areas where minimal casework with countertop sinks are located, which is not consistent with GCS standards. This wing also contains three shared group toilet rooms, none of which are handicap accessible and are accessed from alcoves shared with the classroom entries, not from the classrooms themselves. These group toilets should be removed and replaced with individual toilet rooms in each of the classrooms so that the smaller classroom sizes can be increased to approximately 930 square feet and adequate casework added. Each of the Pre-Kindergarten and the 1st Grade classrooms contain doors to the exterior.
- Kindergarten classrooms are all slightly larger than the standards and each contains a handicap accessible toilet room, with a hand wash sink located inside the toilet room. Each classroom contains casework of adequate size and layout, including countertop sinks, general storage cabinets, student cubbies and full height teacher storage units. Both of the exterior exits from the Kindergarten rooms contain stairs to the exterior and are not handicap accessible.
- All of the 2nd Grade and one 3rd Grade classrooms are located in Building A, which is the oldest building, and are smaller than the standards. Each classroom contains a toilet, which is not required for 2nd or 3rd Grade and should be removed to make the classrooms larger, or turned into storage. The classrooms also contain outdated casework with countertop sinks, which is not consistent with GCS standards.
- Two of the 3rd Grade classrooms are located in mobile units, and are desired to be eliminated by GCS, which requires the addition of at least two classrooms due to capacity constraints. All of the 3rd Grade classrooms should be located together, if possible.

- Two of the 3rd Grade, and all of 4th and 5th Grade classrooms are located in Building E, the newest building. Each classroom contains casework of adequate size and layout, including countertop sinks, general storage cabinets, student cubbies and full height teacher storage units.

12. Science Classrooms

Science is taught within 4th and 5th Grade classrooms and does not require dedicated Science Rooms or Labs in Elementary Education. Both 4th and 5th Grade classrooms contain casework with a countertop sink, and are generally adequate for science instruction.

13. Exceptional Children Classrooms and AIG / ESL

Room Description	No. of Rooms	Typical Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
EC Resource (203)	1	875 sf	1,200 sf	73%	Poor
EC Resource (205)	1	350 sf	1,200 sf	30%	Poor
AIG	1	305 sf	30 sf	100%	Poor
ESL	0	0 sf	1,000 sf	0%	Poor

Comments: Both of the EC Resource classrooms are located in the Kindergarten wing. The school does not include an EC Cluster classroom, which the Staff does not currently project a need for. AIG utilizes a small conference room located in the Media Center. ESL does not have a dedicated classroom and shares a the AIG room, or other small rooms within the school.

- EC Resource classroom 203 does not contain a toilet, and is not located near handicap accessible group toilets. The room is used by two EC teachers and is divided in half by low, moveable book cases. This room was previously utilized as the Art classroom and contains a small kiln room.
- EC Resource classroom 205 is very small and only able to accommodate 3 to 4 students, and only serves as a small group break out room. This room contains a handicap accessible toilet.
- EC does not have access to a shower / changing or laundry room, as the school does not contain these anywhere within the building.
- AIG does not have a dedicated room and utilizes a small conference room in the Media Center, and should have a dedicated classroom.
- ESL does not have a dedicated room and shares the AIG room, or other small rooms within the school, and should have a dedicated classroom.

14. Arts Education

Room Description	No. of Rooms	Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
Music	1	650 sf	1,000 sf	65%	Poor
Art	1	790 sf	1,000 sf	79%	Poor

Comments: Music utilizes the stage of the multi-purpose room for instruction, which is one third smaller than GCS / NCDPI standards. The Art room is located in the Pre-K / First Grade classroom wing.

- The school does not contain a dedicated Music classroom, but utilizes the stage in the multi-purpose room, which is not of adequate size or acoustically appropriate for music instruction. The stage contains an accordion style folding wall which does not offer acoustical separation from the multi-purpose room.
- The school does not contain a dedicated Music storage room. When the stage is to be used for assemblies or performances, the music equipment must be stored in a small storage room off of the stage, which is not adequate.
- The Art room is a former standard Kindergarten / 1st Grade classroom and is significantly smaller than GCS / NCDPI standards. This room does not contain adequate built in casework or storage for art instruction. The location of the Art room should also be more central to all of the classrooms to limit disruption to the lower grades, and should be relocated to its original location (which is currently an EC Resource Room) near the cafeteria. The Art kiln is located in the EC Resource Room, which was previously utilized as the Art room.

15. Career and Technical Education Classrooms / Shops

CTE is not provided Elementary Education, therefore no facilities are necessary.

16. Media Center

Room Description	No. of Rooms	Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
Main Room	1	2,680 sf	2,400 sf	111%	Excellent
Support Areas	Various	1,600 sf	1,200 sf	133%	Excellent

Comments: The Media Center is located in Building E, the newest building. The Main Room and Support Areas are both larger than the space standards.

- Some of the Media Center Support areas are currently being utilized or shared for other functions. The small classroom is used by AIG and ESL, and the Office / Conference Room is used for the Assistant Principal's office. These should all be provided with dedicated rooms, so that these rooms could be utilized by the Media Center as originally designed. Additionally, the Assistant Principal should be moved to an Office in the Administration area, so this room can be used for Teacher Teaming or a Conference Room.
- The Media Center does not contain a video production room. However, the small classroom off of the Media Center, which is currently shared with AIG and ESL, could be used for this.
- The Media Center is located within an area of the school that could be secured for after-hours community use, however is not located near a parking area.

17. Physical Education

Room Description	Area	Court Size	NCDPI Standard Area	Relation to Standard	Adequacy Rating
Multipurpose / Indoor PE	3,800 sf	(2) 30' x 50'	3,600 sf	105%	Excellent

Comments: The Multipurpose / PE Building is free standing and connected to the classroom wing with an enclosed interior corridor.

- The Multipurpose room contains an elevated stage, which is handicap accessible via a vestibule from the corridor, but not directly from the MP room.
- The stage is also used for Music instruction. The stage contains an accordion style folding wall which does not offer acoustical separation from the multi-purpose room for Music instruction. When the stage is to be used for assemblies or performances, the music equipment must be moved and stored in a small Storage room, which is not of adequate size for music instrument / equipment storage.
- The room contains two basketball courts, which are approximately 30 feet by 50 feet and not of any regulation size. Due to the location of the stage, the room is not currently able to be configured with a regulation size basketball court.
- The Multipurpose Building includes doors directly to the exterior, and doors at the end of the corridor that can be locked to secure it from the rest of the school for after hours use. However, it does not have toilets within close proximity for after hours use.

18. Administration Excellent Good Fair Poor

Comments: The Administration area includes approximately 985 square feet and consists of the following rooms: (1) Main Office / Reception / Mail, (1) Secretary's Office with Toilet, (1) Principal's Office with Toilet, and (1) small Storage room. The Administration area is very limited in space, but is difficult to expand in its current position without displacing other functions or providing a building addition.

- The Administration area is located near, but not directly adjacent to main school entry. The school does not contain a secure vestibule for the main entrance into the Administration area. Design of a new secure entry vestibule with access directly into the Reception area is not possible within the current layout, without relocating the group Toilets adjacent to the main entry doors.
- Due to its location on the interior of the school, the Administration area does not have visibility of the main entry doors, visitor parking or student drop off areas. Only the Principal's Office has any exterior visibility of the front of the school and student drop off areas.
- The Assistant Principal's Office is located in a separate building, adjacent to the Media Center and should be moved to the Administration area.
- The school does not have a dedicated SRO Office, which should be located near the main school entry and Administration area.
- The Administration area does not include a dedicated Conference Room.
- The Administration area does not include a private Staff Room.
- The Administration area does not contain a dedicated Work / Mail Room. Currently, the copier and staff mail are located in the Reception area. The mail is not secure from the public.
- The Administration area does not contain a secure records storage room and only one small storage closet, which is not adequate.
- The main IT MDF rack is located in the open within the Administration area should be in a secure, fire rated room with a gaseous fire suppression system.
- The Administration area does not contain a dedicated men's and women's Toilet.
- Both the Principal and Secretary Offices contain private Toilet Rooms, which are very small and not handicap accessible.

19. Student Support Excellent Good Fair Poor

Comments: The Student Support Spaces consist of (1) Guidance Office and (1) Office shared by both the School Nurse and Social Worker.

- The current Guidance Office is located near the Cafeteria and should be located nearer the Administration area, and include 2 dedicated Guidance Counselor offices with a separate waiting area.
- The Social Worker and Nurse share a very small office in Pre-K / 1st Grade classroom wing. Each should have dedicated spaces located closer to the Administration area.
- Health Services should include a Nurse's Office, Holding Room, dedicated Toilet, Shower and Changing area and wheelchair storage, located near the Administration area.
- The school does not have a washer and dryer which could be shared by Health Services and Exceptional Children.
- The school does not have a School Therapist Office.

20. Staff Support Excellent Good Fair Poor

Comments: The Staff Support Spaces consist of (1) Teacher Lounge in the Kindergarten wing and (1) Work Room shared with the Media Center.

- The Teacher Lounge contains only break room casework and does not include enough space for meeting or teaming.
- Additional Teacher Teaming / Work Rooms should be located in each grouping of classrooms.

21. Cafeteria

Students per Seating *	Dining Room Area	Area per Student	NCDPI Standard Area	Capacity of Dining Room	Relation to Standard
231	2,575 sf	11 sf / student	14 sf / student	184	80% Fair

* Students per Seating equals the 2014 - 2015 student enrollment for the school divided by 2.5 seatings for continuous serving (578 / 2.5 = 231), as recommended by NCDPI Guidelines.

Comments: The Cafeteria was renovated and the Dining Room enlarged in 1999.

- The Cafeteria is 20% smaller than NCDPI standards, and is also of a long and narrow proportion, which limits the efficiency of the area due to circulation for serving and tray return.
- The Cafeteria contains exterior doors that lead to the loading dock / trash area, but are not able to be used for trash removal, due to exterior stairs down to grade. Trash removal must occur through the kitchen.

22. Kitchen

Lunches Served per Day *	Kitchen Area	NCDPI Standard Area	Relation to Standard
520	1,350 sf	1,518 (for 500 - 750 lunches served)	88% Fair

* Lunches Served per Day equals the 2014 - 2015 student enrollment for the school times 75% participation factor (578 x .90 = 540). This school experiences an elevated participation rate due to free and reduced lunches.

Comments: The Kitchen is close to the NCDPI guidelines of overall area for the number of students served, but does not contain some needed spaces, and is in generally poor condition. The serving area

is also located within the Kitchen. See the Section 7: Food Service Assessment for additional information.

- The Kitchen only contains one serving line, which exceeds the serving capacity for the number of students, requiring extended lunch hours to serve students. A second serving line is very difficult to add within the existing space, due to space limitations.
- The Kitchen does not include a secure Manager's Office, as the manager's desk is located in a small room in the kitchen without a door. A dedicated Manager's Office needs to be provided.
- The Kitchen does not include a dedicated toilet. However, handicap accessible staff toilets are located nearby, outside of the Dining Room.
- The Kitchen does not have a washer and dryer.
- The loading dock is elevated, does not contain a handicap accessible ramp and is too small to access the trash dumpster. The dock and canopy above should be enlarged and include a ramp.

23. Toilet Facilities

 Excellent

 Good

 Fair

 Poor

- Pre-K and 1st classrooms do not contain toilets within the classrooms, but include three shared group toilet rooms that are accessed from alcoves shared with the classroom entries and not from the classrooms themselves. None of these group toilets are handicap accessible. These should be removed and replaced with individual toilet rooms in each of the classrooms, since group toilets are located within 200 feet of these classrooms.
- The group toilets which serve 1st, 2nd and 3rd Grade are located directly adjacent to Administration area and the main front entry doors, which is a poor location for access and circulation. Either this toilet or the main entry doors should be relocated. These toilets are in poor condition and do not contain handicap accessible stalls. However, the rooms are of sufficient overall size that stalls can be replaced with handicap accessible partitions and fixtures.
- Group toilets are located adjacent to the Cafeteria, but are not handicap accessible or large enough to serve an adequate number of students, and should be enlarged.
- Building E contains both group and staff toilets that are handicap accessible.
- The school contains 6 Staff toilets located throughout the school, with single watercloset and lavatory. 5 of these Staff toilets are handicap accessible and in good condition. Only the toilet in the Staff Lounge is not accessible and has not been previously renovated.

24. Other Spaces

- The school has very little general purpose storage. Many electrical rooms are used for storage, which violates code.
- The MDF is located in the open Administration area, and should be in a secure, access controlled room with a gaseous fire suppression system. The IDF's are located throughout the school in classrooms and corridors, most of which will be difficult to relocate into secure rooms due to existing data cabling.

25. Additional Considerations

- None at this time.

Part 3: School Site

26. Parking Excellent Good Fair Poor

Description	Current Number of Spaces	Number of Spaces Needed	Relation to Number of Spaces Needed
Staff / Visitor (West)	51	70 Staff (60 employees plus 10 transient)	-9
Staff (East)	<u>35</u>	<u>25 Visitor</u>	
Total Staff / Visitor	86	95 total	
Bus	0	0	Not Required

Comments: Parking on the school site is fair, with close to the total number of parking spaces needed and some separation of most of the parking and pick up /drop off stacking lanes.

- The northwest parking area contains 22 parking spaces, which are used by both Staff and Visitors. These spaces are located along the car rider stacking drive, which presents safety concerns and also makes these spaces unusable when the bus / car rider line is stacked. The asphalt is in poor condition with cracking and patches and should be replaced.
- The asphalt paving in both the east Staff parking areas is in fair condition, with isolated cracking and does not currently warrant replacing.
- The asphalt paving in the east parking area is in poor condition with cracking, and should be replaced.

27. Vehicular Circulation Excellent Good Fair Poor

Comments: Vehicular Circulation on the school site is generally fair, with stacking for cars and busses, separation of bus and car rider lanes. However, all of the drives are located along Old 277 Loop Road, which is very narrow and in poor condition. Further investigations with the City should occur about improvements and widening of Old 277 Loop Road near the school.

- The car rider drive wraps around the west and north side of the school and offers adequate stacking for most days. The asphalt paving is in poor condition to the northwest and in front of the school, and should be replaced.
- The bus drive is located to the northeast side of the school and offers adequate stacking for most days. The asphalt paving is in poor condition and should be replaced.
- A guardrail should be installed at the front of the school where Thornburg Road intersects Old 277 Loop Road for safety reasons. In the past, cars have travelled through the intersection and dangerously close to the school building. This is also where the car rider pick up and drop off is located.
- The kitchen does not have a dedicated service drive and is accessed from the bus drive. The concrete drive at the kitchen loading dock and trash area is in poor condition and in need of replacement.

28. Pedestrian Circulation Excellent Good Fair Poor

Comments: The pedestrian circulation on the school site is fair, with adequate sidewalks which are mostly in fair condition.

- The concrete sidewalks throughout the site are in generally fair condition, except as noted below.

- The concrete walk to the ball field is in poor condition, with significant cracking and should be replaced.
- Two of the entries to the south of Buildings A and B contain stairs to the exterior with one or two steps each, accessible ramps should be added.
- Two of the exterior doors of the Multipurpose room contain stairs to the exterior, accessible ramps should be added.
- Two of the exterior doors of the Cafeteria contain stairs to the exterior, accessible ramps should be added.

29. Walkway Canopies Excellent Good Fair Poor

- The school contains several walkway canopies, which adequately connect the various buildings and are also located along the car rider and bus drop off / pick up areas. The majority of these canopies are narrow, approximately 5 feet wide, and do not offer significant protection from the rain. However, they are mostly of substantial construction and in good condition and do not warrant replacement because of the narrow width.
- Two sections of walkway canopies leading to the main school entry and also the bus rider entry near the cafeteria are older, show evidence of leaking on the adjacent brick walls and need to be replaced.

30. Outdoor Play Excellent Good Fair Poor

- The Pre-Kindergarten room has a dedicated, large fenced play area containing both mulch and grass. The fixed play equipment is very limited, but in generally fair condition and also contains moveable plastic equipment also. The brick well house is located in this area and should be removed, if no longer needed to provide better visibility and security of this area.
- Two other playgrounds are located on the site, one of which is accessed by a paved concrete walk for handicap accessibility. However, none of the playground equipment is handicap accessible. Both of these playgrounds and equipment are in generally good condition.
- None of the playgrounds contain handicap accessible equipment, which should be added in at least one area.
- Some very large mature trees are located close to one of the playgrounds, with limbs overhanging the play area. This playground should be relocated, or the trees removed for safety reasons to limit the potential of large limbs falling and potentially injuring children and staff.
- The site contains one multipurpose ball field with back stop that is in fair condition. This field is accessed by a concrete walk which has stairs, but no handicap ramp which should be added for accessibility. The field and infield are in poor condition, with several bare spots.
- The walking track around the multipurpose field is very narrow of dirt / gravel and not paved. This walking track should be widened and paved.
- The site does not contain a dedicated hard surface play area, which should be added.

31. Athletic Facilities

The site does not contain dedicated athletic fields, which are not needed for an Elementary School.

32. Athletic Spectator Areas

The site does not contain dedicated athletic fields or spectator areas, which are not needed for an Elementary School.

33. Landscaping Excellent Good Fair Poor

- The site contains several large, mature trees, most of which appear to be in good condition and have been trimmed recently, but are located too close to the building. However, the mature trees located near the office area at the front of the school and the Bradford Pear trees located near the Cafeteria should be removed and replaced with new lower growing trees for safety considerations, of large limbs or the trees falling on the school during weather events and for maintenance concerns of leaves clogging the roof gutters.
- Some very large mature trees overhang one of the playgrounds. This playground should be relocated, or the trees removed for safety reasons to limit the potential of large limbs falling and potentially injuring children and staff, as noted previously in the Outdoor Play section.
- Foundation shrubs are located along the front of the building and at intermittent places around the other sides of the various buildings. Landscaping is maintained in generally good condition, but isolated areas of the foundation shrubs are becoming overgrown and should be trimmed, or removed and replaced with lower growing plants.

34. Utilities Excellent Good Fair Poor

- The school is served by the City of Gastonia for water and sewer, and has a backflow preventer for domestic water, which is reported to be in working condition.
- The school has a 500 gallon grease interceptor on the sanitary sewer line from the kitchen. The sanitary sewer is reported to be PVC and in good condition.
- Only two fire hydrants are located in the general area of the school, across the street on NC 277 Loop Road. These hydrants do not provide adequate coverage of the school. More fire hydrants should be added on the school site to provide adequate coverage.
- Overhead power lines run along the front of the school, on the school property very close to the building and also directly parallel to the main car rider drop off lane, and presents a safety concern. Further investigations with the service provider should occur about relocating these power lines across the street or burying underground.
- The school is served by natural gas, which is metered separately for the kitchen and the buildings.
- An abandoned underground oil storage tank is located near the front of the building and should be removed.

35. Storm Drainage Excellent Good Fair Poor

- The site does not have a stormwater management pond, which is not required by the municipality unless additional impervious area is added.
- The west Staff / Visitor parking has underground storm drainage, with no significant evidence of ponding water.
- The downspouts on Building E are connected directly to the underground stormwater piping system. This connection should be made indirect, with the downspouts spilling above grade into catch basins to prevent clogging.
- Downspouts from the other buildings spill directly on to grade. Catch basins should be added where possible to direct the roof drainage to an underground storm drainage system to prevent water from ponding next to the buildings.
- The bus drive and Staff parking pavement sheet flows to a low area, which drains into an intermittent drainage ditch along the east side of the property. A flume with rip-rap should be installed to better control this stormwater runoff.
- The site contains an open ditch running through the site near the ball field, which is a safety concern, especially in an elementary school. This ditch should be converted to underground piping with yard inlets where possible.

36. Emergency Access Excellent Good Fair Poor

- The site has paved emergency access around the north, east and west sides via parking areas and drives, which provide access to most of the main building entries / exits.
- An emergency access drive to the north cannot be added due to grades and limited site for play areas.

37. Site Security Excellent Good Fair Poor

- The site is located in a predominately rural residential area, with some small industrial development including a self storage and metal roofing businesses located nearby to the West. The Principal and school SRO Officer indicated that the surrounding areas do not typically include significant crime and vandalism at the school is rare.
- A house is located very close to the school the West. The Principal indicates that the current owners are amicable with the school.
- The site contains chain link fencing around the perimeter, many areas of which are damaged and should be replaced. In addition, wooded areas have significantly overgrown the fencing and should be cut back.
- The north, east and west sides of the building and site have good visibility from public roads and parking areas. The south side does not have any vehicular access for police patrol.

38. Additional Considerations

- None at this time.

Part 4: Building Envelope

39. Construction Type Non-Combustible Combustible

40. Structural Floors

Material: Concrete Slab on Grade
 Concrete on Metal Deck over Steel Structure
 Wood Deck on Wood Joists
 Other

Evidence of Structural Concerns: Prevalent Isolated None Visible

Overall Condition of Structural Floors: Excellent Good Fair Poor

Comments: The structural floors consist of concrete slab on grade in all areas.

- Concrete floors generally appear to be in good condition with no major cracks telegraphing through the floor coverings, except in Building E as noted below.
- One crack in the VCT was observed in the main corridor of Building E near the media center. The crack does not involve an elevation change on either side, and may be an expansion joint in the concrete slab which has widened.
- In an area of the AIG room, the concrete slab appears to have settled about 1/4" below the rubber wall base. However, the floor feels solid and no significant structural cracks in the adjacent walls are visible.

41. Exterior Walls / Cladding

Material: Masonry EIFS / Stucco Metal Other

Evidence of Structural Cracking: Prevalent Isolated None Visible

Evidence of Concern with Exterior Cladding:

Cracks / Gaps	<input type="checkbox"/> Prevalent	<input type="checkbox"/> Isolated	<input checked="" type="checkbox"/> None Visible
Efflorescence (Masonry)	<input type="checkbox"/> Prevalent	<input checked="" type="checkbox"/> Isolated	<input type="checkbox"/> None Visible
Moisture Penetration	<input type="checkbox"/> Prevalent	<input checked="" type="checkbox"/> Isolated	<input type="checkbox"/> None Visible
Rot/Decay/Corrosion	<input type="checkbox"/> Prevalent	<input checked="" type="checkbox"/> Isolated	<input type="checkbox"/> None Visible

Overall Condition of Exterior Walls: Excellent Good Fair Poor

Comments: The exterior walls of the older Buildings A, B and C appear to consist of multi wythe brick construction that most likely does not include insulation an air space or flashing. The newer Buildings D and E consist of brick veneer with CMU backup, insulation and an air space.

- The brick veneer appears to be in generally good condition, with some areas of efflorescence on the older Buildings A and B, which may be a result of moisture within the wall due to the lack of an air space.
- Buildings A and B contain a type of panel over some door and window recesses, which appear to be deteriorating and leaching onto the brick below in some places. These panels should all be replaced with a more durable material.
- Building B contains exterior hard coat stucco soffits with areas of deterioration, and should be replaced. These soffits are suspected to contain asbestos, although they have not yet been tested.

42. Exterior Glazing

Frame Material: Aluminum Steel Wood Other

Glazing Material: Un-insulated Insulated Glass Block

Evidence of Concern with Exterior Glazing:

Moisture Penetration	<input type="checkbox"/> Prevalent	<input checked="" type="checkbox"/> Isolated	<input type="checkbox"/> None Visible
Rot/Decay/Corrosion	<input type="checkbox"/> Prevalent	<input checked="" type="checkbox"/> Isolated	<input type="checkbox"/> None Visible

Overall Condition of Exterior Glazing: Excellent Good Fair Poor

Comments: Due to the differing ages of the various building wings, the condition of the exterior glazing systems varies substantially, but the majority of glazing is in poor condition.

- The exterior glazing in most areas of the older Buildings A, B and C consists of 1/4" un-insulated glass in a thermally continuous steel framing system, which is very energy inefficient and past its useful life. In addition, this glass appear to standard plate glass, which presents a safety concern as it is easily broken. All of this glazing should be replaced with insulating glass in a thermally broken aluminum storefront framing system to be more energy efficient and provide better thermal control of the classrooms in particular. The glass should be safety tempered in areas required by code. Some areas could be infilled with insulated metal panels or solid wall instead of glass to reduce the amount of glazing, particularly in classrooms.
- The glazing in Building D is insulating glass, but in a hollow metal system, which are both 27 years old. This system should be replaced with new insulating glass in a storefront system also.
- The glazing in Building E consists insulating glass in an aluminum framing system and is in good condition.

43. Exterior Entry / Exit Doors

Door Material: Aluminum Steel Wood Other

Evidence of Concern with Entry / Exit Doors:

Moisture Penetration	<input type="checkbox"/> Prevalent	<input checked="" type="checkbox"/> Isolated	<input type="checkbox"/> None Visible
Rot/Decay/Corrosion	<input type="checkbox"/> Prevalent	<input checked="" type="checkbox"/> Isolated	<input type="checkbox"/> None Visible
Other	None at this time		

Overall Condition Doors: Excellent Good Fair Poor

Overall Condition of Hardware: Excellent Good Fair Poor

Comments: Due to the differing ages of the various building wings, the condition of the entry / exit doors varies substantially, but the majority of doors are in poor condition. None of the exterior doors include access control hardware, which should be added for security.

- Most of the entry / exit doors in the older Buildings A, B and C appear to be original and are in poor condition, do not have code compliant panic devices and have no access control for security. These doors should be replaced to include code compliant door hardware and access control for security.
- The main exterior doors in the cafeteria are in good condition, but do not have access control hardware, which should be added for security.
- The entry / exit doors in Building D are in fair condition, but are almost 27 years old and do not have access control hardware. These doors should be replaced.
- The entry / exit doors in Building E are in good condition, but contain too much glass for security concerns and do not have access control hardware. These doors should be replaced.

44. Exterior Classroom Doors

Door Material: Aluminum Steel Wood Other

Evidence of Concern with Classroom Doors:

Moisture Penetration	<input type="checkbox"/> Prevalent	<input checked="" type="checkbox"/> Isolated	<input type="checkbox"/> None Visible
Rot/Decay/Corrosion	<input type="checkbox"/> Prevalent	<input checked="" type="checkbox"/> Isolated	<input type="checkbox"/> None Visible
Other	None at this time		

Overall Condition of Doors: Excellent Good Fair Poor

Overall Condition of Hardware: Excellent Good Fair Poor

Comments: All classrooms in Building C have doors that open to the exterior, which include Pre-Kindergarten and 1st Grade. The Kindergarten classrooms in Building A also contain doors directly to the exterior.

- The exterior classroom doors are wood with several coats of paint and knob style hardware. These should all be replaced with insulated hollow metal doors and lever style hardware with new locks.
- Some moisture penetration is evident in the First Grade classrooms at the front of the school, due to exterior concrete pads which do not slope away from the doors.

45. Roofing

An independent roof assessment was performed for Gaston County Schools by Roof Engineering, Inc. (REI) in 2006. The report indicates the following needs regarding the replacement of roofs:

- | | |
|--------------------------------|-------------------------------------|
| • Building A: Asphalt Built-up | Replace in 2013 (Kindergarten area) |
| • Building A: Asphalt Built-up | Replace in 2020 (2nd Grade area) |
| • Building B: Asphalt Built-up | Replace in 2024 |

- Building C: Asphalt Built-up Replace in 2013
- Building D: Asphalt Built-up Replace in 2024
- Building E: Asphalt Built-up Replace in 2020

46. Additional Considerations

- Remove existing brick chimney, which is not used anymore, for safety reasons.

Part 5: Building Interior

47. Interior Walls

Overall Condition of Walls: Excellent Good Fair Poor

Comments: The majority of interior walls are painted CMU or brick and are in fair condition. The classroom demising walls in Building E are drywall and are also in good condition. However, most of the Pre-K and 1st Grade classrooms contain demising walls of panels, which do not offer adequate acoustical separation, and also limit the amount of wall mounted casework and electrical / communications outlets within the rooms. These demising walls should all be replaced with fixed walls including sound insulation.

48. Floor Finishes

Classrooms	Flooring Type: VCT (in most classrooms)	Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Classrooms	Flooring Type: Carpet (in Pre-K and 1st Grade classrooms)	Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor
Corridors	Flooring Type: VCT	Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Corridors	Flooring Type: Rubber (in majority of Building A)	Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Cafeteria	Flooring Type: Epoxy	Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor
Multipurpose Room	Flooring Type: Carpet	Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Media Center	Flooring Type: Carpet	Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Administration	Flooring Type: Carpet	Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor

Comments: The majority of interior floor finishes are VCT and in fair condition, but nearing the end of useful life.

- The Pre-Kindergarten and 1st Grade classrooms are mostly carpet, which is in poor condition and should be replaced with VCT. VAT (Vinyl Asbestos Tile) is located beneath the flooring in many areas of Building C and should be abated when the flooring is replaced.
- Most of the 2nd Grade classrooms and corridor in Building A have newer VCT, which is in good condition.
- The carpet in the Multipurpose room should be replaced with rubber flooring. The carpet on the Stage is in poor condition and should be replaced with VCT.

- The epoxy flooring in the Cafeteria contains areas of patches which are not level and two different kinds of epoxy. The epoxy flooring in the kitchen is significantly worn. The flooring in both of these areas should be replaced.
- The carpet in the Administration area is in generally poor condition, with areas of significant wear in high traffic areas and should be replaced.

49. Ceilings

Lay-in	Locations: Building A, Building B, Building E Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Plaster	Locations: Building A, Building D Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Drywall	Locations: Toilets Condition: <input type="checkbox"/> Excellent <input checked="" type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> Poor
Open Structure	Locations: Building C, Multipurpose Room Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor

Comments:

- Most of the ceilings in Buildings A and B are lay-in and in generally fair condition. The ceiling tile in some areas is showing evidence of bowing in some areas and should be replaced, but the grid is in good condition.
- Classroom 104 contains a textured plaster coating applied to a sheathing material attached directly to the underside of the roof joists, which should be removed and replaced with 2x2 lay-in.
- The ceilings in the classrooms of Building C (Pre-K and 1st Grade) are open structure. 2x2 lay-in ceilings should be installed for better acoustics, reflectivity, installation of new light fixtures, and to prevent dust and dirt build-up of the open structure for housekeeping purposes.
- The Multipurpose room contains an open structure with a fiber plank roof deck, which appears to be in good condition.
- Building E contains 2x2 lay-in ceilings, which are in good condition.

50. Casework

Classrooms	Casework Type: Wood and Plastic Laminate Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Media Center	Casework Type: Wood and Plastic Laminate Condition: <input type="checkbox"/> Excellent <input checked="" type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> Poor
Administration	Casework Type: Wood and Plastic Laminate Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor

Comments: The casework in more than half of the classrooms has been installed in the last 10-15 years and is in fairly good condition.

- The casework in Buildings A and C (Pre-K, 1st and 2nd Grades) is inadequate and dated wood cabinets and counters of various configurations, and no student cubbies. Casework in all of these classrooms needs to be replaced with a standard configuration, including student cubbies, a lockable teacher storage unit and countertop sinks.
- The casework in Building E and the Kindergarten classrooms is of adequate size and layout, including student cubbies, full height teacher storage units and countertop sinks. This casework is in generally good condition.
- The Art room does not contain adequate built in casework for storage of materials.

- The Media Center and Media Support spaces contain adequate casework, which is in good condition.
- The Administration area contains inadequate and dated casework, which needs to be replaced. The main reception counter is not handicap accessible.

51. Interior Doors

Overall Condition Doors: Excellent Good Fair Poor
 Overall Condition of Hardware: Excellent Good Fair Poor

Comments: Due to the differing ages of the various building wings and subsequent renovations, the condition of the interior doors and hardware varies substantially, but the majority are in poor condition.

- The interior doors and hardware in some areas of the older Buildings A, B, C and D appear to be original, do not have code compliant lever style hardware and are in poor condition. Several areas of Building A and B have been renovated and contain newer doors and hardware in fairly good condition. These original doors should be replaced, and the classroom doors should also include lockdown hardware.
- The interior doors and hardware in Building E are in generally good condition, but should be upgraded with lockdown hardware in classrooms for security.

52. Additional Considerations

- Most of the window blinds, except those in Building E, are in poor condition and in need of replacement.
- The ramp guardrail in the Corridor near the Multipurpose room does not meet current code for picket / rail spacing and should be replaced.

Part 6: Handicap Accessibility

53. Exterior Handicap Accessibility

Accessible Parking: Excellent Good Fair Poor
 Accessible Route to Building(s): Excellent Good Fair Poor
 Accessible Entrances / Egress: Excellent Good Fair Poor
 Accessible Routes between Buildings: Excellent Good Fair Poor
 Accessible Play Areas: Excellent Good Fair Poor

Comments: The overall exterior handicap accessibility for the school is fair, with most parking and entrances / egresses from the building meeting handicap accessibility requirements.

- The site contains 6 marked accessible parking spaces with loading aisles of correct size and also dispersed throughout the site, which satisfies code. All of these spaces are located a long distance from the main front entry and other accessible entries, but are very difficult to relocate due to site constraints. The parking areas have accessible paths to the building entries, but need to be striped across drive areas.
- Two of the entries to the south of Buildings A and B contain stairs to the exterior with one or two steps each, one of which is utilized by the 4th and 5th grade wing to travel to the Cafeteria. Accessible ramps should be added at all building entries and exits that currently contain stairs.
- Two of the exterior doors of the Multipurpose room contain stairs to the exterior. However, two of the other exits are accessible to the exterior. Accessible ramps should be added at all building entries and exits that currently contain stairs.

- Only one of the 4 cafeteria exits is accessible continuously to the exterior and does not contain exterior stairs. Accessible ramps should be added at the above mentioned building entrance /exit and at the two exit doors directly to the exterior from the Cafeteria.
- Both of the exterior exits from the Kindergarten rooms contain stairs to the exterior. Accessible ramps should be added at these exits.
- One of the playgrounds has a concrete sidewalk for handicap access.
- The concrete walk to the multipurpose field is contains stairs with no handicap ramp, which should be added for accessibility.

54. Interior Handicap Accessibility

Accessible Routes:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input checked="" type="checkbox"/> Fair	<input type="checkbox"/> Poor
Accessible Doors and Hardware:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input checked="" type="checkbox"/> Fair	<input type="checkbox"/> Poor
Accessible Signage:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input checked="" type="checkbox"/> Fair	<input type="checkbox"/> Poor

Comments: The overall interior handicap accessibility for the school is fair.

- The school contains 3 interior ramps, which include a 1:12 rise/run, meeting code. The two ramps in Building A are 36" wide, which is the minimum code width, and also contain an adjacent stair. As these ramps only meet the minimum code widths, they reduce the clear accessible egress by at least half. Both the ramp and stair should be removed and replaced with a full width ramp, so that the clear accessible egress width is not reduced by a stair. This requires reconfiguration of some interior classroom doors.
- One interior corridor in Building A contains only stairs, with no ramp and is not handicap accessible. This is also located just inside the main entrance used by bus riders. This stair should be replaced with a ramp, if possible, which requires reconfiguration of several interior doors.
- The majority of classroom doors in the school are 3'-0" wide. However, most of the doors in Buildings A, B, C and D have knob style hardware, and should be replaced with code compliant levers.
- The Administration area reception counter is not handicap accessible.
- The Media Center circulation counter is handicap accessible.
- Most of the signage in Buildings A, C and D does not meet current accessibility requirements and should be replaced.

55. Toilet Rooms Accessibility

Accessible Classroom Toilets:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor
Accessible Group Toilets:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor
Accessible Staff Toilets:	<input type="checkbox"/> Excellent	<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Fair	<input type="checkbox"/> Poor

Comments: The overall handicap accessibility of student toilet rooms for the school is generally poor. Only the group toilets in Building E and the classroom toilets in Kindergarten classrooms are handicap accessible. Most of the staff toilet rooms were upgraded for handicap accessibility in 2008.

- Pre-K and 1st classrooms include three shared group toilet rooms, none of which are handicap accessible. These should be removed and replaced with accessible individual toilet rooms in each of the classrooms. The Kindergarten classrooms include toilet rooms within each of the classrooms, all of which are handicap accessible and should be enlarged.
- The group toilets located near the main school entry do not contain handicap accessible stalls, but the rooms are of sufficient overall size and should be upgraded to include handicap accessible partitions and fixtures. However, this group toilet is in a poor location, located directly

adjacent the main front entry doors. If the Office area is expanded, as previously noted in Part 2, Item 24: Toilet Facilities, either this toilet or the main entry doors should be relocated.

- The group toilets located near the Cafeteria are not of sufficient size and do not contain handicap accessible stalls. These toilet rooms should be enlarged and made handicap accessible.
- Building E contains both group and 2 Staff toilets that are handicap accessible.
- The school contains a total of 6 Staff toilets located throughout the school, 5 of which are handicap accessible, only the toilet in the Staff Lounge is not accessible.
- The Principal and Secretary both have private toilets within their offices, neither of which are handicap accessible, and are difficult to expand in their current locations.
- The Administration area does not have an accessible toilet room, but one is located in the main hall nearby. The Administration area should contain dedicated accessible toilets for men and women.

Part 7: Food Service

56. Observations and Recommendations

Storage:

- Cold Storage Assembly cooler and freezer needs to be replaced. Cooler floor is collapsing in the center, and the freezer has galvanized metal floor panels which are not NSF compliant.
- While the outdoor compressors appear to be in fairly good condition, it is advised to replace the refrigeration systems for these compartments to insure conforming to current CFC regulations.
- Receiving door should be provided with an air-curtain fan.
- Lockable cabinet needs to be added for proper separation of chemicals from dry food storage.

Food Preparation:

- 2-Compartment sink in good condition. Direct waste to be converted to indirect waste and run to floor sink per code requirements. Clean and replace galvanized legs,
- Ice Machine is in good working condition.
- Painted Galvanized legs and under shelves for all worktables are chipping and should be cleaned and repainted.

Cooking:

- Steamers (2) are in good condition and are recently purchased. They are leaking a significant amount of water onto the floor. These condition needs to be repaired.
- Steamer drain piping is laying on floor. Install stand-offs to secure the drain line above the floor and provide for a proper air gap above the floor receptor.
- The double stack Convection oven is in good repair.
- The existing stainless steel hood is adequate in size. The water wash system is not currently working, and should be repaired as needed to be operable.

Dishwash:

- Provide Proper air gap for indirect drain piping for sink at soiled return table.
- 3-Compartment sink in good condition. Direct waste to be converted to indirect waste and run to floor sink per code requirements. Clean and repaint galvanized legs.
- Add hand sink in wash area.

Serving:

- Replace Milk Box.
- Serving counter has exceeded its expected life span, and has no provision for holding and serving cold food items. Replace the entire counter with new modular serving counters with not less than five hot food wells and a three well cold food pan.
- Serving counters should be mobile with locking wheels to allow for cleaning. Tray slides are to be set at height for elementary school children following SC guidelines.

Auxiliary Spaces:

- Floor has epoxy finish, which appears to be in good condition.
- Plumbing section to address code requirements for grease traps.

Part 8: Plumbing Systems

57. Observations

The building is connected to city water and sewer systems. There is a backflow preventer in an exterior enclosure for the campus (in the general vicinity of the old campus well).

The majority of the plumbing issues stem from waste backups due to undersized piping below grade.

There are several trees along the front side of the building. The leaves from the trees clog the roof drainage system on that side of the building.

Hot water is not provided for the toilet groups adjacent to the cafeteria.

Piping:

- Copper water supply piping is installed for the majority of the building. A portion of area A (basically classrooms 108 through 113) is served by galvanized piping. The piping appears to extend from the well house, with a portion under the connector corridor to the Multipurpose Room.
- There are limited isolation valves in the domestic water system that allow for service of the plumbing fixtures.

Fixtures:

- Restrooms have flush valve type water closets and urinals, and lavatory fixtures. Restrooms appeared to have proper ventilation, floor drains, installed fixture heights, and hose bibbs for housekeeping and priming the floor drain trap.

Water Heaters:

- A tank type electric water heater provides 140F hot water to the kitchen. The heater is rated at 54KW and tank size is 80 gallons nominal. The heater appears to have been installed within the last year.
- Hot water is provided for the classroom sinks in building A by point of use heaters located in the cabinetry. Heaters appear to be 5 gallon.

Kitchen:

- There is a 500 gallon grease trap that serves the kitchen. The capacity of the grease trap should be evaluated as part of any kitchen upgrades.

58. Recommendations

- Replace undersized waste piping in area A/B.
- Replace galvanized water piping with copper.
- Install hot water at toilet group adjacent to cafeteria.
- Install isolation valves at individual toilet groups/building areas.

Part 9: HVAC Systems

59. Observations

School administration and maintenance personnel did not report any significant issues with heating or cooling.

There is an abandoned fuel oil tank below grade in front of the existing building. The tank previously served the campus boiler, which is not in service at this time.

There are several pieces of HVAC equipment that were abandoned in site during previous renovations. The equipment included, but is not limited to, window air conditioning units and temperature control devices (thermostats).

An odor in Area A (near C) was briefly discussed. The owner has investigated this issue before and has not been able to identify. It was suggested by the design team during the visit there is likely an abandoned sewer line in a wall that is open to ambient.

Central Plant Cooling: There is not a central cooling plant. Systems are unique to the portion of the building that they serve.

Central Plant Heating: There is not a central heating plant. Systems are unique to the portion of the building that they serve.

The original building is mainly conditioned on a zone level by unitary equipment, DX cooling with electric heat. Building A is conditioned by packaged roof top units, (12 total 3 or 4 tons nominal) serving both overhead duct systems and concentric supply and return diffusers. The cafeteria is conditioned by a 10 ton packaged roof top unit. The kitchen is conditioned by a 5 ton split system (cooling only). A space mounted electric heater provides heat to the kitchen.

The air conditioning units in area A have economizer capabilities, but that feature has been disabled.

Area C is conditioned by packaged roof top units serving an overhead duct system. There are seven units in total (3 tons each). The air distribution consists of sidewall supply and return diffusers at the interior wall of the classroom. Some discussion was held over the effectiveness of the current distribution system. The units in area C are not on the Allerton BAS system. The units are also horizontal discharge and do not appear to have code compliant ventilation air capabilities.

Multiple ductless split system (3/4 ton Mitsubishi Mr. Slim) provide space conditioning for the office area adjacent to the cafeteria. One of the offices is not conditioned and it was noted that a box fan was located in the space to circulate air from adjoining conditioned areas.

The multipurpose room/stage-class area is conditioned by multiple split systems with the air handling units located above the stage. The units are original to the facility and are difficult to service. Replacement of the unit will require removal of architectural components.

The 2000 addition HVAC system consists of a packaged air cooled chiller and fuel oil fired boiler providing hot and chilled water to a four pipe distribution system. The piping system connects to space mounted (ceiling recessed) unit ventilators and horizontal cabinet fan coils.

Distribution Systems:

- Ductwork is constructed of galvanized metal and is lined (original building).

Controls:

- Controls for the existing structure are provided mainly through an Allerton automation system that is current with GCS guidelines. There are portions of the school that are not established on this system and need to be connected to provide full visibility to the HVAC system.

The 2000 addition is controlled through a pneumatic system with a Barber Colman Network 8000 system overlay.

Kitchen:

- The exhaust fan above the pot sink is not operational.

60. Recommendations

- Install an integrated automation system that provides control for all building systems.
- Replace pot sink exhaust fan.
- The campus does not have any significant issues. Recommendations consist of planning for unit replacement in the immediate future.

Part 10: Fire Protection

61. Observations

- Sprinkler system installed (Y/N) - N
- System type? Wet, dry, preaction, etc.? – N/A
- Full or Partial Coverage? – N/A
- Standpipes installed (Y/N) - N
- Fire Pump installed (Y/N) – N

62. Recommendations

- Provide a full coverage sprinkler system in accordance with the NC Fire Code and NFPA Standard 13.

Part 11: Electrical, Fire Alarm, Security and Communications Systems

63. Observations

Service Entrance

This facility is fed by one (1) pad-mounted transformer furnished by Rutherford Electric Membership Corporation. There are two (2) building services from this transformer. One is located in the

electrical room in Building “A” and is designated “MDP.” It is a 1600-ampere switchboard rated 208GrY120 volts. It is based on the six-division rule. This board feeds all buildings except for Building “E.” A second service entrance panelboard is located in the electrical room in Building “E” and is designated “MDP.” This panel is rated 800-amperes at 208GrY120 volts. It is based on the six-division rule.

An additional separate disconnect was added to the 1600-ampere switchboard in 1975 to feed Building “C” which brings the number of disconnects to six, the maximum permitted by the NEC.

The capacities of the services appear to be adequate, but some refinement of the labeling on the 1600 ampere board should be done.

Distribution

The power distribution consists of distribution panelboards and lighting panelboards fed by copper wire in conduit. The main service equipment and some of the distribution and lighting panelboards are well within their life expectancy. There are still some original panelboards that are in poor condition and should be replaced. Replacement circuit breakers for these panelboards may not be available, and the existing breakers may not be providing the protection necessary. There are some panelboards (actually loadcenters) that have been “tacked” on as new circuits have been needed. These need to be replaced with proper panelboards.

Panelboard labeling, including panelboard directories, is not up to date, some labeling is missing and duplicate panels designations were found. Quantities of duplex receptacles in some areas are insufficient. In some cases, there are standard duplex receptacles too near sinks, which should have GFI protection. Additional receptacle circuits may be needed.

Grounding

Proper grounding is one of the most important factors in an electrical system. Not only is it essential for safety, it is also required for proper operation of electronic equipment. The grounding systems in the older portions of the facility are in question. The original building uses the metal conduit system to distribute grounding throughout the facility. This was legal at the time the building was constructed, but not now. The problem is that the underground conduits installed at that time were galvanized steel, which could have deteriorated in the nearly 50 years since the original facility was constructed, which could result in an increase in ground resistance, or loss of grounding entirely. An earth grounding study needs to be made and corrective measures taken.

The NEC (National Electric Code) requires a minimum ground resistance of 25 ohms. For electronic systems (data rooms, computers, etc.) a minimum ground resistance of 5 ohms is needed.

Lighting

Some of the fluorescent lighting in the project consists of T12 lamps and magnetic ballasts. DPI recommends T8 lamps and electronic ballasts as a minimum, but suggests T5 and LED as alternates. The latest additions have T8 lamps and electronic ballasts and some corridor and toilet lighting has been upgraded. The exterior lighting is insufficient and in poor condition in most areas. Exit signs and egress lighting do not meet current codes. Some of the exit signs are not lighted.

Lighting levels are, in most cases, below the levels recommended by DPI. In some instances, General classroom lighting varies from 22 to 25 footcandles on the task areas, DPI recommends 50 footcandles for task areas. These levels are recommended, not required. The lighting levels in the Kitchen appear to be in accordance with North Carolina Department of Health which requires 50

footcandles minimum in areas where food is handled, prepared and served, and where utensils are washed.

Emergency Power

Emergency power is supplied by unit battery devices, but as mentioned above, some exit signs are not lighted. There is no standby generator.

Fire Alarm

The existing fire alarm system has a FireLite MS-9200 addressable control panel. This is current model, but should be updated. Although the layout of devices in some areas have been updated, much of the layout and distribution of alarm initiating and notification devices does not meet current codes and ADA requirements.

Security

The security system does not meet current Gaston County School guidelines. No access card readers on exterior doors. Video surveillance needs to be upgraded per GCS guidelines. Facility has 16 cameras installed and a control system capable of 32 cameras.

Data/Communications

The data system currently does not meet GCS criteria. The MDF and IDF's are not dedicated and in secure locations. The MDF is located in a Storage Room, the IDF's are located in various non-dedicated and unsecured rooms. Data wiring is run exposed in some cases, with conductors not properly supported and protected. There is no standby generator to supply data and security power needs.

Sound Systems

The sound system used in the Multi-Purpose area appears to be adequate.

Concerns

It was noted in several areas where panels are located that materials, furniture, etc. have been stored too close to the equipment. This is both illegal and dangerous. The National Electrical Code requires a minimum of 36 inches clear in front of these items. We feel that this issue should be addressed as soon as possible.

64. Recommendations

Service Entrance

A SPD system should be installed on Switchboard "MDP" in Building "A." The Panel "MDP" in Building "E" already has a SPD.

Distribution

All original panels and panels by manufacturers that are no longer in business should be replaced. All equipment should be properly labeled, including directories showing loads for all circuits. All electrical panelboards need to be scanned with an infrared scanner to be sure that there are no "hot" spots, which can indicate that there is an overload, faulty device or connection. Based on the scanning results, corrections need to be made.

Lighting

Most lighting in the original building (except where recently updated) should be replaced. Additional exterior lighting needs to be added – some on building walls and some on poles. New exterior lighting should be LED with protective enclosures without the use of polycarbonate lenses.

Additional exit signs and egress lighting needs to be installed. All exit signs and egress lighting shall have battery backup with self-diagnostic system.

Fire Alarm

The fire alarm system should be upgraded to meet current codes using the existing FireLite control panel

Security

Security system needs to be upgraded to latest GCS criteria. Cameras should be increased to 32.

Data/Communications

The wiring system should be updated to current GCS criteria. The main data rack MDF needs to be secured. The IDS locations need to be secured. Backup power from a standby generator should be provided.

Sound Systems

The intercom system is outdated, but appears to operate satisfactorily. Suggest system be updated to a VoIP based system.

End of Assessment



LINGERFELDT ELEMENTARY

1601 Madison Street | Gastonia, NC



YATES ■ CHREITZBERG ■ HUGHES

A S S E S S M E N T

LINGERFELDT ELEMENTARY

Lingerfeldt Elementary School

Existing Condition Assessment

PART 1: General Narrative of Facility

- 1. **Survey Date:** September 2014
- 2. **School Address:** 1601 Madison Street, Gastonia, NC
- 3. **Total Building Area:** 67,307 square feet
- 4. **Total Site Area:** 8.15 acres
- 5. **Instructional Capacity:** 547 students
- 6. **Enrollment 2014-2015:** 471 students
- 7. **Current Utilization:** 86%
- 8. **Area per Student Capacity:** 123 sf / student

9. Building Size and Dates of Construction:

Building A: 1994 (33,084 sf)	Building B: 1957 (9,163 sf)
Building C: 1953 (16,955 sf)	Building D: 1988 (8,105 sf)

10. General Description of Facility:

The original school was constructed in 1953, with three subsequent additions for various Classrooms, Media Center and Multipurpose Room. The two 1950's buildings consist of load bearing masonry walls with steel bar joist roof structure and low sloped roofing. The two newer buildings consist of load bearing masonry walls with steep slope roof structure. Exterior walls consist predominately of brick veneer and significant windows in the older classroom areas, with more moderate windows in the newest classroom wing. Most of the gable ends are finished with EIFS. The majority of the facility consists of one attached building and does not require exterior access to classrooms (although exterior access is required for the 4th and 5th grade classrooms in order not to travel through the Cafeteria). The Multi-purpose Building is detached and requires exterior access.

The site contains a shared staff and visitor parking area, a staff parking area, separate bus drive and car rider drives, and no bus parking. Play areas consist of various playgrounds and one multipurpose field.

Part 2: General Space Standards

11. General Purpose Classrooms

Room Description	No. of Rooms	Typical Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
Pre-Kindergarten	1	1,100 sf	1,200 sf	91%	Good
Kindergarten (A101, A108, A110))	3	1,100 sf	1,200 sf	91%	Good
Kindergarten (A112)	1	810 sf	1,200 sf	81%	Fair
1st Grade	4	1,100 sf	1,000 sf	110%	Excellent
2nd Grade	4	920 sf	1,000 sf	92%	Good
3rd Grade	4	920 sf	1,000 sf	92%	Good
4th Grade	3	780 sf	1,000 sf	78%	Poor
5th Grade	4	780 sf	1,000 sf	78%	Poor

Comments: The general purpose classrooms are arranged into 3 areas. The 4th and 5th Grade wing is attached to the rest of the school, but requires access through the Dining room, or on the exterior. Overall, the classrooms vary significantly in size, depending on the area of the building in which they are located.

All of the classrooms contain smart boards, wireless technology and at least four hardwired computer drops.

- The Pre-Kindergarten, Kindergarten (except for A112) and 1st Grade classrooms are located in Building A, which is the newest building. Each classroom is very close to, or exceeds space standards and contains a toilet, with a hand wash sink located inside the toilet room. These toilet rooms met handicap accessibility when the building was constructed in 1994, but are slightly smaller than current space standards. Each classroom contains casework of adequate size and layout, including countertop sinks, general storage cabinets, student cubbies and full height teacher storage units. Each room, except for Kindergarten Room A101 contains a door to the exterior.
- Kindergarten classroom A112 is not located near the other three classrooms and is significantly smaller than space standards, and does not contain a toilet or door to the exterior. This classroom could be relocated near the other Kindergarten classrooms, but would require relocation of an EC Cluster classroom.
- Kindergarten classroom A101 does not contain a toilet or door to the exterior, which should be added if this room is continued to be utilized for Kindergarten classroom.
- All of the 2nd Grade and 3rd Grade classrooms are located in Building C, which is the oldest building, and are very close to the space standards. Each classroom contains a toilet, which is not required by code for 2nd or 3rd Grade and should be removed to make the classrooms larger, or turned into storage. Each classroom also contains an exterior door, which is not required by code for 2nd or 3rd Grade and should be removed for security reasons. The classrooms also contain minimal casework with countertop sink, which is not consistent with GCS standards.

- All of the 4th Grade and 5th Grade classrooms are located in Building B, which is the second oldest building, and significantly smaller than the space standards. The classrooms contain minimal casework with countertop sinks, which is not consistent with GCS standards.
- The school currently includes only (3) 4th Grade classrooms, but (4) each of 3rd and 5th Grade.

12. Science Classrooms

Science is taught within 4th and 5th Grade classrooms and does not require dedicated Science Rooms or Labs in Elementary Education. These classrooms contain wall mounted sinks and casework, which is not adequate for science instruction

13. Exceptional Children and AIG / ESL Classrooms

Room Description	No. of Rooms	Typical Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
Pre-K EC Cluster	1	1,100 sf	1,200 sf	91%	Good
K-2 EC Cluster	1	1,100 sf	1,200 sf	91%	Good
3-5 EC Cluster	1	780 sf	1,200 sf	65%	Poor
EC Resource (A111)	1	810 sf	1,200 sf	68%	Poor
EC Resource (A114)	1	420 sf	1,200 sf	35%	Poor
AIG	0	0 sf	1,000 sf	0%	Poor
ESL	1	400 sf	1,000 sf	40%	Poor

Comments: The school contains 3 self contained EC Cluster and 2 EC Resource classrooms, located throughout the school. ESL utilizes a small dedicated classroom near the Administration area. AIG does not have a dedicated classroom and is taught on the stage in the Multipurpose Room.

- EC Cluster classrooms A107 (Pre-K) and 109 (K-2nd) are located in Building A, which is the newest building. Each classroom is very close to space standards and contains a toilet, with a hand wash sink located inside the toilet room. These toilet rooms met handicap accessibility when the building was constructed in 1994, but are slightly smaller than current space standards. Each classroom contains casework of adequate size and layout, including countertop sinks, general storage cabinets, student cubbies and full height teacher storage units. Each room also contains a door to the exterior.
- EC Cluster room C102 (3rd-5th) is significantly smaller than space standards does not contain a toilet within the classroom and is also not located near a handicap accessible group toilet.
- EC Resource classroom A111 is significantly smaller than spaces standards, but contains adequate casework and a countertop sink. EC Resource classroom A114 is very small and only able to accommodate 4-5 students, and serves as a small group break out room. This room does not contain any built-in casework or sink. Both classrooms are located near a handicap accessible group toilet.
- EC has access to a shower / changing or laundry room in the Nurse's office, which are handicap accessible.
- AIG does not have a dedicated room and utilizes the stage in the Multipurpose Room, and should have a dedicated classroom.

- ESL utilizes a dedicated small classroom, which is less than half the size of the space standards.

14. Arts Education

Room Description	No. of Rooms	Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
Music	0 *	650 sf	1,000 sf	65%	Poor
Art	0	0	1,000 sf	0%	Poor

* No dedicated Room, shares stage in Multipurpose Room.

Comments: Music utilizes the stage of the multi-purpose room for instruction, and the school does not contain a dedicated Art room.

- The school does not contain a dedicated Music classroom, but utilizes the stage in the multi-purpose room, which is not of adequate size or acoustically appropriate for music instruction. The stage contains an accordion style folding wall which does not offer acoustical separation from the multi-purpose room. A dedicated Music room should be provided.
- The school contains a dedicated Music storage room adjacent to the stage. When the stage is to be used for assemblies or performances, the music equipment must be stored in a small storage room off of the stage, which is not adequate.
- The school does not contain a dedicated Art room, which provided on mobile carts within the classrooms. A dedicated Art room should be included.

15. Career and Technical Education Classrooms / Shops

CTE is not provided Elementary Education, therefore no facilities are necessary.

16. Media Center

Room Description	No. of Rooms	Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
Main Room	1	2,680 sf	2,400 sf	111%	Excellent
Support Areas	Various	1,420 sf	1,200 sf	118%	Excellent

Comments: The Media Center is located in Building A, the newest building, near the main school entrance. The Main Room and Support Areas are both larger than the space standards.

- The main IT MDF rack is located in a Media Support room, which is also used for storage and a copier. This room should be secure and fire rated room with a gaseous fire suppression system.
- The Media Center does not contain a video production room. However, the room which is currently used for a IF office could be used for this.
- The Media Center does not contain a meeting room.
- The Media Center does not contain an area for computer / technology instruction, however has direct access to the adjacent Computer Lab.

- The Media Center is located within an area of the school that could be secured for after-hours community use, However, this would require an additional exterior door for exiting requirements and additional interior doors to secure it from the rest of the school and provide access to toilets.

17. Physical Education

Room Description	Area	Court Size	NCDPI Standard Area	Relation to Standard	Adequacy Rating
Multipurpose / Indoor PE	3,800 sf	42 x 60	3,600 sf	105%	Excellent

Comments: The Multipurpose / PE Building is free standing and not connected to rest of the school building, except with an exterior covered canopy.

- The Multipurpose Room contains an elevated stage, which is handicap accessible via a wheelchair lift in the backstage vestibule, but not directly from the MP room.
- The stage is also used for Music instruction. The stage contains an accordion style folding wall which does not offer acoustical separation from the multi-purpose room for Music instruction. When the stage is to be used for assemblies or performances, the music equipment must be moved and stored in a small Storage room, which is not of adequate size for music instrument / equipment storage.
- The basketball court is 60 feet long, which is 14 feet short of the recommended 74 foot length, and only has 4 feet of safety space on the ends. The safety space on each side is approximately 6 feet, with the steps of the stage on one side, which is a safety concern.
- The Multipurpose Building includes a separate entrance with a small lobby, toilets and doors to the exterior for after hours use.

18. Administration

 Excellent

 Good

 Fair

 Poor

Comments: The Administration area includes approximately 3,200 square feet, but also contains Health and Guidance spaces directly within the Admin. area. Administration consists of the following rooms: (1) Main Office / Reception, (1) Principal's Office, (1) Assistant Principal's Office, (1) Financial Secretary's Office, (1) Conference Room, (1) Staff Lounge with two Toilets, (1) Conference Room, (1) Work Room / Mail Room, (2) Toilets (1) Records Storage and (1) General Storage Room. The Administration area contains fairly adequate space.

- The Administration area is located across the main corridor from the main school entry. The school does not contain a secure vestibule for the main entrance. Design of a new secure entry vestibule with access directly into the Reception area is not possible without interruption of the main interior corridor. However, the Reception area has direct visibility of the main entry doors, and a secure vestibule can be added which has visible, but not direct access into the Administration area.
- Due to its location on the interior of the school, the Administration area does not have visibility of the front of the school where visitor parking and student drop off areas are located. The Main Office does have visibility of the main entry doors through an interior window.
- The school does not have a dedicated SRO Office, which should be located near the main school entry and Administration area.

- The Administration area does not include a private Staff Room.
- The Administration area contains a Guidance Office and Nurse / Social Worker office directly within the Admin. area. These spaces should be relocated to separate areas near, but separate from the Administration offices.

19. Student Support Excellent Good Fair Poor

Comments: The Student Support Spaces consist of (1) Guidance Office and (1) School Nurse Office (1) Social Worker Office (1) School Therapist Office and (1) Parent Involvement Room.

- The current Guidance Office is located directly within the Administration area. Guidance should include 2 dedicated Guidance Counselor offices with a separate entrance and waiting area from the Administration.
- The Nurse's office is located directly within the Administration area and includes a toilet, shower and washer /dryer. The Health Services area should be near, but separate from the Admin. area and should include a dedicated Nurse's Office, Holding Room, dedicated Toilet, Shower and Changing area and wheelchair storage.
- The school Social Worker's office is located directly within the Administration area. This office should be near, but separate from the Admin area for confidentiality.
- The School Therapist office is located directly off of a busy corridor near the Media Center, which offers little student privacy, and should be relocated to a more private area for confidentiality.

20. Staff Support Excellent Good Fair Poor

Comments: The Staff Support Spaces consist of (1) Teacher Lounge in Building B and (1) Teacher Lounge in the Administration area.

- Both Teacher Lounges contains only break room casework and should be converted to Teaming / Work Rooms.
- Additional Teacher Teaming / Work Rooms should be located in each grouping of classrooms.

21. Cafeteria

Students per Seating *	Dining Room Area	Area per Student	NCDPI Standard Area	Capacity of Dining Room	Relation to Standard
200	2,530 sf	12.6 sf / student	14 sf / student	180	90% Good

* Students per Seating equals the 2014 - 2015 student enrollment for the school divided by 2.5 seatings for continuous serving (500 / 2.5 = 200), as recommended by NCDPI Guidelines.

Comments: The Cafeteria is located in Building B, which is the oldest building.

- The Cafeteria is close to space standards, but is of a long and narrow proportion, which limits the efficiency of the area due to circulation for serving and tray return. One pair of main entry doors are poorly located near the serving line and tray return, which does not provide good circulation.
- The Cafeteria contains a pair of doors to the exterior in the courtyard area. Trash must be removed through the main corridor to the loading dock area.

22. Kitchen

Lunches Served per Day *	Kitchen Area	NCDPI Standard Area	Relation to Standard
450	1,150 sf	1,518 (for 500 lunches served)	75% Poor

* Lunches Served per Day equals the 2014 - 2015 student enrollment for the school times 90% participation factor (500 x .90 = 450). This school experiences an elevated participation rate due to free and reduced lunches.

Comments: The Kitchen is significantly smaller than NCDPI guidelines of overall area for the number of students served, and is in generally poor condition. The serving area is also located within the Kitchen. See the Section 7: Food Service Assessment for additional information.

- The Kitchen only contains one serving line, which exceeds the serving capacity for the number of students, requiring extended lunch hours to serve students. A second serving line is very difficult to add within the existing space.
- The Kitchen includes two small toilets, both of which are not handicap accessible.
- The Kitchen Manager's office is very small and located in the main corridor outside of the Kitchen. This office should be accessed from inside the Kitchen.
- The Kitchen does not include staff lockers.
- The Kitchen does not have a washer and dryer.
- The loading dock is on grade and located very close to a public road, which does not allow adequate space for most on-site deliveries. Most delivery trucks park in the road, or partially block the road. The receiving area only has a small building overhang and no covered canopy. Due to confined site area on this side of the building, redesign of the loading dock is very limited.

23. Toilet Facilities

 Excellent

 Good

 Fair

 Poor

- Building A contains two group toilets that are in generally good condition and also handicap accessible.
- The group toilets in Building B near the Cafeteria are in poor condition and not handicap accessible. These toilets should be upgraded, due to their proximity to the Cafeteria.
- Staff are only provided with 3 single toilets. The two located in the Administration area are in good condition, These toilet rooms met handicap accessibility when the building was constructed in 1994, but are slightly smaller than current standards. The Staff Toilet in a Teacher Lounge near the Cafeteria, is in poor condition and is much smaller than handicap standards. Staff toilets need to be included within any new Teacher Teaming / Work Rooms within the classroom wings as noted above.

24. Other Spaces

- The school has limited general purpose secure storage. Many electrical rooms are used for storage, which violates code.

- The MDF is located a Media Center support room, which should be converted to a secure, access controlled room with a gaseous fire suppression system. The IDF's are located throughout the school in classrooms and corridors, most of which will be difficult to relocate or converted into secure rooms due to existing data cabling.

25. Additional Considerations

- None at this time.

Part 3: School Site

26. Parking Excellent Good Fair Poor

Description	Current Number of Spaces	Number of Spaces Needed	Relation to Number of Spaces Needed
Staff / Visitor (West)	60	80 Staff (70 employees plus 10 transient)	-25
Staff (East)	<u>30</u>	<u>25 Visitor</u>	
Total Staff / Visitor	90 total	95 total	
Bus	0	0	Not Required

Comments: Parking on the school site is poor, with a deficiency of 25 parking spaces. Many staff parallel park along Carolina Avenue.

- The west parking area contains 60 parking spaces, which are used by both Staff and Visitors. Some of these spaces are located along the one-way drive used for student drop off and pick up, which presents safety concerns and also makes most of these spaces unusable when the bus / car rider line is stacked. The asphalt is in poor condition, with cracking and weed growth, and should be replaced. This parking lot should be redesigned and expanded for both parking and stacking.
- The east parking area contains 30 parking spaces, which are used by Staff. The asphalt is in poor condition, with cracking and weed growth, and should be replaced. This parking lot is not able to be expanded without additional property acquisition.
- Many staff parallel park along Carolina Avenue, which is a public road. This is a safety concern, as all staff should be provided parking spaces on site.

27. Vehicular Circulation Excellent Good Fair Poor

Comments: Vehicular Circulation on the school site is generally poor, with inadequate stacking for cars and busses, parking located within pick up /drop off stacking lanes and poor condition of paving.

- The west parking and drive is used for car rider drop off in the mornings and bus rider pick up in the afternoons. This drive contains some stacking space, but cars regularly back up onto Dixon Avenue. The drive allows adequate stacking for busses in the afternoon. This drive could be redesigned (along with the parking lot) and expanded to provide more stacking.

- The east parking and drive is used for bus rider drop off in the mornings and car rider pick up in the afternoons. This drive contains limited stacking space for cars and regularly backs up onto Madison Street. The drive allows adequate stacking for busses in the morning. This drive is not able to be expanded without additional property acquisition. Consideration should be given to eliminating car rider pick up from this area and providing only bus access, which does not require as much stacking. This drive is not able to be expanded without additional property acquisition.
- The kitchen access drive located on Carolina is very short and does not allow adequate space for most on-site deliveries. Most delivery trucks park in the road, or partially block the road. This area cannot be expanded significantly, due to the proximity of the kitchen building to the road.

28. Pedestrian Circulation Excellent Good Fair Poor

Comments: The school site contains adequate sidewalk locations for pedestrian circulation. However, the condition of most sidewalks on the site are very poor and in need of replacement.

- All of the concrete sidewalks around the perimeter of the site along Carolina Ave, and Madison St. are in very poor condition with significant cracking, deterioration and weed growth, and should be replaced.
- Almost all of the sidewalks adjacent to parking areas, at the front entry of the school and within courtyards between buildings are in poor condition with significant cracking and deterioration, and should be replaced.
- The sidewalk at the Vestibule between the Cafeteria and Build B slopes down toward the doors and has frequently flooded the interior of the building in the Vestibule due to overrunning of the walkway canopy gutters. The walk needs to be replaced to slope away from the building.
- The exit door for the means of egress from Building C is accessed on the exterior by stairs with approximately 4 feet of total vertical rise. An accessible ramp should be added at this exit.

29. Walkway Canopies Excellent Good Fair Poor

Comments: The school contains two walkway canopies that connect the various buildings, and also a short canopy at the front entry for car rider drop off and bus pick up.

- The front of the building has a short covered canopy to the main entry doors. This canopy is in fair condition, but not of substantial construction, or of adequate length and should be replaced with a more durable system that is longer parallel to the drive.
- The canopies connecting the buildings are not of substantial construction and also contain gutters that are too small, which overflow and cause significant ponding water near the recessed entry doors. These canopies need to be replaced with more durable systems with larger gutters.
- A canopy should be extended all the way to the east drive area, which is used for bus drop off in the morning and car rider pick up in the afternoon.

30. Outdoor Play Excellent Good Fair Poor

- The courtyard area includes a fenced play area containing both mulch and grass, which serves the Pre-Kindergarten room. The fixed play equipment is very limited, but in generally fair condition and also contains moveable plastic equipment also. The mulch and edging is in poor condition and needs to be replaced.

- One other playground is located on the site, inside of the walking track. The play equipment is in poor condition with missing slides and should be repaired or replaced. The mulch and edging is also poor and needs to be replaced. An accessible sidewalk should be added from the walking track to playground. The playground does not contain handicap accessible equipment, which should be added.
- The site contains one multipurpose ball field with back stop that is in fair condition. This field is accessed by a concrete walk. The field and infield are in poor condition, with several bare spots.
- The walking track around the multipurpose field is paved, but the asphalt surface is in poor condition and should be replaced.
- The site includes a hard surface play area. The asphalt surface is in poor condition and should be replaced.

31. Athletic Facilities

The site does not contain dedicated athletic fields, which are not needed for an Elementary School.

32. Athletic Spectator Areas

The site does not contain dedicated athletic fields or spectator areas, which are not needed for an Elementary School.

33. Grounds / Landscaping Excellent Good Fair Poor

- The perimeter of the site is significantly overgrown on the west and south sides and should be trimmed back for safety and security purposes.
- An area of overgrown trees and shrubs is located near the front entry of the building, which also contains a retaining wall. This landscaping should be removed and the area re-graded to eliminate the retaining wall.
- The area inside the fence around the transformer is significantly overgrown and should be trimmed back.
- Foundation shrubs are located at intermittently around the various buildings, most of which are significantly overgrown and should be trimmed, or removed and replaced with lower growing plants.

34. Utilities Excellent Good Fair Poor

- The school is served by the City of Gastonia for water and sewer, and has a backflow preventer for domestic water that only serves a portion of the building, and is reported to be in working condition. Backflow prevention should be provided for all of the buildings.
- The school does not have a grease interceptor on the sanitary sewer line for the kitchen, which should be added by code.
- The sewer line is reported to be terra cotta and in poor condition, and should be replaced with PVC.
- The domestic water line is reported to be in poor condition and should be replaced.
- Three fire hydrants are located along public roads in the general area of the school. These hydrants do not provide adequate coverage of the school. More fire hydrants should be added on the school site to provide adequate coverage.
- The school is served by natural gas, which is metered separately for the kitchen and the buildings.

35. Storm Drainage Excellent Good Fair Poor

- The site does not have a stormwater management pond, which is not required by the municipality unless additional impervious area is added. However, it does include a depressed collection area to the west portion of the site, which does not serve as a pond.
- The west parking lot has minimal underground storm drainage, which flows into the collection area. Additional underground storm drainage should be added if this area is replaced or redesigned.
- The east parking lot has no storm drainage and sheet flows into the road, which is very difficult to alleviate.
- The sidewalk at the Vestibule between the Cafeteria and Build B slopes down toward the doors and has frequently flooded the interior of the building in the Vestibule. The walk needs to be replaced to slope away from the building.

36. Emergency Access Excellent Good Fair Poor

- The site has paved emergency access around the north, east and west sides via parking areas and public roads.
- An emergency access drive cannot be added to the south without relocation of the multipurpose field and walking track.

37. Site Security Excellent Good Fair Poor

- The site is located in a predominately commercial and industrial area. The Principal and school SRO Officer indicated that the surrounding areas experience moderate crime and vandalism at the school has occurred occasionally. The school grounds and playgrounds must be checked after weekends for trash and debris from unauthorized use. The school site is also frequently used as a cut through for pedestrians in the area.
- The north, east and west sides of the building and site have good visibility from public roads and parking areas. The south side does not have any vehicular access for police patrol.
- The school is located near train tracks, which run along the opposite side of Madison Street.
- The site is bordered on the west and south sides by wooded areas, which have significantly overgrown most areas of the chain link fencing around the property. These areas should be cut back from the fencing.
- The existing perimeter fencing is in poor condition and should be replaced. Additional fencing should be added to the west side, near the walking track to discourage unauthorized use and pedestrian cut through of the site.
- The stairs down to the basement level Boiler Room are not secured. A security fence around the area well and gate should be added for safety and security.

38. Additional Considerations

- Directional signage on the school site is poor and should be replaced.

Part 4: Building Envelope

39. Construction Type Non-Combustible Combustible

40. Structural Floors

Material: Concrete Slab on Grade
 Concrete on Metal Deck over Steel Structure
 Wood Deck on Wood Joists
 Other

Evidence of Structural Concerns: Prevalent Isolated None Visible

Overall Condition of Structural Floors: Excellent Good Fair Poor

Comments: The structural floors consist predominately of concrete slab on grade, with an area of elevated concrete slabs over a mechanical room below Building C and Building D.

- Concrete floors generally appear to be in good condition with no major cracks telegraphing through the floor coverings, except in Building A as noted below.
- Two cracks in the VCT were observed in the main corridor of Building A. The cracks do not involve an elevation change on either side, and may be an expansion joint in the concrete slab that has widened.

41. Exterior Walls / Cladding

Material: Masonry EIFS / Stucco Metal Other

Evidence of Structural Cracking: Prevalent Isolated None Visible

Evidence of Concern with Exterior Cladding:

Cracks / Gaps (Masonry)	<input type="checkbox"/> Prevalent	<input checked="" type="checkbox"/> Isolated	<input type="checkbox"/> None Visible
Efflorescence (Masonry)	<input type="checkbox"/> Prevalent	<input checked="" type="checkbox"/> Isolated	<input type="checkbox"/> None Visible
Cracks / Gaps (EIFS)	<input type="checkbox"/> Prevalent	<input checked="" type="checkbox"/> Isolated	<input type="checkbox"/> None Visible
Moisture Penetration	<input type="checkbox"/> Prevalent	<input checked="" type="checkbox"/> Isolated	<input type="checkbox"/> None Visible
Rot/Decay/Corrosion	<input type="checkbox"/> Prevalent	<input checked="" type="checkbox"/> Isolated	<input type="checkbox"/> None Visible

Overall Condition of Exterior Walls: Excellent Good Fair Poor

Comments: The exterior walls of the older Buildings B and C appear to consist of multi wythe brick construction that most likely does not include an air space or flashing. The newer Buildings A and D consist of brick veneer with CMU backup, insulation and an air space.

- The brick veneer appears to be in generally good condition, with some areas of efflorescence on the older Buildings B and C, which may be a result of moisture within the wall due to the lack of an air space.
- The mortar joints of the precast concrete window sills in Buildings B and C contain gaps and should all be re-pointed.
- Building A contains EIFS on the gable ends, which does not appear to be a drainable system. The EIFS is damaged in many areas, with indentions and holes that appear to be from rock throwing. These holes allow water into the system, without a method to drain out and may have caused water damage to the sheathing behind. Areas of mildew streaks were also observed on the EIFS. The EIFS should be repaired and recoated, or replaced with a drainable system.

- Building A contains an 24" high EIFS fascia band at the top of the brick. The EIFS is not finished at the top and has previously allowed insects and bats into the attic space. The joint at the top of the EIFS should be sealed with caulk and / or a prefinished metal filler strip.
- Some areas of this EIFS band are water stained from previous roof / gutter leaks, and should be cleaned and recoated.
- The soffits on Buildings B and C have been replaced with metal panels and are in good condition.

42. Exterior Glazing

Frame Material: Aluminum Steel Wood Other
 Glazing Material: Un-insulated Insulated Glass Block

Evidence of Concern with Exterior Glazing:

Moisture Penetration Prevalent Isolated None Visible
 Rot/Decay/Corrosion Prevalent Isolated None Visible

Overall Condition of Exterior Glazing: Excellent Good Fair Poor

Comments: Due to the differing ages of the various building wings, the condition of the exterior glazing systems varies substantially. The glazing in approximately half of the facility is in poor condition.

- The exterior glazing in most areas of the older Buildings B and C consists of 1/4" un-insulated glass in a thermally continuous steel framing system, which is very energy inefficient and past its useful life. In addition, this glass appear to standard plate glass, which presents a safety concern as it is easily broken. All of this glazing should be replaced with insulating glass in a thermally broken aluminum storefront framing system to be more energy efficient and provide better thermal control of the classrooms in particular. The glass should be safety tempered in areas required by code. Some areas could be infilled with insulated metal panels or solid wall instead of glass to reduce the amount of glazing, particularly in classrooms.
- The glazing in Building D is insulating glass, but in a hollow metal system, which are both 27 years old. This system should be replaced with new insulating glass in a storefront system also.
- The window glazing in Building A consists of insulating glass in an aluminum framing system and is in fair condition. The caulking around these windows is failing in many places and in need of replacement.
- The exterior classroom doors in Building A include insulating glass sidelites and transoms within a hollow metal framing system. The metal framing is rusting in several areas and moisture is evident within the air space of several glass panels. Each of these systems should be replaced with new insulating glass in a storefront system.

43. Exterior Entry / Exit Doors

Door Material: Aluminum Steel Wood Other

Evidence of Concern with Entry / Exit Doors:

Moisture Penetration Prevalent Isolated None Visible
 Rot/Decay/Corrosion Prevalent Isolated None Visible
 Other None at this time

Overall Condition Doors: Excellent Good Fair Poor

Overall Condition of Hardware: Excellent Good Fair Poor

Comments: Due to the differing ages of the various building wings, the condition of the entry / exit doors varies substantially. The doors in approximately half of the facility are in poor condition. None of the exterior doors include access control hardware, which should be added for security.

- Most of the entry / exit doors in the older Buildings B and C appear to be original and are in poor condition, do not have code compliant panic devices and have no access control for security. These doors should be replaced to include code compliant door hardware and access control for security.
- The entry / exit doors in Building D are in fair condition, but are almost 27 years old and do not have access control hardware. These doors should be replaced.
- The entry / exit doors in Building A are in fair to good condition, but do not have access control hardware, which should be added. The main front entry doors should have secure access control with buzz-in and security camera tied into the Administration area reception desk.

44. Exterior Classroom Doors

Door Material: Aluminum Steel Wood Other

Evidence of Concern with Classroom Doors:

Moisture Penetration Prevalent Isolated None Visible

Rot/Decay/Corrosion Prevalent Isolated None Visible

Other None at this time

Overall Condition of Doors: Excellent Good Fair Poor

Overall Condition of Hardware: Excellent Good Fair Poor

Comments: Most classrooms in Building A have doors that open to the exterior, which include Pre-Kindergarten and 1st Grade. The classrooms in Building C also contain doors directly to the exterior.

- The exterior doors classroom in Building A are hollow metal and in fair condition, but in need of paint. However, the hollow metal window system in which they are located is rusting with many glass seals broken. This entire system, including the doors should be replaced as previously noted.
- All of the classrooms in Building C contain exterior doors, which is not required by code for 2nd and 3rd grade. These doors are in poor condition and should be removed for security reasons.

45. Roofing

An independent roof assessment was performed for Gaston County Schools by Roof Engineering, Inc. (REI) in 2006. The report indicates the following needs regarding the replacement of roofs (much of the roofing has been recently replaced):

- Building A: Single Ply PVC Replace in 2034
- Building B: Single Ply PVC Replace in 2034
- Building C: Asphalt Built-up Replace in 2029
- Building D: Asphalt Built-up Replace in 2029

46. Additional Considerations

- Remove existing brick chimney, which is not used anymore, for safety reasons.

Part 5: Building Interior

47. Interior Walls

Overall Condition of Walls: Excellent Good Fair Poor

Comments: The majority of interior walls are painted CMU or brick and are in good condition. The paint also appears to be in generally good condition.

48. Floor Finishes

Classrooms	Flooring Type: VCT (combined with carpet in most classrooms) Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Classrooms	Flooring Type: Carpet (combined with VCT in most classrooms) Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor
Corridors	Flooring Type: VCT Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Cafeteria	Flooring Type: VCT (over ACT) Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Multipurpose Room	Flooring Type: Carpet Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor
Media Center	Flooring Type: Carpet Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor
Administration	Flooring Type: Carpet Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor

Comments: Most classrooms contain approximately one third VCT and two thirds carpet. All of the corridors contain VCT.

- All of the classrooms contain both carpet and VCT. The VCT is in fair condition, but the carpet is generally in poor condition and should be replaced with VCT for the whole room.
- The rubber base in most corridors of all buildings is in poor condition and should be replaced.
- The carpet in the Media Center, Administration area and Computer lab is in poor condition and should be replaced.
- The VCT in the Multipurpose Building entries and various rooms is in poor condition and should be replaced.
- The carpet in the Multipurpose room should be replaced with rubber flooring. The carpet on the Stage is in poor condition and should be replaced with VCT.
- The VCT in the Media Center support spaces is in poor condition and should be replaced.
- The hard tile in the kitchen consists of two different types of mosaic tile and is in poor condition. This should be replaced with a larger quarry tile with less grout joints.

49. Ceilings

Lay-in Locations: 2x4 in Building A, Corridors of Buildings B and C, Cafeteria, Building D including Multipurpose Room
Condition: Excellent Good Fair Poor

Plaster	Locations: Building B, C Classrooms and Toilets
	Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Drywall	Locations: Building A Toilets
	Condition: <input type="checkbox"/> Excellent <input checked="" type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> Poor

Comments:

- Most of the ceilings in Buildings A, the Corridors of Buildings B and C, the Cafeteria and Multipurpose Room are lay-in, and in good condition.
- The classrooms and other rooms in Buildings B and C are a type of textured plaster coating applied to a sheathing material attached directly to the underside of the roof joists. These continuous plaster coated ceilings do not offer any access to the plenum space and all light fixtures, conduit, piping, etc. are surface mounted. These ceilings should be removed and replaced with 2x2 lay-in, for better acoustics, reflectivity, installation of new light fixtures and concealment of conduit and piping.
- The kitchen contains a washable 2x2 lay-in ceiling which is in good condition.
- Group toilets in Building A contain drywall ceilings, which are in good condition.
- Group toilets in Building D contain 2x2 lay in that are not washable and should be replaced with either drywall or washable tile.

50. Casework

Classrooms	Casework Type: Wood and Plastic Laminate
	Condition: <input type="checkbox"/> Excellent <input checked="" type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> Poor
Media Center	Casework Type: Wood and Plastic Laminate
	Condition: <input type="checkbox"/> Excellent <input checked="" type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> Poor
Administration	Casework Type: Wood and Plastic Laminate
	Condition: <input type="checkbox"/> Excellent <input checked="" type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> Poor

Comments: The casework in approximately half of the classrooms has been installed in the last 10-15 years and is in fairly good condition.

- The casework in Building A is of adequate size and layout, including student cubbies, full height teacher storage units and countertop sinks. This casework is in generally good condition.
- The casework in Buildings B and C appears to have been replaced at the same time Building A was constructed. This casework is of adequate size and layout, including student cubbies, full height teacher storage units and countertop sinks. This casework is in generally good condition.
- The Media Center and Media Support spaces contain adequate casework, which is in good condition. The support desk is handicap accessible.
- The Administration area contains fairly adequate casework, which is in good condition. The main reception counter is also handicap accessible.

51. Interior Doors

Overall Condition Doors:	<input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Overall Condition of Hardware:	<input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor

Comments: Due to the differing ages of the various building wings and subsequent renovations, the condition of the interior doors and hardware varies substantially, with approximately half being in poor condition.

- The interior doors and hardware in most areas of the older Buildings B and C appear to be original, do not have code compliant lever style hardware and are in poor condition. These original doors should be replaced, and the classroom doors should also include lockdown hardware.
- Doors in Building B contain glass transom panels, which appear to be standard plate glass. These should be removed and replaced with tempered glass for safety purposes.
- The interior doors and hardware in Building A are in generally good condition and have lever style hardware, but should be upgraded with lockdown hardware in classrooms for security.

52. Additional Considerations

- Most of the window blinds, except those in Building A, are in poor condition and in need of replacement.
- The folding wall for the Stage is in poor condition and should be replaced.

Part 6: Handicap Accessibility

53. Exterior Handicap Accessibility

Accessible Parking:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input checked="" type="checkbox"/> Fair	<input type="checkbox"/> Poor
Accessible Route to Building(s):	<input type="checkbox"/> Excellent	<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Fair	<input type="checkbox"/> Poor
Accessible Entrances / Egress:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input checked="" type="checkbox"/> Fair	<input type="checkbox"/> Poor
Accessible Routes between Buildings:	<input type="checkbox"/> Excellent	<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Fair	<input type="checkbox"/> Poor
Accessible Play Areas:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input checked="" type="checkbox"/> Fair	<input type="checkbox"/> Poor

Comments: The overall exterior handicap accessibility for the school is fair, with most parking and entrances / egresses from the building being accessible.

- The west parking lot contains 4 marked accessible parking spaces located near the main school entry, none of which contain a van accessible aisle. At least one space should be enlarged to be van accessible.
- The east parking lot contains 1 accessible parking space which is striped, but does not include any of the required signage.
- The exit door for the means of egress from Building C is not handicap accessible and is accessed only by stairs with approximately 4 feet of total vertical rise. An accessible ramp should be added at this exit.
- The playground does not have a concrete sidewalk for handicap access, but is located near the paved walking track. An accessible walk should be extend from the track to the playground. The walking track has a concrete sidewalk for handicap access and also provides access to the ball field.

54. Interior Handicap Accessibility

Accessible Routes:	<input type="checkbox"/> Excellent	<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Fair	<input type="checkbox"/> Poor
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Accessible Doors and Hardware: Excellent Good Fair Poor
 Accessible Signage: Excellent Good Fair Poor

Comments: The interior of the school is on one finished floor level, with no interior ramps or stairs.

- The majority of classroom and other interior doors in the school are 3'-0" wide. However, most of the doors in Buildings B and C have knob style hardware, and should be replaced with code compliant levers.
- The Administration area reception counter and the Media Center circulation counter are both handicap accessible.
- Most of the signage in Buildings B, C and D does not meet current accessibility requirements and should be replaced.

55. Toilet Rooms Accessibility

Accessible Classroom Toilets: Excellent Good Fair Poor
 Accessible Group Toilets: Excellent Good Fair Poor
 Accessible Staff Toilets: Excellent Good Fair Poor

Comments: The handicap accessibility of the student group toilets is generally fair, with two of the three group toilets being accessible. Most Staff toilets are not handicap accessible.

- Pre-K, Kindergarten and 1st Grade classrooms in Building A include toilet rooms within each of the classrooms (except for Kindergarten Rooms A101 and A112). These toilet rooms were designed to meet handicap accessibility requirements when the building was constructed in 1994, but are slightly smaller than current standards.
- Both of the group toilets located in Building A are handicap accessible.
- Group toilets in Building B do not contain handicap accessible stalls. However, the rooms are of sufficient overall size and should be upgraded to include handicap accessible partitions and fixtures, which would reduce the watercloset fixture count. The pull side of the door to the girls toilet must be enlarged for accessibility, requiring relocation of the Janitor room.
- Group toilets in the Multipurpose Building do not contain handicap accessible stalls. However, the rooms are of sufficient overall size and should be upgraded to include handicap accessible partitions and fixtures, which would reduce the watercloset fixture count.
- The school contains a total of three Staff toilets, two of which are located in the Administration area. These toilet rooms were designed to meet handicap accessibility requirements when the building was constructed in 1994, but are slightly smaller than current standards. The Staff toilet in Building B and not accessible. Accessible Staff toilets should be provided in each classroom wing.

Part 7: Food Service

56. Observations and Recommendations

Storage:

- Cold Storage Assembly is one year old. The cooler was missing a few cam locks on the galvanized aluminum floor. The freezer had ice build-up. No major issue with these units.

- Dry storage square footage is adequate and has the proper amount of Metro Q shelving.

Food Preparation:

- Ice Machine is in good working condition and has a water filter. The machine is two years old.
- Two-Compartment Sink: Direct waste to be converted to indirect waste and run to floor sink per code requirements. Galvanized painted legs not to code.
- Worktables all need to be replaced as they have galvanized bases.
- Add additional hand sink to meet DHEC code requirements.
- Refrigerator (two-door) is in good running condition and is approximately ten years old.
- Hot cabinets (2): One cabinet is new and in good condition and the other needs to be replaced in the next couple of years as it is minimum 15 years old.

Cooking:

- Convection Ovens (2): One unit is two years old and in good working condition. The other unit has the bottom oven which works intermittently and the top oven does not work.
- Braising Pan is twenty years old and does not have a floor trough for drainage.
- Steamers are new and in good working condition.
- Half range is in working condition. Age is approximately 10 years old.
- Hood and Fire System is new and is in good working condition. Exhaust and make-up air appear to be balanced.

Dishwash:

- Three-Compartment Sink has galvanized base. Direct waste to be converted to indirect waste and run to floor sink per code requirement. Sink sizes too small for pans. Therefore unit needs to be replaced.
- Soiled Dishtable: Table does not meet NSF standards and needs to be replaced or properly trimmed.

Serving:

- Milk Box is ten years old and needs to be replaced and is not insulated properly.
- Serving line has five hot wells. One is not in working condition. One is used for a cold well by placing ice in the pan. The serving line is old but is adequate size for the serving capacity for the school.
- The school is on a free breakfast/lunch program and starts serving breakfast as early as 7:00 a.m. and lunch from 10:30 a.m. to 12:45 p.m. Breakfast serves 250/300 and lunch serves up to 500.
- Recommend replacing with new modular units. Hot food wells, cold food wells, plain top counter, and cashier counter.
- Silver tray stand casters are rusted.

Auxiliary Spaces:

- Restroom ADA Requirements per code is not allowed to open into the preparation area.
- Recommend adding fly fan at rear door.
- Grease traps are not installed in this kitchen.

- Office is not large enough. Currently have two desk in space and recommend redesigning the kitchen to add space to office.

Part 8: Plumbing Systems

57. Observations

Roof drainage is a gutter and downspout system.

Installed backflow preventer only protects a portion of the building. Building is served with City of Gastonia water.

Gas service is provided to the kitchen appliances, water heaters, and heating boiler.

Water cooler is non-compliant with current code for accessibility.

Administration reported a few occurrences of toilets backing up in K-Wing.

Piping:

- Copper water supply piping installed inside, most all exposed piping was uninsulated (restrooms, mechanical rooms, etc). Galvanized water supply pipe installed outside and in tunnel. Piping in tunnel is inaccessible due to the presence of asbestos.

Fixtures:

- Restrooms have flush valve type water closets and urinals, and lavatory fixtures. Restrooms appeared to have proper ventilation, floor drains, installed fixture heights, and hose bibbs for housekeeping and priming the floor drain trap. Floor drains in gang toilets are small in size.
- Lavatories and faucets in K classrooms are outdated and do not have hot water piped to them.
- Floor drain in AHU mezzanine, adjacent to Media, is poorly grouted and ponding water.

Water Heaters:

- A residential 75 MBH gas fired storage type unit serves the kitchen. Heater is located in the dry storage room. Combustion air inlet louver was blocked by items being stored on shelving. No drain pan installed.
- A 20 gallon electric water heater is installed on an inadequate platform in what appears to be a shaft (labeled as Rm 226 Storage on plans). Heater installation makes it dangerous to access.

Kitchen:

- No grease interceptor installed.
- Sanitary waste from 2- and 3- compartment sinks were observed to be direct connections with no air gaps.

58. Recommendations

- Install a grease interceptor outside of building in an accessible location.
- Insulate all exposed domestic cold and hot water piping.
- Replace water cooler
- Install backflow preventer for unprotected portion of the building.
- Install indirect waste connections as required by code

- Replace hand sink in the kitchen
- Replace lavatory faucets in gang toilets and K classroom toilets.
- Install drain pan beneath water heater serving the kitchen.
- Install hose rack in janitor's closets and provide new location for items being stored there within.
- Remove abandoned CW piping (in Electrical Room serving Gymnasium) and finish off floor slab.
- Repair floor drain in AHU Mezzanine adjacent to Media Center.
- Install hot water supply (and recirculation loop depending on location of water heater with respect to fixtures being served) to lavatories in K classrooms.
- Relocate electric water heater serving classroom gang toilets across from Dining Room.
- Restroom ADA Requirements per code is not allowed to open into the preparation area.
- Recommend adding fly fan at rear door.
- Grease traps are not installed in this kitchen.
- Office is not large enough. Currently have two desk in space and recommend redesigning the kitchen to add space to office.

Part 9: HVAC Systems

59. Observations

The building HVAC system consists of the following combination.

- A 2-pipe system utilizing unit ventilators
- DX AHUs with hot water heating.
- RTU gas packaged units.

The majority of corridors throughout the building are not supplied with air. An electric wall mounted unit heater is located near the exit doors. A unit ventilator serves the entrance lobby.

HVAC operation is based on time-of-day scheduling. Humidity is extremely difficult to control in the building, particularly during the fall and spring seasons.

Central Plant Cooling: A nominal 80 ton chiller was installed around 1990. Several compressors and sensors have been changed out since that time. Accessing the chiller with a boom truck is difficult due to the masonry screen wall.

Central Plant Heating: There is a gas fired steam boiler and a u-tube steam-to-water heat exchanger that appear to be in good condition. Two heating water building pumps were observed.

Distribution Systems:

- Ductwork is constructed of galvanized metal.
- In the older Wings B and C, each classroom is served by a RTU that distributes supply & return air in the middle of the classroom via centrally located concentric ductwork. Spaces in the newer Wing A are served by unit ventilators
- Several Janitors closets had no exhaust air.

- Heating coil serving the Admin area AHU is located in the supply ductwork above the main lobby. Water to coil has been shut off to protect ceiling from condensation leaks.
- All ductwork in mezzanines contains inner liner material.
- All AHUs and pumps are constant volume air systems.
- HW piping material is copper. Piping is wrapped with fiberglass insulation.

Controls:

- Unit ventilators are served by the 2-pipe system and controlled by individual wall thermostats.

Kitchen:

- A new grease hood has been installed complete with a fire suppression system. There is no direct air makeup to the hood. A rooftop makeup air unit was recently installed that introduces outside air to the space. However, maintenance personnel have reported that it's not functioning and has been turned "off".

Dining:

- Window AC units have been installed to provide cooling during the winter time (since cooling is unavailable from 2-pipe system).
- There is no outside air connected to the unit ventilators serving the dining area.

60. Recommendations

- Provide a building wide automation system utilizing direct digital controls.
- Makeup air source for the kitchen hood is provided by a dedicated roof mounted unit. This unit is out of service. Re-commission the 3000 cfm kitchen makeup air unit and place back in service.
- Remove window A/C unit from kitchen. Install new 4-pipe AHU.
- Provide supply/return air in dry storage room.
- Introduce exhaust air to all janitor's closets and toilet rooms. Provide an unobstructed path for transfer air if makeup is taken from an adjacent space.
- Verify building air balance, especially on exhaust systems. Replace or clean all exhaust grilles. Confirm building is appropriately pressurized.
- Remove obstruction from combustion air louver where the kitchen water heater is located.
- Install new 100-ton air cooled chiller in accessible location. Install a new 2-pipe system alongside the existing system. Convert from 2-pipe to 4-pipe system
- Install AHU systems and terminal VAV boxes with hot water reheat.
- Install a DOAS system for each wing.
- Install VFDs on pumping systems.
- Introduce supply air to all corridors.
- Relocate existing condensing units, serving Admin, closer to evaporator coils in equipment mezzanine or replace line sets.
- Remove window A/C units and unit ventilators in the cafeteria. Install new 4-pipe AHU with correct volume of outside air.
- Remove duct liner from inside duct systems. Install external fiberglass insulation.

- Replace wall propeller exhaust fan in Boy's restroom with concealed inline or roof mounted fan.

Part 10: Fire Protection

61. Observations

- Sprinkler system installed (Y/N) - N
- System type? Wet, dry, preaction, etc.? – N/A
- Full or Partial Coverage? – N/A
- Standpipes installed (Y/N) - N
- Fire Pump installed (Y/N) – N

62. Recommendations

- Provide a full coverage sprinkler system in accordance with the NC Fire Code and NFPA Standard 13.

Part 11: Electrical, Fire Alarm, Security and Communications Systems

63. Observations

Service Entrance

This facility is fed by one (1) pad-mounted transformer and one (1) pole mounted transformer furnished by City of Gastonia. The service to the main building (all except Building D) is fed from the pad-mounted transformer. It is located in the Coal Room in Building "C" and is designated "MH." It is a 800-ampere panelboard rated 480GrY277 volts. It has a main circuit breaker. This panelboard feeds all buildings except for Building D. A second service entrance panelboard is located in the electrical room in Building D and is designated "M." This panel is rated 400-amperes at 208GrY120 volts. It is based on the six-division rule.

The capacities of the services appear to be adequate.

Distribution

The power distribution consists of distribution panelboards and lighting panelboards fed by copper wire in conduit. The main service equipment and some of the distribution and lighting panelboards are well within their life expectancy. There are still some original panelboards that are in poor condition and should be replaced. Replacement circuit breakers for these panelboards may not be available, and the existing breakers may not be providing the protection necessary. There are some panelboards (actually loadcenters) that have been "tacked" on as new circuits have been needed. These need to be replaced with proper panelboards.

Panelboard labeling, including panelboard directories, is not up to date, some labeling is missing and duplicate panels designations were found. There are standard duplex receptacles too near sinks, which should have GFI protection. Additional receptacle circuits may be needed.

Grounding

Proper grounding is one of the most important factors in an electrical system. Not only is it essential for safety, it is also required for proper operation of electronic equipment. The grounding systems in the older portions of the facility are in question. The original building uses the metal conduit system to distribute grounding throughout the facility. This was legal at the time the building was constructed, but not now. The problem is that the underground conduits installed at that time were galvanized steel, which could have deteriorated in the nearly 50 years since the original facility was constructed, which could result in an increase in ground resistance, or loss of grounding entirely. An earth grounding study needs to be made and corrective measures taken.

The NEC (National Electric Code) requires a minimum ground resistance of 25 ohms. For electronic systems (data rooms, computers, etc.) a minimum ground resistance of 5 ohms is needed.

Lighting

Some of the fluorescent lighting in the project consists of T12 lamps and magnetic ballasts. DPI recommends T8 lamps and electronic ballasts as a minimum, but suggests T5 and LED as alternates. The latest additions have T8 lamps and electronic ballasts and some corridor and toilet lighting has been upgraded. The exterior lighting is insufficient and in poor condition in most areas. Exit signs and egress lighting do not meet current codes. Some of the exit signs are not lighted.

Lighting levels are, in most cases, below the levels recommended by DPI. In some instances, General classroom lighting varies as low as 12 footcandles on the task areas, DPI recommends 50 footcandles for task areas. These levels are recommended, not required. The lighting levels in the Kitchen appear to be in accordance with North Carolina Department of Health which requires 50 footcandles minimum in areas where food is handled, prepared and served, and where utensils are washed.

Emergency Power

There is a small standby generator located exterior to wing C. This feeds some lighting, security and fire alarm equipment. This unit may not be large enough to feed the data equipment and additional exit and egress lighting.

Fire Alarm

The existing fire alarm system has a FireLite APF-200 addressable control panel. This is current model, but should be updated. Although the layout of devices in some areas have been updated, much of the layout and distribution of alarm initiating and notification devices does not meet current codes and ADA requirements.

Security

The security system does not meet current Gaston County School guidelines. No access card readers on exterior doors. Video surveillance needs to be upgraded per GCS guidelines. Facility has 32 cameras installed and a control system capable of 32 cameras.

Data/Communications

The data system currently does not meet GCS criteria. The MDF and IDF's are not dedicated and in secure locations. The MDF is located in a Storage Room, the IDF's are located in various non-dedicated and unsecured rooms. Data wiring is run exposed in some cases, with conductors not properly supported and protected. There is no standby generator to supply data and security power needs.

Sound Systems

The sound system used in the Multi-Purpose are appears to be adequate, but may need upgrading.

Concerns

It was noted in several areas where panels are located that materials, furniture, etc. have been stored too close to the equipment. This is both illegal and dangerous. The National Electrical Code requires a minimum of 36 inches clear in front of these items. We feel that this issue should be addressed as soon as possible.

64. Recommendations

Service Entrance

SPD (Surge Protection Device) should be installed on all service entrance equipment that currently do not have them.

Distribution

All original panels and panels by manufacturers that are no longer in business should be replaced. All equipment should be properly labeled, including directories showing loads for all circuits. All electrical panelboards need to be scanned with an infrared scanner to be sure that there are no “hot” spots, which can indicate that there is an overload, faulty device or connection. Based on the scanning results, corrections need to be made.

Lighting

Most lighting in the original building (except where recently updated) should be replaced. Additional exterior lighting needs to be added – some on building walls and some on poles. New exterior lighting should be LED with protective enclosures without the use of polycarbonate lenses. Additional exit signs and egress lighting needs to be installed. All exit signs and egress lighting shall have battery backup with self-diagnostic system.

Fire Alarm

The fire alarm system should be upgraded to meet current codes using the existing FireLite control panel

Security

Security system needs to be upgraded to latest GCS criteria. Door access system and Mass Notification System need to added per GCS standards.

Data/Communications

The wiring system should be updated to current GCS criteria. The main data rack MDF and IDF rack need to be secured. Backup power from a standby generator should be provided.

Sound Systems

The intercom system is outdated, but appears to operate satisfactorily. Suggest system be updated to a VoIP based system.

End of Assessment



SHERWOOD ELEMENTARY
1744 Dixon Road | Gastonia, NC



YATES ■ CHREITZBERG ■ HUGHES

A S S E S S M E N T

Sherwood Elementary School

Existing Condition Assessment

PART 1: General Narrative of Facility

- 1. **Survey Date:** September 2014
- 2. **School Address:** 1714 Dixon Road, Gastonia, NC
- 3. **Total Building Area:** 75,450 square feet
- 4. **Total Site Area:** 13.09 acres
- 5. **Instructional Capacity:** 723 students
- 6. **Enrollment 2014-2015:** 641 students
- 7. **Current Utilization:** 89%
- 8. **Area per Student Capacity:** 104 sf / student

9. Building Size and Dates of Construction:

Building A: 1964 (65,048 sf) Building B: 2003 (10,402 sf)

10. General Description of Facility:

The original school was constructed in 1964, with a free standing classroom building addition in 2003. The majority of the facility consists of load bearing masonry walls with steel bar joist roof structure and low sloped roofing. Exterior walls consist of predominately brick veneer and windows. The facility consists of 2 detached buildings, which require exterior access between them.

The site contains three areas of shared staff and visitor parking, a single drive that is shared both car riders and buses, and no bus parking area. Play areas consist of various playgrounds and two multipurpose fields.

Part 2: General Space Standards

11. General Purpose Classrooms

Room Description	No. of Rooms	Typical Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
Pre-Kindergarten	1	1,290 sf	1,200 sf	107%	Excellent
Kindergarten (102, 103)	2	1,170 sf	1,200 sf	97%	Good
Kindergarten (105, 106,107)	3	870 sf	1,200 sf	72%	Poor
1st Grade	5	920 sf	1,000 sf	92%	Good
2nd Grade	5	810-980 sf	1,000 sf	81-98%	Fair - Good
3rd Grade	5	870-930 sf	1,000 sf	87-93%	Fair - Good
4th Grade	4	870 sf	1,000 sf	87%	Fair
5th Grade	4	870 sf	1,000 sf	87%	Fair

Comments: The general purpose classrooms are arranged into 5 areas, one of which is a free standing detached building for 4th and 5th Grade, and requires exterior access. Overall, the classrooms vary significantly in size, depending on the area of the building in which they are located.

All of the classrooms contain smart boards, wireless technology and at least four hardwired computer drops.

- The Pre-Kindergarten classroom is slightly larger than the space standards and contains a handicap accessible toilet room, with a hand wash sink located inside the classroom. The classroom contains a door to the exterior and minimal casework with countertop sink, which is not consistent with GCS standards.
- Kindergarten classrooms 102 and 103 are very close to space standards, while Classrooms 105, 106 and 107 are significantly smaller. Two toilet rooms are shared between each of the classroom pairs, none of which are handicap accessible. The classrooms contain a shared door to the exterior at the toilet vestibule and minimal casework with countertop sink, which is not consistent with GCS standards.
- The 1st Grade classrooms are all very close to space standards. Each classroom contains a door to the exterior. The classrooms also contain minimal casework with sink, which is not consistent with GCS standards.
- 2nd and 3rd Grade classrooms vary in size, but are generally close to space standards (except for 2nd Grade room 202, which is 810 sf). Four of the classrooms contain exterior doors, which is not required by code for 2nd or 3rd Grade and should be removed for security reasons. The classrooms also contain minimal casework and no sinks, which is not consistent with GCS standards.
- Two of the 3rd Grade classrooms contain a toilet, which is not required for 3rd Grade and should be removed to make the classrooms larger, or turned into storage.
- Most of the Pre-K - 3rd Grade classrooms contain demising walls of folding panels, which do not offer adequate acoustical separation, and also limit the amount of wall mounted casework and

electrical / communications outlets within the rooms. These demising walls should all be replaced with fixed walls including sound insulation.

- All of the 4th Grade and 5th Grade classrooms are located in Building B, the newest building, and are smaller than space standards. Each classroom contains casework of adequate size and layout, general storage cabinets, student cubbies and full height teacher storage units. None of the classrooms contain sinks within the room.

12. Science Classrooms

Science is taught within 4th and 5th Grade classrooms and does not require dedicated Science Rooms or Labs in Elementary Education. These classrooms do not contain any sinks, which is not adequate for science instruction. Sinks are very difficult to add, due to the existing sewer lines below slab.

13. Exceptional Children and AIG / ESL Classrooms

Room Description	No. of Rooms	Typical Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
EC Resource (111)	1	920	1,200 sf	76%	Poor
EC Resource (216)	1	480 sf	1,200 sf	40%	Poor
EC Resource (216B)	1	420 sf	1,200 sf	35%	Poor
AIG	1	920	1,000 sf	92%	Good
ESL	1	400	1,000 sf	40%	Poor

Comments: EC Resource classroom 111 is located in the 1st Grade wing. EC Resource classrooms 216 and 216B and the ESL classroom are located in the 3rd Grade wing. The AIG room is located in the 1st Grade wing.

- EC Resource classroom 111 is taught in a standard classroom in the 1st Grade wing, which is significantly smaller than space standards, and has the same comments as general purpose 1st Grade classrooms. The classroom does not contain a toilet, but is located near a handicap accessible group toilet.
- EC Resource classrooms 216 and 216B utilize a classroom that has been divided in two, both of which are less than half the size of space standards. Neither classroom contains a toilet, but are located adjacent to a handicap accessible group toilet. The classrooms also contain minimal casework, which is not consistent with GCS standards.
- EC has access to a toilet / shower and laundry room in the Administration are, however the shower is not currently functional or handicap accessible.
- The school previously included an EC Cluster classroom, but this program was removed due to capacity needs. Staff would like to incorporate an EC Cluster room in the future, which would also require a dedicated toilet, built in casework, counter, sink and student cubbies.
- AIG is taught in a standard classroom in the 1st Grade wing, which is close to space standards, and has the same comments as general purpose 1st Grade classrooms.
- ESL utilizes a dedicated small classroom, which is less than half the size of the space standards.

14. Arts Education

Room Description	No. of Rooms	Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
Music	1	800 sf	1,000 sf	80%	Fair
Art	1	1,100 sf	1,000 sf	110%	Good

Comments: Music and Art both have dedicated rooms. Music is located in the 2nd Grade wing and Art is located near the center of the school close to the Media Center.

- The Music room is separated from the adjacent classroom by a folding panel wall, which does not offer adequate acoustical separation. This wall should be replaced by a fixed wall with insulation. The room contains dated classrooms casework, which is not adequate for music storage.
- Art is located in an open room without any doors to the adjacent corridors and does not contain any built-in casework, sink or a kiln, which should be added. Doors should be added to separate the Art room from the noise of the corridors.
- The Art room has contains exterior doors to an enclosed courtyard, which is significantly overgrown.
- Both the Music and Art rooms do not have any dedicated secure storage outside of the room.

15. Career and Technical Education Classrooms / Shops

CTE is not provided Elementary Education, therefore no facilities are necessary.

16. Media Center

Room Description	No. of Rooms	Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
Main Room	1	2,850 sf	2,400 sf	118%	Excellent
Support Areas	Various	550 sf	1,200 sf	45%	Poor

Comments: The Media Center is located centrally within the main school building. The Main Room is larger than the space standards, however the Support Areas are significantly smaller.

- The Media Center Support spaces are more than one half smaller than space standards and contain only an office and small storage room. The main IT MDF rack is located in a Media Center support room, which should be a secure, fire rated room with a gaseous fire suppression system. Due to the location within the school, the support areas are very difficult to expand. However, the Media Center and Support areas have direct access to a large, central Materials and Resource Center, which serves as a storage, work room and teacher lounge for the main school building.
- The Media Center does not contain a video production room, which could be added in the Material Resources Center area.
- The Media Center does not contain a meeting room.
- The Media Center contains an area for computer / technology instruction.

- The school Nurse and Social Worker share a small office in the Media Center, which should be relocated for privacy.
- The Media Center is located within an area of the school that cannot be secured for after-hours community use.

17. Physical Education

Room Description	Area	Court Size	NCDPI Standard Area	Relation to Standard	Adequacy Rating
Multipurpose / Indoor PE	2,650 sf	42 x 62	3,600 sf	73%	Poor

Comments: The Multipurpose / PE Room is located adjacent to the main entry doors near the Administration area, and is separated from the Cafeteria by a folding wall.

- The Multipurpose Room is significantly smaller than space standards.
- The Multipurpose Room contains an elevated stage, which is handicap accessible via a ramp from a vestibule from the corridor, but not directly from the MP Room.
- The basketball court is 60 feet long, which is 14 feet short of the recommended 74 foot length, and only has no safety space on the ends or sides. The steps of the stage are on one side with no safety space, which is a safety concern.
- The Multi-purpose room contains two pairs of doors to the exterior. However, it cannot be utilized after hours, since it does not have access to toilets that can be secured from the rest of the building.

18. Administration

Excellent Good Fair Poor

Comments: The Administration area includes approximately 1,270 square feet, and consists of the following rooms: (1) Main Office / Reception, (1) Principal's Office, (1) Assistant Principal's Office, (1) Toilet shared between Principal and Assistant Principal and (1) large Work / Storage room. The Administration area is very limited in space, but could be redesigned and expanded into the Material Resources Center for better efficiency.

- The Administration area is located across the main corridor from the main school entry and the school does not contain a secure vestibule for the main entrance. Design of a new secure entry vestibule with access directly into the Reception area is not possible without interruption of the main interior corridor, or relocation of the Admin area. However, the Reception area has direct visibility of the main entry doors, and a secure vestibule can be added which has visible, but not direct access into the Administration area.
- Due to its location on the interior of the school, the Administration area does not have visibility of any portion of the exterior of the school, including visitor parking or student drop off areas. The Main Office does have visibility of the main entry doors through an interior window.
- The school does not have a dedicated SRO Office, which should be located near the main school entry and Administration area.
- The Administration area does not include a Secretary's Office.
- The Administration area does not include a dedicated Conference Room.

- The Administration area does not include a private Staff Room.
- The Administration area contains a large Work / Storage Room. However, Staff mail slots are located in a small hallway between the Main Office and Work Room, and should be moved into this large Work Room
- The Administration area does not contain a secure records storage room or any dedicated secure storage.
- The Administration area does not contain a dedicated men's and women's Toilet.
- The Administration area does not contain any room for a waiting area. Waiting is provided in the main corridor outside of the Reception area.
- The Principal and Assistant Principal share a private Toilet Room, is not handicap accessible.
- The Main Office contains a door in the Reception area that opens directly into the First Aid Room, which should be removed for privacy reasons.

19. Student Support Excellent Good Fair Poor

Comments: The Student Support Spaces consist of (1) Guidance Office and (1) Office shared by the School Nurse and Social Worker (1) School Therapist Office and (1) Parent Involvement Room. Classroom 104 is also used as a Guidance Room.

- The school contains 1 large Guidance Office near the Administration area, which could be divided into 2 smaller offices.
- The Social Worker and Nurse share an office in Media Center. Each should have dedicated spaces, located closer to the Administration area.
- Health Services should include a Nurse's Office, Holding Room, dedicated Toilet, Shower and Changing area and wheelchair storage located near, but separate from, the Administration area.
- The school currently has a washer and dryer near the front office area, which should be relocated into the Health Services area.
- The School Therapist office is located directly off of a busy corridor near front of the school, which offers little student privacy, and should be relocated to a more private area for confidentiality.

20. Staff Support Excellent Good Fair Poor

Comments: The Staff Support Spaces consist of (1) Teacher Work Room in Building B, (1) Teacher Lounge in the 1st Grade Wing and a Teacher Lounge space within the large Material Resources Center.

- Teacher Lounges should be converted to Teaming / Work Rooms.
- Additional Teacher Teaming / Work Rooms should be located in each grouping of classrooms.

21. Cafeteria

Students per Seating *	Dining Room Area	Area per Student	NCDPI Standard Area	Capacity of Dining Room	Relation to Standard
242	2,410 sf	9.9 sf / student	14 sf / student	180	71% Poor

* Students per Seating equals the 2014 - 2015 student enrollment for the school divided by 2.5 seatings for continuous serving ($605 / 2.5 = 242$), as recommended by NCDPI Guidelines.

Comments: The Cafeteria is located adjacent to Multipurpose Room near at the front of the building and is separated from the MP Room by a folding wall.

- The Cafeteria is significantly smaller than space standards and is accessed from within the school by only one pair of doors, significantly limiting circulation for entering and exiting the room.
- The Cafeteria contains a pair of doors to the exterior at the front of the school. However, these doors do not offer close access to the loading dock area for trash removal. Trash must be removed through the Kitchen to the loading dock area.

22. Kitchen

Lunches Served per Day *	Kitchen Area	NCDPI Standard Area	Relation to Standard
544	1,250 sf	1,518 (for 500 - 750 lunches served)	82% Fair

* Lunches Served per Day equals the 2014 - 2015 student enrollment for the school times 90% participation factor ($605 \times .90 = 544$). This school experiences an elevated participation rate due to free and reduced lunches.

Comments: The Kitchen is significantly smaller than NCDPI guidelines of overall area for the number of students served, and is in generally poor condition. The serving area is also located within the Kitchen. See the Section 7: Food Service Assessment for additional information.

- The Kitchen only contains one serving line, which exceeds the serving capacity for the number of students, requiring extended lunch hours to serve students. A second serving line is very difficult to add within the existing space.
- The Kitchen does not include a secure Manager's Office, as the manager's desk is located in a corner of the kitchen. A dedicated Manager's Office needs to be provided.
- The kitchen staff locker area is too small.
- The kitchen toilet is not handicap accessible.
- The Kitchen does not have a washer and dryer.
- The loading dock is elevated and has stairs, but does not contain a handicap accessible ramp and is too small to access the trash dumpster. It also does not include a covered canopy, only a small recess at the receiving door. The dock should be enlarged and include a ramp, and also a covered canopy.

23. Toilet Facilities

Excellent
 Good
 Fair
 Poor

- The group toilets in the 1st Grade wing, and between the 2nd and 3rd Grade wing have been upgraded in 2002. These toilets are both in generally good condition and also mostly handicap accessible.
- Building B contains two both group and staff toilets that are in generally good condition and also handicap accessible.

- The group toilets near the front of the building are in poor condition and also not handicap accessible. These toilets should be upgraded, since they are closest to the Cafeteria and Multipurpose Room.
- Building A contains four Staff toilets, which are located in the various classrooms wings. Three of these were upgraded in 2002, are in generally good condition and also handicap accessible. The staff toilet in the 2nd Grade wing is in poor condition and also not handicap accessible.

24. Other Spaces

- The school has very little general purpose storage. Many electrical rooms are used for storage, which violates code.
- The school currently has one classroom in the 1st Grade wing (Room 115) which is not currently utilized for a classroom, but for part time Occupational Therapy.
- The MDF is located a Media Center support room, which should be converted to a secure, access controlled room with a gaseous fire suppression system. The IDF's are located throughout the school in classrooms and corridors, most of which will be difficult to relocate or converted into secure rooms due to existing data cabling.

25. Additional Considerations

- None at this time.

Part 3: School Site

26. Parking Excellent Good Fair Poor

Description	Current Number of Spaces	Number of Spaces Needed	Relation to Number of Spaces Needed
Staff / Visitor (South)	60	80 Staff (70 employees plus 10 transient) <u>25 Visitor</u> 105 total	+32
Staff (East)	34		
Staff (West)	<u>43</u>		
Total Staff / Visitor	137 total		
Bus	0	0	Not Required

Comments: The site contains more than an adequate number of parking spaces, and none of the spaces are located directly in a drop-off / pick-up lane. However, most of the paving is in poor condition.

- The asphalt paving in the east and south parking areas is in poor condition with significant cracking and areas of settling, and should be replaced.
- The asphalt paving in the west parking lot is in fair condition, but contains several patches.

27. Vehicular Circulation Excellent Good Fair Poor

Comments: Vehicular Circulation on the school site is poor, with only one drive that serves both busses and car riders and inadequate stacking. Most of the paving is in poor condition.

- The school contains only one drive that is shared by both buses and car riders, which is a safety and logistical concern. Staff has to manage the schedule to serve busses first, then cars, which requires significant additional staff and time. The drive does not contain sufficient stacking for cars, which back up onto Dixon Road. The drive, and possibly the parking area should be redesigned to provide dedicated car and bus drives with adequate stacking.
- The asphalt paving in the drive is in poor condition, with significant cracking and rutting, and should be replaced.
- The kitchen does not have a dedicated service drive and is accessed from the main drive. The asphalt and concrete near the kitchen loading dock and trash area is in poor condition and in need of replacement.

28. Pedestrian Circulation Excellent Good Fair Poor

Comments: The pedestrian circulation on the school site is fair, with adequate sidewalks which are in fair condition.

- The concrete sidewalks throughout the site are in generally fair condition, except as noted below.
- The concrete walk to the entry between the 2nd and 3rd Grade classrooms wings is in poor condition and should be replaced.
- Dixon Road includes a sidewalk for the length of the school property, which is in generally fair condition.

29. Walkway Canopies Excellent Good Fair Poor

Comments: The school contains one walkway canopy that connects the two buildings, and long canopy at the front entry for drop off and pick up. Small area canopies are also located over most of the classroom doors to the exterior.

- The canopy at the front of the building provides adequate length for drop off and pick up. This canopy is of fairly substantial construction and in fair condition.
- The canopy connecting the two buildings is of substantial construction and in good condition. Another canopy could be added at the opposite end of Building B to connect the entrance closer to the Cafeteria and Gymnasium.
- The canopies over the exterior classroom doors are not of substantial construction and in poor condition. These should be removed or replaced with more durable systems.

30. Outdoor Play Excellent Good Fair Poor

- Pre-Kindergarten and Kindergarten have two dedicated fenced play areas containing both mulch and grass. The fixed play equipment is adequate and in good condition. However, the mulch and edging is in poor condition and needs to be replaced.
- Three other playgrounds are located on the site, one of which is accessed by a paved concrete walk for handicap accessibility. However, none of the playgrounds contain handicap accessible equipment, which should be added in at least one area. The play equipment is in generally good condition, however the mulch and edging is in poor condition and needs to be replaced.

- Some very large mature trees are located close to all but one of the playgrounds, with limbs overhanging the play area. These trees should be removed for safety reasons to limit the potential of large limbs falling and potentially injuring children and staff.
- The site contains one multipurpose ball field with back stop that is in poor condition. This field is located at a much higher grade than the school, with no handicap access. The field and infield are in poor condition with several bare spots, and the fencing is overgrown with vegetation. This field does not appear to be used on a regular basis.
- The walking track around the multipurpose field is paved, and the asphalt is in generally poor condition.
- The site does not contain a hard surface play area, which should be added.

31. Athletic Facilities

The site does not contain dedicated athletic fields, which are not needed for an Elementary School.

32. Athletic Spectator Areas

The site does not contain dedicated athletic fields or spectator areas, which are not needed for an Elementary School.

33. Grounds / Landscaping Excellent Good Fair Poor

- The perimeter of the site is significantly overgrown on the north and west sides and should be trimmed back for safety and security purposes.
- Approximately 5 very large mature trees are located near the building and overhanging some playground areas. These trees should be removed and replaced with new lower growing trees for safety considerations of large limbs or the trees falling on the school or playgrounds, and for maintenance concerns of leaves clogging the roof gutters.
- The interior courtyard is significantly overgrown with both trees and shrubs, which should be removed and replaced with lower growing plants.
- Foundation shrubs minimal at intermittent places around the building, areas of which are somewhat overgrown. These shrubs should be trimmed, or removed and replaced with lower growing plants.

34. Utilities Excellent Good Fair Poor

- The school is served by the City of Gastonia for water and sewer, and has a backflow preventer for domestic water that only serves Building B only, and is reported to be in working condition. Backflow prevention should be provided for all of the buildings.
- The school does not have a grease interceptor on the sanitary sewer line for the kitchen, which should be added by code.
- The sewer line from Building A is reported to be terra cotta and in poor condition, and should be replaced with PVC.
- Two fire hydrants are located in the general area of the school, along Dixon Road, and one hydrant is located on site near the kitchen loading dock. These hydrants do not provide adequate coverage of the school. More fire hydrants should be added on the school site to provide adequate coverage.
- The school is served by natural gas, which is metered separately for the kitchen and the buildings.

35. Storm Drainage Excellent Good Fair Poor

- The site does not have a stormwater management pond, which is not required by the municipality unless additional impervious area is added. However, it does include a depressed collection area to the west portion of the site, which does not serve as a pond.
- The site has very minimal underground storm drainage, as the majority of the water sheet flows across paved areas to only a few storm drains or ditches.
- The east parking lot area has no underground storm drainage and sheet flows into a ditch, and shows evidence of several areas of ponding. Underground storm drainage should be added if this area is replaced or redesigned.
- The south parking area and main drive have minimal underground storm drainage, which is not adequate for the amount of paving. Additional underground storm drainage should be added if this area is replaced or redesigned.
- The west parking area contains underground storm drainage, which flows into the collection area.
- Most of the downspouts throughout the school are connected directly to an underground stormwater piping system. This connection should be made indirect, with the downspouts spilling above grade into catch basins to prevent clogging.

36. Emergency Access Excellent Good Fair Poor

- The site has paved emergency access around the north, east and south sides via parking areas and drives, which provide access to most of the main building entries / exits.
- An emergency access drive cannot be added to the north without relocation of the multipurpose field and walking track.

37. Site Security Excellent Good Fair Poor

- The site is located in a predominately residential area, although it is fairly close to East Garrison Blvd. and commercial developments. The rear of the site abuts a large Church. The Principal and school SRO Officer indicated that the surrounding areas do not typically include significant crime and vandalism at the school is rare.
- The south, east and portions of the west sides of the building and site have good visibility from public roads and parking areas. The north side does not have any vehicular access for police patrol.
- The site contains chain link fencing around the perimeter, many areas of which are damaged and should be replaced. In addition, wooded areas have significantly overgrown the fencing and should be cut back.

38. Additional Considerations

- The flagpole is in poor condition and should be replaced.
- Directional signage on the school site is poor and should be replaced.

Part 4: Building Envelope

39. Construction Type Non-Combustible Combustible

40. Structural Floors

Material: Concrete Slab on Grade
 Concrete on Metal Deck over Steel Structure
 Wood Deck on Wood Joists
 Other

Evidence of Structural Concerns: Prevalent Isolated None Visible

Overall Condition of Structural Floors: Excellent Good Fair Poor

Comments: The structural floors consist of concrete slab on grade in all areas.

- Concrete floors generally appear to be in good condition with no major cracks telegraphing through the floor coverings, except in Building A as noted below.
- One crack in the terrazzo was observed in the main corridor of between Rooms 201 and 208. The crack does not involve an elevation change on either side, and may be an expansion joint in the concrete slab that has widened.

41. Exterior Walls / Cladding

Material: Masonry EIFS / Stucco Metal Other

Evidence of Structural Cracking: Prevalent Isolated None Visible

Evidence of Concern with Exterior Cladding:

Cracks / Gaps Prevalent Isolated None Visible

Efflorescence (Masonry) Prevalent Isolated None Visible

Moisture Penetration Prevalent Isolated None Visible

Rot/Decay/Corrosion Prevalent Isolated None Visible

Overall Condition of Exterior Walls: Excellent Good Fair Poor

Comments: The exterior walls of Building A appears to consist of multi wythe brick, or brick / CMU construction that most likely does not include an air space or flashing. The newer Building B consists of brick veneer with CMU backup, insulation and an air space.

- The brick veneer appears to be in generally good condition, with some areas of efflorescence on the older Building A, which may be a result of moisture within the wall due to the lack of an air space.
- In areas of the exterior kitchen wall, the horizontal mortar bed joints have deteriorated and contain gaps. These mortar joints should be re-pointed.
- Building A contains an approximately 24" high fascia band at the top of the brick, which consists of a panel system of unknown material. These panels may contain asbestos, but have not been tested. The panels and joints are deteriorating in many places and should be replaced.
- The exterior wall of the gymnasium that extends above the adjacent roof line contains panels which are gravel veneer and also metal. The joints of the gravel panels appear to be opening up and these panels should be replaced.

42. Exterior Glazing

Frame Material: Aluminum Steel Wood Other

Glazing Material: Un-insulated Insulated Glass Block

Evidence of Concern with Exterior Glazing:

Moisture Penetration Prevalent Isolated None Visible

Rot/Decay/Corrosion Prevalent Isolated None Visible

Overall Condition of Exterior Glazing: Excellent Good Fair Poor

Comments: Due to the differing ages of the various building wings, the condition of the exterior glazing systems varies substantially, but the majority of glazing is in poor condition.

- The exterior glazing in most areas of Building A consists of 1/4" un-insulated glass in a thermally continuous steel framing system, which is very energy inefficient and past its useful life. The glazing also includes an exterior louvered shutter system at each of the classrooms. In addition, this glass appear to standard plate glass, which presents a safety concern as it is easily broken. All of this glazing should be replaced with insulating glass in a thermally broken aluminum storefront framing system to be more energy efficient and provide better thermal control of the classrooms in particular. The glass should be safety tempered in areas required by code. Some areas could be infilled with insulated metal panels or solid wall instead of glass to reduce the amount of glazing, particularly in classrooms.
- The glazing in Building B consists insulating glass in an aluminum framing system and is in good condition.

43. Exterior Entry / Exit Doors

Door Material: Aluminum Steel Wood Other

Evidence of Concern with Entry / Exit Doors:

Moisture Penetration Prevalent Isolated None Visible

Rot/Decay/Corrosion Prevalent Isolated None Visible

Other None at this time

Overall Condition Doors: Excellent Good Fair Poor

Overall Condition of Hardware: Excellent Good Fair Poor

Comments: Due to the differing ages of the various building wings, the condition of the entry / exit doors varies substantially, but the majority of doors are in poor condition. None of the exterior doors include access control hardware, which should be added for security.

- Most of the entry / exit doors Building A appear to be original and are in poor condition, contain wire glass, do not have code compliant panic devices and have no access control for security. Several of the exterior door are wood and significantly deteriorated at the bottom. These doors should be replaced to include code compliant door hardware and access control for security.
- The entry / exit doors in Building B are in good condition, but contain too much glass for security concerns and do not have access control hardware. These doors should be replaced.
- The main front entry doors should have secure access control with buzz-in and security camera tied into the Administration area reception desk.

44. Exterior Classroom Doors

Door Material: Aluminum Steel Wood Other

Evidence of Concern with Classroom Doors:

Moisture Penetration Prevalent Isolated None Visible

Rot/Decay/Corrosion Prevalent Isolated None Visible

Other None at this time

Overall Condition of Doors: Excellent Good Fair Poor

Overall Condition of Hardware: Excellent Good Fair Poor

Comments: All classrooms in the Kindergarten and 1st Grade wings have doors that open to the exterior.

- The exterior classroom doors are wood with several coats of paint and knob style hardware, several of which are significantly deteriorated at the bottom. These should all be replaced with insulated hollow metal doors and lever style hardware with new locks.
- Four of the 2nd and 3rd Grade classrooms contain exterior doors, which is not required by code for 2nd and 3rd grade. These doors are in poor condition and should be removed for security reasons.

45. Roofing

An independent roof assessment was performed for Gaston County Schools by Roof Engineering, Inc. (REI) in 2006. The report indicates the following needs regarding the replacement of roofs:

- Building A: Asphalt Built-up Replace in 2018 (All areas)
- Building B: Asphalt Built-up No replacement information was provided in the roof assessment. Assume replacement in 2028, which is 25 years from date of installation in 2003.

46. Additional Considerations

- Remove existing brick chimney, which is not used anymore, for safety reasons.
- Most of the downspouts on Building A are in poor condition. Several have deteriorated and contain holes, and should be replaced.

Part 5: Building Interior**47. Interior Walls**

Overall Condition of Walls: Excellent Good Fair Poor

Comments: The majority of interior walls are painted CMU and are in good condition. However, most of the Pre-K - 3rd Grade classrooms contain demising walls of folding panels, which do not offer adequate acoustical separation, and also limit the amount of wall mounted casework and electrical / communications outlets within the rooms. These demising walls should all be replaced with fixed walls including sound insulation. The classroom demising walls in Building B are drywall and in good condition. The paint also appears to be in generally good condition.

48. Floor Finishes

Classrooms	Flooring Type: VAT (in most classrooms of Building A) Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Classrooms	Flooring Type: VCT (in all classrooms of Building B) Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Classrooms	Flooring Type: Carpet (in Pre-K and 1st Grade classrooms) Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor
Corridors	Flooring Type: Terrazzo (in Building A) Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Corridors	Flooring Type: VCT (in Building B) Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Cafeteria	Flooring Type: VAT Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor
Multipurpose Room	Flooring Type: VAT Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Media Center	Flooring Type: Carpet Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor
Administration	Flooring Type: Carpet and VAT Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor

Comments: The majority of interior floor finishes within the classrooms of Building A are VAT (Vinyl Asbestos Tile), and the corridors of Building A are terrazzo. Building B contains mostly VCT flooring.

- The Pre-Kindergarten and Kindergarten classrooms are one half carpet and one half VAT. The VAT is in fair condition, but the carpet is generally in poor condition. The VAT should be abated, the carpet removed and the whole room replaced with VCT.
- All of the 1st - 3rd Grade classrooms, and various other rooms in Building A have VAT, which should be abated and replaced with VCT.
- The VAT in the Multipurpose Room is in fair condition, and the VAT in the Cafeteria is in poor condition. Both of these rooms should be abated, the MP Room replaced with rubber flooring and the Cafeteria replaced with VCT.
- The carpet in the Media Center and Administration area is in poor condition and should be replaced.
- The hard tile in the kitchen is mosaic tile and is in poor condition. This should be replaced with a larger quarry tile with less grout joints.

49. Ceilings

Lay-in	Locations: Building A, Building B Condition: <input type="checkbox"/> Excellent <input checked="" type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> Poor
Drywall	Locations: Kitchen Condition: <input type="checkbox"/> Excellent <input checked="" type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> Poor

Comments:

- All of the ceilings in Building A were replaced with 2x2 lay-in in 2005, and are in generally good condition. Group toilets in this building contain washable ceiling tiles.

- The kitchen contains a drywall ceiling that is in good condition.
- Building B contains 2x2 lay-in ceilings, which are in good condition.

50. Casework

Classrooms	Casework Type: Wood and Plastic Laminate Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor
Media Center	Casework Type: Wood and Plastic Laminate Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor
Administration	Casework Type: Wood and Plastic Laminate Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor

Comments: The majority of the casework in the school is inadequate and in poor condition.

- All of the classrooms in Building A contain inadequate, dated wood cabinets and counters of various configurations in poor condition, and no student cubbies. Casework in all of these classrooms needs to be replaced with a standard configuration, including student cubbies, a lockable teacher storage unit and countertop sinks (where currently located in classrooms).
- The casework in Building B is of adequate size and layout, including student cubbies, full height teacher storage units, but do not contain countertop sinks. This casework is in generally good condition.
- The Art room does not contain any built in casework for storage of materials, which should be added.
- The Media Center and Media Support rooms contain a variety of very dated casework, which is inadequate and should be replaced.
- The Administration area contains inadequate and dated casework, which needs to be replaced. The main reception counter is not handicap accessible.

51. Interior Doors

Overall Condition Doors:	<input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor
Overall Condition of Hardware:	<input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor

Comments: Due to the differing ages of the various building wings, the condition of the interior doors and hardware varies substantially, but the majority are in poor condition.

- The interior doors and hardware in most areas of the older Building A appear to be original, do not have code compliant lever style hardware and are in poor condition. These original doors should be replaced, and the classroom doors should also include lockdown hardware.
- The interior doors and hardware in Building B are in generally good condition and have lever style hardware, but should be upgraded with lockdown hardware in classrooms for security.
- The pairs of doors in the Cafeteria and Multipurpose Room all open outward directly into the main corridor, reducing the exit width and causing safety concerns. These doors should all be pocketed.

52. Additional Considerations

- Most of the window blinds in Building A are in poor condition and in need of replacement.

- The ramp guardrail to the Stage does not meet current code for picket / rail spacing and should be replaced.

Part 6: Handicap Accessibility

53. Exterior Handicap Accessibility

Accessible Parking:	<input type="checkbox"/> Excellent	<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Fair	<input type="checkbox"/> Poor
Accessible Route to Building(s):	<input type="checkbox"/> Excellent	<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Fair	<input type="checkbox"/> Poor
Accessible Entrances / Egress:	<input type="checkbox"/> Excellent	<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Fair	<input type="checkbox"/> Poor
Accessible Routes between Buildings:	<input type="checkbox"/> Excellent	<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Fair	<input type="checkbox"/> Poor
Accessible Play Areas:	<input type="checkbox"/> Excellent	<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Fair	<input type="checkbox"/> Poor

Comments: The overall exterior handicap accessibility for the school is generally good, with parking and entrances / egresses from the building being accessible.

- The site contains 6 marked accessible parking spaces located in three different parking areas, two of which contains a van accessible aisle.
- All of the main entry / doors exit to grade without stairs.
- Four of the five playground areas and the walking track have a concrete or asphalt sidewalk for handicap access.

54. Interior Handicap Accessibility

Accessible Routes:	<input type="checkbox"/> Excellent	<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Fair	<input type="checkbox"/> Poor
Accessible Doors and Hardware:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input checked="" type="checkbox"/> Fair	<input type="checkbox"/> Poor
Accessible Signage:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input checked="" type="checkbox"/> Fair	<input type="checkbox"/> Poor

Comments: The interior of the school is on one finished floor level, with no interior ramps or stairs.

- The majority of classroom and other interior doors in the school are 3'-0" wide. However, most of the doors in Building A have knob style hardware, and should be replaced with code compliant levers.
- The Administration area reception counter and the Media Center circulation counter are both not handicap accessible.
- Most of the signage in Building A does not meet current accessibility requirements and should be replaced.

55. Toilet Rooms Accessibility

Accessible Classroom Toilets:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor
Accessible Group Toilets:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input checked="" type="checkbox"/> Fair	<input type="checkbox"/> Poor
Accessible Staff Toilets:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input checked="" type="checkbox"/> Fair	<input type="checkbox"/> Poor

Comments: The handicap accessibility of the student group toilets is generally fair. In 2002 some (but not all) of the group and Staff toilets rooms were upgraded for handicap accessibility. Only the Pre-K classroom toilet is accessible.

- The Pre-K classroom contains a handicap accessible toilet room. The Kindergarten classrooms include toilet rooms within each of the classrooms, none of which are handicap accessible and should be enlarged.
- Two of the three group toilets in Building A are mostly handicap accessible. However, the girl's group toilet in the 1st Grade wing does not include a handicap accessible watercloset stall. Two of the stalls should be combined into one large handicap accessible stall.
- The group toilet near the main entry and Administration area is not accessible, and should be enlarged. These toilets should be enlarged to be accessible, since they are closest to the Cafeteria and Multipurpose Room.
- Building A contains four Staff toilets, three of which are handicap accessible and located in the various classroom wings. The Staff toilet in the 2nd Grade wing is not handicap accessible.
- The toilet in the Administration area is not handicap accessible. The Administration area should contain dedicated accessible toilets for men and women.
- Building B contains group toilets and two Staff toilets that are handicap accessible.
- The Principal and Assistant Principal share a toilet that is not handicap accessible and difficult to expand in the current location.

Part 7: Food Service

56. Observations and Recommendations

Storage:

- Cold Storage Assembly cooler and freezer needs to be replaced. Assembly wall panels are swelling and separating in a number of places.
- Walk-in Assembly is not properly trimmed and sealed to wall and floor surfaces.
- It is advised to replace the refrigeration systems for these compartments to insure conforming to current CFC regulations.
- Receiving door should be provided with an air-curtain fan.
- Lockable cabinet needs to be added for proper separation of chemicals from dry food storage.

Food Preparation:

- 2-Compartment sink in good condition. Direct waste to be converted to indirect waste and run to floor sink per code requirements.
- Ice Machine is in good working condition.
- Painted Galvanized legs and under shelves for all worktables are in good condition.
- Replace the worktable having the painted pot rack with a new all stainless steel unit for sanitary reasons.
- One of the two mobile hot cabinets is not functional and in need of immediate replacement.

Cooking:

- Convection Steamer is in new condition.
- The double stack Convection oven is in excellent condition.
- The single convection oven is functional, but is nearing time for replacement.
- The 18" hot top range well past its useful life cycle and should be replaced as soon as possible.

- Hood and fire system is to be replace as it does meet NFPA96.

Dishwash:

- Existing dish wash tables, and the dishwasher are in fair condition. Provide Proper air gap for all indirect at the floor sink. Dishwasher is functional, and is used for pot and pan sanitizing.
- 3-Compartment sink in good condition. Direct waste to be converted to indirect waste and run to floor sink per code requirements.
- Add one hand sink

Serving:

- Replace Milk Box, unit leaks a noticeable amount of water.
- Serving counter has exceeded its expected life span, and has no provision for holding and serving cold food items. Hot well interior liners are heavily rusted. Replace the entire counter with new modular serving counters with not less than five hot food wells and a three well cold food pan.
- Serving counters should be mobile with locking wheels to allow for cleaning. Tray slides are to be set at height for elementary school children following SC guidelines.

Auxiliary Spaces:

- Floor has small tile finish, which is in very good condition.
- Plumbing section to address code requirements for grease traps.

Part 8: Plumbing Systems

57. Observations

Roof drainage is largely a gutter and downspout system.

A backflow preventer is installed on the incoming domestic water service for the new addition. A backflow preventer is not installed on the main building.

Hot water is not available in the majority of the toilet rooms.

Gas service is provided to the kitchen appliances, water heaters, and roof top makeup and air conditioning units. The gas service appears to be oversized for the equipment serviced. Maintenance personnel noted that the majority of the classrooms were heated by gas originally. These units were replaced with heat pumps on or around 2004 and the gas service for space heating systems was decommissioned.

Piping:

- Copper water supply piping installed inside. A new main shutoff valve was installed recently at the service main entrance.
- The primary plumbing issue noted was at the individual stops for each fixture. There is evidence of galvanic corrosion at each of the stops.

- Gas piping on the roof shows advanced signs of corrosion.
- The existing exterior waste piping is primarily terra cotta and has been the primary source of issues with the plumbing systems at this site.

Fixtures:

- Restrooms have flush valve type water closets and urinals, and lavatory fixtures.

Water Heaters:

- A 199 MBH gas fired heater with separate storage tank provides 140°F hot water to the kitchen. Domestic hot water is provided by a single 40 MBH heater located in the outside storage room. The domestic hot water system also has a recirculation pump and based on the appearance of the equipment, is less than two years old.
- Hot water is provided for the 2002 addition by a 10 gallon tank type electric water heater. HW is provided only for the janitor's sink.
- Island sinks in the kindergarten rooms are supplied with hot water by an instantaneous heater located in the island cabinets.
- Hot water is not provided to any student restrooms.

Kitchen:

- No grease interceptor installed. The kitchen is on a crawl space, so rerouting of piping without damaging the floor is possible.
- Some minor leaking of the water piping systems in the crawl space was noted.

58. Recommendations

- Install a grease interceptor outside of building in an accessible location.
- Provide hot water to fixtures excluding Pre-K rooms.
- Replace stops at all fixtures.
- Install a backflow prevention device on the service line to the original building.
- Repair water piping in the kitchen crawl space.

Part 9: HVAC Systems

59. Observations

School administration and maintenance personnel did not report any significant issues with heating or cooling. The makeup air units that supply ventilation air to the spaces were not operable and staff noted that they had been problematic since their installation.

Central Plant Cooling: There is not a central cooling plant. Systems are unique to the portion of the building that they serve.

Central Plant Heating: There is not a central heating plant. Systems are unique to the portion of the building that they serve.

The original building is mainly conditioned on a zone level by split system heat pump/unit ventilators. They replaced the original system in or around 2004 and should be a viable system for another 8-10 years. Ventilation air for the building is provided by roof mounted units (each rated at 13 tons). The units (as manufactured by Aaon) were not operational during our visit and have been problematic since their installation.

The media center, multipurpose room and cafeteria are conditioned by dedicated packaged roof top air conditioning unit with gas heat. The units appear for all but the multipurpose room appear to be less than 10 years old and should be viable for another 5-8 years. The multipurpose room unit will need attention sooner.

The admin area is conditioned by a custom built six deck multizone unit with DX cooling and a gas furnace section for heating. The unit is a replacement unit to the original system.

The 2002 addition is conditioned by a variable volume air handling unit with full economizer. Cooling is provided by a 40 ton air cooled condensing unit located on grade outside the main mechanical room. Individual zone conditioning is provided by fan powered variable volume terminal units with electric heat. The VFD is locked in hand mode and is in need of replacement.

Distribution Systems:

- Ductwork is constructed of galvanized metal and is lined (original building).
- Several Janitors closets had no exhaust air.

Controls:

- Controls for this are provided by a Barber Colman Network 8000 system. Communication through the system is established through a dial up modem connection. The system as installed does not comply with the current GCS guidelines for building automation systems.

Kitchen:

- Two window units provide air conditioning to the kitchen.
- A dedicated exhaust hood is provided for the dishwasher.
- A dedicated exhaust hood is provided over the cooking equipment. There is not a separate makeup air unit provided with the hood.

60. Recommendations

- Provide a building automation system utilizing direct digital controls.
- Replace lined ductwork in existing building
- Replace existing makeup air units
- Schedule existing packaged multizone unit for replacement. Recommend replacing with new units (six total) that will be dedicated to each zone.
- Replace variable speed drive on 2002 building and recommission static pressure control on unit.
- When units have exceeded useful life, replace split system heat pumps/unit ventilators with split system heat pumps with air handling units in closets, using a ducted supply distribution system.

Part 10: Fire Protection

61. Observations

- Sprinkler system installed (Y/N) - N
- System type? Wet, dry, preaction, etc.? – N/A
- Full or Partial Coverage? – N/A
- Standpipes installed (Y/N) - N
- Fire Pump installed (Y/N) – N

62. Recommendations

- Provide a full coverage sprinkler system in accordance with the NC Fire Code and NFPA Standard 13.

Part 11: Electrical, Fire Alarm, Security and Communications Systems

63. Observations

Service Entrance

This facility is fed by one (1) pad-mounted transformer by the City of Gastonia. The service to the whole campus is fed from the pad-mounted transformer. The pad-mounted transformer is located adjacent to Building A. Three (3) services are delivered from this transformer:

1. 800-ampere 3-pole to the existing panelboard “MDP” in Building A.
2. 400-ampere 3-pole to panelboard “MP” in Building B.
3. 1200-ampere 3-pole to panelboard “1M” on exterior of Building A.

The capacities of the services appear to be adequate.

Distribution

The power distribution consists of distribution panelboards and lighting panelboards fed by copper wire in conduit. The main service equipment and some of the distribution and lighting panelboards are well within their life expectancy. There are still some original panelboards that are in poor condition and should be replaced. Replacement circuit breakers for these panelboards may not be available, and the existing breakers may not be providing the protection necessary. There are some panelboards (actually loadcenters) that have been “tacked” on as new circuits have been needed. These need to be replaced with proper panelboards.

Panelboard labeling, including panelboard directories, is not up to date, some labeling is missing and duplicate panels designations were found. There are standard duplex receptacles too near sinks, which should have GFI protection. Additional receptacle circuits may be needed.

Grounding

Proper grounding is one of the most important factors in an electrical system. Not only is it essential for safety, it is also required for proper operation of electronic equipment. The grounding systems in the older portions of the facility are in question. The original building uses the metal conduit system to distribute grounding throughout the facility. This was legal at the time the building was constructed, but

not now. The problem is that the underground conduits installed at that time were galvanized steel, which could have deteriorated in the nearly 50 years since the original facility was constructed, which could result in an increase in ground resistance, or loss of grounding entirely. An earth grounding study needs to be made and corrective measures taken.

The NEC (National Electric Code) requires a minimum ground resistance of 25 ohms. For electronic systems (data rooms, computers, etc.) a minimum ground resistance of 5 ohms is needed.

Lighting

Most of the lighting has recently been upgraded. DPI recommends T8 lamps and electronic ballasts as a minimum, but suggests T5 and LED as alternates. The latest additions have T8 lamps and electronic ballasts and some corridor and toilet lighting has been upgraded. The exterior lighting is insufficient and in poor condition in most areas.

Lighting levels are, in most cases, within the levels recommended by DPI. These levels are recommended, not required. The lighting levels in the Kitchen appear to be in accordance with North Carolina Department of Health which requires 50 footcandles minimum in areas where food is handled, prepared and served, and where utensils are washed.

Emergency Power

This facility has no standby generator.

Fire Alarm

The existing fire alarm system has a EST addressable control panel. This is current model. Although the layout of devices in most areas have been updated, some of the layout and distribution of alarm initiating and notification devices does not meet current codes and ADA requirements.

Security

The security system does not meet current Gaston County School guidelines. No access card readers on exterior doors. No Mass Notification System. Video Surveillance System needs upgrading – some cameras do not operate.

Data/Communications

The data system currently does not meet GCS criteria. The MDF and IDF's are not dedicated and in secure locations. The MDF is located in a Conference Room. The IDF's, with except of the IDF in Building B, are located in various non-dedicated and unsecured rooms. There is no standby generator to supply data and security power needs.

Concerns

It was noted in several areas where panels are located that materials, furniture, etc. have been stored too close to the equipment. This is both illegal and dangerous. The National Electrical Code requires a minimum of 36 inches clear in front of these items. We feel that this issue should be addressed as soon as possible.

64. Recommendations

Service Entrance

SPD (Surge Protection Device) should be installed on all service entrance equipment that currently do not have them.

Distribution

All original panels and panels by manufacturers that are no longer in business should be replaced. All equipment should be properly labeled, including directories showing loads for all circuits. All electrical panelboards need to be scanned with an infrared scanner to be sure that there are no “hot” spots, which can indicate that there is an overload, faulty device or connection. Based on the scanning results, corrections need to be made.

Lighting

The lighting in most areas of the facility has recently been replaced, although a few areas need lighting. Additional exterior lighting needs to be added – some on building walls and some on poles. New exterior lighting should be LED with protective enclosures without the use of polycarbonate lenses. Additional exit signs and egress lighting needs to be installed. All exit signs and egress lighting shall have battery backup with self-diagnostic system.

Fire Alarm

The fire alarm system is mostly up to date, but a few devices may need to be added.

Security

Security system needs to be upgraded to latest GCS criteria. Door access system and Mass Notification System need to added per GCS standards.

Data/Communications

The wiring system should be updated to current GCS criteria. The main data rack MDF and IDF racks, with exception to Building B, need to be secured. Backup power from a standby generator should be provided.

Sound Systems

The intercom system is outdated, but appears to operate satisfactorily. Suggest system be updated to a VoIP based system.

End of Assessment



MIDDLE SCHOOL ASSESSMENT REPORTS

Gaston County Schools Comprehensive Feasibility Study

MIDDLE SCHOOLS

GASTON COUNTY MIDDLE SCHOOL ASSESSMENT REPORTS



YATES ■ CHREITZBERG ■ HUGHES



BELMONT MIDDLE
110 Central Avenue | Belmont, NC 28012



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A S S E S S M E N T

BELMONT MIDDLE

Belmont Middle School

Existing Condition Assessment

PART 1: General Narrative of Facility

- 1. **Survey Date:** November 2014
- 2. **School Address:** 110 Central Avenue, Belmont, NC
- 3. **Total Building Area:** 106, 232 square feet
- 4. **Total Site Area:** 4.5 acres
- 5. **Instructional Capacity:** 751 students
- 6. **Enrollment 2014-2015:** 726 students
- 7. **Current Utilization:** 96%
- 8. **Area per Student Capacity:** 141 sf / student

9. Building Size and Dates of Construction:

Building A: 1938 (60,054 sf) Building B: 1995 (21,163 sf)
Building C: 1981 (8,357 sf) Building D: 1953 (16,658 sf)

10. General Description of Facility:

The original school was constructed in 1938, with three subsequent additions for various Classrooms, Media Center, Locker Rooms and Band Room. The majority of the building classroom areas are 2 or 3 stories in height. The original 1938 Building consists of load bearing masonry walls with a combination of wood and steel framed floors and roof. The later additions consist primarily of steel frame structure with steel bar joist roof structure, low sloped roofing. Exterior walls consist of brick veneer and various configurations of windows. The main school building consists of two buildings, which are connected by an enclosed corridor on two levels.

The site contains minimal shared staff and visitor parking. No athletic facilities are located on site, however a multipurpose field with walking track at the adjacent Stowe Park (owned by the City of Belmont) is utilized by the school.

Part 2: General Space Standards

11. General Purpose Classrooms

Room Description	No. of Rooms	Typical Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
6th Grade	8	650 - 770 sf	850 sf	76% - 90%	Fair
7th Grade	6	750 - 780 sf	850 sf	88% - 91%	Fair
8th Grade	8	630 - 700 sf	850 sf	74 - 82%	Fair

Comments: The general purpose classrooms are arranged into 3 areas for the 6th, 7th and 8th Grade wings, although not all of the 6th Grade classrooms are located together in the same wing. The classrooms vary in size, and are all smaller than the space standards.

All of the classrooms contain smart boards, wireless technology and at least four hardwired computer drops.

- Half of the 6th Grade classrooms are located in the 1938 building and half are located in the 1953 building, and are all smaller than space standards. These rooms are also of a long and narrow proportion, which limits the efficient use of the classrooms. The classrooms contain adequate casework.
- The 7th Grade classrooms are located in the 1953 and 1995 buildings and are all smaller than space standards. The 3 classrooms in the 1953 building are of a long and narrow proportion, which limits the efficient use of the classrooms. The classrooms contain adequate casework.
- All of the 8th Grade classrooms are located in the 1938 building and are all smaller than space standards. These rooms are also of a long and narrow proportion, which limits the efficient use of the classrooms. The classrooms contain adequate casework.

12. Science Classrooms

Room Description	No. of Rooms	Typical Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
6th Grade Science	2	730 sf	1,000 sf	73%	Poor
7th Grade Science	2	1,000 sf	1,000 sf	100%	Excellent
8th Grade Science	2	1,000 sf	1,000 sf	100%	Excellent

Comments: Each grade contains two science rooms, which are also shared with other instructional curriculum.

- The Science classrooms all contain dedicated Preparation / Storage rooms.
- The Science classrooms contain minimal casework with only two sinks and no demonstration island. None of the rooms contain an eye wash / shower.

13. Exceptional Children, Language Arts and Health

Room Description	No. of Rooms	Typical Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
EC Resource	1	350 sf	1,000 sf	35%	Poor
EC Cluster	0	0 sf	1,000 sf	0%	Poor
Spanish	1	1,050 sf	850 sf	123%	Excellent
Health	1	1,290	850 sf	151%	Excellent

Comments: The school contains 1 EC Resource area, which is located in a portion of the Media Center work room. The school does not contain an EC Cluster classroom. The Spanish classroom is located in the CTE wing. The Health classroom is located on the 2nd floor of the 1938 Building A.

- The EC Resource area is located in a portion of the Media Center work room and is separated by only a temporary low wall, which does not provide adequate classroom privacy. This space is significantly smaller than space standards. EC Resource should have a dedicated classroom.
- The Staff would like to locate an EC Cluster classroom at this school, but is limited on space. EC Cluster students from the area are bused to another school.
- EC does not have a dedicated shower / changing or laundry room, and must share the facilities within the Locker Rooms. If an EC Cluster room is added, dedicated shower and changing facilities should be added, if possible.
- The Spanish and Health classrooms are both significantly larger than space standards.

14. Arts Education

Room Description	No. of Rooms	Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
Art	1	1,110 sf	1,200 sf	92%	Good
Band	1	2,080 sf	1,600 sf	130%	Excellent
Chorus	1	1,000 sf	1,200 sf	83%	Fair
Auditorium	1	3,900 sf	Varies	N / A	N / A
Stage	1	890 sf	Varies	N / A	N / A

Comments: The Art room and Chorus room are located in a wing with the CTE rooms. The Music room is located near the Gymnasium. The Auditorium is located at the opposite end of the school from the Gymnasium and contains a dedicated exterior entrance.

- The Art room conforms to space standards, contains both a storage room and kiln room, and also contains adequate built-in casework.
- The Band Room is much larger than space standards, but contains no secure storage rooms. Instruments are stored in lockable units located within the classroom. The room does not contain fixed risers, but could be upfitted with portable risers, if desired. The room does not contain appropriate acoustical treatments, with a VCT floor, CMU walls and standard lay in ceiling.
- The Chorus room is smaller than space standards. The room contains fixed risers and one storage room, which contains open shelving for sheet music storage. The room does not contain

appropriate acoustical treatments, with a VCT and carpet floor, CMU walls and standard lay in ceiling.

- The Auditorium is connected to the school, but also contains a separate dedicated entrance for after hours use. However, it does not include dedicated toilets, which are located nearby in the 6th Grade classroom wing. The Auditorium contains a main level and balcony level, which is accessed by two sets of stairs.
- The Auditorium contains 840 dated wood seats, which should be replaced. 600 seats are located on the main level and 240 in the balcony. The room is capable of seating the student population on the main level.
- The Auditorium does not contain any handicap seating areas. The stage is elevated, and is not handicap accessible from any location. A ramp from the audience chamber to the stage is very difficult to add, due to the continuously sloping concrete floor. However, a handicap accessible ramp could be added within the stage area, which would reduce the useable area of the stage and require redesign of the backstage rooms.
- The Auditorium does not contain appropriate acoustical treatments, with hard plaster walls and continuous flat ceiling.
- The Stage contains minimal curtains and rigging, and two Dressing Room / Toilets, which are not functional and used for storage only.

15. Career and Technical Education Classrooms / Shops

Room Description	No. of Rooms	Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
Business Lab	2	1,150 -1,475 sf	1,200 sf	110%	Excellent
Technology Lab	1	1,600 sf	1,200 sf	133%	Excellent

Comments: The three CTE classrooms are all located on the lower level of the 1953 / 1995 building. All CTE classrooms are larger than space standards.

- Technology Lab B002 includes a dedicated shop and storage room.
- Business Lab B005 was a former Life Skills classroom with demonstration kitchen and casework, and is significantly larger than standards. The kitchen area should be removed, so the useable area of the classroom can be enlarged, or turned into storage room or break out space.
- Business Lab B015 conforms to the space standards.

16. Media Center

Room Description	No. of Rooms	Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
Main Room	1	3,800 sf	3,400 sf	111%	Excellent
Support Areas	Various	1,280 sf	1,800 sf	71%	Poor

Comments: The Media Center is located in Building B, which was constructed in 1995. The Main Room exceeds space standards, but the Support Areas are significantly smaller.

- The Media Center support spaces include a large Work Room, Office and Storage Room. Due to the location within the school, the support areas cannot be expanded without reducing space of the Main Room.
- Approximately one half of the Media Center work room is used for an EC Resource classroom, with a temporary low wall, which does not provide adequate classroom privacy. EC Resource should have a dedicated classroom, so that this space can be utilized by the Media Center.
- The main IT MDF rack is located in a Media Support room, which is also used for a work room. This room should be converted to a secure and fire rated room with a gaseous fire suppression system.
- The Media Center does not contain a Conference room.
- The Media Center does not contain a video studio, production, editing, or equipment rooms.
- The Media Center does not contain an area for computer / technology instruction, however one of the Computer Labs is located in an adjacent room and has a direct connection.
- The Media Center is located within an area of the school that cannot be secured for after-hours community use.

17. Physical Education / Indoor Athletics

Room Description	Area	Court Size	NCDPI Standard Area	Relation to Standard	Adequacy Rating
Gymnasium	7,200 sf	50 x 84	Varies	N / A	N / A

Comments: The Gymnasium is located at the opposite side of the school from the Auditorium, and includes a dedicated exterior entry, lobby and access to toilets.

- The Gymnasium is connected to the school, but also includes a separate entrance with a lobby, toilets and doors to the exterior for after hours use.
- The Gymnasium includes telescoping bleachers on both sides, which seat approximately 650. These bleachers are in poor condition and in need of replacement.
- The basketball court is of regulation size for interscholastic play, but does not contain adequate safety zones with the bleachers fully extended.
- The Boys PE locker room contains one large group shower, which is functioning, but should be replaced with individual stalls. The toilet partitions in are poor condition, and most of the lockers are damaged and do not contain doors.
- The Girls PE locker room contains functioning individual shower stalls, but no curtains or dressing area. The toilet partitions are poor condition, and the metal lockers are mostly in fair condition and contain locking doors.
- The Boys Team locker room is very small and contains only lockers. Toilets and showers are shared with the Boys PE locker room. The room contains 16 full size 24" wide metal locker cubbies, which do not have doors and are not lockable. The lockers are in fair condition.
- The Girls Team locker room is very small and contains only lockers. Toilets and showers are shared with the Girls PE locker room. The room contains 26 full size 12" wide metal lockers with lockable doors, which are in fair condition.
- Both the Boys and Girls locker rooms contain glass windows between the PE and Team rooms, which should be removed and infilled with CMU.

18. Administration

 Excellent

 Good

 Fair

 Poor

Comments: The Administration area includes approximately 1,900 square feet. Administration consists of the following rooms: (1) Main Office / Reception, (1) Principal's Office, (1) Assistant Principals Office, (1) SRO Office, (1) Conference Room (1) Work Room (2) Toilets and (1) Storage room. The Administration area is somewhat limited in space, but cannot be expanded in its current location within the school.

- The Administration area is located across the main corridor from the main school entry and the school does not contain a secure vestibule for the main entrance. Design of a new secure entry vestibule with access directly into the Reception area is not possible without interruption of the main interior corridor, or relocation of the Admin area. A secure vestibule can be added at the main entry to the school. However, with the current location of the Administration area, the new vestibule would need to be monitored by camera.
- Due to its location within the school, the Administration area does not have visibility of the visitor parking or student drop off areas. The Reception area does not have direct visibility of the main entry doors.
- The SRO has a dedicated office off the main corridor near the Administration area and main school entry.
- The Administration area does not include a private Staff Room.
- Staff mail slots are located in the wide main administration hallway, which is adequate.
- Neither of the Toilets the Administration area are handicap accessible. The Administration should include a dedicated, handicap accessible, men's and women's Toilet.

19. Student Support Excellent Good Fair Poor

Comments: The Student Support Spaces consist of (2) Guidance Offices, (1) Guidance Conference Room, (1) Office shared by the Nurse and Social Worker.

- The two Guidance Offices are located in an office area near, but separate from the Administration area. Another office should be added, as GCS standards desire 3 Guidance Counselor offices in Middle Schools.
- The Social Worker and Nurse share an office near the main front entry. Each should have dedicated spaces, located closer to the Administration area.
- Health Services should include a Nurse's Office, Holding Room, dedicated Toilet, Shower and Changing area and wheelchair storage located near, but separate from, the Administration area.
- The School Therapist does not have a dedicated office or other space, and shares conference rooms or other spaces. The School Therapist should have a dedicated office that is private and secure.

20. Staff Support Excellent Good Fair Poor

Comments: The Staff Support Spaces consist of three Teacher Teaming / Work rooms, one for each Grade wing.

- Teacher Teaming / Work Rooms are located in each of the 6th, 7th and 8th Grade wings. The rooms contain built-in work carrels, which are not utilized and should be removed to provide more useable space within the room for tables.

21. Cafeteria

Students per Seating *	Dining Room Area	Area per Student	NCDPI Standard Area	Capacity of Dining Room	Relation to Standard
242	4,400 sf	18.2 sf / student	14 sf / student	314	130% Excellent

* Students per Seating equals the 2014 - 2015 student enrollment for the school divided by 3 seatings for continuous serving ($726 / 3 = 161$).

Comments: The Cafeteria is located on the lowest level of the school, below the Gymnasium.

- The Cafeteria exceeds space standards. It is accessed from the interior from the 6th Grade wing and mainly from the exterior from the 7th, 8th and CTE wing. The Cafeteria requires travel down stairs by the majority of students, but has elevator access nearby for handicap access.
- The Cafeteria contains two serving lines, which provides adequate serving capacity for the number of students.

22. Kitchen

Lunches Served per Day *	Kitchen Area	NCDPI Standard Area	Relation to Standard
653	1,664 sf	1,938 (for 500 to 750 lunches served)	85% Fair

* Lunches Served per Day equals the 2014 - 2015 student enrollment for the school times 90% participation factor ($726 \times .90 = 653$). This school experiences an elevated participation rate due to free and reduced lunches.

Comments: The Kitchen is smaller than the NCDPI guidelines of overall area for the number of students served, does not contain some needed spaces, and is in generally poor condition. See the Section 7: Food Service Assessment for additional information.

- The Kitchen includes a secure Manager's Office.
- The Kitchen includes one small toilet, which is not handicap accessible.
- The Kitchen does not include a staff locker area.
- The Kitchen does not have a washer and dryer.
- The loading dock is elevated approximately 2 feet and does not include a ramp. The loading dock contains very little area for deliveries, but is difficult to expand significantly in its current location, due to location of the main electrical transformer on this side of the building. The canopy over the loading dock is in fair condition, but not of substantial construction and should be replaced.

23. Toilet Facilities

 Excellent

 Good

 Fair

 Poor

- Each of the 4 group toilets in the 1938 Building A are in poor condition and not handicap accessible. The rooms contain CMU walls between the waterclosets, and should be redesigned for toilet partitions. The rooms are of sufficient overall size that can be redesigned to be handicap accessible.

- The group toilets in the Gymnasium lobby are in poor condition and not handicap accessible. The rooms are not of sufficient size to provide enough fixtures so that the Gymnasium can be utilized without providing access to other toilets in the 6th Grade wing.
- Building D contains 6 group toilets, two on each of the 3 floors. The toilets on the 1st and 3rd floors are in poor condition and not handicap accessible. However, the rooms are of sufficient overall size that can be redesigned to be handicap accessible. The toilets on the 2nd floor were renovated in 1995, are in good condition and met handicap accessibility when they were renovated in 1995.
- Staff are provided with 5 single toilets, 4 located in each of the classroom wings and 1 in the Administration area. All of the toilet rooms, except one in the 6th Grade wing are in fair condition. These toilets also met handicap accessibility when the renovated in 1995, but are slightly smaller than current standards.

24. Other Spaces

- The school has limited general purpose storage. Many electrical rooms are used for storage, which violates code.
- The school contains 3 separate general purpose Computer Labs in various areas of the school, each of which is currently dedicated to a grade level.
- The MDF is located a work room within the Media Center, which should be converted into a secure, access controlled room with a gaseous fire suppression system. The IDF's are located throughout the school in classrooms and corridors, most of which will be difficult to relocate into secure rooms due to existing data cabling.

25. Additional Considerations

- The student lockers in the 6th grade wing are in poor condition and should be replaced.

Part 3: School Site

26. Parking

 Excellent

 Good

 Fair

 Poor

Description	Current Number of Spaces	Number of Spaces Needed	Relation to Number of Spaces Needed
Staff / Visitor (East)	43	75 Staff (65 employees plus 10 transient)	
Visitor (Parallel Spaces)	<u>20</u>	30 Visitor	-32
Total Staff / Visitor	63	95 total	
Bus	0	0	N / A

Comments: Parking on the school site is extremely poor, with a significant deficiency in the number of spaces on site.

- The east side of the site contains 43 total parking spaces for visitors and staff, which is significantly less than the minimum number of spaces needed. Due to limited site area, the parking is not able to be expanded without additional land.
- 20 additional parallel parking spaces are provided along S. Central Avenue at the front of the school. However, these spaces are only able to be utilized during certain hours, and not during pick up and drop off times.

- The asphalt paving in the staff parking lot is in poor condition and should be replaced.
- Visitors and some staff park off site in nearby lots not owned by the school.
- Only the athletic bus is parked on site, but does not contain a dedicated parking space.

27. Vehicular Circulation Excellent Good Fair Poor

Comments: Vehicular Circulation on the school site is extremely poor.

- The school does not contain on-site drives for car riders or bus riders. Pick up and drop off for both occurs along public streets, S. Central Avenue and Myrtle Street. Circulation and stacking occurs solely within the streets and requires extensive supervision and traffic management by the staff, crossing guards and local law enforcement.
- A pick up / drop off lane could be provided on site in front of the school, but would not provide adequate stacking for busses and car during peak times.
- The kitchen service area is located off of Hill Street. The paving in the area of the kitchen loading area is fair condition.

28. Pedestrian Circulation Excellent Good Fair Poor

Comments: The school site contains adequate sidewalk locations for pedestrian circulation access to the buildings. The sidewalks vary in condition.

- Most of the sidewalks at the west (front) side of the school are in poor condition with significant cracking and deterioration, and should be replaced.
- The perimeter of the school site contains sidewalks only on S. Central Ave. and Myrtle Street, which are in generally fair condition.

29. Walkway Canopies Excellent Good Fair Poor

Comments: The school contains one walkway canopy between buildings, and does not contain walkway canopies to any of the main building entrances.

- Walkway canopies should be provided from the drop off area for car riders and bus riders to the main entrance of the school.
- The canopy to the north side of the Media center is of substantial prefinished metal construction and in good condition.
- The main school entry contains a very small exterior cover.

30. Outdoor Play

- The site contains one outdoor paved play area at the northwest side of the site. The asphalt paving is in poor condition and should be replaced.

31. Athletic Facilities

The adjacent Stowe Park site contains a football field and walking track, which are used by the school, but owned and maintained by the City of Belmont, and are therefore not a part of this assessment. All outdoor athletics games and practices are held at other GCS campuses.

32. Athletic Spectator Areas

The site does not contain any athletic fields or spectator areas, as outdoor athletics games and practices are held at other GCS campuses.

33. Grounds / Landscaping Excellent Good Fair Poor

- The school contains various foundation shrubs, which are maintained in fair to good condition.
- The school contains several large, mature trees, which are located an appropriate distance from the school and appear to be maintained in good condition.
- The perimeter vegetation has overgrown areas of the fence on the north side and should be trimmed back.

34. Utilities Excellent Good Fair Poor

- The school is served by the City of Belmont for water and sewer, and does not have a backflow preventer for domestic water, which should be added by code. The water line is not reported to have any current issues.
- The school does not have a grease interceptor on the sanitary sewer line for the kitchen, which should be added by code. The sewer line was recently replaced and reported to be in good condition.
- Three fire hydrants are located in the general area of the school, all are located across the public streets. More fire hydrants should be added on the school site to provide adequate coverage to the east side of the building.
- The school is served by natural gas, which is metered separately for the kitchen and the buildings.
- Overhead power lines run along the rear of the school, and into the open courtyard area, which presents a safety concern. Further investigations with the service provider should occur about burying these underground.

35. Storm Drainage Excellent Good Fair Poor

- The site does not have a stormwater management pond, which is not required by the municipality unless additional impervious area is added.
- The site has virtually no stormwater system, as all paved areas sheet flow to public streets. The enclosed interior courtyard contains storm drainage which runs beneath one of the buildings to daylight.
- Most of the downspouts spill directly on to grade, due to the lack of a storm drain system with which to connect.
- The downspouts on the north side of Building C are connected directly to an underground stormwater piping system, which runs to daylight. This connection should be made indirect, with the downspouts spilling above grade into catch basins to prevent clogging.

36. Emergency Access Excellent Good Fair Poor

- The site has paved emergency access around the east, west and south sides via public roads, parking areas and drives.
- Only a portion of the north side of the building does not have emergency access.

37. Site Security Excellent Good Fair Poor

- The site is located in a mostly residential area, adjacent to a public park. The Principal and school SRO Officer indicated that the surrounding areas do not typically include significant crime and vandalism at the school is rare.
- The south, east and west portions of the building and site have good visibility from public roads, drives and parking areas. The north side does not have proper vehicular access for police patrol.

- The site contains chain link fencing around the perimeter, some areas of which are damaged and should be replaced. In addition, wooded areas have significantly overgrown the fencing on the north side and should be cut back. Additional fencing should be added to help secure the exterior classroom buildings.

38. Additional Considerations

- Most of the guardrails at the exterior stairs does not meet current code for picket spacing, and should be replaced
- All of the exterior steel handrails and guardrails need painting.
- Directional signage on the school site is poor and should be replaced.

Part 4: Building Envelope

39. Construction Type Non-Combustible Combustible

40. Structural Floors

Material: Concrete Slab on Grade
 Concrete on Metal Deck over Steel Structure
 Wood Deck on Wood Joists
 Other

Evidence of Structural Concerns: Prevalent Isolated None Visible
 Overall Condition of Structural Floors: Excellent Good Fair Poor

Comments: The structural floors consist of both wood and steel framed two story construction, including a crawl space area in the 1938 Building A. The other buildings consist of concrete slab on grade and elevated concrete slab two story construction.

- The concrete floors generally appear to be in good condition with no major cracks telegraphing through the floor coverings, except as noted below.
- In areas of the ground level in Buildings B and D, the VCT is cracked between the opening of classroom doors. This is most likely due to a concrete construction or control joint that has moved slightly over time.
- In areas of the ground level in Building D, small pits were telegraphing through the VCT flooring, which should be further investigated as to the potential cause.
- The wood framed floors in Building A appear to be in fair condition, although thorough investigation of the crawl space was not performed. The floors produced some squeaking, which would be considered consistent with a building of this age.

41. Exterior Walls / Cladding

Material: Masonry EIFS / Stucco Metal Other
 Evidence of Structural Cracking: Prevalent Isolated None Visible
 Evidence of Concern with Exterior Cladding:
 Cracks / Gaps Prevalent Isolated None Visible
 Efflorescence (Masonry) Prevalent Isolated None Visible
 Moisture Penetration Prevalent Isolated None Visible
 Rot/Decay/Corrosion Prevalent Isolated None Visible
 Overall Condition of Exterior Walls: Excellent Good Fair Poor

Comments: The exterior walls of Buildings A and D appear to consist of multi wythe brick construction that most likely does not include insulation, an air space or flashing. Building D also contains areas of stucco / EIFS and ribbed metal panels. Building C consists of brick veneer with CMU backup, insulation but no air space. Building B consists of brick veneer with CMU backup, insulation and an air space.

- The brick veneer appears to be in generally good condition, with some areas of efflorescence on the older Buildings A and D, which may be a result of moisture within the wall due to the lack of an air space.
- Building D contains areas of hard coat stucco wall, where large strip windows were previously infilled during a renovation. The stucco appears to be in fair condition, but most likely does not consist of a drainable system to direct moisture out of the wall cavity.
- Building D and the enclosed corridor between buildings contains ribbed metal panels, which are in poor condition and should be replaced.
- Two cracks in the brick veneer were observed on west side of Building A, on both the interior and exterior side of the stair shafts. These cracks extend through both the exterior and interior masonry and should be further investigated by a structural engineer.

42. Exterior Glazing

Frame Material: Aluminum Steel Wood Other

Glazing Material: Un-insulated Insulated Glass Block

Evidence of Concern with Exterior Glazing:

Moisture Penetration	<input type="checkbox"/> Prevalent	<input checked="" type="checkbox"/> Isolated	<input type="checkbox"/> None Visible
Rot/Decay/Corrosion	<input type="checkbox"/> Prevalent	<input checked="" type="checkbox"/> Isolated	<input type="checkbox"/> None Visible

Overall Condition of Exterior Glazing: Excellent Good Fair Poor

Comments: The school contains a variety of exterior glazing systems, the majority of which are in is poor condition.

- The exterior glazing in Building A has been replaced from the original and consists of 1/2" semi-insulated glass in a thermally continuous aluminum framing system, which is energy inefficient and past its useful life. The windows also contain significant areas of opaque panels. All of this glazing should be replaced with insulating glass in a thermally broken aluminum storefront framing system to be more energy efficient and provide better thermal control. The glass should be safety tempered in areas required by code.
- The exterior glazing in Building B is insulating glass in an aluminum framing system. However, the operating mechanism for most of the windows is not functioning, so the windows will not stay in the open position. The operating mechanisms should be repaired.
- The exterior glazing in most areas of Buildings C and D consists of 1/2" semi-insulated glass in a thermally continuous aluminum framing system, which is energy inefficient and past its useful life. All of this glazing should be replaced with insulating glass in a thermally broken aluminum storefront framing system to be more energy efficient and provide better thermal control. The glass should be safety tempered in areas required by code.
- The exterior glazing in the enclosed corridor link and stair shafts of Building D consists of 1/4" un-insulated glass in a thermally continuous steel framing system, which is very energy inefficient and past its useful life. In addition, this glass appear to standard plate glass, which presents a safety concern as it is easily broken. All of this glazing should be replaced with insulating glass in a thermally broken aluminum storefront framing system to be more energy efficient and provide better thermal control. The glass should be safety tempered in areas required by code. Some areas could be infilled with insulated metal panels or solid wall instead of glass to reduce the amount of glazing.

43. Exterior Entry / Exit Doors

Door Material: Aluminum Steel Wood Other

Evidence of Concern with Entry / Exit Doors:

Moisture Penetration	<input type="checkbox"/> Prevalent	<input checked="" type="checkbox"/> Isolated	<input type="checkbox"/> None Visible
Rot/Decay/Corrosion	<input type="checkbox"/> Prevalent	<input checked="" type="checkbox"/> Isolated	<input type="checkbox"/> None Visible
Other	None at this time		

Overall Condition Doors: Excellent Good Fair Poor

Overall Condition of Hardware: Excellent Good Fair Poor

Comments: Most of the entry / exit doors are in poor condition for the majority of the school, except in Building B. None of the exterior doors include access control hardware, which should be added for security.

- Many of the entry / exit doors in Building A are original and consist of pairs of 2'-6" wide doors and are in poor condition, some do not have code compliant panic devices and none have access control for security. These doors should be replaced with 3'-0" wide doors for handicap accessibility and include code compliant door hardware and access control for security.
- Most of the entry / exit doors in Buildings C and D appear to be original and are in poor condition, some do not have code compliant panic devices and most have no access control for security. These doors should be replaced to include code compliant door hardware and access control for security.
- The doors in Building B are in generally good condition, but do not have access control hardware, which should be added for security.
- The main front entry doors should have secure access control with buzz-in and security camera tied into the Administration area reception desk.

44. Exterior Classroom Doors

Door Material: Aluminum Steel Wood Other

Evidence of Concern with Classroom Doors:

Moisture Penetration	<input type="checkbox"/> Prevalent	<input checked="" type="checkbox"/> Isolated	<input type="checkbox"/> None Visible
Rot/Decay/Corrosion	<input type="checkbox"/> Prevalent	<input checked="" type="checkbox"/> Isolated	<input type="checkbox"/> None Visible
Other	None at this time		

Overall Condition of Doors: Excellent Good Fair Poor

Overall Condition of Hardware: Excellent Good Fair Poor

Comments: Only the Art and one of the CTE Classrooms in Building B have doors that open directly to the exterior.

- Both exterior classroom doors are hollow metal, contain lever style hardware and locks, and are in fair condition.
- The majority of other exterior doors for mechanical rooms, electrical rooms, storage, locker rooms and kitchen service in Buildings A, C and D are in poor condition and should be replaced.

45. Roofing

An independent roof assessment was performed for Gaston County Schools by Roof Engineering, Inc. (REI) in 2006. The report indicates the following needs regarding the replacement of roofs:

- Building A: Asphalt Built-up Replace in 2019
- Buildings B and D: Asphalt Built-up Replace in 2015
- Building C: Asphalt Built-up Replace in 2022

46. Additional Considerations

- The school contains three brick chimneys, one of which appears to be utilized as a boiler flue, but should be lowered for safety reasons. The others should be removed if no longer needed.

Part 5: Building Interior**47. Interior Walls**

Overall Condition of Walls: Excellent Good Fair Poor

Comments: The interior walls consist of painted CMU or plaster and are in generally fair condition.

- Building C contains two cracks in the interior CMU walls on either side of the corridor nearest the north exit door. These cracks may be due to settlement of the foundation, and should be further investigated by a structural engineer.
- Building B contains a crack in the CMU between a pilaster and wall in the Media Center, which should be further investigated by a structural engineer.
- The classroom portions of Building A contain plaster demising walls and plaster applied to the interior side of the exterior walls. This plaster is in generally fair condition.
- The Auditorium contains plaster applied to the interior side of the exterior walls. This plaster is in poor condition, especially around the windows.

48. Floor Finishes

Classrooms	Flooring Type: VCT (in most areas)	Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Classrooms	Flooring Type: Wood (in Building A)	Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Corridors	Flooring Type: VCT (over VAT in Building A only)	Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Stairs	Flooring Type: VCT and painted concrete	Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor
Cafeteria	Flooring Type: Quarry Tile	Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Gymnasium	Flooring Type: Wood	Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor
Auditorium	Flooring Type: Wood	Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor
Media Center	Flooring Type: Carpet	Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor
Administration	Flooring Type: Carpet	Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor

Comments: The majority of interior floor finishes are VCT and in varying condition. Building A contains wood flooring in most of the classrooms and Auditorium.

- The VCT in Buildings B and C is in poor condition and should be replaced.
- The VCT in corridors of Building A and the enclosed corridor connector is in poor condition and should be replaced. This VCT is installed over VAT, which should be abated also.
- Most of the classrooms floors in Building A have wood floors, which are not acoustically appropriate for instruction. These should be removed and replaced with a new subfloor and VCT.

- The stairs in Building A have painted concrete landings, risers and treads. Rubber flooring should be added for slip resistance.
- The carpet in the Chorus room and the VCT in the Band room are both in poor condition and should be replaced with carpet.
- The wood floor in the Gymnasium is in poor condition. The wood appears to be beyond refinishing and should be replaced entirely.
- The carpet in the Administration area and Media Center is in generally poor condition, with areas of significant wear in high traffic areas and should be replaced.
- The Auditorium floor is wood and needs to be refinished. In addition, carpet should be installed in the aisles to limit noise from the wood floor. The wood stage flooring needs to be refinished and painted black.

49. Ceilings

Lay-in	Locations: Building A, B and C	Condition: <input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input checked="" type="checkbox"/> Fair	<input type="checkbox"/> Poor
Plaster	Locations: Building D	Condition: <input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input checked="" type="checkbox"/> Fair	<input type="checkbox"/> Poor
Drywall	Locations: Locker Room showers	Condition: <input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input checked="" type="checkbox"/> Fair	<input type="checkbox"/> Poor
Open Structure	Locations: Gymnasium	Condition: <input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input checked="" type="checkbox"/> Fair	<input type="checkbox"/> Poor

Comments:

- Most of the ceilings in Buildings A, B and C are lay-in and in generally fair condition.
- The ceilings in the classrooms of Building D are a type of textured plaster coating applied to a sheathing material attached directly to the underside of the roof joists. This material is reported to contain asbestos. These continuous plaster coated ceilings do not offer any access to the plenum space and all light fixtures, conduit, piping, etc. are surface mounted. These ceilings should be removed and replaced with 2x2 lay-in, for better acoustics, reflectivity, installation of new light fixtures and concealment of conduit and piping.
- The lay-in ceiling in the enclosed corridor connector is in poor condition and should be replaced.
- The Band and Chorus plaster ceilings should be replaced with a high NRC lay-in ceiling for acoustical purposes.
- The locker rooms contain standard lay-in ceilings, which are in poor condition and should be replaced with moisture resistant, washable grid and tile.
- The Auditorium contains flat ceiling panels, which are not reported to contain asbestos. These panels appear to be in poor condition and should be replaced.
- The open wood structure in the Gymnasium needs to be painted.
- The Kitchen contains 2x2 washable ceiling tile, which is good condition.

50. Casework

Classrooms	Casework Type: Wood and Plastic Laminate	Condition: <input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input checked="" type="checkbox"/> Fair	<input type="checkbox"/> Poor
Science Rooms	Casework Type: Wood and Plastic Laminate	Condition: <input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input checked="" type="checkbox"/> Fair	<input type="checkbox"/> Poor
Media Center	Casework Type: Wood and Plastic Laminate	Condition: <input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input checked="" type="checkbox"/> Fair	<input type="checkbox"/> Poor

Administration

Casework Type: Wood and Plastic Laminate

Condition: Excellent Good Fair Poor

Comments: The majority of the casework in the school is adequate and in fair condition.

- The 6th, 7th and 8th Grade classrooms contain adequate casework, which is consistent with GCS standards and in generally fair condition.
- The Band Room contains lockable instrument storage within the room. A secure storage rooms could be constructed if desired, since the Band room is much larger than space standards.

51. Interior DoorsOverall Condition Doors: Excellent Good Fair PoorOverall Condition of Hardware: Excellent Good Fair Poor

Comments: The majority of the doors within the building are in poor condition.

- Most of the interior doors and hardware in the school, except Building B, appear to be original, do not have code compliant lever style hardware, and are in poor condition. These original doors should be replaced, and the classroom doors should also include lockdown hardware.
- Many of the doors in Buildings A and D contain glass transom panels, which appear to be standard plate glass. These should be removed and replaced with tempered glass or solid panels for safety purposes.
- The interior doors and hardware in Building B are in generally good condition and have lever style hardware, but should be upgraded with lockdown hardware in the classrooms.

52. Additional Considerations

- Most of the window blinds in the school are in poor condition and in need of replacement.
- The elevator is in poor condition, currently not functioning, and should be replaced.
- The stair guardrails in all of the school, except Building B, do not meet current code for picket spacing and should be replaced.

Part 6: Handicap Accessibility**53. Exterior Handicap Accessibility**Accessible Parking: Excellent Good Fair PoorAccessible Route to Building(s): Excellent Good Fair PoorAccessible Entrances / Egress: Excellent Good Fair PoorAccessible Routes between Buildings: Excellent Good Fair Poor

Accessible Athletic Fields: N / A

Comments: The overall exterior handicap accessibility for the school is poor, with inadequate handicap parking and most entrances / egresses not being accessible.

- The site contains 6 marked accessible parking spaces. 3 are parallel spaces located along S. Central Avenue and 3 are located on Hill Street, behind Building D. The parallel parking spaces do not contain access aisles and do not conform to code.
- Only the main school entry / exit and one of the entries to Building D are accessible to grade with a handicap ramp. All of the other major building entry / exits contain stairs to grade and are not handicap accessible.

- The multi-purpose field and walking track used by the school at the adjacent park contains an accessible route to track.

54. Interior Handicap Accessibility

Accessible Routes:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor
Accessible Doors and Hardware:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor
Accessible Signage:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor

Comments: The interior of the school is on three finished floor levels, with four interior stairs and one exterior stair. The school contains one elevator.

- The main corridor in Building A exits to the exterior through the two stair enclosures. These stairs contain additional stairs to grade and do not provide accessible routes to the exterior.
- The elevator is not centrally located and requires a significant travel distance from most areas of the school, and is accessed through a classroom on the third level. The elevator is also in poor condition and currently not functioning.
- The majority of classroom doors in the school are 3'-0" wide. However, almost all of the doors in have knob style hardware, and should be replaced with code compliant levers.
- The Auditorium is accessible only from the entries at the rear, but does not contain any handicap seating areas. Both of the entries near the Stage contain steps and are not accessible.
- The Auditorium Stage is not handicap accessible from any location.
- The Administration area reception counter and the Media Center circulation counter are both handicap accessible.
- Most of the signage in Buildings A, C and D does not meet current accessibility requirements and should be replaced.

55. Toilet Rooms Accessibility

Accessible Group Toilets:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor
Accessible Staff Toilets:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input checked="" type="checkbox"/> Fair	<input type="checkbox"/> Poor

Comments: The handicap accessibility of the group toilets is poor, as only two are handicap accessible. Only one of the Staff toilets are handicap accessible.

- Only one of the group toilets in the school are handicap accessible, which is adjacent to the Media Center. However, the other group toilet rooms are of sufficient overall size and should be upgraded to include handicap accessible partitions and fixtures, which would reduce the watercloset fixture count.
- The boys and girls PE / Team toilets do not contain handicap accessible stalls or fixtures. However, the rooms are of sufficient overall size and should be upgraded to include handicap accessible partitions and fixtures, which would reduce the watercloset fixture count.
- The group toilets in the Gymnasium lobby not handicap accessible. The rooms are not of sufficient size to provide enough fixtures so that the Gymnasium can be utilized without providing access to other toilets in the 6th Grade wing.
- The School contains 5 Staff toilets, all of which met handicap accessibility when the renovated in 1995, but are slightly smaller than current standards.

Part 7: Food Service

56. Observations and Recommendations

Storage:

- Cold Storage Assembly is minimum 30 years old and needs to be replaced. Size is not adequate with square footage needing to be increased. The unit has a hard time keeping temperature. The thresholds are not level with the kitchen finished floor. Strip curtains also need to be added to hold temperature.
- Dry storage shelving is in good condition and square footage of storage area is accurate for size of school.
- Reach-in Refrigerator (3-Door) is approximately 24 years old. Temperature currently is holding at 40 degrees. Recommend replacing unit in the next couple of years for a more energy efficient model.

Food Preparation:

- Prep Worktables are in ok condition. Bases have galvanized/painted legs and need to be repainted or replaced.
- Prep sinks are in good condition but waste is direct and recommend running to floor sink and thru a grease trap.
- Ice Machine is in good condition and does not need replaced.

Cooking:

- Convection Oven (2 years old) is in good working condition.
- (2) Gas Fryer (15 years old) but in good working condition.
- 2-burner Range (15 years old) is in working condition.
- Steamer is missing. Recommend adding a 2-stack unit.
- Exhaust Hood is in good condition but layout is incorrect for cooking equipment. Recommend re-design layout of cooking equipment, hood, and fire system.
- Heated Cabinet (2) are old and need to be replaced as they do not keep appropriate temperature. (1) Unit is approximately 5 years old and in good condition.

Dishwash:

- The facility has no dish machine and only uses a three-compartment sink.
- Type II condensate hood is rusted above sink but can be removed as it is not required.

Serving:

- Serving lines are 20 years old. All drop-ins are currently in good working condition. Recommend replacement in next 5 years.
- Milk Cabinet unit (2) are in good condition.

Auxiliary Spaces:

- Office square footage is too small and is not adequate for (1) office manager
- Heating/cooling is adequate according to manager.
- No grease trap
- Recommend adding (1) more hand sink.
- New water heater dedicated to kitchen (1) year old.
- Kitchen square footage is adequate.

- No fly fan is required as kitchen rear door has a screen door
- Computers at serving don't work and are slow per manager. Slows down lines in order to get kids thru line.
- Walls are hard to get clean because of age.

Part 8: Plumbing Systems

57. Observations

Backflow preventer is not installed. Domestic cold water enters the boiler room and feeds a piping header with approximately 12 zones. Each of these zones contains a gate valve for isolation.

Gas service is provided to the kitchen appliances, water heaters, and heating boiler.

Water coolers are non-compliant with current code for accessibility.

The Principal reported temperature control issues in the Administration areas. Temperature swings were noticed throughout the building.

Scuppered openings/downspouts were observed on Bldg A.

New plumbing piping and fixtures are needed throughout the building.

Piping:

- Copper water supply piping installed inside, most all exposed piping was uninsulated (restrooms, mechanical rooms, etc).

Fixtures:

- Restrooms have flush valve type water closets and urinals, and lavatory fixtures. Restrooms appeared to have proper ventilation, floor drains, installed fixture heights, and hose bibbs for housekeeping and priming the floor drain trap.

Water Heaters:

- A 3 kW, 30 gallon residential water heater, manufactured by A.O. Smith, is installed in the boiler room and serves the Admin area. Age of water heater appears to be 23 years old. There are several electric water heaters located throughout the newer portion, Bldg B.
- Kitchen is served by a new 130 gallon water heater manufactured by AO Smith. Water heater is a high efficiency gas fired unit with an output capacity of 450 MBH.
- Hot water is not connected to the lavatories in the gang toilets, Bldg A

Kitchen:

- No grease interceptor installed.
- Sanitary waste from 2- and 3- compartment sinks were observed to be direct connections with no air gaps.
- Could not determine if gas supply (to appliances) was interlocked with the hood fire suppression.

58. Recommendations

- Install a grease interceptor outside of building in an accessible location.
- Insulate all exposed domestic cold and hot water piping.

- Replace water coolers
- Install backflow preventer
- Install indirect waste connections as required by code
- Replace hand sink in the kitchen

Part 9: HVAC Systems

59. Observations

The building HVAC system consists of the following combination.

- Two (2) separate 2-pipe systems utilizing unit ventilators and AHUs
- DX AHUs with hot water heating.

The corridors throughout the building are not supplied with air. A unit ventilator serves the entrance lobby.

Humidity is extremely difficult to control in the building, particularly during the fall and spring seasons.

The gymnasium is ventilated only via an exhaust fan and intake louver that are approximately 5 years old. There are plans to install some new unit heaters in a few weeks (Dec '14). The existing steam unit heaters have been abandoned.

The classroom unit ventilators installed in the original construction, Building A, do not have any outside air connected to them. These areas also do not have a dedicated outside air unit. Therefore, the only source of fresh air is through operable windows when outside conditions are moderate.

The Administration wing is served by 2-pipe unit ventilators. These areas also have a split system DX unit to provide cooling when the dual temp system is in heating mode and cooling is required.

A two-story glass enclosed walkway, connecting the newer portion to the original construction, does not have any heating or cooling.

The auditorium is served by two AHUs located in a mezzanine above the stage. There is extremely poor access to these units, one of which is by a temporary ladder.

Central Plant Cooling: One air-cooled chiller and packaged condensing unit (evaporator barrel inside) are located in a court yard surrounded by buildings. It has been reported that the chillers are noisy and disruptive during operation. There is no path for vehicle access to the chillers. Chillers are at the end of their serviceable life.

Each chiller system serves an independent dual temp pipe distribution system.

A sheet metal shield was installed above a chilled water pump to deflect water dripping from above on to the ODP motor. Piping insulation appeared to be compromised or lacking in the mechanical room areas.

Central Plant Heating: The boiler room is in the basement off the central courtyard. There is no path for vehicle access. There is no path for equipment removal from the boiler plant.

One 1420 MBH gas fired Weil-McLain cast iron boiler is currently serving the entire school. There is capacity to add four additional plates should the heating demand increase. An abandoned steam boiler is installed in the boiler room. Both dual temp distribution systems are connected to the water boiler. The breeching and flue stacks have begun deteriorating.

There is some portion of hot water piping insulation that contains asbestos.

Water enters the boiler room when it rains. Wall behind air compressor shows evidence where the problem leak occurs.

There is a substantial amount of equipment from the old steam system that has been abandoned in place (ex. Boiler, condensate receiver & pump, hot water convertor, electrical disconnects, boiler feed piping, controls, etc.)

Distribution Systems:

- Ductwork is constructed of galvanized metal.
- Janitor's closets had no exhaust air.
- All ductwork observed contained inner liner material.
- All AHUs and pumps are constant volume air systems.
- Piping material is copper.
- Piping is wrapped with fiberglass insulation in limited areas.

Controls:

- Unit ventilators are served by the 2-pipe system and controlled by individual wall thermostats.
- Systems in the Administration area have local overrides for after-hours operation.
- Barber-Coleman controls are nonfunctioning.
- All actuation is pneumatic. Control air is delivered from two compressors in the boiler room.
- Much of the central equipment is manually operated 24/7 (ex. boiler).

Kitchen:

- A grease hood is installed complete with an older fire suppression system. It is unclear what type of agent is being used.
- There is no direct air makeup to the hood or kitchen.
- Several 2-pipe unit ventilators cool the kitchen space.
- A wall separating the kitchen toilet room from the water heater room does not extend up to structure, compromising privacy.
- There is no air in the kitchen dry storage room. It appears this space was once ventilated by an exhaust fan.
- The dish wash hood is showing advanced signs of corrosion

Dining:

- Dehumidifier has been installed to help prevent mold growth during the summer when systems are shut down.
- There is no outside air connected to the unit ventilators serving the dining area.

60. Recommendations

- Provide a building wide automation system utilizing direct digital controls.
- Provide a direct source of makeup air for the kitchen hood utilizing a dedicated roof mounted unit.
- Provide conditioned supply and return air in dry storage room.

- Introduce exhaust air to all janitor's closets and toilet rooms. Provide an unobstructed path for transfer air if makeup is taken from an adjacent space.
- Verify building air balance, especially on exhaust systems. Replace or clean all exhaust grilles. Confirm building is appropriately pressurized.
- Install two new air cooled chillers, each at nominal 150 tons in accessible location. Install a new 2-pipe system alongside the existing system. Convert from 2-pipe to 4-pipe system
- Install AHU systems and terminal VAV boxes with hot water reheat for Admin Area and Lower Level.
- Replace AHUs in auditorium and provide permanent service access.
- Provide new AHU for gymnasium
- Install a DOAS systems throughout.
- Install VFDs on pumping systems.
- Introduce supply air to all corridors.
- Remove duct liner from inside duct systems. Install new ductwork and external fiberglass insulation.
- Remove window air conditioners from the Computer Lab.
- Remove old steam radiators, steam & condensate piping, and abandoned boiler room equipment.

Part 10: Fire Protection

61. Observations

- Sprinkler system installed (Y/N) - N
- System type? Wet, dry, preaction, etc.? – N/A
- Full or Partial Coverage? – N/A
- Standpipes installed (Y/N) - N
- Fire Pump installed (Y/N) – N

62. Recommendations

- Provide a full coverage sprinkler system in accordance with the NC Fire Code and NFPA Standard 13.

Part 11: Electrical, Fire Alarm, Security and Communications Systems

63. Observations

Service Entrance

This facility is fed by one (1) 500 KVA pad-mounted transformer by Duke Energy. The service to the whole campus is fed from the pad-mounted transformer. The pad-mounted transformer is located between Buildings A and D. The service is delivered overhead from the transformer to the building and down to the new 500 ampere service panel "MSB."

The capacity of the service appears to be adequate.

Distribution

The power distribution consists of distribution panelboards and lighting panelboards fed by copper wire in conduit. The main service equipment and some of the distribution and lighting panelboards are well within their life expectancy. There are still some original fusible panelboards that are in poor

condition, and have been in service over 70 years, should be replaced. Replacement switches and fuses for these panelboards may not be available. There are some panelboards (actually loadcenters) that have been “tacked” on as new circuits have been needed. These need to be replaced with commercial grade panelboards.

Panelboard labeling, including panelboard directories, is not up to date, some labeling is missing and duplicate panels designations were found. There are standard duplex receptacles too near sinks, which should have GFI protection. Additional receptacle circuits may be needed.

Grounding

Proper grounding is one of the most important factors in an electrical system. Not only is it essential for safety, it is also required for proper operation of electronic equipment. The grounding systems in the older portions of the facility are in question. The original building uses the metal conduit system to distribute grounding throughout the facility. This was legal at the time the building was constructed, but not now. The problem is that the underground conduits installed at that time were galvanized steel, which could have deteriorated in the nearly 50 years since the original facility was constructed, which could result in an increase in ground resistance, or loss of grounding entirely. An earth grounding study needs to be made and corrective measures taken.

The NEC (National Electric Code) requires a minimum ground resistance of 25 ohms. For electronic systems (data rooms, computers, etc.) a minimum ground resistance of 5 ohms is needed.

Lighting

Some of the lighting has been upgraded. DPI recommends T8 lamps and electronic ballasts as a minimum, but suggests T5 and LED as alternates. The exterior lighting is insufficient and in poor condition in most areas.

Lighting levels are, in some cases, within the levels recommended by DPI, but many areas have lighting levels far below DPI recommendations. These levels are recommended, not required. The lighting levels in the Kitchen appear to be in accordance with North Carolina Department of Health which requires 50 footcandles minimum in areas where food is handled, prepared and served, and where utensils are washed.

Emergency Power

This facility has a 12 KW standby generator. It is in bad condition and is inadequate for the needs of the building. This unit should be replaced.

Fire Alarm

The existing fire alarm system has a Simplex 4020 addressable control panel. This is a current model. Although the layout of devices in most areas have been updated, some of the layout and distribution of alarm initiating and notification devices does not meet current codes and ADA requirements.

Security

The security system does not meet current Gaston County School guidelines. No access card readers on exterior doors. No Mass Notification System. Video Surveillance System needs upgrading with additional cameras.

Data/Communications

The data system currently does not meet GCS criteria. The MDF and IDF's are not dedicated and in secure locations. The MDF is located in a Conference Room. The IDF's are located in various non-dedicated and unsecured rooms.

Concerns

It was noted in several areas where panels are located that materials, furniture, etc. have been stored too close to the equipment. This is both illegal and dangerous. The National Electrical Code requires a minimum of 36 inches clear in front of these items. We feel that this issue should be addressed as soon as possible.

64. Recommendations**Service Entrance**

The existing service entrance is relatively new and appears to be in good condition except for some labeling issues.

Distribution

All original panels and panels by manufacturers that are no longer in business, or are past their rated life, should be replaced. All equipment should be properly labeled, including directories showing loads for all circuits. All electrical panelboards need to be scanned with an infrared scanner to be sure that there are no "hot" spots, which can indicate that there is an overload, faulty device or connection. Based on the scanning results, corrections need to be made.

Lighting

The lighting in some areas of the facility has recently been replaced, many areas need new lighting. There is practically no exterior lighting, additional exterior lighting needs to be added – some on building walls and some on poles. New exterior lighting should be LED with protective enclosures without the use of polycarbonate lenses. Additional exit signs and egress lighting needs to be installed. All exit signs and egress lighting shall have battery backup with self-diagnostic system unless they are connected to the standby generator. Auditorium, Stage and Gymnasium lighting should be updated, with new dimming system for the Auditorium and Stage. Egress lighting needs to comply with ADA requirements.

Emergency Power

The existing generator should be replaced with a new unit sized to handle the life safety and data needs of the facility.

Fire Alarm

The fire alarm system is mostly up to date, but a few devices may need to be added.

Security

Security system needs to be upgraded to latest GCS criteria. Door access system and Mass Notification System need to be added per GCS standards.

Data/Communications

The wiring system should be updated to current GCS criteria. The main data rack MDF and IDF racks need to be secured. Backup power from a standby generator should be provided.

Sound Systems

The intercom system is outdated, but appears to operate but it should be updated to a VoIP based system. The existing system should be updated and restored to proper operation so that it can be used as a backup system for the new IP intercom and paging system.

The sound systems in the Auditorium and Gymnasium should be updated and made to comply with ADA requirements.

End of Assessment



BESSEMER CITY MIDDLE
525 Ed Wilson Road | Bessemer City, NC



YATES ■ CHREITZBERG ■ HUGHES

A S S E S S M E N T

BESSEMER CITY MIDDLE

Bessemer City Middle School

Existing Condition Assessment

PART 1: General Narrative of Facility

- 1. **Survey Date:** October 2014
- 2. **School Address:** 525 Ed Wilson Road, Bessemer City, NC
- 3. **Total Building Area:** 99,583 square feet
- 4. **Total Site Area:** 18.38 acres
- 5. **Instructional Capacity:** 751 students
- 6. **Enrollment 2014-2015:** 550 students
- 7. **Current Utilization:** 73%
- 8. **Area per Student Capacity:** 132sf / student

9. Building Size and Dates of Construction:

Building A: 1954 (58,250 sf) Building B: 1995 (20,481 sf)
Building C: 1979 (17,797 sf) Building D: 2009 (3,055 sf)

10. General Description of Facility:

The original school was constructed in 1954, with three subsequent additions for various Classrooms, Administration area and Band Room, and Kitchen and Cafeteria addition. The majority of the facility consists of load bearing masonry walls with steel bar joist roof structure and low sloped roofing. Exterior walls consist of brick veneer and significant windows in the older classroom areas, with more moderate windows in the newest classroom wing. The facility consists of 3 detached buildings, which require exterior access between them.

The site contains shared staff and visitor parking, staff parking, and separate bus and car rider drives. The adjacent site contains a football field and various baseball / softball fields, which are owned and maintained by Gaston County Parks and Recreation, and are therefore not a part of this assessment.

Part 2: General Space Standards

11. General Purpose Classrooms

Room Description	No. of Rooms	Typical Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
6th Grade	7	740 sf	850 sf	87%	Fair
7th Grade	6	740 sf	850 sf	87%	Fair
8th Grade	6	740 sf	850 sf	87%	Fair

Comments: The general purpose classrooms are arranged into 3 areas for the 6th, 7th and 8th Grade wings, with the 7th Grade wing requiring exterior access. The classrooms are generally all of the same square footage.

All of the classrooms contain smart boards, wireless technology and at least four hardwired computer drops.

- The 6th Grade classrooms are all smaller than space standards. Each room contains a wall mounted sink, which should be removed. The classrooms contain dated casework, which is not consistent with GCS standards. All of the 6th grade classroom doors open out into the hallway, which is a safety concern and should be reversed to open into the classrooms.
- The 7th Grade classrooms are all smaller than space standards. The classrooms contain dated casework, which is not consistent with GCS standards. All of the 7th grade classroom doors open out into the hallway, which is a safety concern and should be reversed to open into the classrooms.
- The 8th Grade classrooms are all smaller than space standards. The classrooms contain newer casework, however it is not consistent with GCS standards.

12. Science Classrooms

Room Description	No. of Rooms	Typical Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
7th Grade wing	2	980 sf	1,000 sf	98%	Good
8th Grade wing	2	990 sf	1,000 sf	99%	Good

Comments: Two Science classrooms are located in each of the 7th Grade and 8th Grade wings. No Science rooms are provided in the 6th Grade wing. Each Science room has a dedicated Preparation room.

- The Science classrooms meet the space standards. However, the Preparation rooms are each approximately on half the of the 250 square feet space standard. The Preparation rooms in the 7th Grade wing are approximately 8 feet wide and very limited in useable space.
- Each of the Science rooms contains adequate casework with chemical resistant tops, sinks and a demonstration island with sink. Each of the rooms contain an eye wash / shower, but no floor drain.

13. Exceptional Children, Language Arts and Health

Room Description	No. of Rooms	Typical Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
EC Resource	1	920 sf	1,000 sf	92%	Good
EC Cluster	1	1,122 sf	1,000 sf	112%	Excellent
EC Cluster (break out)	1	816 sf	1,000 sf	N / A	N / A
Spanish	1	740 sf	850 sf	87%	Fair
Health	1	700 sf	850 sf	82%	Fair

Comments: The school contains 1 EC Resource classroom, with an attached break out room and 1 self contained EC Cluster classroom. The EC Resource room is located in the Cafeteria / CTE building and the EC Cluster room is located near the Media Center. The Spanish classroom is located in the 8th Grade wing, and the Health classroom is located between the 6th and 7th Grade wings.

- The EC Resource room is located in the Cafeteria / CTE building, and requires exterior access. The classroom contains a toilet, which is not handicap accessible and is also not located near accessible group toilets.
- The EC Cluster classroom meets the space standards, however does not include a dedicated toilet, which should be added if possible. The classroom contains dated casework, which is not consistent with GCS standards, and should also contain a countertop sink.
- The EC Cluster classroom includes an attached Break-out Room, which could be utilized as another EC Cluster or Resource classroom.
- EC does not have access to a shower / changing room other than those located within the PE Locker rooms.
- Spanish is taught in a typical 8th Grade classroom, which is smaller than space standards. The classroom contains newer casework, however it is not consistent with GCS standards.
- The Health classroom is located in a former mechanical room with access only from the exterior. This room does not include any exterior window, which does not comply with building code.

14. Arts Education

Room Description	No. of Rooms	Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
Art	1	960	1,200 sf	80%	Fair
Band	1	1,350 sf	1,600 sf	84%	Fair
Chorus	1	840 sf	1,200 sf	70%	Poor
Auditorium	1	3,300 sf	Varies	N / A	N / A
Stage	1	1,550 sf	Varies	N / A	N / A

Comments: The Art room is located in the 8th Grade wing. The Band and Chorus rooms are located near the Auditorium at the front of the school. The Auditorium is located adjacent to the Gymnasium and shares a dedicated exterior entry, lobby and toilets.

- The Art room is significantly smaller than space standards, and contains a separate kiln room and secure storage room. The Art room does not contain adequate built-in casework.
- The Band Room is smaller than space standards. The room contains fixed risers and numerous storage closets around the perimeter, which is inefficient for instrument storage (as opposed to one large storage room). The room does not contain appropriate acoustical treatments, with a VCT floor, CMU walls and standard lay in ceiling. The back wall contains perforated masonite panels, which do not offer significant sound absorption.
- The Chorus room is significantly smaller than space standards, and also upfitted like a standard classroom. The ceiling is not of adequate height. The room does not contain portable risers or appropriate acoustical treatments, with a VCT floor, CMU walls and standard lay in ceiling.
- The Auditorium contains 520 dated wood seats, which should be replaced. The room is not capable of seating the entire student population, and does not include any handicap seating areas.
- The stage is elevated, and is handicap accessible via a vestibule from the main corridor, but not directly from the Auditorium. A ramp from the audience chamber to the stage is very difficult to add, due to the continuously sloping concrete floor.
- The Auditorium does not contain appropriate acoustical treatments, with hard plaster walls and standard lay in ceiling.
- The Stage contains minimal curtains and rigging, and two Dressing Room / Toilets, which are not functional and used for storage only.

15. Career and Technical Education Classrooms / Shops

Room Description	No. of Rooms	Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
Business Lab	1	800 sf	1,200 sf	66%	Poor
Technology Lab	1	740 sf	1,200 sf	62%	Poor
Industrial Arts Shop	1	1,800 sf	N / A	N / A	N / A

Comments: CTE is located in a separate building with the Cafeteria and requires exterior access for all students.

- The Business and Technology Labs are both significantly smaller than space standards.
- The Industrial Arts Shop is currently not utilized for a shop or instruction, only for storage. This room includes a roll-up door to the exterior and two storage rooms.

16. Media Center

Room Description	No. of Rooms	Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
Main Room	1	2,620 sf	3,400 sf	77%	Poor
Support Areas	Various	1,320 sf	1,800 sf	73%	Poor

Comments: The Media Center is located in Building A, the oldest building, between the 6th and 7th Grade classroom wings. The Main Room and Support Areas are significantly smaller than space standards.

- The Media Center support spaces include an Office, Conference Room and various Storage / Work rooms that could be re-designed to be more space efficient. In addition, the Support spaces could be expanded into the adjacent classroom, which is currently used as a Guidance office.
- The main IT MDF rack is located in a Media Support room, which is also used for storage and a copier. This room should be converted to a secure and fire rated room with a gaseous fire suppression system.
- The Media Center does not contain a video studio, production, editing, or equipment rooms.
- The Media Center does not contain an area for computer / technology instruction, however one of the Computer Labs is in an adjacent room, but does not have a direct connection.
- The Media Center is located within an area of the school that cannot be secured for after-hours community use.

17. Physical Education / Indoor Athletics

Room Description	Area	Court Size	NCDPI Standard Area	Relation to Standard	Adequacy Rating
Gymnasium	7,500 sf	50 x 84	Varies	N / A	N / A

Comments: The Gymnasium is located adjacent to the Auditorium and shares a dedicated exterior entry, lobby and toilets. The gymnasium was recently renovated, with new concrete slab, wood floor and painting.

- The Gymnasium includes telescoping bleachers on each side, which seat approximately 480. These bleachers are in poor condition and in need of replacement.
- The basketball court is of regulation size for interscholastic play. With the bleachers extended, the safety space on the sides is approximately 3-4 feet, which is less than the 6 foot minimum. The end safety zones are adequate, with wall pads.
- The Gymnasium includes a separate entrance with a lobby, toilets and doors to the exterior for after hours use.
- The Girls and Boys PE locker rooms are both in fair condition with showers and access to the adjacent group toilets. The rooms contain minimal metal lockers, which are in good condition, The rooms contain space for more lockers to be added, if desired.

- The Girls and Boys Team locker rooms are both in very poor condition with non functioning showers, toilet fixtures, finishes in poor condition and broken lockers.

18. Administration Excellent Good Fair Poor

Comments: The Administration area includes approximately 3,500 square feet, but also contains Health and Guidance spaces directly within the Admin. area. Administration consists of the following rooms: (1) Main Office / Reception, (1) Waiting, (1) Principal's Office with Toilet, (2) Assistant Principal's Office, (1) Secretary Office (1) Work Room / Mail Room, (3) Toilets and (1) Records Storage. Another Assistant Principal's office is located near the Media Center. The Administration area is fairly limited in space, but could be redesigned for better efficiency.

- The Administration area is located directly adjacent to the main entry doors, with an interior window to a secure vestibule and waiting area.
- The Administration area is located at the front of the school and had good visibility of the main entry doors, car rider drop off area and visitor parking.
- The school does not have a dedicated SRO Office, which should be located near the main school entry and Administration area.
- The Administration area does not include a dedicated Conference Room.
- The Administration area does not include a private Staff Room.
- The Administration area contains a Guidance Office, Nurse and Social Worker office directly within the Admin. area. These spaces should be relocated to separate areas near, but separate from the Administration offices.
- None of the Toilets in the Administration area are handicap accessible.

19. Student Support Excellent Good Fair Poor

Comments: The Student Support Spaces consist of (2) Guidance Offices and (1) School Nurse Office (1) Social Worker Office (1) and School Therapist Office.

- One of the current Guidance Offices is located directly within the Administration area. This office is large enough to be divided into 2 smaller offices. The other Guidance Counselor utilizes a classroom in the 6th Grade wing. Another office should be added, as GCS standards desire 3 Guidance Counselor offices in Middle Schools.
- The Nurse's office is located directly within the Administration area, is very small, and is adjacent to the Social Worker's office with a shared waiting area. The Health Services area should be near, but separate from the Admin. area and should include a dedicated Nurse's Office, Holding Room, dedicated Toilet, Shower and Changing area and wheelchair storage.
- The school Social Worker's office is located directly within the Administration area. This office should be near, but separate from the Admin area for confidentiality.
- The School Therapist office is located directly off of a busy corridor near the Media Center, which offers little student privacy, and should be relocated to a more private area for confidentiality.

20. Staff Support Excellent Good Fair Poor

Comments: The Staff Support Spaces consist of only one Teacher Lounge in the 6th Grade wing.

- The Teacher Lounge contains only break room casework and should be converted to a Teaming / Work Room.
- Additional Teacher Teaming / Work Rooms should be located in each classroom wing.

21. Cafeteria

Students per Seating *	Dining Room Area	Area per Student	NCDPI Standard Area	Capacity of Dining Room	Relation to Standard
183	4,000 sf	21.8 sf / student	14 sf / student	285	156% Excellent

* Students per Seating equals the 2014 - 2015 student enrollment for the school divided by 3 seatings for continuous serving ($550 / 3 = 183$).

Comments: The Cafeteria is located in a separate building with CTE and requires exterior access for all students. The Cafeteria and Kitchen were both enlarged and renovated in 2009.

- The Cafeteria exceeds space standards. However, it is mainly accessed by one pair of doors, which limits circulation for entering and exiting the room.
- Three serving lines are located within the Dining Room, which are adequate to serve the number of students.
- The Cafeteria contains a pair of doors to the exterior in the courtyard area. However, these doors do not offer close access to the loading dock area for trash removal. Trash must be removed through the Kitchen to the loading dock area.

22. Kitchen

Lunches Served per Day *	Kitchen Area	NCDPI Standard Area	Relation to Standard
495	2,500 sf	1,518 (for 500 to 750 lunches served)	164% Excellent

* Lunches Served per Day equals the 2014 - 2015 student enrollment for the school times 90% participation factor ($550 \times .90 = 495$). This school experiences an elevated participation rate due to free and reduced lunches.

Comments: The Kitchen exceeds the NCDPI guidelines of overall area for the number of students served, contains all of the required spaces, and is in generally good condition. The Cafeteria and Kitchen were both enlarged and renovated in 2009. See the Section 7: Food Service Assessment for additional information.

- The loading dock is on grade, with a covered canopy. However, due to the dumpster location, trucks are not able to back up close to the receiving door.

23. Toilet Facilities

 Excellent

 Good

 Fair

 Poor

- The group toilets in the 6th grade wing contain new partitions which are handicap accessible. However, the finishes and fixtures in these rooms are in poor condition and should be upgraded.
- The group toilets in the 7th grade wing contain new partitions but the overall rooms are not handicap accessible. The finishes and fixtures in these rooms are in poor condition and should be upgraded. These toilets also do not contain an adequate number of fixtures to serve the 7th Grade students and should be enlarged, if possible.
- The group toilets in the 8th grade wing are handicap accessible. The finishes, fixtures and toilet partitions in these rooms are in poor condition and should be upgraded.
- The group toilets in the Cafeteria / CTE Building contain new partitions but the overall rooms are not handicap accessible. The finishes in these rooms are in poor condition and should be upgraded and expanded, since they serve the Cafeteria.
- The group toilets in the Auditorium / Gymnasium lobby contain new partitions but the overall rooms are not handicap accessible. The finishes and fixtures in these rooms are in poor condition and should be upgraded.
- Staff are provided with 9 single toilets throughout the school, 4 of which are located in the Administration area. All of the toilets, except for one in the 8th Grade wing, are in poor condition and not handicap accessible. At least one Staff toilet in each wing should be upgraded and made handicap accessible.

24. Other Spaces

- The school has limited general purpose storage. Many electrical rooms are used for storage, which violates code.
- The school contains 3 separate general purpose Computer Labs in various areas of the school.
- ISS is located in a large classroom near the Media Center.
- The MDF is located a Media Center support room, which should be converted into a secure, access controlled room with a gaseous fire suppression system. The IDF's are located throughout the school in classrooms and corridors, most of which will be difficult to relocate into secure rooms due to existing data cabling.

25. Additional Considerations

- Student lockers in the 6th and 7th Grade wings are in poor condition, rusting and should be replaced. Lockers in the 8th Grade wing are newer, but need some repairs to most of the blank panels and paint.

Part 3: School Site

26. Parking Excellent Good Fair Poor

Description	Current Number of Spaces	Number of Spaces Needed	Relation to Number of Spaces Needed
Staff / Visitor (North)	34	80 Staff (70 employees plus 10 transient) 30 Visitor 110 total	-20
Staff / Visitor (Gravel)	20		
Staff (West)	36		
Total Staff / Visitor	90		
Bus	0	7	-7

Comments: Parking on the school site is poor, with parking located directly along car rider and bus drives, and an inadequate number of spaces, including a gravel parking area. Most of the asphalt paving is in poor condition.

- The north parking area contains 34 paved spaces and 20 gravel spaces, which are used by both Staff and Visitors. Most of these spaces are very poorly marked from the drive areas. Some of these spaces are located along the one-way drive used for student drop off and pick up, which presents safety concerns and also makes most of these spaces unusable when the car rider line is stacked. The asphalt is in poor condition, with significant cracking, and should be replaced. This parking lot should be redesigned and expanded for both parking and stacking.
- The asphalt paving in the west Staff parking lot is in poor condition with significant cracking and areas of settling, and should be replaced.
- The site does not contain a dedicated bus parking area. Buses are parked on the side of the west drive, which presents a safety concern. A dedicated bus parking area should be included, but is difficult to add due to limited site area.

27. Vehicular Circulation Excellent Good Fair Poor

Comments: Vehicular Circulation on the school site is generally fair, with separate stacking for cars and busses, and separation of bus and car rider lanes. Buses enter and exit from Ed Wilson Road, cars enter and exit from South Gould Avenue. However, most of the asphalt paving is in poor condition.

- Ed Wilson Road and South Gould Avenue both connect to Skyland Drive, very close together. Skyland Drive does not contain any dedicated turn or deceleration lanes for the school. Additional investigation should be made with the Department of Transportation about public road improvements.
- The car rider drive loops around at the front of the school and provides significant stacking on Ed Wilson Road. However, the Principal reports back-ups onto Skyland Drive, due to the increased times for drop off and pick up. This drive is not clearly marked or delineated from the Staff / Visitor parking area. The asphalt is in very poor condition, with significant cracking, and should be replaced. The drive and parking lot should be redesigned and expanded for both parking and stacking.
- The bus drive contains adequate stacking in the turn-around area, however bus riders are currently dropped off in the morning at the Gymnasium entrance. This is located directly on the main drive to the west Staff parking lot, which is a safety concern. Bus riders are picked up in the afternoon in the bus turn-around area, which offers stacking and is segregated from the main drive and parking.

- The asphalt paving of the west drive is in poor condition with significant cracking and areas of settling, and should be replaced.
- The kitchen has a dedicated service drive from the bus drive, which is rutted near the dumpster and should be replaced with concrete in this area.

28. Pedestrian Circulation Excellent Good Fair Poor

Comments: The school site contains adequate sidewalk locations for pedestrian circulation for access to various areas of the school buildings. Most of the sidewalks are in fair condition, except near the front of the school.

- All of the concrete sidewalks near the front (north) side of the school are in very poor condition with significant cracking and deterioration, and should be replaced.
- The sidewalk within the enclosed courtyard is in poor condition and should be replaced.
- The sidewalk between the 6th, 7th Grade wing and the Cafeteria / CTE Building is in poor condition and should be replaced.
- The precast concrete wall cap in the courtyard patio area is significantly deteriorated and should be replaced.
- Most of the other sidewalks, stairs and patios around the building and within the open courtyard are in fair condition.

29. Walkway Canopies Excellent Good Fair Poor

Comments: The school contains one walkway canopy that connects some of the various buildings, and one canopy at the car rider drive.

- The canopy at the front of the building provides adequate length for car rider drop off and pick up. This canopy is in fair condition, but not of substantial construction and should be replaced with a more durable system.
- The canopy connecting the buildings is of painted steel structure, with peeling paint and many areas of rust. This canopy is also very low and should be replaced with more durable prefinished metal systems. Consideration should be given to replacing this covered walkway with an enclosed corridor to eliminate exterior access to the 7th Grade wing and Cafeteria / CTE Building.
- The school does not contain a canopy at the bus rider drop off, which is at the lobby to the Gymnasium / Auditorium. A walkway canopy can be added in this area.
- The school does not contain a canopy at the bus rider pick up area, which is difficult to add since the students utilize multiple different doors to access this area. However, a canopy could be added to the waiting area around the perimeter of the bus circle.
- The main school entry contains a moderately sized exterior cover.

30. Outdoor Play

- The site contains does not contain any outdoor play areas, other than the athletic fields.

31. Athletic Facilities

The adjacent site contains a football field and various baseball / softball fields, which are owned and maintained by Gaston County Parks and Recreation, and are therefore not a part of this assessment. This park does not include a paved track, or track and field facilities.

32. Athletic Spectator Areas

The adjacent site contains athletic facilities and spectator area, which are owned and maintained by Gaston County Parks and Recreation, and are therefore not a part of this assessment.

33. Grounds / Landscaping Excellent Good Fair Poor

- The school contains virtually no foundation shrubs, except near the front entry. The front entry contains foundation shrubs and trees that are becoming too large for the small area in which they are planted. These should be removed and replaced with lower growing plants.
- The school contains several trees on the east side, which are overgrown and should be trimmed due to their proximity to the building.
- The perimeter of the site is overgrown on the west side along the bus drive and should be trimmed back.
- The interior courtyard contains a wood retaining wall, which is deteriorating and should be replaced with a modular block retaining wall.
- The ramp down to the baseball field is significantly overgrown with vegetation, which should be trimmed back. The wood retaining wall along this ramp is deteriorating and should be replaced with a modular block retaining wall.

34. Utilities Excellent Good Fair Poor

- The school is served by the City of Bessemer for water and sewer, has a backflow preventer for domestic water, which is reported to be in working condition. The water line is not reported to have any current issues.
- The school has a 1,200 gallon grease interceptor on the sanitary sewer line from the kitchen. The sanitary sewer is reported not to have any current issues.
- Only one fire hydrant is located in the general area of the school on Ed Wilson Road, and does not provide adequate coverage of the school. More fire hydrants should be added on the school site to provide adequate coverage.
- The school is served by natural gas, which is metered separately for the kitchen and the buildings.
- An abandoned underground oil storage tank is located near the chiller / cooling tower. However, it is probably not able to be removed, due to its proximity to the equipment.
- Overhead power lines run along the front of the school, and into the open courtyard area, which presents a safety concern. Further investigations with the service provider should occur about burying these underground.

35. Storm Drainage Excellent Good Fair Poor

- The site does not have a stormwater management pond, which is not required by the municipality unless additional impervious area is added.
- The site has very minimal underground storm drainage, as the majority of the water sheet flows across paved areas to only a few storm drains.
- The entire paved area on the southwestern portion of the site flows to one storm drain inlet in the bus turnaround area. This paved area shows significant signs of ponding water. A catch basin was

recently added adjacent to the Auditorium / Gymnasium entry to alleviate ponding in this area. Additional underground storm drainage should be added in this area if the paving is replaced.

- The entire paved area on the northern portion of the site flows to one storm drain inlet. Additional underground storm drainage should be added in this area if the paving is replaced
- Approximately half of the downspouts throughout the school are connected directly to the underground stormwater piping system. This connection should be made indirect, with the downspouts spilling above grade into catch basins to prevent clogging.
- Approximately half of the downspouts spill directly on to grade. Catch basins should be added where possible to direct the roof drainage to an underground storm drainage system to prevent water from ponding next to the buildings.

36. Emergency Access Excellent Good Fair Poor

- The site has paved emergency access around the north, west and south sides via parking areas and drives.
- An emergency access drive cannot be added to the east due to grades and without relocation of the football field.

37. Site Security Excellent Good Fair Poor

- The site is located in a rural residential area, adjacent to a county park. The Principal and school SRO Officer indicated that the surrounding areas do not typically include significant crime. In the past, the school has previously experienced several break-ins and vandalism. However, the Principal reported that these are less frequent in recent years, with 2 break-ins in the last 7 years.
- There is an obviously abandoned house near the school site that the Principal indicated she was investigating.
- The north, west and south portions of the building and site have good visibility from drives and parking areas. The east side does not have any vehicular access for police patrol.
- A mobile unit that is used by the County for storage is located directly adjacent to the bus drive. This should be moved off site, if it is not utilized by the school.
- The site contains very little chain link fencing around the perimeter.

38. Additional Considerations

- The guardrail on top of the site retaining wall in the courtyard does not meet current code for picket spacing and should be replaced.
- All of the exterior steel handrails and guardrails need painting.
- Directional signage on the school site is poor and should be replaced.

Part 4: Building Envelope

39. Construction Type Non-Combustible Combustible

40. Structural Floors

Material: Concrete Slab on Grade
 Concrete on Metal Deck over Steel Structure
 Wood Deck on Wood Joists
 Other

Evidence of Structural Concerns: Prevalent Isolated None Visible

Overall Condition of Structural Floors: Excellent Good Fair Poor

Comments: The structural floors consist predominately of concrete slab on grade, with an area of elevated concrete slab over a mechanical room below the 8th Grade wing.

- Concrete floors generally appear to be in good condition with no major cracks telegraphing through the floor coverings, except in the 6th Grade wing as noted below.
- Some cracks in the VCT were observed in the main corridor of the 6th Grade wing. The cracks appear to be minor, don't extend the width of the corridor, and did not involve an elevation change on either side.

41. Exterior Walls / Cladding

Material: Masonry EIFS / Stucco Metal Other

Evidence of Structural Cracking: Prevalent Isolated None Visible

Evidence of Concern with Exterior Cladding:

Cracks / Gaps	<input type="checkbox"/> Prevalent	<input checked="" type="checkbox"/> Isolated	<input type="checkbox"/> None Visible
Efflorescence (Masonry)	<input type="checkbox"/> Prevalent	<input checked="" type="checkbox"/> Isolated	<input type="checkbox"/> None Visible
Moisture Penetration	<input type="checkbox"/> Prevalent	<input checked="" type="checkbox"/> Isolated	<input type="checkbox"/> None Visible
Rot/Decay/Corrosion	<input type="checkbox"/> Prevalent	<input checked="" type="checkbox"/> Isolated	<input type="checkbox"/> None Visible

Overall Condition of Exterior Walls: Excellent Good Fair Poor

Comments: The exterior walls of the all of the Buildings, except Building B appear to consist of multi wythe brick, or brick / CMU construction that most likely does not include insulation, an air space or flashing. The newer Building B consists of brick veneer with CMU backup, insulation and an air space.

- The brick veneer appears to be in generally good condition, with some areas of efflorescence on the older Buildings A and C, which may be a result of moisture within the wall due to the lack of an air space.
- A crack in the brick veneer was observed on the exterior wall of the library, which extends approximately one third up the elevation of the wall. The crack has previously been filled with caulk, with no evidence of widening since. This crack appears to be isolated and non-structural.
- An area of missing brick veneer around and electrical box was observed on the exterior wall of the 7th Grade science rooms, and should be infilled to prevent waster intrusion.

- Expansion joint caulking is failing and has fallen out in several places, and should be replaced on all buildings to prevent water intrusion.
- The soffits on Building A consist of the exposed metal roof deck. The paint is peeling in most places, which most likely contains lead. These soffits should be scraped and painted, and metal panel soffits installed.

42. Exterior Glazing

Frame Material: Aluminum Steel Wood Other

Glazing Material: Un-insulated Insulated Glass Block

Evidence of Concern with Exterior Glazing:

Moisture Penetration Prevalent Isolated None Visible

Rot/Decay/Corrosion Prevalent Isolated None Visible

Overall Condition of Exterior Glazing: Excellent Good Fair Poor

Comments: Due to the differing ages of the various building wings, the condition of the exterior glazing systems varies substantially, but the majority of glazing is in poor condition.

- The exterior glazing in most areas of the older Buildings A and C consists of 1/4" un-insulated glass in a thermally continuous steel framing system, which is very energy inefficient and past its useful life. In addition, this glass appear to standard plate glass, which presents a safety concern as it is easily broken. All of this glazing should be replaced with insulating glass in a thermally broken aluminum storefront framing system to be more energy efficient and provide better thermal control of the classrooms in particular. The glass should be safety tempered in areas required by code. Some areas could be infilled with insulated metal panels or solid wall instead of glass to reduce the amount of glazing, particularly in classrooms.
- The window glazing in Building B and the Cafeteria consists of insulating glass in an aluminum framing system and is in fair condition.

43. Exterior Entry / Exit Doors

Door Material: Aluminum Steel Wood Other

Evidence of Concern with Entry / Exit Doors:

Moisture Penetration Prevalent Isolated None Visible

Rot/Decay/Corrosion Prevalent Isolated None Visible

Overall Condition Doors: Excellent Good Fair Poor

Overall Condition of Hardware: Excellent Good Fair Poor

Comments: Due to the differing ages of the various building wings, the condition of the entry / exit doors varies substantially, but the majority of doors are in poor condition. None of the exterior doors include access control hardware, which should be added for security.

- Most of the entry / exit doors in the older Buildings A and C appear to be original and are in poor condition, some do not have code compliant panic devices and none have access control for security. These doors should be replaced to include code compliant door hardware and access control for security.

- The exterior doors in the cafeteria and kitchen are in good condition, but do not have access control hardware, which should be added for security.
- The entry / exit doors in the 8th Grade wing are in good condition, but contain too much glass for security concerns and do not have access control hardware. These doors should be replaced.
- The main front entry doors should have secure access control with buzz-in and security camera tied into the Administration area reception desk.

44. Exterior Classroom Doors

Door Material: Aluminum Steel Wood Other

Evidence of Concern with Classroom Doors:

Moisture Penetration Prevalent Isolated None Visible

Rot/Decay/Corrosion Prevalent Isolated None Visible

Other None at this time

Overall Condition of Doors: Excellent Good Fair Poor

Overall Condition of Hardware: Excellent Good Fair Poor

Comments: The Health classroom and some rooms in the CTE Building have doors that open directly to the exterior.

- The exterior classroom doors are either steel or wood with significant peeling paint and several areas of rust, and are generally in poor condition. These should all be replaced with insulated hollow metal doors and lever style hardware with new locks.
- The majority of other exterior doors for mechanical rooms, electrical rooms, storage and locker rooms in Buildings A and C are in poor condition and should be replaced.

45. Roofing

An independent roof assessment was performed for Gaston County Schools by Roof Engineering, Inc. (REI) in 2006. The report indicates the following needs regarding the replacement of roofs:

- All areas: Asphalt Built-up Replace in 2014 (All roofing)

46. Additional Considerations

- The brick chimney appears to be utilized as a boiler flue, but should be lowered if possible, for safety reasons.
- The CTE Building contains a large, wood roll up garage door, which is in poor condition and should be replaced, or infilled if no longer needed.

Part 5: Building Interior

47. Interior Walls

Overall Condition of Walls: Excellent Good Fair Poor

Comments: The majority of interior walls are painted CMU or brick and are in good condition.

- The walls of the 6th Grade classroom wing and CTE areas need painting.

48. Floor Finishes

Classrooms	Flooring Type: VCT (in most areas) Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Corridors	Flooring Type: VCT (in most areas) Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Cafeteria	Flooring Type: VCT Condition: <input type="checkbox"/> Excellent <input checked="" type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> Poor
Gymnasium	Flooring Type: Wood Condition: <input type="checkbox"/> Excellent <input checked="" type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> Poor
Auditorium	Flooring Type: Carpet in Aisles, Epoxy under Seats Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor
Media Center	Flooring Type: Carpet Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Administration	Flooring Type: Carpet Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor

Comments: The majority of interior floor finishes are VCT and in fair condition.

- The VCT in the main Lobby and in the main Corridor between the Band Room and Auditorium is in poor condition and needs replacing.
- The carpet in the CTE Technology Lab and Business Lab is in poor condition and should be replaced with VCT.
- The Band and Chorus rooms contain VCT which should be replaced with carpet.
- The carpet aisles and epoxy flooring under the seating in the Auditorium are both in poor condition and should be replaced.
- The wood Stage floor is in poor condition, and should be refinished and painted black.
- An area of mosaic tile in the main Corridor near the Gymnasium / Auditorium doors should be replaced.
- The carpet in the Administration area is in generally poor condition, with areas of significant wear in high traffic areas and should be replaced.

49. Ceilings

Lay-in	Locations: Building B, Building C, Auditorium Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Plaster	Locations: Building A Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Drywall	Locations: Toilets, Locker Rooms Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Open Structure	Locations: Gymnasium Condition: <input type="checkbox"/> Excellent <input checked="" type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> Poor

Comments:

- Most of the ceilings in Buildings B and C are lay-in and in generally fair condition.

- Most of the ceilings in Building A are a type of textured plaster coating applied to a sheathing material attached directly to the underside of the roof joists. This material is reported to contain asbestos in the classrooms, but has been abated in the corridors. These continuous plaster coated ceilings do not offer any access to the plenum space and all light fixtures, conduit, piping, etc. are surface mounted. These ceilings should be removed and replaced with 2x2 lay-in, for better acoustics, reflectivity, installation of new light fixtures and concealment of conduit and piping. The Business Lab in the CTE Building also contains this type of ceiling, and should be replaced.
- The lay-in ceilings in the main Lobby and the main Corridor between the Band Room and Auditorium are in poor condition and need replacing.
- The Band and Chorus room appear to contain standard lay-in ceilings. These should be upgraded to a high NRC ceiling for acoustical purposes.
- A lay-in ceiling should be installed in the CTE Technology Lab.
- The Band and Chorus room appear to contain standard lay-in ceilings. These should be upgraded to a high NRC ceiling for acoustical purposes.
- The Kitchen contains a washable 2x2 lay-in ceiling which is in good condition. The Cafeteria ceiling tile is in good condition.

50. Casework

Classrooms	Casework Type: Wood and Plastic Laminate Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor
Science Rooms	Casework Type: Wood with Chemical Resistant Counters Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Media Center	Casework Type: Wood and Plastic Laminate Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Administration	Casework Type: Wood and Plastic Laminate Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor

Comments: The majority of the casework in the school is inadequate and in poor condition.

- All of the 6th and 7th Grade classrooms contain inadequate and dated wood cabinets, storage units and bookshelves various configurations. Casework in all of these classrooms needs to be replaced with a standard configuration, including open shelving and a lockable teacher storage unit.
- The 8th Grade classrooms contain newer casework, which is in fair condition. However, these classrooms all contain counters and sinks, which is not consistent with GCS standards. Casework in all of these classrooms needs to be replaced with a standard configuration, including open shelving and a lockable teacher storage unit.
- The Art room does not contain adequate built in casework for storage of materials, which should be replaced.
- The Media Center contains adequate casework, which is in fair condition. The and Media Support rooms contain a variety of very dated casework, which is inadequate and should be replaced.
- The Administration area contains inadequate and dated casework, which needs to be replaced. The counter at the main reception window is not handicap accessible.
- Casework in the Science classrooms is in generally fair condition. However, many of cabinet door hinges are loose and may need replacing.

51. Interior Doors

Overall Condition Doors: Excellent Good Fair Poor
 Overall Condition of Hardware: Excellent Good Fair Poor

Comments: Due to the differing ages of the various building wings and subsequent renovations, the condition of the interior doors and hardware varies substantially, but the majority are in poor condition.

- The interior doors and hardware in most areas of the older Buildings A and C appear to be original and do not have code compliant lever style hardware. These original doors should be replaced, and the classroom doors should also include lockdown hardware.
- Most of the doors in the 6th and 7th Grade classroom wings open out into the hallway, which is a safety concern and should be reversed to open into the classrooms.
- Most of the doors in the 6th Grade classroom wing contain glass transom panels, which appear to be standard plate glass. These should be removed and replaced with tempered glass or solid panels for safety purposes.
- The interior doors and hardware in Building B are in generally good condition and have lever style hardware, but should be upgraded with lockdown hardware in the classrooms. However, these doors are painted wood, which the Facilities Staff would eventually like replaced with prefinished wood, to reduce maintenance.

52. Additional Considerations

- Most of the window blinds, except those in Building B, are either missing or in poor condition, and in need of replacement.
- The guardrail in the stair near the Administration area does not meet current code for picket spacing and should be replaced.
- The elevator cab is in poor condition and should be replaced.

Part 6: Handicap Accessibility**53. Exterior Handicap Accessibility**

Accessible Parking: Excellent Good Fair Poor
 Accessible Route to Building(s): Excellent Good Fair Poor
 Accessible Entrances / Egress: Excellent Good Fair Poor
 Accessible Routes between Buildings: Excellent Good Fair Poor
 Accessible Athletic Fields: N / A

Comments: The overall exterior handicap accessibility for the school varies, with inadequate parking, but entrances / egresses from the building that meet handicap accessibility requirements.

- The site contains 2 marked accessible parking spaces located near the main school entry and two in the Staff parking lot near the 8th grade wing, which is adequate for the overall number of spaces needed for the school. None of the spaces are van accessible, at least one space should be enlarged to be van accessible.
- All of the main entry / doors exit to grade without stairs.

- One of the exterior walks between buildings is not accessible and contains a significant number of stairs. A handicap accessible ramp could be added, but would require significant length due to the change in grade. An alternate route between buildings is available on the interior of the building, which includes an elevator.
- The athletic fields are owned and maintained by Gaston County Parks and Recreation, and are therefore not a part of this assessment.

54. Interior Handicap Accessibility

Accessible Routes: Excellent Good Fair Poor

Accessible Doors and Hardware: Excellent Good Fair Poor

Accessible Signage: Excellent Good Fair Poor

Comments: The interior of the school is on two finished floor levels, with two interior stairs and one elevator.

- The majority of classroom doors in the school are 3'-0" wide. However, most of the doors in Buildings A and C have knob style hardware, and should be replaced with code compliant levers.
- The Auditorium is only accessible from the entries at the rear and does not contain any handicap seating areas. Both of the entries near the Stage contain steps and are not accessible.
- The Auditorium Stage is handicap accessible from the Corridor, but not from the audience chamber.
- The Administration area reception counter / window and the Media Center circulation counter are both not handicap accessible.
- An area near the Lobby of the CTE area contains a concrete floor with a 1" step, which is not handicap accessible and a trip hazard. This step should be ground down to a ramp transition.
- Most of the signage in Buildings A and C does not meet current accessibility requirements and should be replaced.

55. Toilet Rooms Accessibility

Accessible Group Toilets: Excellent Good Fair Poor

Accessible Staff Toilets: Excellent Good Fair Poor

Comments: The handicap accessibility of the group toilets is generally poor, as only one is handicap accessible. Only one of the Staff toilets is handicap accessible.

- The group toilets in the 6th Grade wing contain accessible partitions and are of adequate overall size. However, the fixtures do not meet current accessibility requirements and should be replaced.
- The group toilets in the 7th Grade wing and the CTE / Cafeteria Building are both not of sufficient size and do not contain handicap accessible stalls or fixtures. These toilet rooms should be enlarged and made handicap accessible.
- The group toilets in the 8th Grade wing are handicap accessible.
- The group toilets in the Auditorium / Gymnasium lobby are not of sufficient size and do not contain handicap accessible stalls or fixtures. These toilet rooms should be enlarged and made handicap accessible.

- The boys and girls PE / Team Locker room toilets do not contain handicap accessible stalls or fixtures. However, the rooms are of sufficient overall size and should be upgraded to include handicap accessible partitions and fixtures, which would reduce the watercloset fixture count.
- The school contains a total of eight Staff toilets, three of which are located in the Administration area. Only the one Staff toilet in the 8th Grade wing is handicap accessible. Accessible Staff toilets should be provide in each classroom wing.

Part 7: Food Service

56. Observations and Recommendations

Storage:

- Cold Storage Assembly cooler and freezer door needs to be replaced. The Manufacturer is no longer in business, and the freezer has galvanized metal floor panels which are not NSF compliant. Wall panels are worn and damaged.
- While the outdoor compressors appear to be working order, it is advised to replace the refrigeration systems for these compartments to insure conforming to current CFC regulations.
- Receiving door should be provided with an air-curtain fan.
- Lockable cabinet needs to be added for proper separation of chemicals from dry food storage.

Food Preparation:

- 2-Compartment sink in good condition. Direct waste to be converted to indirect waste and run to floor sink per code requirements.
- Ice Machine is in good working condition.
- Painted Galvanized legs and under shelves for all worktables are in good condition.
- Add second hand sink.

Cooking:

- The double stack Convection oven is in good repair.
- Need to add a convection steamer.
- The 40 gallon braising pan is very old and larger than needed with the addition of a new steamer. Advise replacing this with a new 30 gallon model.
- Six-burner range is in good condition, but should be reduced to an 18" wide hot top model to make room for the needed steamer.
- Exhaust hood is in good condition, and is adequate in size.
- The outdated dry chemical hood fire system is to be replaced with a wet chemical system.

Dishwash:

- Existing dish wash tables, and the dishwasher are in fair condition. The dishwasher is not currently being used. The dishwasher exhaust ducts are not connected, and there is no condensate hood above the dishwasher. It is advised to connect the dishwasher vent ducts to properly balanced exhaust ductwork to allow the use of the dishwasher for food pan sanitizing.
- 3-Compartment sink in good condition. Direct waste to be converted to indirect waste and run to floor sink per code requirements. Add hand sink in wash area.

Serving:

- Replace Milk Box.
- Serving counter is in good condition. The tray slides are set higher than typical for use by elementary school students. It is suggested to lower the tray slides on the student side to conform to current SC guidelines.
- Auxiliary Spaces
- Floor has epoxy finish, which appears to be in good condition.
- Plumbing section to address code requirements for grease traps.

Part 8: Plumbing Systems

57. Observations

- Roof drainage is largely a gutter and downspout system. Some flat roof areas with roof drains.
- Domestic water pressure fluctuates and is low. A backflow preventer is installed on the incoming domestic water service. A second backflow preventer, installed downstream, has been removed slightly improving water pressure. It has been reported by maintenance staff that the water distribution piping inside the building is undersized.
- Toilet fixture counts were questioned by the Principal.
- Hot water is not available at many of the lavatories. It was noted that the majority of fixtures in the building are served. However, hot water is not recirculated, significantly delaying the arrival of hot water at the fixtures and wasting water in the process.
- Gas service is provided to the kitchen appliances, water heaters, heating boiler, and rooftop mechanical units. The gas piping at the main boiler room continues to leak in multiple locations, particularly at pipe fittings and valves downstream of the pressure regulator.
- Water coolers are non-compliant with current code for accessibility.

Piping:

- A combination of galvanized and copper water supply piping is installed inside. Most of the exposed piping is uninsulated. Galvanized water supply pipe installed outside. Sanitary drain piping is constructed of terra cotta.
- Piping in the tunnel and some of the boiler room piping contains asbestos in the insulation. Water leaks previously discovered in the tunnel have forced maintenance personnel to isolate and abandoned the piping in place.
- A cleanout is not installed on the sanitary serving the boy's toilet, adjacent to the Tech Lab. Blockage is very difficult to remove in this portion of the sanitary waste system.
- Fixtures in the 6th Grade wing have been connected to the waste line using tees instead of wye fittings or sweeps, making it difficult cleaning out the lines.
- Piping is stubbed up in the covered walkway, just outside of the 7th Grade Boy's restroom. Piping appears abandoned.

Fixtures:

- Restrooms have flush valve type water closets and urinals, and lavatory fixtures. Restrooms appeared to have proper ventilation, floor drains, installed fixture heights, and hose bibbs for housekeeping and priming the floor drain trap.

- Sinks were observed in the 8th Grade classrooms.
- A wall opening for access to lavatory piping in the Boy's Restroom (7th Grade wing) was observed. The wall opening is currently covered up by plywood. Floor drains appear small.
- Water closet, lavatory, and showers in the Boy's locker room are in disrepair. Fixtures are not in a usable condition. A small electric water heater sits on the floor adjacent to the lavatory. Ice machine does not have a code compliant air gap at the drain fitting.
- A bathtub was observed in the toilet room in Life Skills.

Water Heaters:

- Hot water is not provided to all fixtures at this time.
- The main source of hot water comes from a gas fired 160 MBH water heater coupled with a large storage tank. This system is approximately 16 years old and serves everything except the 8th Grade wing and Kitchen area.
- Two new AO Smith gas fired storage type units providing 140°F hot water to the kitchen are installed in the Janitor's closet with insufficient service clearance around them.

Kitchen:

- The gas service to the kitchen does not have a cutoff located inside. One must go outside and isolate gas at the main regulator.

58. Recommendations

- Evaluate domestic water pressure. Review line sizes inside the building and consider installing a booster pump.
- Install a domestic hot water recirculation loop on each system.
- Install domestic hot water supply to all fixtures.
- Remove sinks in 8th Grade classrooms.
- Replace exterior gas piping downstream of utility meter and regulator and piping within the boiler room. Test for leakage in the balance of the piping system.
- Install gas shutoff valves at all kitchen appliances. Ensure solenoid valve has been installed and interlocked with the hood fire suppression system. A solenoid valve was not observed.
- Install ADA accessible water coolers.
- Insulate all domestic water piping.
- Abate asbestos in piping insulation in boiler room and tunnel.
- Install adequate number and quantity of cleanouts to access and clear sanitary lines.
- Remove abandoned sanitary piping or install cleanouts at dead ends.
- Remove bathtub from Life Skills.
- Replace water heater and all fixtures in the Locker/Team rooms.
- Replace the domestic water heater and storage tank in main boiler room.
- Relocate the 140°F water heaters serving the Kitchen to an accessible location.

Part 9: HVAC Systems

59. Observations

The HVAC serving the classrooms and admin areas is a 2-pipe dual temperature system. Dedicated outside air systems have been installed in the 6th and 7th Grade wings, and Tech & Bus Labs. Outside air for the 8th Grade wing is introduced directly to the dual temp unit ventilators. Many stained ceiling tiles were noted where piping had previously leaked. Humidity control is a problem, particularly in the spring and fall seasons.

Packaged gas rooftop units serve the Admin area, Band room, Kitchen, and Cafeteria.

Each 7th Grade classroom has a dual temp unit ventilator and a DX split system. Oftentimes, both of them operate simultaneously and fight each other. The two 7th Grade classrooms at the end of the wing are the exception. These end rooms each have a DX split system and seem to operate satisfactorily. Condensate drain piping is installed exposed below the ceiling. Many of the louvered supply diffusers had black dirt on them.

The Home Economics and Life Skills are each served with a dual temp unit ventilator and a 3-ton DX split system (condensing units on roof).

The Gymnasium contains two large 10,000 cfm exhaust fans and gas fired unit heaters. One fan operates at a time. There is no makeup air in the gymnasium so doors are propped open and air is transferred in from the corridor. Room pressure is an issue as it relates to door closures and safety.

Central Plant Cooling: There are two separate plants serving the dual temp systems. A nominal 70 ton air cooled scroll machine serves everything excluding the 8th Grade wing. The 8th Grade wing is served by an old 80-ton Trane air cooled chiller.

Central Plant Heating: Two gas fired cast iron boilers complement the chillers above. Hot water is delivered to the dual temp systems.

Corridors throughout the building are not cooled. Many corridors and rooms contain hot water radiators but the majority has been abandoned in place with the exception of EMH and Reading rooms located in the 6th Grade wing. Hot water piping has also been abandoned in place.

The EMH and Reading Rooms share a dedicated packaged DX unit.

The Tech Lab has two ductless mini-splits and a unit ventilator.

Exhaust fan serving the Boys Restroom in the 6th Grade wing is not operating and is inaccessible above the ceiling.

An office has been created off the 6th Grade corridor. There is no supply, return, or outside air in this space.

The 6th Grade classrooms on the south exposure experience become uncomfortably warm when the dual temp system is in “heating” mode.

The Boys locker room has a small wall mounted propeller exhaust fan. Ventilation is inadequate for the space.

Distribution Systems:

- Ductwork is constructed of galvanized metal.
- Several Janitors closets had no exhaust air.
- HW piping material is copper.

Controls:

- A BAS system is installed and communicates with approximately 75% of the building. Pneumatic control systems are installed in the 8th Grade wing and space temperatures have been difficult to maintain.
- A control air compressor is installed in the main boiler room and currently only serves the two valve actuators.
- Old time clocks and control panels have been abandoned in place.

Kitchen:

- The kitchen was recently upgraded.

60. Recommendations

- Evaluate domestic water pressure. Review line sizes inside the building and consider a installing a booster pump.
- Install a domestic hot water recirculation loop on each system.
- Install domestic hot water supply to all fixtures.
- Remove sinks in 8th Grade classrooms.
- Replace exterior gas piping downstream of utility meter and regulator and piping within the boiler room. Test for leakage in the balance of the piping system.
- Install gas shutoff valves at all kitchen appliances. Ensure solenoid valve has been installed and interlocked with the hood fire suppression system. A solenoid valve was not observed.
- Install ADA accessible water coolers.
- Insulate all domestic water piping.
- Abate asbestos in piping insulation in boiler room and tunnel.
- Install adequate number and quantity of cleanouts to access and clear sanitary lines.
- Remove abandoned sanitary piping or install cleanouts at dead ends.
- Remove bathtub from Life Skills.
- Replace water heater and all fixtures in the Locker/Team rooms.
- Replace the domestic water heater and storage tank in main boiler room.
- Relocate the 140°F water heaters serving the Kitchen to an accessible location.

Part 10: Fire Protection

61. Observations

- Sprinkler system installed (Y/N) - N
- System type? Wet, dry, preaction, etc.? – N/A
- Full or Partial Coverage? – N/A
- Standpipes installed (Y/N) - N
- Fire Pump installed (Y/N) - N

62. Recommendations

- Provide a full coverage sprinkler system in accordance with the NC Fire Code and NFPA Standard 13.

Part 11: Electrical, Fire Alarm, Security and Communications Systems

63. Observations

Service Entrance

This facility is fed by one (1) bent-mounted transformer by Duke Energy. The service to the whole campus is fed from the pad-mounted transformer. The bent-mounted transformer is located adjacent to Building A.1. The service is delivered overhead from the transformer to the building and down to the new 2,000 ampere service panel “MDP.”

The capacity of the service appears to be adequate.

Distribution

The power distribution consists of distribution panelboards and lighting panelboards fed by copper wire in conduit. The main service equipment and some of the distribution and lighting panelboards are well within their life expectancy. There are still some original panelboards that are in poor condition, and have been in service over 50 years, should be replaced. Replacement circuit breakers for these panelboards may not be available, and the existing breakers may not be providing the protection necessary. There are some panelboards (actually load centers) that have been “tacked” on as new circuits have been needed. These need to be replaced with proper panelboards.

Panelboard labeling, including panelboard directories, is not up to date, some labeling is missing and duplicate panels designations were found. There are standard duplex receptacles too near sinks, which should have GFI protection. Additional receptacle circuits may be needed.

Grounding

Proper grounding is one of the most important factors in an electrical system. Not only is it essential for safety, it is also required for proper operation of electronic equipment. The grounding systems in the older portions of the facility are in question. The original building uses the metal conduit system to distribute grounding throughout the facility. This was legal at the time the building was constructed, but not now. The problem is that the underground conduits installed at that time were galvanized steel, which

could have deteriorated in the nearly 50 years since the original facility was constructed, which could result in an increase in ground resistance, or loss of grounding entirely. An earth grounding study needs to be made and corrective measures taken.

The NEC (National Electric Code) requires a minimum ground resistance of 25 ohms. For electronic systems (data rooms, computers, etc.) a minimum ground resistance of 5 ohms is needed.

Lighting

Much of the lighting has been upgraded. DPI recommends T8 lamps and electronic ballasts as a minimum, but suggests T5 and LED as alternates. The exterior lighting is insufficient and in poor condition in most areas.

Lighting levels are, in most cases, within the levels recommended by DPI. These levels are recommended, not required. The lighting levels in the Kitchen appear to be in accordance with North Carolina Department of Health which requires 50 footcandles minimum in areas where food is handled, prepared and served, and where utensils are washed.

Emergency Power

This facility has no standby generator.

Fire Alarm

The existing fire alarm system has a Simplex 4100U addressable control panel. This is a current model. Although the layout of devices in most areas have been updated, some of the layout and distribution of alarm initiating and notification devices does not meet current codes and ADA requirements.

Security

The security system does not meet current Gaston County School guidelines. No access card readers on exterior doors. No Mass Notification System. Video Surveillance System needs upgrading with additional cameras.

Data/Communications

The data system currently does not meet GCS criteria. The MDF and IDF's are not dedicated and in secure locations. The MDF is located in a Conference Room. The IDF's are located in various non-dedicated and unsecured rooms. There is no standby generator to supply data and security power needs.

Concerns

It was noted in several areas where panels are located that materials, furniture, etc. have been stored too close to the equipment. This is both illegal and dangerous. The National Electrical Code requires a minimum of 36 inches clear in front of these items. We feel that this issue should be addressed as soon as possible.

64. Recommendations

Service Entrance

The existing service entrance is relatively new and appears to be in good condition except for some labeling issues. Might consider providing an underground service to avoid overhead power lines on the school campus.

Distribution

All original panels and panels by manufacturers that are no longer in business should be replaced. All equipment should be properly labeled, including directories showing loads for all circuits. All electrical panelboards need to be scanned with an infrared scanner to be sure that there are no “hot” spots, which can indicate that there is an overload, faulty device or connection. Based on the scanning results, corrections need to be made.

Lighting

The lighting in most areas of the facility has recently been replaced, although a few areas need upgraded lighting. Additional exterior lighting needs to be added – some on building walls and some on poles. New exterior lighting should be LED with protective enclosures without the use of polycarbonate lenses. Additional exit signs and egress lighting needs to be installed. All exit signs and egress lighting shall have battery backup with self-diagnostic system. Auditorium, Stage and Gymnasium lighting should be updated, with new dimming system for the Auditorium and Stage.

Fire Alarm

The fire alarm system is mostly up to date, but a few devices may need to be added.

Security

Security system needs to be upgraded to latest GCS criteria. Door access system and Mass Notification System need to be added per GCS standards.

Data/Communications

The wiring system should be updated to current GCS criteria. The main data rack MDF and IDF racks need to be secured. Backup power from a standby generator should be provided.

Sound Systems

The intercom system is outdated, but appears to operate but it should be updated to a VoIP based system.

The sound systems in the Auditorium and Gymnasium should be updated.

End of Assessment



GRIER MIDDLE
1622 East Garrison Blvd. | Gastonia, NC



YATES ■ CHREITZBERG ■ HUGHES

A S S E S S M E N T

GRIER MIDDLE

Grier Middle School

Existing Condition Assessment

PART 1: General Narrative of Facility

- 1. **Survey Date:** October 2014
- 2. **School Address:** 1622 E. Garrison Boulevard, Gastonia, NC
- 3. **Total Building Area:** 122,841 square feet
- 4. **Total Site Area:** 24.69 acres
- 5. **Instructional Capacity:** 928 students
- 6. **Enrollment 2014-2015:** 679 students
- 7. **Current Utilization:** 73%
- 8. **Area per Student Capacity:** 132 sf / student

9. Building Size and Dates of Construction:

Building A: 1955 (73,311 sf) Building B: 1958 (7,848 sf)
Building C: 1985 (28,429 sf) Building D: 2003 (13,253 sf)

10. General Description of Facility:

The original school was constructed in 1955, with three subsequent additions for various Classrooms, Gymnasium and Media Center. The majority of the facility consists of load bearing masonry walls with steel bar joist roof structure and low sloped roofing. Exterior walls consist of brick veneer and significant windows. The facility consists of 6 detached buildings, all of which require exterior access between them.

The site contains shared staff and visitor parking, staff parking, and separate bus and car rider drives. Athletic facilities consist of a football field with running track and a baseball field.

Part 2: General Space Standards

11. General Purpose Classrooms

Room Description	No. of Rooms	Typical Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
6th Grade	10	760 - 780 sf	850 sf	90%	Good
7th Grade	9	780 - 940 sf	850 sf	91 - 110%	Good
8th Grade	9	780 sf	850 sf	91%	Good

Comments: The general purpose classrooms are arranged into 4 areas for the 6th, 7th and 8th Grade wings. The 6th Grade wing is attached to the main school and is two stories. 7th and 8th Grade share 3 detached wings, requiring exterior access to each individual classroom. The classrooms are close to, or exceed the space standards.

All of the classrooms contain smart boards, wireless technology and at least four hardwired computer drops.

- The 6th Grade classrooms are generally close to space standards. The classrooms contain dated casework, which is not consistent with GCS standards.
- The 7th and 8th Grade classrooms are generally close to space standards. The classrooms do not contain any built-in casework and have lockers within the rooms. All of the classrooms are accessed from the exterior.

12. Science Classrooms

Room Description	No. of Rooms	Typical Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
6th Grade wing	1	960 sf	1,000 sf	96%	Good

Comments: The school only contains one dedicated Science classroom, which is located in the 6th Grade wing. Science is also taught in regular classrooms, which do not have adequate casework for science experiments.

- The Science classroom is very close to the space standards. However, it does not include a Preparation Room, or a shower / eye wash.
- The Science room contains dated, painted wood casework and only 2 sinks, which is not consistent with GCS standards.

13. Exceptional Children, Language Arts and Health

Room Description	No. of Rooms	Typical Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
EC Resource (36)	1	780 sf	1,000 sf	78%	Poor
EC Cluster (4)	1	940 sf	1,000 sf	94%	Good
EC Cluster (5)	1	920 sf	1,000 sf	92%	Good
Spanish	1	940 sf	850 sf	110%	Excellent
Health	1	940 sf	850 sf	110%	Excellent

Comments: The school contains 1 EC Resource classroom, and 2 self contained EC Cluster classrooms. The EC Resource room is located in the 8th Grade wing and the EC Cluster rooms are located in the 7th Grade wing. Spanish and Health are also located in the 7th Grade wing.

- The EC Resource room is located in a typical 8th Grade classroom, which is significantly smaller than space standards.
- Both EC Cluster classrooms are very close to the space standards, however does not include a dedicated toilet, which should be added if possible. The classrooms do not contain any casework, which is not consistent with GCS standards, and should also contain a countertop sink.
- EC does not have access to a shower / changing room other than those located within the PE Locker rooms (in which the boy's showers do not function).
- Spanish and Health are both taught in typical 7th Grade classrooms, which exceed space standards.

14. Arts Education

Room Description	No. of Rooms	Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
Art	1	750	1,200 sf	62%	Poor
Band	1	1,867 sf	1,600 sf	116%	Excellent
Chorus	1	750 sf	1,200 sf	62%	Poor
Auditorium	1	4,240 sf	N / A	N / A	N / A
Stage	1	1,550 sf	Varies	N / A	N / A

Comments: The Art room is located in the 6th Grade wing. The Band and Chorus rooms are located near the Gymnasium.

- The Art room is significantly smaller than space standards, but contains a separate storage room. The Art room does not contain adequate built-in casework.
- The Band Room exceeds space standards. The room contains fixed risers and one large instrument storage room. The room contains some acoustical treatments, with carpet floor and carpet on the back wall, but a standard lay in ceiling. The storage room contains open plywood cubbies that are in poor condition and not lockable.

- The Chorus room is significantly smaller than space standards. The room contains fixed risers and one storage room. The room contains some acoustical treatments, with carpet floor and carpet on the back wall, but a standard lay in ceiling. The storage room does not contain adequate storage for sheet music.
- The Auditorium contains approximately 600 dated wood seats, which should be replaced. The room is not capable of seating the entire student population, and does not include any handicap seating areas.
- The stage is elevated, and is handicap accessible via a vestibule from the main corridor, but not directly from the Auditorium. A ramp from the audience chamber to the stage is very difficult to add, due to the continuously sloping concrete floor.
- The Auditorium does not contain appropriate acoustical treatments, with CMU walls and continuous hard plaster ceiling.
- The Stage contains minimal curtains and rigging, and one Dressing Room / Toilet, which is not functional and used for storage only.

15. Career and Technical Education Classrooms / Shops

Room Description	No. of Rooms	Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
Business Lab	1	1,121 sf	1,200 sf	93%	Good
Technology Lab	1	1,545 sf	1,200 sf	128%	Excellent

Comments: CTE is located in a separate building and requires exterior access for all students.

- The Business Lab is close to space standards, but is a very long and narrow room, limiting efficiency.
- The Technology Lab is significantly larger than space standards.
- The ESL classroom is attached and only has access through the Technology Lab.

16. Media Center

Room Description	No. of Rooms	Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
Main Room	1	4,300 sf	3,400 sf	116%	Excellent
Support Areas	Various	1,240 sf	1,800 sf	68%	Poor

Comments: The Media Center is located in Building D, which was constructed in 2003 and is located centrally within the school. The Main Room greatly exceeds space standards, but the Support Areas are significantly smaller.

- The Media Center support spaces include a large Conference Room / Production Room, large Work Room and 3 Storage Rooms. It does not contain a dedicated Office. Due to the location within the school, the support areas cannot be expanded without reducing space of the Main Room.

- The Media Center does not contain a video studio, production, editing, or equipment rooms.
- The Media Center contains an area for computer / technology instruction.
- The Media Center is located within an area of the school that can be secured for after-hours community use, and also contains dedicated toilets.

17. Physical Education / Indoor Athletics

Room Description	Area	Court Size	NCDPI Standard Area	Relation to Standard	Adequacy Rating
Gymnasium	7,700 sf	50 x 84	Varies	N / A	N / A
Auxiliary Gym	6,000 sf	N / A	Varies	N / A	N / A

Comments: The Gymnasium is located at the front of the school with a dedicated exterior entry. The Gym is accessed from the upper seating level, with the court one floor below. The school also contains a freestanding detached Auxiliary Gym that has locker rooms and showers.

- The Gymnasium includes fixed concrete bleachers on one side, which seat approximately 450. No handicap seating areas are provided. The concrete risers are carpeted, which is in very poor condition with gum, food and drink stains. The aluminum bleacher seats are in poor condition. The Gymnasium does not include any handicap seating areas on the upper or floor levels.
- The basketball court is of regulation size for interscholastic play, with adequate safety zones and wall pads.
- The Gymnasium includes a separate entrance and lobby for after hours use that can be secured from the rest of the school for after hours use. The only toilets to serve this area are located fairly far away, on the other side of the Administration area. These toilets can also be secured from the rest of the school, along with the Gym. However, the location of the toilets creates a dead end condition that does not conform to code.
- The Girls PE / Team locker room contains individual showers and shower partitions, which are in fair condition. The toilet partitions and most of the metal lockers are damaged and in poor condition.
- The Boys PE / Team locker room contains one large group shower, which is non-functioning, and should be replaced with individual stalls. The toilet partitions and most of the metal lockers are damaged and in poor condition.
- The school contains an auxiliary gymnasium building, which is in poor condition. The building contains additional Team locker rooms and showers for boys and girls, with non-functioning showers, toilet fixtures and finishes in poor condition and wood cubbies for lockers.

18. Administration

 Excellent

 Good

 Fair

 Poor

Comments: The Administration area includes approximately 1,000 square feet, and consists of the following rooms: (1) Main Office / Reception, (1) Principal's Office with Toilet and (1) Work Room. One Assistant Principal's office is located near the Teacher Lounge and one is located in the 6th Grade wing. Administration is very limited in space, but cannot be expanded in its current location.

- The Administration area is located near the main entry doors, but does not have a secure vestibule. However, an additional pair of doors with access control can be installed in the main

corridor, and access control added to the existing doors to the Gymnasium to create a secure vestibule

- The Administration area is located at the front of the school and had fairly good visibility of the main entry doors, car rider drop off area and visitor parking.
- The school does not have a dedicated SRO Office, which should be located near the main school entry and Administration area.
- The Administration area does not include a Secretary's Office.
- The Administration area does not include a dedicated Conference Room.
- The Administration area does not include a private Staff Room.
- The Administration area does not contain a secure records storage room or any dedicated secure storage.
- The Principal's toilet is not handicap accessible.
- The Administration area does not contain any toilets other than in the Principal's private office, and should include a dedicated men's and women's Toilet.

19. Student Support

 Excellent

 Good

 Fair

 Poor

Comments: The Student Support Spaces consist of (2) Guidance Offices, (1) School Nurse Office, (1) Social Worker Office, and (1) School Therapist Office.

- One Guidance Office is located off the main corridor near the Auditorium, and is a very small office. Guidance also utilizes a classroom in the 8th Grade wing. Another office should be added, as GCS standards desire 3 Guidance Counselor offices in Middle Schools.
- The Nurse's office is located in the detached 8th Grade classrooms wing, and is the size of a small classroom. The Health Services area should be near, but separate from the Admin. area and should include a dedicated Nurse's Office, Holding Room, dedicated Toilet, Shower and Changing area and wheelchair storage.
- Both the school Social Worker and Therapist offices are both located directly off of a busy corridor near the 7th Grade wing, which offers little student privacy, and should be redesigned or relocated to a more private area for confidentiality.

20. Staff Support

 Excellent

 Good

 Fair

 Poor

Comments: The Staff Support Spaces consist of only one Teacher Lounge across from the Media Center.

- The Teacher Lounge contains only break room casework and should be converted to a Teaming / Work Room.
- Additional Teacher Teaming / Work Rooms should be located in each classroom wing.

21. Cafeteria

Students per Seating *	Dining Room Area	Area per Student	NCDPI Standard Area	Capacity of Dining Room	Relation to Standard
226	3,600 sf	16 sf / student	14 sf / student	257	113% Excellent

* Students per Seating equals the 2014 - 2015 student enrollment for the school divided by 3 seatings (679 / 3 = 226), as recommended by NCDPI Guidelines.

Comments: The Cafeteria is located in a separate building and requires exterior access for all students.

- The Cafeteria exceeds space standards and is accessed by two pairs of doors to aid in circulation for entering and exiting the room.
- The Cafeteria contains two doors to the exterior. However, these doors both contain stairs and do not offer close access to the loading dock area for trash removal. Trash must be removed through the Kitchen to the loading dock area.

22. Kitchen

Lunches Served per Day *	Kitchen Area	NCDPI Standard Area	Relation to Standard
610	1,750 sf	1,518 (for 500 to 750 lunches served)	115% Excellent

- Lunches Served per Day equals the 2014 - 2015 student enrollment for the school times 90% participation factor (678 x .90 = 610). This school experiences an elevated participation rate due to free and reduced lunches.

Comments: The Kitchen exceeds to the NCDPI guidelines of overall area for the number of students served, does not contain some needed spaces, and is in generally poor condition. The serving area is also located within the Kitchen. See the Section 7: Food Service Assessment for additional information.

- The Kitchen contains two serving lines, which provides adequate serving capacity for the number of students.
- The Kitchen includes two small toilets, both of which are not handicap accessible.
- The Kitchen Manager's office is not fully secure, as the demising wall to the kitchen does not extend full height to the ceiling.
- The kitchen staff locker area is too small.
- The Kitchen does not have a washer and dryer.
- The loading dock is elevated with stairs, but does not contain a handicap accessible ramp and is too small to access the trash dumpsters, which are located elsewhere on site. It also does not include a covered canopy, only a small recess at the receiving door. The dock should be enlarged and include a ramp, and also a covered canopy.

23. Toilet Facilities Excellent Good Fair Poor

- The group toilets on the lower level of the 6th grade wing contain new partitions which are handicap accessible. However, the finishes and fixtures in these rooms are in poor condition and should be upgraded.
- The group toilets on the upper level of the 6th grade wing are not handicap accessible. The finishes, fixtures and toilet partitions in these rooms are in poor condition and should be upgraded. However, the rooms are of sufficient overall size that can be redesigned to be handicap accessible.
- The group toilets in the two detached 7th and 8th Grade wings both require access from the exterior. These toilets are kept locked, and can only be opened with a key from a teacher, requiring additional supervision. The finishes, fixtures and toilet partitions in these rooms are in very poor condition and should be upgraded. However, the rooms are of sufficient overall size that can be redesigned to be handicap accessible.
- The group toilets near the Auditorium contain new partitions which are handicap accessible. However, the finishes and fixtures in these rooms are in poor condition and should be upgraded. These toilets also do not contain an adequate number of fixtures to serve the Auditorium space adequately and should be enlarged, if possible.
- The group toilets adjacent the Administration area are not handicap accessible. The finishes, fixtures and toilet partitions in these rooms are in poor condition and should be upgraded. The rooms are also not of sufficient size to be made handicap accessible. These toilets should be redesigned and also expanded, since they serve events the Gymnasium.
- The Group toilets in the Media center are in good condition and also handicap accessible.
- Neither the CTE or Cafeteria Buildings contain group toilets.
- Staff are provided with one single toilet located near the Auditorium, which is handicap accessible and in fair condition. Additional Staff toilets need to be within each of the classroom wings.

24. Other Spaces

- The school has limited general purpose storage. Many electrical rooms are used for storage, which violates code.
- The school contains 3 separate general purpose Computer Labs, which are adjacent to each other in the 6th Grade wing.
- ISS is located in a regular classroom in the detached 7th / 8th grade wing, which only has exterior access to the room.
- The MDF is located a storage room off 6th Grade classroom 203, which should be converted to a secure, access controlled room with a gaseous fire suppression system. The IDF's are located throughout the school in classrooms and corridors, most of which will be difficult to relocate into secure rooms due to existing data cabling.

25. Additional Considerations

- Student lockers in the 6th Grade wing are in poor condition, rusting and should be replaced. Lockers are located within the classrooms in the 7th and 8th Grade wings. These are also in poor condition and should be replaced.

Part 3: School Site

26. Parking Excellent Good Fair Poor

Description	Current Number of Spaces	Number of Spaces Needed	Relation to Number of Spaces Needed
Staff / Visitor (South)	77	75 Staff (65 employees plus 10 transient) 30 Visitor 105 total	+13
Staff (North)	32		
Staff (Interior)	19		
Total Staff / Visitor	128		
Bus	1 for team bus	1 for team bus	0

Comments: The site contains slightly more than an adequate number of total parking spaces. However, the location and arrangement of spaces is poor, and all of the asphalt paving is in poor condition.

- The south parking area contains 77 spaces for Staff and Visitors, all of which are located along the drive used for car rider drop off and pick up, which presents safety concerns and also makes most of these spaces unusable when the car rider line is stacked. This parking lot should be redesigned to separate the parking and car rider drive.
- The north parking area contains 32 spaces for Staff. These spaces are located very close to a classroom building and should be relocated farther away from the building for safety purposes.
- The interior paved area between the Cafeteria and CTE building contains 19 spaces for Staff. These spaces should be eliminated for safety reasons, as this area is used by students travelling between buildings on site.
- All of the asphalt paving in parking areas on the site is in poor condition with significant cracking, potholes, patches, etc., and should be replaced.
- The site does not contain any parking near the athletic fields, which is difficult to add due to site constraints.
- Only the athletic bus is parked on site.

27. Vehicular Circulation Excellent Good Fair Poor

Comments: Vehicular Circulation on the school site is generally poor, with inadequate stacking for cars, parking located within pick up /drop off stacking lanes and poor condition of paving.

- The main school entry, car rider drive, staff parking drive and bus drive are all located on Burtonwood drive, which does not contain any dedicated turn or deceleration lanes for the school. Additional investigation should be made with the Department of Transportation about public road improvements.
- The car rider drive runs along the front of the building. The drive does not offer adequate stacking and cars back up onto Burtonwood Drive, where the entrance is located very close to the intersection with E. Garrison Blvd. Due to limited site area, this drive cannot be lengthened significantly on site. This drive also serves as a cut through to avoid the traffic light, with cars speeding through the school site. Speed humps should be installed in this drive. Left turns onto Garrison Blvd. back up traffic on site significantly, and should be eliminated during drop off and pick up times.

- The bus drive contains a short loop from Burtonwood Drive, which offers enough stacking for approximately 4-5 busses. However, the exit from the bus drive is located very close to the entrance of the car rider drive, causing circulation conflicts.
- The kitchen service area is located on the interior of the school site, between the 8th Grade and CTE Building, which is a safety concern. However, this drive is not able to be relocated, due to the location of the kitchen on the interior of the site. Concrete pads should be provided at the loading and dumpster areas.
- All of the asphalt paving in drive areas on the site is in poor condition with significant cracking, potholes, patches, etc., and should be replaced.

28. Pedestrian Circulation Excellent Good Fair Poor

Comments: The school site contains significant sidewalks for pedestrian circulation between the various detached buildings, which are in generally poor condition.

- Portions of the sidewalk near the front entry and Auditorium are in poor condition and should be replaced. Some of these areas slope back toward the building, and a storm drain inlet is located in the sidewalk directly in front of the main entry doors.
- The sidewalks between the 6th Grade wing, CTE Building and Auxiliary Gymnasium consist of both concrete and asphalt and are in generally poor condition, except for two sections that were recently replaced. These walks in poor condition should be replaced with concrete.
- The sidewalks between the Cafeteria and 7th / 8th Grade wing consist of both concrete and asphalt, are in generally poor condition, and should be replaced.
- Additional sidewalks should be added to provide handicap access to the Athletic Facilities spectator areas for the football and baseball fields.
- The perimeter of the school site contains sidewalks on both Burtonwood Drive and East Garrison Blvd., which are in generally fair condition.

29. Walkway Canopies Excellent Good Fair Poor

Comments: The school contains numerous canopies that connect the various buildings, and one canopy at the end of the 7th Grade wing for the bus rider drive. A covered entry on the Gym building offers cover for car riders.

- Almost all of the walkway canopies between buildings are of painted steel structure, with peeling paint and many areas of rust. These canopies are also very low and should be replaced with more durable prefinished metal systems.
- The canopy to the east side of the Media center is structural steel and attached to the building. This canopy is in need of painting.
- The canopy to the north side of the Media center is of substantial prefinished metal construction and in good condition.
- The covered entry to the Gym building and main school entry provides adequate cover for car riders.
- The canopy at the bus rider drive is in fair condition, but not of substantial construction and should be replaced with more a durable system.

30. Outdoor Play

- The site contains does not contain any outdoor play areas, other than the athletic fields.

31. Athletic Facilities Excellent Good Fair Poor

Comments: The school contains (1) football field / track and (1) baseball / softball field. Soccer also utilizes the football field. None of the fields are lighted.

- The football field is in fair condition. However, the goal posts are poor condition and need replacing.
- The long jump runway and landing pit are both in poor condition. The runway should be re-paved and the pit reconstructed.
- The asphalt paving of the track is cracking in many areas and should be re-surfaced.
- Baseball and softball share the same field, which is in fair condition. The facility contains wood framed dugouts, which are minimal but also in fair condition. The site does not contain enough area for a dedicated softball field.
- The baseball scoreboard is reported to not be functioning, due to faulty power.
- The perimeter vegetation has overgrown the fence of the baseball field and the west side of the track fence and should be trimmed back.

32. Athletic Spectator Areas Excellent Good Fair Poor

- The baseball field does not include any handicap access or spectator bleachers. Bleachers for 75 home and 75 visitors, with handicap access should be added.
- The football field / track does not include any handicap access to the bleachers, which should be added. The spectator bleachers are in poor condition, do not meet safety codes and should be replaced with bleachers with 150 home and 50 visitor seats.
- The concessions / toilet building near the football field/ track is in poor condition, with the toilets not functioning. This building should be renovated and toilets made functional.

33. Grounds / Landscaping Excellent Good Fair Poor

- The school contains very limited foundation shrubs, which are maintained in fair condition.
- The school contains several large, mature trees, which are located too close to the 7th Grade and 8th Grade buildings. These trees should be removed and replaced with new lower growing trees for safety considerations of large limbs or the trees falling on the school and for maintenance concerns of leaves clogging the roof gutters.
- The perimeter vegetation has overgrown the fence of the baseball field and the west side of the track fence and should be trimmed back.

34. Utilities Excellent Good Fair Poor

- The school is served by the City of Gastonia for water and sewer, and does not have a backflow preventer for domestic water, which should be added by code. The water line is reported to be in poor condition and in need of replacement.
- The school does not have a grease interceptor on the sanitary sewer line for the kitchen, which should be added by code. The sewer line is reported to be original terra cotta, and should be replaced with PVC.

- Only two fire hydrants are located in the general area of the school, one on East Garrison Blvd. and one on Burtonwood Drive, and do not provide adequate coverage of the school. More fire hydrants should be added on the school site to provide adequate coverage.
- The school is served by natural gas, which is metered separately for the kitchen and the buildings.
- Overhead power lines run in various areas, and along the football field, which presents a safety concern. Further investigations with the service provider should occur about burying these power lines underground.

35. Storm Drainage Excellent Good Fair Poor

- The site does not have a stormwater management pond, which is not required by the municipality unless additional impervious area is added.
- The site has limited underground storm drainage in most paved areas, which is very old original piping, some of which is clay. This storm drainage should be replaced and additional underground storm drainage should be added if the paving is replaced.
- Approximately half of the downspouts throughout the school are connected directly to the underground stormwater piping system. This connection should be made indirect, with the downspouts spilling above grade into catch basins to prevent clogging.
- Approximately half of the downspouts spill directly on to grade. Catch basins should be added where possible to direct the roof drainage to an underground storm drainage system to prevent water from ponding next to the buildings.

36. Emergency Access Excellent Good Fair Poor

- The site has paved emergency access around the north, east and south sides via parking areas and drives.
- A gravel / dirt access drive runs along the west side of the Auxiliary Gymnasium, which provides emergency access to the football field. This drive is in poor condition and should be improved. Emergency access cannot be provided directly to the baseball field, due to existing grades.

37. Site Security Excellent Good Fair Poor

- The site is located on East Garrison Boulevard, near both commercial and residential areas. The Principal and school SRO Officer indicated that the surrounding areas do not typically include significant crime and vandalism at the school is rare.
- The north, east and south portions of the building and site have good visibility from public roads, drives and parking areas. The west side does not have vehicular access for police patrol.
- The stairs down to the basement level Boiler Room are not secured. A security fence around the area well and gate should be added for safety and security.
- The site contains chain link fencing around the perimeter, some areas of which are damaged and should be replaced. Wooded areas have significantly overgrown the fencing on the north side and should be cut back. Additional fencing should be added to help secure the exterior classroom buildings.

38. Additional Considerations

- The guardrail on top of the site retaining wall in the courtyard does not meet current code for picket spacing. The adjacent stair does not contain a perimeter guardrail / handrail, which should be added.
- All of the exterior steel handrails and guardrails need painting.
- The school contains a fenced -in weather station on site.
- The main school chillers are located in a chain link fence enclosure between the Cafeteria and 8th Grade classroom wing. These chillers are very noisy and should be enclosed with a masonry screen wall.
- Directional signage on the school site is poor and should be replaced.

Part 4: Building Envelope

39. Construction Type Non-Combustible Combustible

40. Structural Floors

Material: Concrete Slab on Grade
 Concrete on Metal Deck over Steel Structure
 Wood Deck on Wood Joists
 Other

Evidence of Structural Concerns: Prevalent Isolated None Visible

Overall Condition of Structural Floors: Excellent Good Fair Poor

Comments: The structural floors consist of concrete slab on grade, with some areas of elevated concrete slab two story construction in the 6th Grade wing and Gymnasium building.

- Concrete floors generally appear to be in good condition with no major cracks telegraphing through the floor coverings, except as noted below.
- In an area of the Cafeteria, there is a visible gap between the masonry exterior wall and the concrete floor slab, which should be investigated further.
- A crack telegraphing through the mosaic floor tile in the Boys bathroom located in the 7th / 8th Grade wing was observed near the door. The slab on one side of the crack has settled slightly.

41. Exterior Walls / Cladding

Material: Masonry EIFS / Stucco Metal Other

Evidence of Structural Cracking: Prevalent Isolated None Visible

Evidence of Concern with Exterior Cladding:

Cracks / Gaps	<input type="checkbox"/> Prevalent	<input checked="" type="checkbox"/> Isolated	<input type="checkbox"/> None Visible
Efflorescence (Masonry)	<input type="checkbox"/> Prevalent	<input checked="" type="checkbox"/> Isolated	<input type="checkbox"/> None Visible
Moisture Penetration	<input type="checkbox"/> Prevalent	<input checked="" type="checkbox"/> Isolated	<input type="checkbox"/> None Visible
Rot/Decay/Corrosion	<input type="checkbox"/> Prevalent	<input checked="" type="checkbox"/> Isolated	<input type="checkbox"/> None Visible

Overall Condition of Exterior Walls: Excellent Good Fair Poor

Comments: The exterior walls of Buildings A and B appear to consist of multi wythe brick, or brick / CMU construction that most likely does not include insulation, an air space or flashing. Building C consists of brick veneer with CMU backup, insulation but no air space. The newer Building D consists of brick veneer with CMU backup, insulation and an air space.

- The brick veneer appears to be in generally fair condition, with some areas of efflorescence on the older Buildings A and B, which may be a result of moisture within the wall due to the lack of an air space.
- A large crack in the brick veneer was observed on the southwest end of the two story 6th Grade wing. This crack extends the full height of the two story wing wall, and the brick on either side has shifted in plane. This crack should be further investigated by a structural engineer.
- A few areas of missing brick sills was observed on the exterior wall of the 7th / 8th Grade wings, and should be infilled.
- The exterior hard coat stucco soffits on the two story 6th Grade wing are in poor condition, appear to have some water damage, and should be replaced. These soffits are suspected to contain asbestos, although they have not yet been tested. The exposed steel beam at the soffit perimeter is rusting and needs painting.
- The soffits and exposed steel beams on 7th / 8th Grade wings are in fair condition, but need painting.

42. Exterior Glazing

Frame Material: Aluminum Steel Wood Other

Glazing Material: Un-insulated Insulated Glass Block

Evidence of Concern with Exterior Glazing:

Moisture Penetration Prevalent Isolated None Visible

Rot/Decay/Corrosion Prevalent Isolated None Visible

Overall Condition of Exterior Glazing: Excellent Good Fair Poor

Comments: The condition of the exterior glazing systems in the majority of the school is poor.

- The exterior glazing in most areas of the older Buildings A and B consists of 1/4" un-insulated glass in a wood framing system, which is very energy inefficient and past its useful life. Paint is peeling significantly from the wood frames. In addition, this glass appear to standard plate glass, which presents a safety concern as it is easily broken. All of this glazing should be replaced with insulating glass in a thermally broken aluminum storefront framing system to be more energy efficient and provide better thermal control of the classrooms in particular. The glass should be safety tempered in areas required by code. Some areas could be infilled with insulated metal panels or solid wall instead of glass to reduce the amount of glazing, particularly in classrooms.
- The glazing in Building C is insulating glass, but in a hollow metal system, which are both 30 years old. This system should be replaced with new insulating glass in a storefront system also.
- The window glazing in Building D and the Cafeteria consists of insulating glass in an aluminum framing system and is in good condition.

43. Exterior Entry / Exit Doors

Door Material: Aluminum Steel Wood Other

Evidence of Concern with Entry / Exit Doors:

Moisture Penetration Prevalent Isolated None Visible
 Rot/Decay/Corrosion Prevalent Isolated None Visible
 Other None at this time

Overall Condition Doors: Excellent Good Fair Poor

Overall Condition of Hardware: Excellent Good Fair Poor

Comments: Due to the differing ages of the various building wings, the condition of the entry / exit doors varies substantially, but the majority of doors are in poor condition. None of the exterior doors include access control hardware, which should be added for security.

- Many of the entry / exit doors in the school consist of pairs of 2'-6" wide doors. Some doors have been recently replaced, and some are in poor condition. However, all of these doors should be replaced with 3'-0" wide doors for handicap accessibility.
- The main entry and gymnasium doors along the front of the building are in generally good condition, but do not have access control hardware, which should be added for security. The main front entry doors should have secure access control with buzz-in and security camera tied into the Administration area reception desk.
- The exterior doors in the Cafeteria are in good condition, but do not have access control hardware, which should be added for security.
- The exterior doors to the detached CTE and Auxiliary Gymnasium buildings are all in poor condition and should be replaced.

44. Exterior Classroom Doors

Door Material: Aluminum Steel Wood Other

Evidence of Concern with Classroom Doors:

Moisture Penetration Prevalent Isolated None Visible
 Rot/Decay/Corrosion Prevalent Isolated None Visible
 Other None at this time

Overall Condition of Doors: Excellent Good Fair Poor

Overall Condition of Hardware: Excellent Good Fair Poor

Comments: All classrooms in the three 7th and 8th Grade wings and CTE Buildings have doors that open directly to the exterior.

- The exterior classroom doors are either steel or wood with significant peeling paint and several areas of rust, and are generally in poor condition. These should all be replaced with insulated hollow metal doors and lever style hardware with new locks.
- The majority of other exterior doors for mechanical rooms, electrical rooms, storage, locker rooms and kitchen service in for all buildings are in poor condition and should be replaced.

Comments: The majority of interior floor finishes are VCT and in fair condition.

- The VCT in the three 7th and 8th Grade building wings shows evidence of some type of staining, mainly through the joints of the tile, which should be tested and investigated further.
- The carpet in the Band room and the VCT in the Chorus room are both in poor condition and should be replaced with carpet in both rooms.
- The wood floor in the Gymnasium is in fair condition.
- The carpet in the Administration area is in generally poor condition, with areas of significant wear in high traffic areas and should be replaced.
- The Auditorium contains VAT tile beneath the seats, which should be abated and be polished concrete, with carpet in the aisles.
- The wood Stage floor is in poor condition, and should be refinished and painted black.
- The Auxiliary gym does not contain any flooring, as the VAT was recently abated. This should be replaced with rubber flooring.

49. Ceilings

Lay-in	Locations: Building C, Building D, Administration, Cafeteria Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Plaster	Locations: Building A, Building B Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Drywall	N / A
Open Structure	Locations: Gymnasium, Auxiliary Gym Condition: <input type="checkbox"/> Excellent <input checked="" type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> Poor

Comments:

- Most of the ceilings in the various wings of Building A and B are a type of textured plaster coating applied to a sheathing material attached directly to the underside of the roof joists. This material is reported to contain asbestos in all areas. These continuous plaster coated ceilings do not offer any access to the plenum space and all light fixtures, conduit, piping, etc. are surface mounted. These ceilings should be removed and replaced with 2x2 lay-in, for better acoustics, reflectivity, installation of new light fixtures and concealment of conduit and piping. The Business Lab in the CTE building also contains this type of ceiling, and should be replaced.
- A lay-in ceiling should be installed in the CTE Technology Lab.
- The ceilings in Buildings C and D are lay-in and in fair condition. The ceiling tile in the main corridor of Building C is in poor condition, and should be replaced within the existing grid.
- The Band and Chorus room appear to contain standard lay-in ceilings. These should be upgraded to a high NRC ceiling for acoustical purposes.
- The Kitchen contains a non-washable ceiling tile, which needs to be replaced. The Cafeteria ceiling tile is in good condition.
- The locker rooms contain standard lay-in ceilings and should be replaced with moisture resistant, washable grid and tile.

50. Casework

Classrooms	Casework Type: Wood and Plastic Laminate Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor
Science Rooms	Casework Type: Wood with Chemical Resistant Counters

	Condition:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor
Media Center	Casework Type:	Wood and Plastic Laminate			
	Condition:	<input type="checkbox"/> Excellent	<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Fair	<input type="checkbox"/> Poor
Administration	Casework Type:	Wood and Plastic Laminate			
	Condition:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor

Comments: The majority of the casework in the school is inadequate and in poor condition.

- All of the 6th, 7th and 8th Grade classrooms contain inadequate and dated wood cabinets and counters of various configurations. Casework in all of these classrooms needs to be replaced with a standard configuration, including open shelving and a lockable teacher storage unit. Some of the classrooms contain countertop sinks, which should be removed.
- Casework in the one Science classrooms is inadequate, with painted wood cabinets and should be replaced.
- The Art room does not contain adequate built in casework for storage of materials, which should be replaced.
- The Media Center and Support Spaces contain adequate casework, which is in good condition.
- The Administration area contains inadequate and dated casework, which needs to be replaced. The main reception counter is not handicap accessible.
- The Band Room instrument storage should be replaced with lockable storage units.
- The Chorus Room storage room casework should be replaced with open shelves for sheet music storage.

51. Interior Doors

Overall Condition Doors:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor
Overall Condition of Hardware:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor

Comments: The majority of the doors within the building are in poor condition.

- All of the interior doors and hardware in the school, except in Building D (the Media Center), appear to be original, do not have code compliant lever style hardware, and are in poor condition. These original doors should be replaced, and the classroom doors should also include lockdown hardware.
- Doors to group toilets and janitor rooms in the 6th Grade classroom wing contain glass transom panels, which appear to be standard plate glass that have been painted. These should be removed and replaced with tempered glass or solid panels for safety purposes.

52. Additional Considerations

- Most of the window blinds, except those in Building D, are in poor condition and in need of replacement.
- All of the stair guardrails in the 6th Grade wing and the Gymnasium Building do not meet current code for picket spacing and should be replaced.

Part 6: Handicap Accessibility

53. Exterior Handicap Accessibility

Accessible Parking:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input checked="" type="checkbox"/> Fair	<input type="checkbox"/> Poor
Accessible Route to Building(s):	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input checked="" type="checkbox"/> Fair	<input type="checkbox"/> Poor
Accessible Entrances / Egress:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor
Accessible Routes between Buildings:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor
Accessible Athletic Fields:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor

Comments: The overall exterior handicap accessibility for the school is poor, with most entrances / egresses and routes between the Cafeteria and Media Center not being accessible.

- The site contains 8 marked accessible parking spaces in the student and staff parking spaces, two of which are van accessible, but only 2 spaces near the main school entry. Additional accessible spaces need to be added near the main school entry.
- The Masonry shop, Carpentry shop, Auxiliary Gym and Fieldhouse all require exterior access and have an accessible route on the site.
- The football field / track contains an accessible route to the main entry gate, but does not include an accessible route to any of the spectator bleachers.
- The baseball field does not include an accessible route to the spectator areas, and also does not contain bleachers.

54. Interior Handicap Accessibility

Accessible Routes:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor
Accessible Doors and Hardware:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor
Accessible Signage:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor

Comments: The various building wings and detached buildings are on approximately 8 different finished floor levels.

- The school contains two areas of two story building, but does not include an elevator for handicap access to either level, which should be added.
- The school does not contain an interior accessible route from approximately one half of the classrooms to the Media Center.
- The majority of classroom doors in the school are 3'-0" wide. However, almost all of the doors in have knob style hardware, and should be replaced with code compliant levers.
- Many of the entry /exit doors to the exterior consist of a pair of 2'-6" wide doors. These should be replaced with 3'-0" wide doors for handicap accessibility.
- The Gymnasium does not include any handicap seating areas on the upper or court levels.
- The Auditorium is only accessible from the entries at the rear and does not contain any handicap seating areas. Both of the entries near the Stage contain steps and are not accessible.
- The Auditorium Stage is handicap accessible from the Corridor, but not from the audience chamber.
- The Administration area reception counter and the Media Center circulation counter are both handicap accessible.

- Most of the signage in Buildings A, B and C does not meet current accessibility requirements and should be replaced.

55. Toilet Rooms Accessibility

Accessible Group Toilets: Excellent Good Fair Poor
 Accessible Staff Toilets: Excellent Good Fair Poor

Comments: The handicap accessibility of the group toilets is poor, as only two are handicap accessible. Only one of the Staff toilets is handicap accessible.

- Only two of seven group toilets in the school are handicap accessible, within the Media Center and outside of the Auditorium. However, each of the other rooms are of sufficient overall size and should be upgraded to include handicap accessible partitions and fixtures, which would reduce the watercloset fixture count.
- The boys and girls PE / Team Locker room toilets do not contain handicap accessible stalls or fixtures. However, the rooms are of sufficient overall size and should be upgraded to include handicap accessible partitions and fixtures, which would reduce the watercloset fixture count.
- The school contains only one Staff toilet, which is handicap accessible. Several other offices, such as the Principal, Assistant Principal and some Guidance Counsellor contain private toilets, none of which are handicap accessible. Accessible Staff toilets should be provide in each classroom wing.

Part 7: Food Service

56. Observations and Recommendations

Storage:

- Cold Storage Assembly is in good condition with proper temperature. Strip curtains need to be added. Size of assembly is adequate.
- Dry storage shelving is in good condition and the square footage is adequate.
- One shelving unit is clean but needs to be replaced because of rust.

Food Preparation:

- Ice Machine is in good condition.
- Stainless Steel Worktable is in good condition (pot rack is not used).
- Pre-Rinse Sink does not have disposer but has a direct waste which does not meet current code. Either add a disposer or provide a floor sink with an indirect waste from pre-rinse sink.
- 3-Compartment Sink is in good condition but has a direct waste which does not meet code. Recommend adding a floor sink.

Cooking:

- Exhaust Hood needs to be replaced immediately as it does not meet code requirements. The equipment should be set under hood in the proper location to meet 6" perimeter spacing requirements. Recommend leveling the floor under the equipment.

- The Fire Suppression System should be replaced immediately as it is not tied in with hood and wiring is exposed. Fire nozzle to be replaced with proper nozzle connections to match equipment.
- Fryer is in good condition.
- Range (2-Burner) is in good condition.
- Convection Oven (Double) is in good condition.
- Steamer is in good condition.
- Hot Cabinets (2) is in good condition but one (1) will need to be replaced as it does not keep proper temperature.

Dishwash:

- Dish wash had ventilation on unload end just added. It does have corner loader and keeps temperature but the machine is very old. Dish machine does not have load end ventilation. Recommend replacing dish machine and adding ventilation ducts at each end.
- Soiled Dish table splash needs welded and sealed. The soiled dish table at pass thru to be retrofitted so that roll down door will properly secure kitchen.

Serving:

- The stainless steel Serving Lines (2) are in decent working condition for age. The Hot Wells consist of five (5) wells for staff service and the sneeze guard needs to be replaced to meet code requirements. The Cold Wells consist of six (6) hot wells and are used as cold wells with ice. A tray slide needs to be added to cold food counter. The sneeze guard at hot wells is for self service should be replaced the sneeze guard for staff service.
- Milk Cabinets (2) are in good condition.
- Cashier's Stand is in good condition.
- Ice Cream Cabinet is in good condition.

Auxiliary Spaces:

- Fly Fan is missing and needs to be added.
- Ceiling tiles need to be replaced with smooth washable type.
- Quarry tile floor is in ok condition for age but recommend replacing with level floor so that equipment is level.

Part 8: Plumbing Systems

57. Observations

Roof drainage is a gutter and downspout system.

A backflow preventer is not installed on incoming domestic water service. The piping runs underneath the building for a significant distance prior to entering the building.

Several gate valves are installed on the underground domestic water. Valves are not seating properly making it difficult to isolate piping.

Gas service is provided to the kitchen appliances, water heaters, and heating boilers. Kitchen gas service is metered independently. Gas piping is leaking according to maintenance personnel and kitchen employees.

Several water coolers are non-compliant with current code for accessibility.

An old cast iron service sink is installed in the Janitor's closet and is being used as a mop sink.

It's difficult to repair underground leaks in sanitary sewer due to existing bed rock.

Area well outside of the kitchen boiler room is filled with dirt, broken glass and yard debris. Floor drain was blocked at the time of the visit.

Boy's shower room in the new gymnasium, Bldg C, appears to be used for storage. Ensure floor drain traps are primed.

The water heater and hot water storage tank serving the old gymnasium, Bldg C, is out of service and has been abandoned in place.

Two of the classroom wings on the east side (Buildings A.3 and B) have gang restrooms at the end of each wing. These restrooms were observed to have holes in walls, cracked plumbing fixtures, floor drain covers missing, and no hot water at the lavatories. Urinals are floor mounted.

Piping:

- Domestic water piping outside is mainly copper. Copper is installed on domestic water piping inside with some galvanized portions. Most all piping exposed to view is insulated with few exceptions.

Fixtures:

- Restrooms have flush valve type water closets and urinals, and lavatory fixtures. The more recently renovated restrooms appeared to have proper ventilation, floor drains, installed fixture heights, and hose bibbs for housekeeping and priming the floor drain trap.

Water Heaters:

- Several of the water heaters observed show signs of advanced aging (Ex. Old gymnasium)
- The gas fired water heater, providing 140 degF water to the kitchen, is relatively new and is in good working condition. Its nominal capacity is 100 gallon. Storage tank volume is unknown. The other water heaters were gas fired and most found to be in fair to good condition.

Kitchen:

- There is not a grease interceptor installed outside the building. One grease trap below the floor is installed but has been reported to be leaking with poor access from below.
- Drains from 3- compartment sink and ice machine were observed to be directly connected to sanitary waste with no air gaps.
- Pilots on several gas appliances go out frequently leaking raw gas into space.

- Unprotected plumbing piping is stubbed up above the floor in dry storage.

58. Recommendations

- Install a grease interceptor outside of building in an accessible location.
- Replace water coolers.
- Install mop sink in Janitor's closet.
- Install backflow preventer and gate valves on incoming domestic water. Provide new pipe route into the building in the event the existing underground supply piping develops a leak under the building.
- Clean area outside of boiler room. Install strainer on area well drain.
- Install trap primers on floor drains serving the showers in the new and old gym. Showers do not appear to be in use.
- Install a new gas fired water heater to serve the locker rooms in the old gym.
- Install indirect waste connections in the kitchen as required by code.
- Remove water piping from dry storage room
- Remove floor mounted urinals and replace with wall mounted fixtures.
- Replace lavatories in gang toilets in Classroom Buildings A.1, A.3 and B and in old gym locker rooms, Building A.7.
- Install automatic trap primer at floor drains in toilet rooms. Many of the traps have lost their seal.
- Install hot water supply to private toilets, locker rooms, and gang toilets in Building A, toilet in Vocational building.
- Leak test entire gas piping system and repair leaks. Consult with food service equipment provider and consider replacing standing pilots on kitchen appliances with electronic or auto spark igniters, incorporating safeties for proving flame, locking out gas, etc. At a minimum, if standing pilots remain, verify safeties on the pilot are working.
- Ensure floor drain traps in Boy's shower room (new gymnasium) are primed.

Part 9: HVAC Systems

59. Observations

The building HVAC system consists of the following combination.

- A dual temperature system utilizing unit ventilators and AHUs.
- Dedicated Outside Air Systems in Classroom Building A.1.
- Split system heat pump and DX cooling systems.

Humidity control is difficult to maintain in the building.

The majority of corridors throughout the building are not supplied with air. A few "heating only" suspended fan coil units were observed in the corridor adjacent to the teacher's lounge, Building A.4.

AHU serving the front office and admin spaces is located in a janitor's closet, Building C.

AHU supply duct serving the Media center, Building D, has hot water coils in the ductwork that leak. These coils are above a high ceiling and are inaccessible without a lift.

The two story classroom wing (Building A.1) has new 2-pipe unit ventilators and DOAS systems. They appear to have been installed around 2009. The DOAS introduces fresh outside air directly to the space. Window A/C units are being used to cool the south facing rooms while the dual temp system is in heating.

The back side of the Media center, Building D, AHU is inaccessible. Fan wheel bearings are very difficult to maintain.

Two split system DX AHUs provide cooling two the Vocational Building A.6. The electrical disconnects are surface mounted inside the classrooms and they are not locked out. There is no outside air connected to these units. There is no auxiliary drain pan. Duct supports do not meet SMACNA standards. A window A/C is installed in the office.

Two new Mitsubishi Mr. Slim split systems serve the Assistant Principal's office and the Teacher's Lounge, Building A.4. These systems appear to be in good condition.

Oil fired boiler serving the old gymnasium, with a rated output of 704 MBH, is beyond its serviceable life- Building A.7

Piping, hot water circulator pump, and pneumatic valve actuators in Auditorium mezzanine, Building A.4, are showing signs of aging and corrosion.

The three original classroom wings on the east side of the site (Buildings A.1, A.3, and B) are equipped with 2-pipe unit ventilators. Hot water radiators below the windows are not used and have been abandoned in place. The unit ventilators do not have outside air connected to them. It is assumed that fresh air is introduced to the classrooms using the operable windows when outdoor conditions allow. Two of the gang restrooms (Buildings A.3 and B) are dilapidated. Exhaust/makeup air was either non-existent or woefully inadequate. Unit ventilators were not operational.

Old gymnasium, Building A.7, has suspended hot water unit heaters and exhaust air. Path for makeup air is reliant on open exterior doors. Backdraft damper on exterior wall is being taken over by ivy. Unit heaters and piping appear to be advanced in age.

Locker room office in old gym, Building A.7, has an old window A/C unit installed.

Band and Chorus AHUs are located in mezzanine above the Storage room, Building C. Only means of access to mezzanine is by use of portable step ladder making transporting parts & tools difficult and dangerous.

At many locations, where dual temp piping penetrates an exterior wall, the piping passes through a single sheet of plexiglass. Although shatter resistant, the plexiglass has little thermal insulation value compared to insulated glass. The annular space around the piping appears to be sealed.-Building A.4.

HVAC operation is largely based on time-of-day scheduling. Humidity is extremely difficult to control in the building, particularly during the fall and spring seasons due to the dual temperature systems.

Central Plant Cooling: A nominal 225 ton air cooled chiller and pump were installed around 2009. There were no reported problems with operation.

Central Plant Heating: Two cast iron boilers, each with a net output capacity of 2700 MBH, provide heating to the dual temp system. The boilers and dual fuel burners are approximately 25 years old. The base mounted end suction boiler pumps are approaching the end of their serviceable life. The dual temp building loop pumps are relatively new and appear to be in good working condition.-Building A.5

Distribution Systems:

- Ductwork is constructed of galvanized metal.
- HW piping material is copper. Piping is wrapped with fiberglass insulation.
- Underground piping is wrapped in insulation containing asbestos. Portions of the underground distribution between the kitchen/cafeteria building and the old gym have been abandoned.

Controls:

- The unit ventilators in classroom Buildings A.1, A.3, and B are served by the 2-pipe system and controlled by individual wall thermostats.
- An Alerton BAS operating off a Tridium JACE platform was recently installed. It controls the existing dual temp system (loop pumps, chiller pump), cafeteria AHU, Building A.1, unit ventilators and DOAS systems. Control system monitors the chiller operation, split system heat pumps, and kitchen freezer/ cooler.
- Unit ventilators and DOAS systems in the classroom wings operate on existing time clocks

Kitchen:

- An old grease hood is installed complete with a fire suppression system. There is no direct air makeup to the hood. It is not clear where the hood is getting makeup air.
- Back door to loading dock was open allowing untreated outside air into the space.
- HVAC coil condensate is discharging to floor drain in Kitchen.
- Propeller exhaust fan is mounted in wall separating the kitchen from the loading dock. It is not clear when or if this fan operates.
- No exhaust air in toilet room.

Dining:

- A new RTU was installed recently. No reported problems.

60. Recommendations

- Replace unit ventilators in Building A.1 gang toilets. Ensure proper amount of mechanical exhaust.
- Ensure makeup air source for the kitchen hood is provided. Replace unit ventilators in the kitchen, Building A.5. Reroute coil condensate so it discharges outside of the occupied Kitchen. Secure back door to kitchen loading dock to maintain air balance. Provide supply/return air in dry storage room.

- Introduce exhaust air to all private toilet rooms. Provide an unobstructed path for transfer air if makeup is taken from an adjacent space.
- Verify building air balance, especially on exhaust systems. Replace or clean all exhaust grilles. Confirm building is appropriately pressurized.
- Provide cooling air to the locker rooms in the new Gym, Building C. Replace unit ventilators in the old Gym locker rooms, Building A.7.
- Install a DOAS system for classroom Buildings A.1, A.3, and B.
- Install exhaust fan for gang toilets in Buildings A.3 and B.
- Introduce supply air to all corridors.
- Remove wall propeller fan in new locker rooms, Building C. Provide adequate cooling, heating, exhaust air.
- Remove the air compressor from the coal room, Building A.5. This compressor is providing control air to the media center AHU only. Remove pneumatic tubing and controller and replace with electronic actuation. Connect into the existing BAS.
- Relocate AHU that is currently in Janitor's closet and serving the front office and admin spaces, Building C.
- Relocate Media center hot water reheat coils to an accessible location, Building D. Enlarge size of mechanical room housing the Media center AHU. Perhaps add door on opposite side of AHU.
- Enclose split system AHUs and disconnects in Vocational building, Building A.6. Introduce outside air to the spaces. Install ductless split system for office.
- Remove and replace boiler serving "old" gymnasium unit heaters, Building A.7. Replace hot water unit heaters in the "old" gymnasium. Remove ivy from exhaust fan backdraft damper to ensure allow closure. Remove window A/C unit from office and replace with standalone ductless split system.
- Remove abandoned piping and pump in Auditorium mezzanine, Building A.4. Replace AHU.
- Replace boilers and boiler pumps in main boiler room, Building A.5.

Part 10: Fire Protection

61. Observations

- Sprinkler system installed (Y/N) - N
- System type? Wet, dry, preaction, etc.? – N/A
- Full or Partial Coverage? – N/A
- Standpipes installed (Y/N) - N
- Fire Pump installed (Y/N) - N

62. Recommendations

- Provide a full coverage sprinkler system in accordance with the NC Fire Code and NFPA Standard 13.

Part 11: Electrical, Fire Alarm, Security and Communications Systems

63. Observations

Service Entrance

This facility is fed by two (2) pad-mounted transformers by City of Gastonia. One is rated 208GrY120 volts and is located near the Gymnasium. The second service is rated 480GrY277 volts and is located near the Kitchen.

The capacity of the services appear to be adequate.

Distribution

The power distribution consists of distribution panelboards and lighting panelboards fed by copper wire in conduit. The main service equipment and some of the distribution and lighting panelboards are well within their life expectancy. There are still some original panelboards that are in poor condition, and have been in service almost 60 years, should be replaced. Replacement circuit breakers for these panelboards may not be available, and the existing breakers may not be providing the protection necessary. There are some panelboards (actually loadcenters) that have been “tacked” on as new circuits have been needed. These need to be replaced with proper panelboards.

Panelboard labeling, including panelboard directories, is not up to date, some labeling is missing and duplicate panels designations were found. There are standard duplex receptacles too near sinks, which should have GFI protection. Additional receptacle circuits may be needed.

Grounding

Proper grounding is one of the most important factors in an electrical system. Not only is it essential for safety, it is also required for proper operation of electronic equipment. The grounding systems in the older portions of the facility are in question. The original building uses the metal conduit system to distribute grounding throughout the facility. This was legal at the time the building was constructed, but not now. The problem is that the underground conduits installed at that time were galvanized steel, which could have deteriorated in the nearly 50 years since the original facility was constructed, which could result in an increase in ground resistance, or loss of grounding entirely. An earth grounding study needs to be made and corrective measures taken.

The NEC (National Electric Code) requires a minimum ground resistance of 25 ohms. For electronic systems (data rooms, computers, etc.) a minimum ground resistance of 5 ohms is needed.

Lighting

Much of the lighting has been upgraded. DPI recommends T8 lamps and electronic ballasts as a minimum, but suggests T5 and LED as alternates. The exterior lighting is insufficient and in poor condition in most areas.

Lighting levels are, in most cases, within the levels recommended by DPI. These levels are recommended, not required. The lighting levels in the Kitchen appear to be in accordance with North Carolina Department of Health which requires 50 footcandles minimum in areas where food is handled, prepared and served, and where utensils are washed.

Emergency Power

This facility has no standby generator.

Fire Alarm

The existing fire alarm system has a Simplex 4005 zoned control panel. This is an obsolete model and should be replaced. The layout and distribution of alarm initiating and notification devices does not meet current codes and ADA requirements.

Security

The security system does not meet current Gaston County School guidelines. No access card readers on exterior doors. No Mass Notification System. Video Surveillance System needs upgrading with additional cameras.

Data/Communications

The data system currently does not meet GCS criteria. The MDF and IDF's are not dedicated and in secure locations. The MDF is located in a Storage Room. The IDF's are located in various non-dedicated and unsecured rooms. There is no standby generator to supply data and security power needs.

Concerns

It was noted in several areas where panels are located that materials, furniture, etc. have been stored too close to the equipment. This is both illegal and dangerous. The National Electrical Code requires a minimum of 36 inches clear in front of these items. We feel that this issue should be addressed as soon as possible.

64. Recommendations**Service Entrance**

The original 208GrY120 volt service equipment is past its rated life and should be replaced. The 480GrY277 volt service is still within its rated life and is in good condition.

Distribution

All original panels and panels by manufacturers that are no longer in business should be replaced. All equipment should be properly labeled, including directories showing loads for all circuits. All electrical panelboards need to be scanned with an infrared scanner to be sure that there are no "hot" spots, which can indicate that there is an overload, faulty device or connection. Based on the scanning results, corrections need to be made.

Lighting

The lighting in some areas of the facility has recently been replaced, but the majority of the areas need updated lighting. Additional exterior lighting needs to be added – some on building walls and some on poles. New exterior lighting should be LED with protective enclosures without the use of polycarbonate lenses. Additional exit signs and egress lighting needs to be installed. All exit signs and egress lighting shall have battery backup with self-diagnostic system. Auditorium, Stage and Gymnasium lighting should be updated, with new dimming system for the Auditorium and Stage.

Fire Alarm

The fire alarm system is mostly up to date, but a few devices may need to be added.

Security

Security system needs to be upgraded to latest GCS criteria. Door access system and Mass Notification System need to added per GCS standards.

Data/Communications

The wiring system should be updated to current GCS criteria. The main data rack MDF and IDF racks need to be secured. Backup power from a standby generator should be provided.

Sound Systems

The intercom system is outdated, but appears to operate. A new IP based intercom/paging system needs to be installed, using the existing updated analog intercom system as backup.

The sound systems in the Auditorium and Gymnasium should be updated.

End of Assessment



MOUNT HOLLY MIDDLE
124 South Hawthorne St. | Mt. Holly, NC



YATES ■ CHREITZBERG ■ HUGHES

A S S E S S M E N T

MOUNT HOLLY MIDDLE

Mount Holly Middle School

Existing Condition Assessment

PART 1: General Narrative of Facility

- 1. **Survey Date:** November 2014
- 2. **School Address:** 124 South Hawthorne St., Mount Holly, NC
- 3. **Total Building Area:** 97,185 square feet (including detached Auditorium Building)
- 4. **Total Site Area:** 15.61 acres
- 5. **Instructional Capacity:** 818 students
- 6. **Enrollment 2014-2015:** 771 students
- 7. **Current Utilization:** 94%
- 8. **Area per Student Capacity:** 118 sf / student (including Auditorium Building)

9. Building Size and Dates of Construction:

Building A: 1959 (32,737 sf)	Building B: 1965 (17,744 sf)	Building C: 1965 (2,480 sf)
Building D: 1982 (24,666 sf)	Building E: 1950 (13,000)	Building G: 1996 (6,558 sf)

10. General Description of Facility:

The original school was constructed in 1959, with five subsequent additions for various Classrooms, Administration area, Gymnasium and CTE classrooms. The majority of the facility consists of load bearing masonry walls with steel bar joist roof structure and low sloped roofing. Exterior walls consist of brick veneer and significant windows. The main school building consists of one attached building that does not require exterior access between wings (although the exterior covered walkways are utilized to limit disruption of the 6th Grade hallway). The Auditorium is a free standing building, located across Hawthorne Street and was constructed in 1950.

The site contains shared staff and visitor parking, and separate bus and car rider drives. Athletic facilities consist of a softball field on the site, and a football and baseball field located across Hawthorne Street from the main school.

Part 2: General Space Standards

11. General Purpose Classrooms

Room Description	No. of Rooms	Typical Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
6th Grade	10	800 - 900 sf	850 sf	94% - 105%	Good
7th Grade	9	830 - 1,000 sf	850 sf	94% - 117%	Good
8th Grade	9	820 - 975 sf	850 sf	96% - 114%	Good

Comments: The general purpose classrooms are arranged into 3 areas for the 6th, 7th and 8th Grade wings, although several classrooms overlap grade level wings. The classrooms are all close to, or exceed the space standards.

All of the classrooms contain smart boards, wireless technology and at least four hardwired computer drops.

- The 6th Grade classrooms are all close to, or larger than space standards. The classrooms contain dated casework, which is not consistent with GCS standards. The casework also contains a countertop sink, which should be removed from the classrooms.
- The 7th Grade classrooms are all close to, or larger than space standards. Four of the classrooms (113, 115, 116, 118) are former Science rooms, with science casework and demonstration islands. This casework and sinks should be removed and replaced with standard classroom casework. One of the 7th Grade classrooms (119) contains steps down into the room from the corridor and is not handicap accessible. One of the 7th Grade classrooms (124) contains a walled work area with casework and countertop sink within the room and a storage room shared between two classrooms. The walled work area, casework and sink should be removed to make the classroom larger, and replaced with standard casework.
- The 8th Grade classrooms are all close to, or larger than space standards. The classrooms on the main level contain a walled work area with casework and countertop sink within the room and a storage room shared between two classrooms. The walled work area, casework and sink should be removed to make the classrooms larger, and replaced with standard casework.
- Three of the 8th Grade classrooms are located on the lower level and are not handicap accessible, since there is no elevator access. One of these classrooms (127) was a former Life Skills classroom with demonstration kitchen and casework, which should be removed and replaced with standard classrooms casework. In addition, this classroom is 1,675 square feet and could be divided into two classrooms. The other two classrooms contain no built in casework.

12. Science Classrooms

Room Description	No. of Rooms	Typical Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
Science classroom	0	0 sf	1,000 sf	0%	Poor

Comments: The school does not contain a dedicated Science classroom, science is taught in the regular classrooms, which do not have adequate casework for experiments.

- The 7th Grade wing contains 4 classrooms that were previously utilized for science instruction, and include science casework, demonstration islands and prep rooms. However, these are now used for standard classrooms, and the school does not have any dedicated science classrooms.

13. Exceptional Children, Language Arts and Health

Room Description	No. of Rooms	Typical Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
EC Resource	1	518 sf	1,000 sf	52%	Poor
EC Cluster	1	784 sf	1,000 sf	78%	Poor
Spanish	1	837 sf	850 sf	98%	Good
Health	1	Located in mobile unit			Poor

Comments: The school contains 1 EC Resource classroom located in the CTE wing and 1 EC Cluster classroom, located near the Gymnasium. EC Resource also shares one of the Computer rooms in the 7th Grade wing. The Spanish classroom is located adjacent to the main front entry. The Health classroom is located in a mobile unit.

- The EC Resource room is located in the CTE wing and is significantly smaller than standards. This room also requires either access through the Technology Lab classroom, or from the exterior. The classroom is located near group toilets in the Gym building, which are not handicap accessible.
- The EC Cluster classroom is significantly smaller than space standards, and also does not include a dedicated toilet, which should be added if possible. The classroom contains dated casework, which is not consistent with GCS standards, and should also contain a countertop sink.
- EC does not have access to a shower / changing room other than those located within the PE / Team Locker rooms.
- Spanish is taught in a typical classroom located directly adjacent to the main school entry and entry to the Administration area, which is very noisy area of the school.
- The Health classroom is located in a mobile unit.

14. Arts Education

Room Description	No. of Rooms	Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
Art	1	1,200	1,200 sf	100%	Excellent
Band	1	1,410 sf	1,600 sf	88%	Fair
Chorus	1	765 sf	1,200 sf	63%	Poor
Auditorium	1	5,900 sf	Varies	N / A	N / A
Stage	1	2,100 sf	Varies	N / A	N / A

Comments: The Art room is located in the CTE wing. The Band and Chorus rooms are located near the Gymnasium at the rear of the school. The Auditorium is a free standing building, located across Hawthorne Street.

- The Art room conforms to space standards, contains both a storage room and kiln room, and also contains adequate built-in casework.
- The Band Room is smaller than space standards. The room contains fixed risers and one large instrument storage room, with 3 other small storage rooms. The room contains some acoustical treatments, with carpet floor and carpet on the back wall, but a standard lay in ceiling. The storage room contains open plywood cubbies that are in fair condition but are not lockable.
- The Chorus room is significantly smaller than space standards. The room contains fixed risers and two storage rooms, one of which contains open shelving for sheet music storage. The room contains some acoustical treatments, with carpet floor and carpet on the back wall, but a standard lay in ceiling.
- The Auditorium is located in a free standing building, located across Hawthorne Street. Students must cross the public road to travel from the main school to Auditorium, which is a safety concern.
- The Auditorium contains 950 dated wood seats, which should be replaced.
- The Auditorium does not contain any handicap seating areas. The stage is elevated, and is not handicap accessible from any location. A ramp from the audience chamber to the stage is very difficult to add, due to the continuously sloping concrete floor. However, a handicap accessible ramp could be added within the stage area, which would reduce the useable area of the stage and require redesign of the backstage rooms.
- The Auditorium does not contain appropriate acoustical treatments, CMU walls and continuous hard plaster ceiling.
- The Stage contains minimal curtains and rigging, and two Dressing Room / Toilets, which are not functional and used for storage only.

15. Career and Technical Education Classrooms / Shops

Room Description	No. of Rooms	Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
Business Lab (210)	1	1,400 sf	1,200 sf	116%	Excellent
Business Lab (212)	1	1,000 sf	1,200 sf	83%	Fair
Technology Lab (208)	1	1,345 sf	1,200 sf	112%	Excellent

Comments: CTE is located adjacent to the Gymnasium.

- The Technology Lab is larger than space standards. However, EC Resource utilizes the attached storage room, which only has access through the Tech Lab, or from the exterior.
- Business Lab includes two dedicated classrooms. Room 210 was a former Life Skills classroom with demonstration kitchen and casework, which should be removed, so the useable area of the classroom can be enlarged.

16. Media Center

Room Description	No. of Rooms	Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
Main Room	1	2,330 sf	3,400 sf	68%	Poor
Support Areas	Various	500 sf	1,800 sf	27%	Poor

Comments: The Media Center is located in Building A, the oldest building, between the 7th and 8th Grade classroom wings. The Main Room is significantly smaller than standards, and the Support Areas are approximately one-fourth of the size.

- The Media Center support spaces are very limited and include only a small work room and storage room. Due to the location within the school, the support areas cannot be expanded without displacing of a classroom or building addition.
- The main IT MDF rack is located in a Media Support room, which is also used for a copier and work room. This room should be converted to a secure and fire rated room with a gaseous fire suppression system.
- The Media Center does not contain, Office or Conference room, or adequate Work room.
- The Media Center does not contain a video studio, production, editing, or equipment rooms.
- The Media Center contains an area for computer / technology instruction.
- The Media Center is located within an area of the school that cannot be secured for after-hours community use.

17. Physical Education / Indoor Athletics

Room Description	Area	Court Size	NCDPI Standard Area	Relation to Standard	Adequacy Rating
Gymnasium	8,450 sf	50 x 84	Varies	N / A	N / A

Comments: The Gymnasium is located at the front of the school and includes a dedicated exterior entry, lobby and toilets.

- The Gymnasium includes telescoping bleachers on one side, which seat approximately 400. These bleachers are in poor condition and in need of replacement.
- The basketball court is of regulation size for interscholastic play, with adequate safety zones and safety pads.
- The Gymnasium includes a separate entrance with a lobby, toilets and doors to the exterior for after hours use.
- The school does not contain any dedicated Team locker rooms, teams share with PE.
- The Girls PE / Team locker room contains individual showers and shower partitions, which are in fair condition. The toilet partitions are poor condition, and the room contains no lockers or cubbies for storage of clothes.
- The Boys PE / Team locker room contains one large group shower, which is functioning but should be replaced with individual stalls. The toilet partitions are poor condition, and the room contains only wood open cubbies (which are not securable) and no lockers.

18. Administration Excellent Good Fair Poor

Comments: The Administration area includes approximately 2,900 square feet, but also contains Health and Guidance spaces directly within the Admin. area. Administration consists of the following rooms: (1) Main Office / Reception, (1) Principal's Office, (1) Secretary Office, (1) Conference Room, (1) Work Room, (2) Group toilets, (1) Records Storage vault, and (1) Storage room. The Assistant Principal's office is located in another office area, close to the Administration area. The Administration area is fairly limited in space, but could be expanded into the 6th Grade classrooms at the front of the school, if these classrooms could be relocated.

- The Administration area is located across the main corridor from the main school entry and the school does not contain a secure vestibule for the main entrance. Design of a new secure entry vestibule with access directly into the Reception area is not possible without interruption of the main interior corridor, or relocation of the Admin area. A secure vestibule can be added at the main entry to the school. However, with the current location of the Administration area, the new vestibule would need to be monitored by camera.
- Due to its location on the interior of the school, the Administration area does not have visibility of any portion of the exterior of the school, including visitor parking or student drop off areas. The Reception area does not have direct visibility of the main entry doors.
- The SRO has a dedicated office, which located in a separate office area near the Administration area.
- The Administration area does not include a private Staff Room.
- The Administration area contains a Nurse and Therapist office directly within the Admin. area. These spaces should be relocated to separate areas near, but separate from the Administration offices.
- The Administration area also contains two Guidance Offices located directly within the Administration area, but along a separate corridor than the main office areas
- The Administration area contains a Work Room. However, Staff mail slots are located in the main hallway and should be moved into this large Work Room
- None of the Toilets in the Administration area are handicap accessible.

19. Student Support Excellent Good Fair Poor

Comments: The Student Support Spaces consist of (2) Guidance Offices, (1) School Nurse Office, (1) Social Worker Office, and (1) School Therapist Office.

- The two Guidance Offices are located directly within the Administration area, but along a separate corridor than the main office areas. Another office should be added, as GCS standards desire 3 Guidance Counselor offices in Middle Schools.
- The Nurse's office is located directly within the Administration area and is very small, with a small toilet that is not handicap accessible. The Health Services area should be near, but separate from the Admin. area and should include a dedicated Nurse's Office, Holding Room, dedicated Toilet, Shower and Changing area and wheelchair storage.
- The school Social Worker's office is located in an office area with the Assistant Principal and SRO, which is separate from the Administration area.
- The School Therapist office is located directly off of a busy corridor in the Administration area, which offers little student privacy, and should be redesigned or relocated to a more private area for confidentiality.

20. Staff Support Excellent Good Fair Poor

Comments: The school does not contain any Staff Support Spaces.

- Teacher Teaming / Work Rooms should be located in each classroom wing.

21. Cafeteria

Students per Seating *	Dining Room Area	Area per Student	NCDPI Standard Area	Capacity of Dining Room	Relation to Standard
257	4,000 sf	15.5 sf / student	14 sf / student	285	110% Excellent

* Students per Seating equals the 2014 - 2015 student enrollment for the school divided by 3 seatings for continuous serving ($771 / 3 = 257$).

Comments: The Cafeteria is located near the Administration area.

- The Cafeteria exceeds space standards. However, it is mainly accessed by one pair of doors, which limits circulation for entering and exiting the room.
- The Cafeteria contains two doors to the exterior. However, these doors do not offer close access to the loading dock area for trash removal. Trash must be removed through the Kitchen to the loading dock area.

22. Kitchen

Lunches Served per Day *	Kitchen Area	NCDPI Standard Area	Relation to Standard
694	1,300 sf	1,518 (for 500 to 750 lunches served)	85% Fair

* Lunches Served per Day equals the 2014 - 2015 student enrollment for the school times 90% participation factor ($771 \times .90 = 697$). This school experiences an elevated participation rate due to free and reduced lunches.

Comments: The Kitchen is smaller than the NCDPI guidelines of overall area for the number of students served, does not contain some needed spaces, and is in generally poor condition. The serving area is also located within the Kitchen. See the Section 7: Food Service Assessment for additional information.

- The Kitchen contains two serving lines, which provides adequate serving capacity for the number of students.
- The Kitchen does not include a secure Manager's Office, as the manager's desk is located in a corner of the kitchen. A dedicated Manager's Office needs to be provided.
- The Kitchen includes two small toilets, both of which are not handicap accessible.
- The kitchen does not have a staff locker area.
- The Kitchen does not have a washer and dryer.
- The walk-in cooler/freezer is located on the exterior of the building, with a wood lean-to roof structure constructed over it. This needs to be enclosed in a more permanent structure.

- The loading dock is on grade, with a small covered canopy and very limited area for deliveries. The dock area should be expanded. The dock area also contains a wood framed screen enclosure for can wash, which should be replaced with a more permanent structure.

23. Toilet Facilities

Excellent Good Fair Poor

- The school contains three group toilets. Each of the group toilets in the 6th Grade wing, 7th Grade wing and near the Gymnasium are in poor condition and not handicap accessible. However, the rooms are of sufficient overall size that can be redesigned to be handicap accessible.
- Staff are provided with 2 single toilets, both located in the 7th Grade wing, which are handicap accessible and in good condition. Additional Staff toilets need to be within each of the other classroom wings. Staff are also provided with 2 group toilets in the Administration area, which are not handicap accessible and in poor condition.

24. Other Spaces

- The school has limited general purpose storage. Many electrical rooms are used for storage, which violates code.
- The school contains two mobile units on site, one for ISS and one for Health
- The school contains 2 separate general purpose Computer Labs in various areas of the school.
- The MDF is located a room within the Media Center, which should be converted into a secure, access controlled room with a gaseous fire suppression system. The IDF's are located throughout the school in classrooms and corridors, most of which will be difficult to relocate into secure rooms due to existing data cabling.

25. Additional Considerations

- Student lockers in the 6th and 7th Grade wings are older, but in fair condition. Lockers in the 8th Grade wing are newer and in good condition.

Part 3: School Site**26. Parking**

Excellent Good Fair Poor

Description	Current Number of Spaces	Number of Spaces Needed	Relation to Number of Spaces Needed
Staff / Visitor (East)	80	80 Staff (70 employees plus 10 transient)	-12
Staff (West - gravel)	18	30 Visitor	
Total Staff / Visitor	98 total	110 total	
Bus / Overflow	40 (vehicle size)	1 for team bus	0

Comments: Parking on the school site is generally poor, with an inadequate number of spaces, including gravel parking areas. All of the asphalt paving is in poor condition.

- The east parking area contains 80 paved spaces, which are used by both Staff and Visitors. All of the spaces are accessed from the car rider drive, which makes circulation difficult when the car

rider line is stacked. The drive and parking could be expanded on site, but would require area from the practice field and significant fill for grading.

- The west side of the site contains approximately 18 gravel spaces along the bus drive, utilized by Staff. These spaces should be paved.
- All of the asphalt paving in parking areas on the site is in poor condition with significant cracking, potholes, patches, etc., and should be replaced.
- The site contains a paved lot to the southwest, which could be utilized for team busses and athletic field overflow. This paving is also in very poor condition and should be replaced. Only the athletic bus is parked on site.
- The football and baseball fields utilize parking at the adjacent Rankin Elementary School.

27. Vehicular Circulation Excellent Good Fair Poor

Comments: Vehicular Circulation on the school site is generally fair, with separate car rider and bus drives with a fair amount of staking space. Busses enter and exit from West Catawba Avenue, cars enter and exit from South Hawthorne Street. However, most of the asphalt paving is in poor condition.

- The main school entry and car rider drive is located on West Catawba Avenue, which does not contain any dedicated turn or deceleration lanes for the school. Additional investigation should be made with the Department of Transportation about public road improvements.
- The car rider drive runs along the front of the building. The drive does not offer adequate stacking during peak times and cars back up onto South Hawthorne Street, where the entrance is located very close to the intersection with West Catawba Avenue. This drive could be lengthened on site, but would require area from the practice field and significant fill for grading.
- The west bus drive contains adequate stacking and turn-around loop area.
- The kitchen has a dedicated service drive from the bus loop, which is in poor condition. The service drive should be replaced, with a concrete pad under the loading and dumpster areas.
- All of the asphalt paving in drive areas on the site is in poor condition with significant cracking, potholes, patches, etc., and should be replaced.

28. Pedestrian Circulation Excellent Good Fair Poor

Comments: The school site contains adequate sidewalk locations for pedestrian circulation access to various areas of the school the building. Most of the sidewalks are in generally fair condition.

- Several areas of the concrete walks have been replaced recently and are in good condition.
- Some areas of concrete sidewalks to the east side of the building are in poor condition and should be replaced.
- The concrete walks to the south and west of the Auditorium building are in poor condition and should be replaced.
- Additional sidewalks should be added to provide handicap access to the Athletic Facilities spectator areas for the football field.
- The perimeter of the school site does not contain sidewalks, however sidewalks are located on the opposite side of South Hawthorne Street.

29. Walkway Canopies Excellent Good Fair Poor

Comments: The school contains two walkway canopies that offer exterior circulation to minimize disruption on the 6th Grade hall from students travelling to the Cafeteria. A covered entry on the Gym building offers cover for car riders.

- The walkway canopy along the front of the building is in fair condition, but not of substantial construction and should be replaced with a more durable system.
- The covered entry to the Gym building provides adequate cover for car riders.
- The school does not contain a canopy at the bus rider area, which should be added.
- The main school entry contains a very small exterior cover.

30. Outdoor Play

- The site contains does not contain any outdoor play areas, other than the athletic fields.

31. Athletic Facilities Excellent Good Fair Poor

Comments: The school contains (1) football field (1) baseball field (which overlaps the football field) and (1) softball field. Soccer also utilizes the football field. The football and baseball fields are located across Hawthorne Street from the main school building. All of the fields are lighted.

- The school does not contain a running track, or any other track and field facilities on site. Due to limited site area, these cannot be added to the current site, without additional land.
- The football field is in fair condition. However, the goal posts are poor condition and need replacing.
- The softball field ins in fair condition, however the wood dugouts are in poor condition and in need of replacing. The softball field has a gravel walking track around the perimeter, which should be paved.
- The school does not have a dedicated baseball field, and mostly uses the softball field which is not regulation size for baseball. The site does not contain enough area for a dedicated baseball field.

32. Athletic Spectator Areas Excellent Good Fair Poor

- The softball / baseball field contains bleachers that are handicap accessible and in fair condition. However, they do not meet safety codes and should be replaced with bleachers with 75 home and 75 visitor seats.
- The football field does not include any handicap access to the bleachers, which should be added. The spectator bleachers are in poor condition, do not meet safety codes and should be replaced with 150 home and 50 visitor seats.
- The concessions / toilet building near the football field/ track is in fair condition.
- The baseball / softball field does not have any kind of outdoor toilets or concessions facilities.
- The football field press box building is wood framed and in poor condition.

33. Grounds / Landscaping Excellent Good Fair Poor

- The school contains virtually no foundation shrubs or trees in the vicinity of the building. The few foundation shrubs near the front entry are beginning to be overgrown and should be replaced with lower growing plants.
- The perimeter of the site is overgrown on the north side along the walking track and should be trimmed back.

34. Utilities Excellent Good Fair Poor

- The school is served by the City of Mount Holly for water and sewer, and does not have a backflow preventer for domestic water, which should be added by code. The water line is not reported to have any current issues.

- The school does not have a grease interceptor on the sanitary sewer line for the kitchen, which should be added by code. The sewer line is reported to be original terra cotta, and should be replaced with PVC.
- Three fire hydrants are located in the general area of the school along public roads, but do not provide adequate coverage of the school. More fire hydrants should be added on the school site to provide adequate coverage.
- The school is served by natural gas, which is metered separately for the kitchen and the buildings.
- An abandoned underground oil storage tank is located near the rear of the building and should be removed.
- Overhead power lines run along the back of the school, and into the open courtyard area, which presents a safety concern. Further investigations with the service provider should occur about burying these underground.

35. Storm Drainage Excellent Good Fair Poor

- The site does not have a stormwater management pond, which is not required by the municipality unless additional impervious area is added.
- The entire paved area on the east side of the site sheet flows to storm drainage along South Hawthorne Street. Additional underground storm drainage should be added in this area if the paving is replaced.
- The south and west paved areas contain minimal storm drainage, which ties into the very old, original piping system that daylight off site. Additional underground storm drainage should be added in this area if the paving is replaced.
- Approximately one third of the downspouts throughout the school are connected directly to the underground stormwater piping system. This connection should be made indirect, with the downspouts spilling above grade into catch basins to prevent clogging. Approximately one third of the downspouts already have this indirect connection.
- Approximately one third of the downspouts spill directly on to grade. Catch basins should be added where possible to direct the roof drainage to an underground storm drainage system to prevent water from ponding next to the buildings.

36. Emergency Access Excellent Good Fair Poor

- The site has paved emergency access around the only the southern one-half of the building. The northern half does not have any paved emergency access.
- An emergency access drive cannot be added to the north due to grades and without relocation of the baseball and practice football field.
- The site has emergency access to proximity of the athletic fields from paved drives and parking areas.

37. Site Security Excellent Good Fair Poor

- The site is located in a predominately residential area. The Principal and school SRO Officer indicated that the surrounding areas do not typically include significant crime and vandalism at the school is rare.
- The east, west and south portions of the building and site have good visibility from drives and parking areas. The north side does not have any vehicular access for police patrol.
- The stairs down to the basement level Boiler Room are not secured. A security fence around the area well and gate should be added for safety and security.

- The site contains chain link fencing around the perimeter, some areas of which are damaged and should be replaced. Wooded areas have significantly overgrown the fencing on the north side and should be cut back. Additional fencing should be added to help better secure some of the exterior areas.

38. Additional Considerations

- All of the exterior steel guardrails need painting.
- Directional signage on the school site is poor and should be replaced.

Part 4: Building Envelope

39. Construction Type Non-Combustible Combustible

40. Structural Floors

Material: Concrete Slab on Grade
 Concrete on Metal Deck over Steel Structure
 Wood Deck on Wood Joists
 Other

Evidence of Structural Concerns: Prevalent Isolated None Visible
 Overall Condition of Structural Floors: Excellent Good Fair Poor

Comments: The structural floors consist of concrete slab on grade, with an area of elevated concrete slab two story construction in the 8th Grade wing.

- Concrete floors generally appear to be in good condition with some minor cracks telegraphing through the floor coverings, except as noted below.
- 6th Grade classrooms 104 and 106 appear to have deteriorating concrete, which is telegraphing through the VCT flooring, producing a prominent dimple effect. The slab in this area should be investigated further to determine the cause and extent of deterioration, and possible need for replacement of the slab.

41. Exterior Walls / Cladding

Material: Masonry EIFS / Stucco Metal Other
 Evidence of Structural Cracking: Prevalent Isolated None Visible
 Evidence of Concern with Exterior Cladding:
 Cracks / Gaps Prevalent Isolated None Visible
 Efflorescence (Masonry) Prevalent Isolated None Visible
 Moisture Penetration Prevalent Isolated None Visible
 Rot/Decay/Corrosion Prevalent Isolated None Visible

Overall Condition of Exterior Walls: Excellent Good Fair Poor

Comments: The exterior walls of Buildings A, B and C appear to consist of multi wythe brick construction that most likely does not include insulation, an air space or flashing. Building D consists of brick veneer with CMU backup, insulation but no air space. Building G consists of brick veneer with CMU backup, insulation and an air space. Building E is a free standing Auditorium, which appears to consist of brick veneer with CMU backup, with no insulation or air space.

- The brick veneer appears to be in generally good condition, with some areas of efflorescence on the older Buildings A, B, C and E, which may be a result of moisture within the wall due to the lack of an air space. The horizontal mortar bed joints in some areas of Building D on the gymnasium wall have pushed out and should be further investigated for moisture penetration. The mortar joints in isolated areas of Building A have deteriorated and should be re-pointed.
- Expansion joint caulking is being compressed and failing in some places of Building D and should be replaced.
- Building A contains exterior hard coat stucco soffits with areas of deterioration, and should be replaced. These soffits are suspected to contain asbestos, although they have not yet been tested.
- Several areas of Buildings A and B include areas exterior walls that serve as retaining walls, where the exterior grade is higher than the interior finished floor. Various areas of water intrusion were evident on the interior side of these retaining walls. In addition, a fairly significant crack is evident on the interior in the girl's group toilet, which should be investigated further. The waterproofing and foundation drainage system is most likely in poor condition and should be replaced, requiring excavation of the grade in these areas.

42. Exterior Glazing

Frame Material: Aluminum Steel Wood Other

Glazing Material: Un-insulated Insulated Glass Block

Evidence of Concern with Exterior Glazing:

Moisture Penetration	<input type="checkbox"/> Prevalent	<input checked="" type="checkbox"/> Isolated	<input type="checkbox"/> None Visible
Rot/Decay/Corrosion	<input type="checkbox"/> Prevalent	<input checked="" type="checkbox"/> Isolated	<input type="checkbox"/> None Visible

Overall Condition of Exterior Glazing: Excellent Good Fair Poor

Comments: The condition of the exterior glazing systems in the majority of the school is poor.

- The exterior glazing in most areas of the older Buildings A, B, C and E consists of 1/4" un-insulated glass in a thermally continuous steel framing system, which is very energy inefficient and past its useful life. In addition, this glass appear to standard plate glass, which presents a safety concern as it is easily broken. All of this glazing should be replaced with insulating glass in a thermally broken aluminum storefront framing system to be more energy efficient and provide better thermal control of the classrooms in particular. The glass should be safety tempered in areas required by code. Some areas could be infilled with insulated metal panels or solid wall instead of glass to reduce the amount of glazing, particularly in classrooms.
- The glazing in Building D is insulating glass, but in a hollow metal system, which are both over 30 years old. This system should be replaced with new insulating glass in a storefront system also.
- The window glazing in Building G consists of insulating glass in an aluminum framing system and is in fair condition.

43. Exterior Entry / Exit Doors

Door Material: Aluminum Steel Wood Other

Evidence of Concern with Entry / Exit Doors:

Moisture Penetration	<input type="checkbox"/> Prevalent	<input checked="" type="checkbox"/> Isolated	<input type="checkbox"/> None Visible
Rot/Decay/Corrosion	<input type="checkbox"/> Prevalent	<input checked="" type="checkbox"/> Isolated	<input type="checkbox"/> None Visible
Other	None at this time		

Overall Condition Doors: Excellent Good Fair Poor

Overall Condition of Hardware: Excellent Good Fair Poor

Comments: Due to the differing ages of the various building wings, the condition of the entry / exit doors varies substantially, but the majority of doors are in poor condition. None of the exterior doors include access control hardware, which should be added for security.

- Most of the entry / exit doors in the older Buildings A, B, C and E appear to be original and are in poor condition, some do not have code compliant panic devices and none have access control for security. These doors should be replaced to include code compliant door hardware and access control for security.
- The doors in Buildings D and G are in generally good condition, but do not have access control hardware, which should be added for security.
- The main front entry doors should have secure access control with buzz-in and security camera tied into the Administration area reception desk.

44. Exterior Classroom Doors

Door Material: Aluminum Steel Wood Other

Evidence of Concern with Classroom Doors:

Moisture Penetration Prevalent Isolated None Visible

Rot/Decay/Corrosion Prevalent Isolated None Visible

Other None at this time

Overall Condition of Doors: Excellent Good Fair Poor

Overall Condition of Hardware: Excellent Good Fair Poor

Comments: Classrooms on the lower level of the 8th Grade wing have doors that open to the exterior.

- The exterior classroom doors are steel with several coats of paint, and are generally in poor condition. These should all be replaced with insulated hollow metal doors and lever style hardware with new locks.
- The majority of other exterior doors for mechanical rooms, electrical rooms, storage, locker rooms and kitchen service, except in Building G, are in poor condition and should be replaced.

45. Roofing

An independent roof assessment was performed for Gaston County Schools by Roof Engineering, Inc. (REI) in 2006. The report indicates the following needs regarding the replacement of roofs:

- Building A: Asphalt Built-up Replace in 2013 (Classroom areas)
- Building A: Asphalt Built-up Replace in 2026 (Cafeteria / Kitchen)
- Building B: Asphalt Built-up Replace in 2026
- Building C: Asphalt Built-up Replace in 2026
- Building D: Asphalt Built-up Replace in 2008
- Building E: Asphalt Built-up Replace in 2018
- Building G: Asphalt Built-up Replace in 2016

46. Additional Considerations

- The brick chimney appears to be utilized as a boiler flue, but should be lowered for safety reasons.

Part 5: Building Interior

47. Interior Walls

Overall Condition of Walls: Excellent Good Fair Poor

Comments: The majority of interior walls are painted CMU or brick and are in fair condition.

- Some of the demising walls in the 7th Grade wing contain exposed wood paneling and non-tempered plate glass, and should be replaced with fire resistant drywall and tempered glass.
- The walls in the Media Center support area contain exposed wood framing, paneling and non-tempered plate glass, and should be replaced with fire resistant drywall and tempered glass.

48. Floor Finishes

Classrooms	Flooring Type: VCT (6th Grade and other classrooms) Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Classrooms	Flooring Type: VCT over VAT (7th and 8th Grade areas) Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor
Corridors	Flooring Type: VCT (in most areas) Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Cafeteria	Flooring Type: VCT Condition: <input type="checkbox"/> Excellent <input checked="" type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> Poor
Gymnasium	Flooring Type: Wood Condition: <input type="checkbox"/> Excellent <input checked="" type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> Poor
Auditorium	Flooring Type: VAT (in most areas) Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor
Media Center	Flooring Type: Carpet Condition: <input type="checkbox"/> Excellent <input checked="" type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> Poor
Administration	Flooring Type: Carpet Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor

Comments: The majority of interior floor finishes are VCT and in varying condition.

- The VCT on the main level of the 7th and 8th Grade wings is in poor condition, and also installed over Vinyl Asbestos Tile (VAT). The VAT should be abated and the VCT replaced.
- The lower level of the 8th Grade wing contains exposed VAT tile, which should be abated and replaced with VCT.
- The carpet in both the Band and Chorus rooms is in poor condition and should be replaced.
- The wood floor in the Gymnasium has recently been refinished and is in good condition.
- The carpet in the Administration area is in generally poor condition, with areas of significant wear in high traffic areas and should be replaced.
- The Auditorium (Building E) contains mostly VAT, which should be abated and be polished concrete under the seats, with carpet in the aisles.
- The wood Stage floor is in poor condition, and should be refinished and painted black.

49. Ceilings

Lay-in	Locations: Building D, Building G, Corridors of Buildings A and B Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Plaster	Locations: Buildings A, B and E Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Drywall	N / A

Open Structure

Locations: Gymnasium

Condition: Excellent Good Fair Poor**Comments:**

- All of the ceilings in the classrooms and other rooms of Buildings A, B and C are a type of textured plaster coating applied to a sheathing material attached directly to the underside of the roof joists. The main corridors contain 2x2 lay-in ceilings. These continuous plaster coated ceilings do not offer any access to the plenum space and all light fixtures, conduit, piping, etc. are surface mounted. These ceilings should be removed and replaced with 2x2 lay-in, for better acoustics, reflectivity, installation of new light fixtures and concealment of conduit and piping. The corridors in these buildings contain lay-in ceilings that are in fair condition.
- Most of the ceilings in Buildings D and G are lay-in and in fair condition. The ceiling tile in the main corridor of Building D is in poor condition, and should be replaced within the existing grid.
- The Band and Chorus room appear to contain standard lay-in ceilings. These should be upgraded to a high NRC ceiling for acoustical purposes.
- The Kitchen contains a washable 2x2 lay-in ceiling which is in good condition. The Cafeteria ceiling tile is in fair condition.
- The locker rooms contain standard lay-in ceilings, which is in poor condition and should be replaced with moisture resistant, washable grid and tile.

50. Casework

Classrooms

Casework Type: Wood and Plastic Laminate

Condition: Excellent Good Fair Poor

Science Rooms

N / A (no Science classrooms)

Media Center

Casework Type: Wood and Plastic Laminate

Condition: Excellent Good Fair Poor

Administration

Casework Type: Wood and Plastic Laminate

Condition: Excellent Good Fair Poor**Comments:** The majority of the casework in the school is inadequate and in poor condition.

- All of the 6th, 7th and 8th Grade classrooms contain inadequate and dated wood cabinets, storage units and bookshelves various configurations. Casework in all of these classrooms needs to be replaced with a standard configuration, including open shelving and a lockable teacher storage unit. All of the classrooms contain countertop sinks, which should be removed.
- The Media Center and Support Spaces contain inadequate casework in poor condition, which should be replaced.
- The Administration area contains inadequate and dated casework, which needs to be replaced. The main reception counter is not handicap accessible.

51. Interior DoorsOverall Condition Doors: Excellent Good Fair PoorOverall Condition of Hardware: Excellent Good Fair Poor**Comments:** Due to the differing ages of the various building wings and subsequent renovations, the condition of the interior doors and hardware varies substantially, but the majority are in poor condition.

- The interior doors and hardware in most areas of the older Buildings A, B, C and E appear to be original, do not have code compliant lever style hardware, and are in poor condition. These original doors should be replaced, and the classroom doors should also include lockdown hardware.

- The classroom doors in Building A contain glass transom panels, which appear to be standard plate glass. These should be removed and replaced with tempered glass or solid panels for safety purposes.
- The classroom doors in Building B contain glass sidelite panels, which appear to be standard plate glass. These should be removed and replaced with solid panels for security purposes.
- The interior doors and hardware in Building D are in generally fair condition, but have non-code compliant knob style hardware, and should be replaced.
- The interior doors and hardware in Building G are in generally good condition and have lever style hardware, but should be upgraded with lockdown hardware in the classrooms.

52. Additional Considerations

- Most of the window blinds, except those in Building G, are in poor condition and in need of replacement.
- The stair guardrails in the 8th Grade wing do not meet current code for picket spacing and should be replaced.

Part 6: Handicap Accessibility

53. Exterior Handicap Accessibility

Accessible Parking:	<input type="checkbox"/> Excellent	<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Fair	<input type="checkbox"/> Poor
Accessible Route to Building(s):	<input type="checkbox"/> Excellent	<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Fair	<input type="checkbox"/> Poor
Accessible Entrances / Egress:	<input type="checkbox"/> Excellent	<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Fair	<input type="checkbox"/> Poor
Accessible Routes between Buildings:	<input type="checkbox"/> Excellent	<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Fair	<input type="checkbox"/> Poor
Accessible Athletic Fields:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor

Comments: The overall exterior handicap accessibility for the school is fair, with parking and entrances / egresses from the building being accessible.

- The site contains 4 marked accessible parking spaces located near the main school entry, one of which is van accessible, which is adequate.
- All of the main entry / doors exit to grade without stairs.
- The bleachers of the softball field are handicap accessible. The football and baseball fields do not contain an accessible route to any of the spectator bleachers.

54. Interior Handicap Accessibility

Accessible Routes:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor
Accessible Doors and Hardware:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor
Accessible Signage:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor

Comments: The interior of the school is on six finished floor levels, with two interior stairs and several ramps.

- The school contains 4 interior ramps that are the full width of the corridor. The two ramps in Building D both include a 1:12 rise/run, meeting code. The two ramps in Building A exceed the handicap accessible rise/run and should be modified, requiring reconfiguration of some classroom doors.
- Building B contains two stairs within the interior corridor, with no accessible ramps. This condition creates 8 classrooms that do not have any accessible means of egress to the exterior.

However, the addition of an accessible ramp requires significant redesign of the corridor and potentially the adjacent classrooms.

- The majority of classroom doors in the school are 3'-0" wide. However, all of the doors, except in Building G, have knob style hardware, and should be replaced with code compliant levers.
- Neither the Gymnasium or Auditorium contain any handicap seating areas, which should be added.
- The Auditorium does not contain any type of handicap accessible route to the stage from any location.
- The Administration area reception counter and the Media Center circulation counter are both not handicap accessible.
- Most of the signage in the school does not meet current accessibility requirements and should be replaced.

55. Toilet Rooms Accessibility

Accessible Group Toilets: Excellent Good Fair Poor
 Accessible Staff Toilets: Excellent Good Fair Poor

Comments: The handicap accessibility of the group toilets is poor, as none are handicap accessible. Only two of the Staff toilets are handicap accessible.

- None of the three group toilets in the school are handicap accessible. However, the rooms are of sufficient overall size and should be upgraded to include handicap accessible partitions and fixtures, which would reduce the watercloset fixture count.
- The boys and girls PE / Team Locker room toilets do not contain handicap accessible stalls or fixtures. However, the rooms are of sufficient overall size and should be upgraded to include handicap accessible partitions and fixtures, which would reduce the watercloset fixture count.
- The group toilets in the Auditorium Building are not of sufficient size and do not contain handicap accessible stalls or fixtures. These toilet rooms should be enlarged and made handicap accessible.
- The school contains a total of four Staff toilets, two of which are located in the Administration area, and are not handicap accessible. Only the Staff toilets in the 7th Grade wing are accessible. Accessible Staff toilets should be provide in each classroom wing.

Part 7: Food Service

56. Observations and Recommendations

Storage:

- Cold Storage Assembly cooler and freezer door needs to be replaced. The Wall panels are worn and damaged. This assembly is installed on the exterior of the building and needs to be properly trimmed and sealed to the exterior wall surfaces.
- It is advised to replace the refrigeration systems for these compartments to insure conforming to current CFC regulations.
- Wood shelving in dry food storage room should be replace with NSF adjustable wire shelving.
- A Lockable cabinet needs to be added for proper separation of chemicals from dry food storage.

Food Preparation:

- 2-Compartment sink is non-NSF square corner construction and must be replaced. Direct waste to be converted to indirect waste and run to floor sink per code requirements.
- Ice Machine is in good working condition.

- Painted Galvanized legs and under shelves for all worktables are not in good condition, we advise replacing all of the worktables with new units having stainless steel legs and under shelves.
- Add second hand sink should be added in the prep area near the walk-in assembly.

Cooking:

- The double stack Convection oven is in good repair.
- A new Combi-Oven has been added and is in excellent condition.
- The Fryers are old and are to be phased out once out of service. We advise deleting these units at the time of replacement of the exhaust hood.
- The 40 gallon braising pan is very old, and larger than needed with the addition of the Combi-oven. Advise replacing this with a new 30 gallon model. There is no floor trough for this unit, so the new braising pan should be provided with a pull-out drain-drawer option.
- Exhaust hood is not adequate in size, and not compliant with NFPA 96 construction. This must be replaced with a new hood sized to provide proper overhang for all equipment located underneath.
- The wet chemical system may remain, but would be reconfigured to suit the new hood installation.

Dishwash:

- Existing dish wash tables, and the dishwasher are in good condition and have all stainless steel legs. The pre-rinse sink in the soiled dish table has non-NSF welded square corners, and we advise replacing just this sink with a new coved corner type to be field cut and welded in place.
- The dishwasher has no exhaust ducts, and there is no condensate hood above the dishwasher. It is advised to provide dishwasher vent ducts to properly balanced exhaust ductwork. The dishwasher is used for food pan sanitizing.
- The existing 2-compartment pot wash sink has square corners and must be replaced with a new 3-Compartment sink. Direct waste to be converted to indirect waste and run to floor sink per code requirements.

Serving:

- Serving counter is very old, but of heavy duty stainless steel construction. The arrangement and components are in good working order. No changes are advised at this time.

Auxiliary Spaces:

- Floor has tile finish, which appears to be in good condition.
- Ceiling tiles are washable type.
- Plumbing section to address code requirements for grease traps.

Part 8: Plumbing Systems

57. Observations

Roof drainage is a gutter and downspout system.

Backflow preventer was installed two years ago per the Town requirements.

Gas service is provided to the kitchen appliances, water heaters, and heating boiler.

Several water coolers are non-compliant with current code for accessibility.

There is a project underway to replace the entire domestic hot and cold water piping system inside the building. Therefore, observations of that system were limited.

Water pressure was reported to be insufficient to flush some of the water closets.

Piping:

- A combination of copper and galvanized water supply piping was observed inside. Most all exposed piping was uninsulated (restrooms, mechanical rooms, etc). Galvanized water supply pipe is installed outside.
- Terra cotta underground sanitary waste piping. Galvanized waste piping in kitchen and boiler room.
- Gas piping on the roof is showing signs of advanced corrosion.

Fixtures:

- Restrooms had flush valve type water closets and urinals, and lavatory fixtures. Restrooms appeared to have proper ventilation, floor drain, installed fixture heights, and hose bibb installed for housekeeping.
- Restrooms have flush valve type water closets and urinals, and lavatory fixtures. Restrooms appeared to have proper ventilation, floor drains, installed fixture heights, and hose bibbs for housekeeping and priming the floor drain trap.
- Lavatory fixtures in the boys and girls locker rooms are worn.
- All fixtures in Building A group toilets are worn and in need of replacement.
- Ice machine is installed in the Laundry Room located adjacent to the gymnasium. Ice machine should be relocated to a protective food service area. Also, drain is piped to the center of the room, creating a trip hazard.

Water Heaters:

- A 75 gallon gas fired storage type unit serves the kitchen.
- A 100 gallon gas fired storage type unit serves the kitchen. Unit appears to be in satisfactory condition.

Kitchen:

- No grease interceptor installed.
- Sanitary waste from 2- and 3- compartment sinks were observed to be direct connections with no air gaps.

58. Recommendations

- Install a grease interceptor outside of building in an accessible location.
- Replace water coolers
- Install indirect waste connections as required by code
- Replace hand sink in the kitchen
- Replace all fixtures in gang toilets in Building B
- Replace all piping and fixtures in the Auditorium Bldg
- Install domestic water booster pump

Part 9: HVAC Systems

59. Observations

The building HVAC system consists of the following combination.

- 2-pipe system utilizing unit ventilators (chilled water/hot water)
- 2-pipe system unitizing unit ventilators (DX cooling/hot water)
- DX AHUs with hot water heating.
- RTU gas packaged units.

The majority of corridors throughout the original classroom wings are not supplied with air. Heating only fan coil units were observed in the ceiling of the new classroom wing and auditorium corridors. An electric wall mounted unit heater is located near the exit doors. Unit ventilators serve the entrance lobby.

HVAC operation is based on time-of-day scheduling. Humidity is extremely difficult to control in the building, particularly during the fall and spring seasons.

Central Plant Cooling: A nominal 110 ton air cooled rotary screw chiller utilizing R-22 refrigerant was installed around 2009. There were no operational issues reported with this Trane unit.

Central Plant Heating: The central heating plant consists of two gas fired cast iron boilers as manufactured by Weil-McLain. Each boiler has a capacity of 2976 MBH and appear to be in good working condition. The boilers were installed approximately 2009.

Gymnasium is provided heat by hot water unit heaters. Outside air ventilation is provided by exhaust fans and intake louvers.

Distribution Systems:

- Ductwork is constructed of galvanized metal.
- Several Janitors closets had no exhaust air.
- All ductwork observed in mezzanines and Mechanical rooms contain inner liner material.
- All AHUs and pumps are constant volume air systems.
- HW piping material is copper. Piping is wrapped with fiberglass insulation.

Controls:

- Unit ventilators are served by the 2-pipe system and controlled by individual wall thermostats.

Kitchen:

- An existing grease hood is installed complete with a wet chemical fire suppression system. There is no direct air makeup to the hood.
- Kitchen area is conditioned by a unit ventilators
- Dry storage does not have air supplied to it.
- There is no exhaust connected to the dish wash machine.

60. Recommendations

- Provide a building wide automation system utilizing direct digital controls.
- Provide a makeup air source for the kitchen hood by a dedicated roof mounted unit.
- Remove window A/C unit from kitchen. Install new 4-pipe AHU.
- Install dish wash exhaust
- Provide supply/return air in dry storage room.

- Introduce exhaust air to all janitor's closets and toilet rooms. Provide an unobstructed path for transfer air if makeup is taken from an adjacent space.
- Verify building air balance, especially on exhaust systems. Replace or clean all exhaust grilles. Confirm building is appropriately pressurized.
- Install new 150-ton air cooled chiller to augment existing machine. Install a new 2-pipe system alongside the existing system. Convert from 2-pipe to 4-pipe system
- Install AHU systems and terminal VAV boxes with hot water reheat.
- Install VFDs on pumping systems.
- Introduce supply air to all corridors.
- Replace duct liner from inside duct systems. Install external fiberglass insulation.
- Provide a new AHU with dehumidification controls for the Gymnasium, Admin, Band, Library, and Chorus areas.
- Provided a dedicated space and HVAC ductless split system for IT rack.
- Replace all HVAC inside the Auditorium

Part 10: Fire Protection

61. Observations

- Sprinkler system installed (Y/N) - N
- System type? Wet, dry, preaction, etc.? – N/A
- Full or Partial Coverage? – N/A
- Standpipes installed (Y/N) - N
- Fire Pump installed (Y/N) – N

62. Recommendations

- Provide a full coverage sprinkler system in accordance with the NC Fire Code and NFPA Standard 13.

Part 11: Electrical, Fire Alarm, Security and Communications Systems

63. Observations

Service Entrance

This facility is fed by one (1) pad-mounted transformer recently installed by Duke Energy. The new weatherproof switchgear is located in the Courtyard adjacent to Building A. It is designated "HSB" and is rated 2500 amperes at 208GrY120-volts and is set up based on the NEC "six-division" rule. This switchboard serves the entire campus except for the Auditorium. The capacity of this service appears to be adequate.

The service to the Auditorium is obsolete and inadequate. It is over 60 years old. The entire building needs to be completely rewired.

Distribution

The power distribution consists of distribution panelboards and lighting panelboards fed by copper wire in conduit. The main service equipment and some of the distribution and lighting panelboards are well within their life expectancy. There are still some original panelboards that are in poor condition and should be replaced. Replacement circuit breakers for these panelboards may not be

available, and the existing breakers may not be providing the protection necessary. There are some panelboards (actually loadcenters) that have been “tacked” on as new circuits have been needed. These need to be replaced with proper panelboards.

Panelboard labeling, including panelboard directories, is not up to date, some labeling is missing and duplicate panels designations were found. There are standard duplex receptacles too near sinks, which should have GFI protection. Additional receptacle circuits may be needed.

Grounding

Proper grounding is one of the most important factors in an electrical system. Not only is it essential for safety, it is also required for proper operation of electronic equipment. The grounding systems in the older portions of the facility are in question. The original building uses the metal conduit system to distribute grounding throughout the facility. This was legal at the time the building was constructed, but not now. The problem is that the underground conduits installed at that time were galvanized steel, which could have deteriorated in the nearly 50 years since the original facility was constructed, which could result in an increase in ground resistance, or loss of grounding entirely. An earth grounding study needs to be made and corrective measures taken.

The NEC (National Electric Code) requires a minimum ground resistance of 25 ohms. For electronic systems (data rooms, computers, etc.) a minimum ground resistance of 5 ohms is needed.

Lighting

Some of the fluorescent lighting in the project consists of T12 lamps and magnetic ballasts. DPI recommends T8 lamps and electronic ballasts as a minimum, but suggests T5 and LED as alternates. The latest additions have T8 lamps and electronic ballasts and some corridor and toilet lighting has been upgraded. The exterior lighting is insufficient and in poor condition in most areas. Exit signs and egress lighting do not meet current codes. Some of the exit signs are not lighted.

Most of the lighting levels are within the guidelines recommended by DPI. In some areas, lighting does need to be upgraded, especially exit and egress and exterior lighting.

Emergency Power

There is no generator at this campus.

Fire Alarm

The existing fire alarm system has a Notifier AFC addressable control panel. This is current model, but should be updated. Although the layout of devices in some areas have been updated, much of the layout and distribution of alarm initiating and notification devices does not meet current codes and ADA requirements. The system was noted to be in a trouble condition during the site visit showing a dirty smoke detector in one of the corridors,

Security

The security system does not meet current Gaston County School guidelines. No access card readers on exterior doors. Video surveillance needs to be upgraded per GCS guidelines.

Data/Communications

The data system currently does not meet GCS criteria. The MDF and IDF's are not dedicated and in secure locations. The MDF is located in a Work Room, the IDF's are located in various non-dedicated and unsecured rooms. Data wiring is run exposed in some cases, with conductors not properly supported and protected. There is no standby generator to supply data and security power needs.

Sound Systems

The existing paging and intercom system needs to be updated and retained as a backup system for the new IP paging and intercom system that is proposed to be installed.

Concerns

It was noted in several areas where panels are located that materials, furniture, etc. have been stored too close to the equipment. This is both illegal and dangerous. The National Electrical Code requires a minimum of 36 inches clear in front of these items. We feel that this issue should be addressed as soon as possible.

64. Recommendations**Service Entrance**

SPD (Surge Protection Device) should be installed on all service entrance equipment that currently do not have them.

Distribution

All original panels and panels by manufacturers that are no longer in business should be replaced. All equipment should be properly labeled, including directories showing loads for all circuits. All electrical panelboards need to be scanned with an infrared scanner to be sure that there are no "hot" spots, which can indicate that there is an overload, faulty device or connection. Based on the scanning results, corrections need to be made.

Lighting

Lighting in the building that has not been updated, should be brought up to DPI recommendations. Additional exterior lighting needs to be added – some on building walls and some on poles. New exterior lighting should be LED with protective enclosures without the use of polycarbonate lenses. Additional exit signs and egress lighting needs to be installed. All exit signs and egress lighting shall have battery backup with self-diagnostic system, or supplied by a standby generator.

Fire Alarm

The fire alarm system should be upgraded to meet current codes using the existing FireLite control panel.

Security

Security system needs to be upgraded to latest GCS criteria. Door access system and Mass Notification System need to be added per GCS standards.

Data/Communications

The wiring system should be updated to current GCS criteria. The main data rack MDF and IDF rack need to be secured. Backup power from a standby generator should be provided.

Sound Systems

The paging/intercom system is outdated, but appears to operate satisfactorily. The Owner wants to leave this system, as backup, and install a new IP based system. The Gymnasium sound system needs to be replaced.

Auditorium

All systems in the existing Auditorium need to be replaced and completely re-wired.

End of Assessment



STANLEY MIDDLE
317 Hovis Road | Stanley, NC



YATES ■ CHREITZBERG ■ HUGHES

A S S E S S M E N T

STANLEY MIDDLE

Stanley Middle School

Existing Condition Assessment

PART 1: General Narrative of Facility

1. **Survey Date:** November 2014
2. **School Address:** 317 Hovis Road, Stanley, NC
3. **Total Building Area:** 88,428 square feet
4. **Total Site Area:** 35.34 acres
5. **Instructional Capacity:** 597 students
6. **Enrollment 2014-2015:** 485 students
7. **Current Utilization:** 81%
8. **Area per Student Capacity:** 148 sf / student

9. Building Size and Dates of Construction:

Building A: 1959 (29,005 sf) Building B: 1965 (1,048 sf)

Building C: 1965 (6,456 sf) Building D: 1965 (51,917 sf)

10. General Description of Facility:

The original school was constructed in 1959, with three subsequent additions for various Classrooms, Band and Art rooms, Gymnasium and Cafeteria expansion, all occurring in 1965. The majority of the facility consists of load bearing masonry walls with steel bar joist roof structure and low sloped roofing. Exterior walls consist of brick veneer and significant windows. The main school building consists of one attached building, but requires exterior access to one area of classrooms from an enclosed courtyard.

The site contains shared staff and visitor parking, staff parking and a shared bus and car rider drive. Athletic facilities consist of a football field with running track and a baseball field.

Part 2: General Space Standards

11. General Purpose Classrooms

Room Description	No. of Rooms	Typical Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
6th Grade	6	800 - 1,220 sf	850 sf	94% - 143%	Good
7th Grade	6	800 - 1,400 sf	850 sf	94% - 164%	Good
8th Grade	7	600 - 750 sf	850 sf	88%	Fair

Comments: The general purpose classrooms are arranged into 3 areas for the 6th, 7th and 8th Grade wings, although several classrooms overlap grade level wings. The classrooms are all close to, or exceed the space standards.

All of the classrooms contain smart boards, wireless technology and at least four hardwired computer drops.

- The 6th Grade classrooms vary greatly in size, but are all close to, or larger than space standards. The classrooms contain dated casework, which is not consistent with GCS standards. The casework in some rooms also contains a countertop sink, which should be removed. Two of the classrooms (14 and 16) are former Science rooms, with science casework and demonstration islands. This casework and sinks should be removed and replaced with standard classroom casework.
- The 7th Grade classrooms vary greatly in size, but are all close to, or larger than space standards. The classrooms contain dated casework, which is not consistent with GCS standards. Classroom 19 is a former Life Skills room and is 1,475 square feet, and is accessed from the exterior. This room can be divided into two smaller rooms, which are more consistent with the space standards. Classroom 15 is also significantly larger than standards and can be divided into a 850 sf classroom and another smaller accessory room. The four 7th Grade classrooms located near the Auditorium contain toilets within the classrooms. These toilets should be removed, however these classrooms are not located near any of the group toilets.
- The 8th Grade classrooms are all smaller than space standards. Classroom 2 has an adjacent hallway added to access the Storage and Mail Room, which has reduced the square footage to 600 sf. This hallway should be removed and access to the Storage / Mail Room reconfigured so the classroom can be enlarged. The classrooms contain dated casework, which is not consistent with GCS standards.

12. Science Classrooms

Room Description	No. of Rooms	Typical Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
Science classroom	0	0 sf	1,000 sf	0%	Poor

Comments: The school does not contain a dedicated Science classroom, science is taught in the regular classrooms, which do not have adequate casework for experiments.

- The 6th Grade wing contains 4 classrooms that were previously utilized for science instruction, and include science casework, demonstration islands and prep rooms. However, these are now used for standard classrooms, and the school does not have any dedicated science classrooms.

13. Exceptional Children, Language Arts and Health

Room Description	No. of Rooms	Typical Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
EC Resource	1	500 sf	1,000 sf	50%	Poor
EC Cluster	0	0 sf	1,000 sf	0%	Poor
Spanish	1	580 sf	850 sf	68%	Poor
Health	1	Located in mobile unit			Poor

Comments: The school contains 1 EC Resource classroom, which is accessed from the exterior. The school does not contain an EC Cluster classroom. The Spanish classroom is located in the Band / Art wing. The Health classroom is located in a mobile unit.

- The EC Resource room is located in the wing that requires exterior access and is significantly smaller than standards. This room also requires either access through the ISS classroom, or directly from the exterior, which includes stairs and is not handicap accessible. The classroom is not located near any of the group toilets.
- The Staff would like to locate an EC Cluster classroom at this school, but is limited on space. However, one classroom in the 6th Grade wing is not currently being utilized. This room does not contain a toilet or adequate casework, which should be added if used for an EC Cluster room.
- EC does not have a dedicated shower / changing or laundry room, and the showers in the PE locker room are not functioning. If an EC Cluster room is added, dedicated shower and changing facilities should be added, if possible.
- EC also includes a small Conference room between the 6th and 8th Grade wings and a small Office in the 6th Grade wing.
- Spanish is taught in a small classroom located between the Band room and Art room.
- The Health classroom is located in a mobile unit.

14. Arts Education

Room Description	No. of Rooms	Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
Art	1	1,540	1,200 sf	128%	Excellent
Band	1	1,460 sf	1,600 sf	91%	Good
Chorus	1	870 sf	1,200 sf	72%	Poor
Auditorium	1	4,100 sf	Varies	N / A	N / A
Stage	1	860 sf	Varies	N / A	N / A

Comments: The Art room and Band room are located in a separate wing, fairly close to the Auditorium. The Chorus room is located near the Gymnasium. The Auditorium is located near the main school entry.

- The Art room is larger than space standards, and also contains both a storage room and kiln room. The Art room does not contain adequate built-in casework.
- The Band Room is slightly smaller than space standards. The room contains fixed risers and 3 storage rooms. The room contains some acoustical wall treatments, but a standard lay in ceiling. The storage room contains open plywood cubbies that are in fair condition but are not lockable.
- The Chorus room is significantly smaller than space standards, and also upfitted like a standard classroom. The ceiling is not of adequate height. The room does not contain portable risers or appropriate acoustical treatments, with a VCT floor, CMU walls and standard lay in ceiling.
- The Auditorium contains 610 dated wood seats, which should be replaced. The room is very close to seating the entire student population.
- The Auditorium does not contain any handicap seating areas. The stage is elevated, and is not handicap accessible from any location. A ramp from the audience chamber to the stage is very difficult to add, due to the continuously sloping concrete floor. A handicap accessible ramp could be added within the stage area, which would reduce the useable area of the stage and require redesign of the backstage rooms.
- The Auditorium does not contain appropriate acoustical treatments, with CMU walls and continuous hard plaster ceiling.
- The Stage contains minimal curtains and rigging, and two Dressing Room / Toilets, which are not functional and used for storage only.

15. Career and Technical Education Classrooms / Shops

Room Description	No. of Rooms	Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
Business Lab	1	1,255 sf	1,200 sf	104%	Excellent
Technology Lab	1	1,170 sf	1,200 sf	97%	Good

Comments: The two CTE classrooms are located in different parts of the building, but both require exterior access for all students.

- The Business Lab is slightly larger than standards, and is access by a door directly to the exterior in the enclosed courtyard.
- The Technology Lab is close space standards. However, it is only accessed through the Art room, and also contains a door to the exterior.

16. Media Center

Room Description	No. of Rooms	Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
Main Room	1	1,875 sf	3,400 sf	55%	Poor
Support Areas	Various	900 sf	1,800 sf	50%	Poor

Comments: The Media Center Main Room and Support areas are both approximately half the size of space standards.

- The Media Center and Support spaces are both very limited. The support spaces include a small Office and two Work Rooms. Due to the location within the school, the areas cannot be expanded without displacing of classrooms and corridors, or a building addition.
- The main IT MDF rack is located in a Media Support room, which is also used for storage and a work room. This room should be converted to a secure and fire rated room with a gaseous fire suppression system.
- The Media Center does not contain an Office or Conference room.
- The Media Center does not contain a video studio, production, editing, or equipment rooms, only a very small videoing area.
- The Media Center does not contain an area for computer / technology instruction, however one of the Computer Labs is in an adjacent room and has a direct connection.
- The school Nurse and Social Worker share a small office in the Media Center, which should be relocated for privacy.
- The Media Center is located within an area of the school that cannot be secured for after-hours community use.

17. Physical Education / Indoor Athletics

Room Description	Area	Court Size	NCDPI Standard Area	Relation to Standard	Adequacy Rating
Gymnasium	10,000 sf	50 x 84	Varies	N / A	N / A

Comments: The Gymnasium is located at the rear of the school, and includes a dedicated exterior entry, lobby and access to toilets.

- The Gymnasium includes telescoping bleachers on both sides, which seat approximately 1,500. These bleachers are in poor condition and in need of replacement.
- The basketball court is of regulation size for interscholastic play, with adequate safety zones and safety pads.
- The Gymnasium includes a separate entrance with a lobby, access to toilets and doors to the exterior for after hours use.
- The Boys PE and Team locker room each contain one large group shower, which is non-functioning, and should be replaced with individual stalls. The toilet partitions in both locker rooms are poor condition, and the rooms contain only wood open cubbies (which are not securable) and no lockers.
- The Girls Team locker room each contain one large group shower, which is non-functioning, and should be replaced with individual stalls. The Girls PE locker room does not have a shower. The toilet partitions in both locker rooms are in poor condition, and most of the metal lockers are damaged.

18. Administration

 Excellent

 Good

 Fair

 Poor

Comments: The Administration area includes approximately 1,200 square feet, Guidance spaces are located in an office area directly adjacent to the Admin area. Administration consists of the following rooms: (1) Main Office / Reception, (1) Principal's Office with toilet, (1) Assistant Principals Office with toilet, (1) SRO Office, and (1) Storage room. The Secretary's Office and a Conference room are located in the adjacent Guidance area. The Administration area is very limited in space, but can be expanded with an addition to the front of the building.

- The Administration area is located across the main corridor from the main school entry and the school does not contain a secure vestibule for the main entrance. Design of a new secure entry vestibule with access directly into the Reception area is not possible without interruption of the main interior corridor. However, a door from the exterior can be added directly into the Administration lobby for security.
- Due to its location within the school, the Administration area does not have visibility of the visitor parking or student drop off areas. The Reception area does not have direct visibility of the main entry doors.
- The SRO shares an office with the Work Room, which located directly behind the reception desk. Each should have a dedicated room.
- The Administration area does not include a private Staff Room.
- The Administration area contains a Work Room. However, Staff mail slots are located in the main hallway and should be moved into this large Work Room
- None of the Toilets within the private offices of the Administration area are handicap accessible.
- The Administration should include a dedicated men's and women's Toilet.

19. Student Support

 Excellent

 Good

 Fair

 Poor

Comments: The Student Support Spaces consist of (2) Guidance Offices, (1) Office shared by the School Nurse and Social Worker, (1) Guidance / Admin Conference Room, and (1) School Therapist Office.

- The two Guidance Offices are located in an office area adjacent, but separate from the Administration area. Another office should be added, as GCS standards desire 3 Guidance Counselor offices in Middle Schools.
- The Social Worker and Nurse share an office in Media Center. Each should have dedicated spaces, located closer to the Administration area.
- Health Services should include a Nurse's Office, Holding Room, dedicated Toilet, Shower and Changing area and wheelchair storage located near, but separate from, the Administration area.
- The School Therapist office is located directly off of a busy corridor in 6th Grade classroom wing, which offers little student privacy, and should be redesigned or relocated to a more private area for confidentiality.

20. Staff Support

 Excellent

 Good

 Fair

 Poor

Comments: The Staff Support Spaces consist of only one Teacher Lounge between the 6th and 8th Grade wings.

- The Teacher Lounge contains only break room casework and should be converted to a Teaming / Work Room.
- Additional Teacher Teaming / Work Rooms should be located in each classroom wing.

21. Cafeteria

Students per Seating *	Dining Room Area	Area per Student	NCDPI Standard Area	Capacity of Dining Room	Relation to Standard
161	2,500 sf	15.5 sf / student	14 sf / student	178	110% Excellent

* Students per Seating equals the 2014 - 2015 student enrollment for the school divided by 3 seatings for continuous serving ($485 / 3 = 161$).

Comments: The Cafeteria is located near the main school entry.

- The Cafeteria exceeds space standards. However, it is mainly accessed by one pair of doors, which limits circulation for entering and exiting the room.
- The Cafeteria contains two serving lines, which provides adequate serving capacity for the number of students.

22. Kitchen

Lunches Served per Day *	Kitchen Area	NCDPI Standard Area	Relation to Standard
436	1,235 sf	1,261 (for 250 to 500 lunches served)	98% Good

* Lunches Served per Day equals the 2014 - 2015 student enrollment for the school times 90% participation factor ($485 \times .90 = 436$). This school experiences an elevated participation rate due to free and reduced lunches.

Comments: The Kitchen is very close to the NCDPI guidelines of overall area for the number of students served, does not contain some needed spaces, and is in generally poor condition. See the Section 7: Food Service Assessment for additional information.

- The Kitchen does not include a secure Manager's Office, as the manager's desk is located in a corner of the Kitchen. A dedicated Manager's Office needs to be provided.
- The Kitchen includes one small toilet, which is not handicap accessible.
- The staff locker area is too small.
- The Kitchen does not have a washer and dryer.
- The loading dock is elevated approximately 2 feet and does not include a ramp. The loading dock contains very little area for deliveries, but is difficult to expand significantly in its current location, due to location of the chillers on this side of the building. The canopy over the loading dock is deteriorating and in need of replacing.

23. Toilet Facilities

 Excellent

 Good

 Fair

 Poor

- The school contains three group toilets. Each of the group toilets in the 6th Grade wing, 8th Grade wing and near the Gymnasium are in poor condition and not handicap accessible.

However, the rooms are of sufficient overall size that can be redesigned to be handicap accessible.

- Staff are provided with 2 single toilets, both located adjacent to the Cafeteria, which are handicap accessible and in fair condition. Additional Staff toilets need to be within each of the other classroom wings.
- The Art / Band room wing has two, one fixture toilet rooms that are in good condition and handicap accessible.

24. Other Spaces

- The school has limited general purpose storage. Many electrical rooms are used for storage, which violates code.
- The school contains 3 separate general purpose Computer Labs in various areas of the school.
- The school contains three mobile units on site, one for Testing, one for Health, and one is used for storage.
- The MDF is located a room within the Media Center support area, which should be converted into a secure, access controlled room with a gaseous fire suppression system. The IDF's are located throughout the school in classrooms and corridors, most of which will be difficult to relocate into secure rooms due to existing data cabling.

25. Additional Considerations

- All of the student lockers within the school are in poor condition, and not currently utilized.

Part 3: School Site

26. Parking Excellent Good Fair Poor

Description	Current Number of Spaces	Number of Spaces Needed	Relation to Number of Spaces Needed
Staff / Visitor (East)	49	75 Staff (65 employees plus 10 transient) 30 Visitor 105 total	-16
Staff / Visitor (West)	40		
Total Staff / Visitor	89		
Bus	1 for team bus	1 for team bus	0

Comments: Parking on the school site is poor, with parking located directly within the shared car rider and bus drive, and an inadequate number of spaces. Most of the asphalt paving is in poor condition.

- The east parking area contains 49 spaces for Staff and Visitors, all of which are located within the drive used for both car rider and buses, which presents safety concerns and also makes most of these spaces unusable when the car rider line is stacked. 3 mobile units are located in the parking area near the Gymnasium entrance, which reduces the amount of parking spaces in this lot. This parking lot should be redesigned to separate the parking, bus and car rider drives.

However, significant redesign is difficult due to limited site area, unless additional land is acquired.

- The east parking area contains 40 spaces and is utilized by Staff, Visitors, Kitchen staff and also contains to kitchen service area and loading dock. This lot is poorly defined and also contains service areas for kitchen dock and mechanical equipment within the parking area. This parking lot should be redesigned to separate the parking and service areas. However, significant redesign is difficult due to limited site area.
- All of the asphalt paving in parking areas on the site is in poor condition with significant cracking, potholes, patches, etc., and should be replaced.
- No parking spaces are located near the main school entry for visitors.
- The site does not contain any parking near the athletic fields. Additional parking could be added to the South of Building C for athletic events and additional staff parking.
- Only the athletic bus is parked on site.

27. Vehicular Circulation Excellent Good Fair Poor

Comments: Vehicular Circulation on the school site is generally poor, with inadequate stacking for cars, a shared bus and car rider drive, parking located within pick up /drop off stacking lanes and poor condition of paving.

- The main school entry, car rider / bus drive, staff parking drive and bus drive are all located on Hovis Road, which does contain a center turn lane, but no deceleration lanes. Additional investigation should be made with the Department of Transportation about public road improvements.
- The school contains one drive that is shared by both buses and car riders, which is a safety and logistical concern. Staff has to manage the schedule to serve busses first, then cars, which requires significant additional staff and time. The drive does not contain sufficient stacking for cars, which back up onto Hovis Road. In addition, staff parking is located directly within the car / bus drive, which presents safety concerns. The drive, and parking area should be redesigned to provide dedicated car and bus drives with adequate stacking. However, significant redesign is difficult due to limited site area, unless additional land is acquired.
- The drive along the front of the school could be used for bus rider, with an additional walkway canopy added to the main entry doors in the 6th Grade wing.
- The kitchen service area is located within the staff parking area, however, this drive is not able to be relocated, due to the location of the kitchen. The paving in the area of the kitchen loading area is poor and should be replaced with a concrete pad under the loading and dumpster areas.
- All of the asphalt paving in drive areas on the site is in poor condition with significant cracking, potholes, patches, etc., and should be replaced.

28. Pedestrian Circulation Excellent Good Fair Poor

Comments: The school site contains adequate sidewalk locations for pedestrian circulation access to various areas of the school the building. Most of the sidewalks are in generally fair condition.

- Some areas of concrete sidewalks near the locker rooms and CTE wing are in poor condition and should be replaced.
- A sidewalk walk extends to the vicinities of the baseball and football fields, however does not provide access to the spectator bleachers of either facility, which should be added.

- The perimeter of the school site contains sidewalks only on Hovis Road, which are in generally poor condition with significant cracking and deterioration, and should be replaced. Ralph Handsel Road does not contain any sidewalks.

29. Walkway Canopies Excellent Good Fair Poor

Comments: The school contains one canopy that is shared for both car and bus riders. A covered entry provides cover for the main school entry.

- The canopy at the car and bus rider drive is in fair condition, but not of substantial construction and should be replaced with more a durable system.
- An additional walkway canopy could be added outside the other main entry doors in the 6th Grade wing if the bus rider and car rider drives are separated.
- The main school entry contains a moderately sized exterior cover.

30. Outdoor Play

- The site contains one large outdoor paved play area near the baseball field. The asphalt paving is in very poor condition and should be repaved.

31. Athletic Facilities Excellent Good Fair Poor

Comments: The school contains (1) football field / track and (1) baseball / softball field. Soccer also utilizes the football field. The baseball / softball field is lighted, the football field / track contains very minimal lighting around the track.

- The football field is in fair condition. However, the goal posts are poor condition and need replacing.
- The asphalt paving of the track is cracking in some areas and should be re-surfaced.
- The west side of the track and football field are prone to flooding, due to the existing grades sloping down to the track. The perimeter of the track, especially to the west side should be re-graded with a swale and an underground stormwater system added to direct water away from the track and football field.
- Baseball and softball share the same field, which is in fair condition. The facility contains wood framed dugouts, which are minimal but also in fair condition. The site does not contain enough area for a dedicated softball field.
- The perimeter vegetation has overgrown the fence of the baseball field and the west side of the track fence and should be trimmed back.

32. Athletic Spectator Areas Excellent Good Fair Poor

- The baseball field contains minimal bleachers, which are located too far from the field. Bleachers for 75 home and 75 visitors, with handicap access should be added.
- The football field / track does not include any handicap access to the bleachers, which should be added. The spectator bleachers are in poor condition, do not meet safety codes and should be replaced with bleachers with 150 home and 50 visitor seats.
- The school does not contain any outdoor toilets for the athletic fields. The concessions building near the baseball field is in poor condition.

- The football field press box building is wood framed and in poor condition, and should be replaced.

33. Grounds / Landscaping Excellent Good Fair Poor

- The school contains very limited foundation shrubs, which are maintained in fair condition.
- The school contains several large, mature trees, which are located too close to the Band / Art building. These trees should be removed and replaced with new lower growing trees for safety considerations of large limbs or the trees falling on the school and for maintenance concerns of leaves clogging the roof gutters.
- The perimeter vegetation has overgrown areas of the fence of the track and football field and should be trimmed back.

34. Utilities Excellent Good Fair Poor

- The school is served by the City of Stanley for water and sewer, and has a backflow preventer for domestic water, which reported to be in working condition. The water line is reported to original cast iron and should be replaced.
- The school contains a grease interceptor on the sanitary sewer line for the kitchen, which located in the Boiler room, but not code compliant. A new grease interceptor should be installed on the exterior of the building for better access. The sewer line is reported to be original terra cotta, and should be replaced with PVC.
- Only two fire hydrants are located in the general area of the school, both on Hovis Road. More fire hydrants should be added on the school site to provide adequate coverage.
- The school is served by natural gas, which is metered separately for the kitchen and the buildings.
- Overhead power lines run through the site between the school building and athletic fields, which appear to be transmission lines from the nearby substation. These transmission lines present a safety concern, and warrant further investigation regarding relocation off of the school site. However, they most likely cannot be relocated without significant cost and additional right of way.

35. Storm Drainage Excellent Good Fair Poor

- The site does not have a stormwater management pond, which is not required by the municipality unless additional impervious area is added.
- The site has virtually no stormwater system, as most paved areas sheet flow to public streets or drainage swales. Additional underground storm drainage should be added if the paved areas are replaced. The enclosed interior courtyard contains storm drainage which runs beneath one of the buildings to daylight.
- The storm culvert piping beneath the entry drives from Ralph Handsell Blvd are partially buried and do not provide adequate water flow, creating evidence of ponding. This pipe should be cleaned out, or replaced with a larger pipe if the driveway is replaced. In addition, further investigation should be given to improving the drainage ditches along public roads with the governing Department of Transportation.
- Approximately half of the downspouts spill directly on to grade. Catch basins should be added where possible to direct the roof drainage to an underground storm drainage system to prevent water from ponding next to the buildings.

- Approximately half of the downspouts have an indirect connection with catch basins, however most of the soil around the catch basins has eroded and should be backfilled.

36. Emergency Access Excellent Good Fair Poor

- The site has paved emergency access around the north, east and west sides via parking areas and drives.
- A gravel / dirt access drive runs along part of the southwest side of the building near the baseball field. This drive is in poor condition and should be paved and extended to the proximity of the football field.

37. Site Security Excellent Good Fair Poor

- The site is located in a predominately residential area, with a large industrial / warehouse building located directly across Ralph Handsel Blvd. In addition, an electrical substation is located nearby on Hovis Road. The Principal and school SRO Officer indicated that the surrounding areas do not typically include significant crime and vandalism at the school is rare.
- The north, east and west portions of the building and site have good visibility from public roads, drives and parking areas. The south side does not have proper vehicular access for police patrol.
- The site contains chain link fencing around the perimeter, many areas of which are damaged and should be replaced. In addition, wooded areas have significantly overgrown the fencing and should be cut back.

38. Additional Considerations

- The guardrails at all of the exterior stairs do not meet current code for picket spacing, and should be replaced.
- All of the exterior steel handrails and guardrails need painting.
- The main school chillers are located in a chain link fence enclosure near the Cafeteria. All of the paving and grassed areas within the fencing should be replaced with concrete.
- Directional signage on the school site is poor and should be replaced.

Part 4: Building Envelope

39. Construction Type Non-Combustible Combustible

40. Structural Floors

Material: Concrete Slab on Grade
 Concrete on Metal Deck over Steel Structure
 Wood Deck on Wood Joists
 Other

Evidence of Structural Concerns: Prevalent Isolated None Visible

Overall Condition of Structural Floors: Excellent Good Fair Poor

Comments: The structural floors consist of concrete slab on grade, with one area of elevated concrete slab two story construction in the Gymnasium building.

- Concrete floors generally appear to be in good condition with no major cracks telegraphing through the floor coverings, except as noted below.
- Several cracks are visible in the terrazzo flooring in the corridor areas of the 6th Grade wing. These cracks appear to be minor shrinkage cracks due to the absence of control joints.

41. Exterior Walls / Cladding

Material: Masonry EIFS / Stucco Metal Other

Evidence of Structural Cracking: Prevalent Isolated None Visible

Evidence of Concern with Exterior Cladding:

Cracks / Gaps	<input type="checkbox"/> Prevalent	<input checked="" type="checkbox"/> Isolated	<input type="checkbox"/> None Visible
Efflorescence (Masonry)	<input type="checkbox"/> Prevalent	<input checked="" type="checkbox"/> Isolated	<input type="checkbox"/> None Visible
Moisture Penetration	<input type="checkbox"/> Prevalent	<input checked="" type="checkbox"/> Isolated	<input type="checkbox"/> None Visible
Rot/Decay/Corrosion	<input type="checkbox"/> Prevalent	<input checked="" type="checkbox"/> Isolated	<input type="checkbox"/> None Visible

Overall Condition of Exterior Walls: Excellent Good Fair Poor

Comments: The exterior walls of all of the buildings appear to consist of multi wythe brick, or brick / CMU construction that most likely do not include insulation, an air space or flashing.

- The brick veneer appears to be in generally fair condition, with some areas of efflorescence, which may be a result of moisture within the wall due to the lack of an air space.
- The Building contains several areas of exterior hard coat stucco soffits with areas of deterioration, and should be replaced. These soffits are suspected to contain asbestos, although they have not yet been tested.

42. Exterior Glazing

Frame Material: Aluminum Steel Wood Other

Glazing Material: Un-insulated Insulated Glass Block

Evidence of Concern with Exterior Glazing:

Moisture Penetration	<input type="checkbox"/> Prevalent	<input checked="" type="checkbox"/> Isolated	<input type="checkbox"/> None Visible
Rot/Decay/Corrosion	<input type="checkbox"/> Prevalent	<input checked="" type="checkbox"/> Isolated	<input type="checkbox"/> None Visible

Overall Condition of Exterior Glazing: Excellent Good Fair Poor

Comments: The condition of the exterior glazing systems in the majority of the school is poor.

- The exterior glazing in all areas of the school consists of 1/4" un-insulated glass in a thermally continuous steel framing system, which is very energy inefficient and past its useful life. In addition, this glass appear to standard plate glass, which presents a safety concern as it is easily broken. All of this glazing should be replaced with insulating glass in a thermally broken aluminum storefront framing system to be more energy efficient and provide better thermal control of the classrooms in particular. The glass should be safety tempered in areas required by code. Some areas could be infilled with insulated metal panels or solid wall instead of glass to reduce the amount of glazing, particularly in classrooms.

43. Exterior Entry / Exit Doors

Door Material: Aluminum Steel Wood Other

Evidence of Concern with Entry / Exit Doors:

Moisture Penetration Prevalent Isolated None Visible
 Rot/Decay/Corrosion Prevalent Isolated None Visible
 Other None at this time

Overall Condition Doors: Excellent Good Fair Poor

Overall Condition of Hardware: Excellent Good Fair Poor

Comments: Most of the entry / exit doors are in poor condition for the majority of the school.

- Many of the entry / exit doors in the school are original and consist of pairs of 2'-6" wide doors and are in poor condition, do not have code compliant panic devices and have no access control for security. These doors should be replaced with 3'-0" wide doors for handicap accessibility and include code compliant door hardware and access control for security.
- Some doors have been recently replaced with 3'-0" wide doors with an inactive panel leaf, but do not have access control hardware, which should be added for security.
- The main front entry doors should have secure access control with buzz-in and security camera tied into the Administration area reception desk.

44. Exterior Classroom Doors

Door Material: Aluminum Steel Wood Other

Evidence of Concern with Classroom Doors:

Moisture Penetration Prevalent Isolated None Visible
 Rot/Decay/Corrosion Prevalent Isolated None Visible
 Other None at this time

Overall Condition of Doors: Excellent Good Fair Poor

Overall Condition of Hardware: Excellent Good Fair Poor

Comments: All classrooms with access from within the enclosed courtyard and in the Band / Art wing have doors that open directly to the exterior.

- The exterior classroom doors are wood with several coats of paint and knob style hardware. These should all be replaced with insulated hollow metal doors and lever style hardware with new locks.
- The majority of other exterior doors for mechanical rooms, electrical rooms, storage, locker rooms and kitchen service in for all buildings are in poor condition and should be replaced.

45. Roofing

An independent roof assessment was performed for Gaston County Schools by Roof Engineering, Inc. (REI) in 2006. The report indicates the following needs regarding the replacement of roofs:

- All areas of the roofing were replaced in 2013.

46. Additional Considerations

- The brick chimney appears to be utilized as a boiler flue, but should be lowered for safety reasons.

Part 5: Building Interior**47. Interior Walls**

Overall Condition of Walls: Excellent Good Fair Poor

Comments: The majority of interior walls are painted CMU or brick and are in fair condition. Several corridors include a glazed face CMU, which is in generally fair condition.

- Some of the demising walls in the EC Conference Room, the School Therapist office, and in the Media Center support areas contain exposed wood paneling and non-tempered plate glass, and should be replaced with fire resistant drywall and tempered glass.

48. Floor Finishes

Classrooms	Flooring Type: VCT (in most areas)	Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Corridors	Flooring Type: VCT and Terazzo	Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Stairs	Flooring Type: VCT	Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Cafeteria	Flooring Type: VCT	Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Gymnasium	Flooring Type: Wood	Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Auditorium	Flooring Type: VAT	Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Media Center	Flooring Type: VAT and Carpet	Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor
Administration	Flooring Type: Carpet	Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor

Comments: The majority of interior floor finishes are VCT and in fair condition.

- Most of the VCT in classrooms and other instructional rooms has been installed in the last 3-5 years. However, this VCT is a lighter color and showing wear more quickly than expected.
- The carpet in the Band room and the VCT in the Chorus room are both in poor condition and should be replaced.
- The wood floor in the Gymnasium is in fair to good condition.
- The carpet in the Administration area and Media Center is in generally poor condition, with areas of significant wear in high traffic areas and should be replaced.

- Some of the Media Center support spaces, the Computer Lab adjacent to the Media Center and the Computer Lab in Building A contain VAT flooring, which should be abated and replaced with VCT.
- The Auditorium contains VAT in all areas, except in front of the stage. This VAT should be abated and be polished concrete under the seats, with carpet in the aisles.
- The wood Stage floor is in poor condition, and should be refinished and painted black.

49. Ceilings

Lay-in	N / A
Plaster	Locations: (in most areas) Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Drywall	N / A
Open Structure	Locations: Gymnasium Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor

Comments:

- Almost all of the ceilings in the various wings of school are a type of textured plaster coating applied to a sheathing material attached directly to the underside of the roof joists. This material is not reported to contain asbestos in all areas. These continuous plaster coated ceilings do not offer any access to the plenum space and all light fixtures, conduit, piping, etc. are surface mounted. These ceilings should be removed and replaced with 2x2 lay-in, for better acoustics, reflectivity, installation of new light fixtures and concealment of conduit and piping.
- The Band and Chorus plaster ceilings should be replaced with a high NRC lay-in ceiling for acoustical purposes.
- The Kitchen contains 2x2 washable ceiling tile, which is good condition.

50. Casework

Classrooms	Casework Type: Wood and Plastic Laminate Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor
Science Rooms	N / A
Media Center	Casework Type: Wood and Plastic Laminate Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor
Administration	Casework Type: Wood and Plastic Laminate Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor

Comments: The majority of the casework in the school is inadequate and in poor condition.

- All of the 6th, 7th and 8th Grade classrooms contain inadequate and dated wood cabinets and counters of various configurations. Casework in all of these classrooms needs to be replaced with a standard configuration, including open shelving and a lockable teacher storage unit. Some of the classrooms contain countertop sinks, which should be removed.
- The Art room does not contain adequate built in casework for storage of materials, which should be replaced.
- The Media Center and Support Spaces contain inadequate casework in poor condition, which should be replaced.

- The Administration area contains inadequate and dated casework, which needs to be replaced. The main reception counter is not handicap accessible.
- The Band Room instrument storage should be replaced with lockable storage units.

51. Interior Doors

Overall Condition Doors: Excellent Good Fair Poor

Overall Condition of Hardware: Excellent Good Fair Poor

Comments: The majority of the doors within the building are in poor condition.

- All of the interior doors and hardware in the school appear to be original, do not have code compliant lever style hardware, and are in poor condition. These original doors should be replaced, and the classroom doors should also include lockdown hardware.
- The classroom doors in Building A contain glass transom panels, which appear to be standard plate glass. These should be removed and replaced with tempered glass or solid panels for safety purposes.
- The classroom doors in Building D contain both glass transom and sidelite panels, which appear to be standard plate glass. The sidelite panels should be removed and replaced with solid panels for security purposes, the transom panels can be replaced with either tempered glass or solid panels.

52. Additional Considerations

- Most of the window blinds in the school are in poor condition and in need of replacement.
- The stair guardrails in the Gymnasium Building do not meet current code for picket spacing and should be replaced.

Part 6: Handicap Accessibility

53. Exterior Handicap Accessibility

Accessible Parking: Excellent Good Fair Poor

Accessible Route to Building(s): Excellent Good Fair Poor

Accessible Entrances / Egress: Excellent Good Fair Poor

Accessible Routes between Buildings: Excellent Good Fair Poor

Accessible Athletic Fields: Excellent Good Fair Poor

Comments: The overall exterior handicap accessibility for the school is poor, with some main entrances / exits not being accessible.

- The site contains 4 marked accessible parking spaces, none of which are van accessible, or locate near an entry to the school.
- The main entry for car riders and bus riders is not handicap accessible with several exterior stairs and no ramp.
- The exits from the Locker Rooms and one of the main building exits from Building D are not handicap accessible with several exterior stairs and no ramp.

- The football field / track contains an accessible route to the track area, but does not include an accessible route to any of the spectator bleachers.
- The baseball field contains an accessible route to the general vicinity of the field, but does not include an accessible route to any of the spectator bleachers.

54. Interior Handicap Accessibility

Accessible Routes:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor
Accessible Doors and Hardware:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor
Accessible Signage:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor

Comments: The various building wings are on approximately 5 different finished floor levels and contain various interior stairs and ramps.

- The school contains 2 ramps that are the full width of the corridor, one on the interior and one on an exterior covered walkway needed to access classrooms in the courtyard. Both ramps include a 1:12 rise/run, meeting code.
- Building D contains a stair within the interior corridor, with no accessible ramp. Due to the significant elevation change, the addition of an accessible ramp requires significant redesign of the corridor and an area of the Media Center.
- The majority of classroom doors in the school are 3'-0" wide. However, almost all of the doors in have knob style hardware, and should be replaced with code compliant levers.
- The Auditorium is accessible from only from the entries at the rear, but does not contain any handicap seating areas. Both of the entries near the Stage contain steps and are not accessible.
- The Auditorium Stage is not handicap accessible from any location.
- The Administration area reception counter and the Media Center circulation counter are both not handicap accessible.
- Most of the signage in the school does not meet current accessibility requirements and should be replaced.

55. Toilet Rooms Accessibility

Accessible Group Toilets:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor
Accessible Staff Toilets:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor

Comments: The handicap accessibility of the group toilets is poor, as none are handicap accessible. Only two Staff toilets within the school are handicap accessible.

- None of the three group toilets in the school are handicap accessible. However, the rooms are of sufficient overall size and should be upgraded to include handicap accessible partitions and fixtures, which would reduce the watercloset fixture count.
- None of the Boys and Girls PE or Team toilets contain handicap accessible stalls or fixtures. However, the rooms are of sufficient overall size and should be upgraded to include handicap accessible partitions and fixtures, which would reduce the watercloset fixture count.
- The school contains only two Staff toilets, both of which are handicap accessible. However, these toilets are both located near the Cafeteria and present a long travel distance from most of the classroom areas. Several offices in the Administration area, contain private toilets, none of which are handicap accessible. Additional accessible Staff toilets should be provide in each classroom wing.

Part 7: Food Service

56. Observations and Recommendations

Storage:

- Cold Storage Assembly is in ok condition and size is adequate. Recommend adding additional lighting additional lighting above head for proper lighting levels. Strip curtains also need to be added to hold temperature. Recommend replacing interior skin of cooler door as it is damaged and health department is docking points for it. Exterior and interior has multiple penetrations. Recommend filling and capping to prevent moisture buildup from entering panels. Recommend adding covered base at interior and exterior floor of box.
- Cold Storage Shelving is adequate and in good condition.
- Dry storage is in good condition and square footage is accurate. Shelving Metro Q is new.

Food Preparation:

- Prep Worktables have galvanized and painted bases. Recommend replacement.
- 2-compartment sink is good condition.
- No prep equipment in kitchen to assess. All food comes pre-prepped from central kitchen.
- Ice Machine is in good condition and is new.

Cooking:

- Convection Oven (minimum 10 years old) is in good working condition.
- Fryer (15 years old) is in working condition. Sides and back are galvanized and painted but is chipping. Recommend repainting.
- Steamer (minimum 10 years old) is in good working condition.
- Exhaust Hood/Fire Suppression System is in good condition. Hood is cleaned on a regular basis and exhaust is captured properly. Fire suppression nozzles are rusted but can be removed as they are not required for equipment under hood.
- Heated holding cabinets are in good working condition (minimum 10 years old).

Dishwash:

- Dish machine that is minimum 15 years old and needs replaced. It keeps temperature currently but needs to be serviced on a regular basis to keep running. Chemicals are being fed to the dish machine and a booster is not present nor required.
- Vent ducts have been added at the load and unload ends of the dish wash and currently are in good condition and capturing properly.
- The disposer has been removed at the pre-rinse sink and replaced with an indirect waste to a hole in the floor. Recommend replacing the sink with a scrap basket with a clean out.
- The soiled dish table and clean dish table are in good condition.

Serving:

- Serving lines are new and in good condition. All drop-ins are currently in good working condition and are meeting proper temps for serving.
- Milk Cabinet unit is in working condition and meets temperature. The paint is chipping on top and sides and showing some rust. (Unit appears to be minimum 10 years old.)

Auxiliary Spaces:

- Office is located in dry storage room.
- Janitor's Room is small and has no mop sink.
- Kitchen square footage is adequate.
- Fly Fan is missing at back door.

Part 8: Plumbing Systems**57. Observations**

Roof drainage is a gutter and downspout system.

A backflow preventer was recently installed on the incoming domestic water service.

Hot water is not available at many of the lavatory fixtures in the toilet rooms. It was noted that some of the hot water systems do not have a recirculation loop installed, significantly delaying the arrival of hot water at the fixtures and wasting water in the process.

Gas service is provided to the kitchen appliances, water heaters, and heating boiler. Gas service to the kitchen is metered independently from the rest of the building.

Water coolers are non-compliant with current code for accessibility.

Water pressure in the building is adequate.

Piping:

- Copper water supply piping installed inside. Exposed piping is uninsulated. Galvanized water supply pipe installed outside.
- Underground sanitary sewer pipe is constructed of terra cotta. Tree roots have compromised the integrity of the sewer system in several locations.
- Gas piping to the kitchen was replaced around 2009. Gas piping within the boiler room was replaced around 2000.
- Water supply piping in the tunnel leaks whenever the locker room showers are in use. Some of the piping is under slab. Hot water has been turned off to the new locker rooms.
- The water closet drains are swept with formed lead. Hence, many of the water closets have become loose over time.

Fixtures:

- Restrooms have flush valve type water closets and urinals, and lavatory fixtures. Restrooms appeared to have proper ventilation, floor drains, installed fixture heights, and hose bibbs for housekeeping and priming the floor drain trap.

Water Heaters:

- A 120 MBH gas fired water heater and storage type unit provides 140°F hot water to the kitchen. A recirculation loop was observed on this system in the boiler room.
- Hot water is not provided to all fixtures at this time.

Kitchen:

- A small 70 gallon grease interceptor was observed in the boiler room. Interceptor is currently connected to the 3-compartment sink.
- Sanitary waste from ice machine and dish wash machine were observed to be direct connections with no air gaps.

58. Recommendations

- Install a grease interceptor outside of building in an accessible location to serve *all* fixtures and floor drains capable of receiving grease-laden waste.
- Provide hot water to fixtures
- Insulate all domestic cold and hot water piping.
- Install recirculating loop on hot water systems.
- Replace hand sink in kitchen.
- Replace water coolers
- Install domestic water isolation valves at all toilet groups
- Install indirect waste connections as required by code

Part 9: HVAC Systems**59. Observations**

Humidity control in the building was non-existent up until 2010. Humidistats were later added to the unit ventilators but were not ineffective. Humidity in the building is still difficult to control.

A 4-pipe system is installed and serves AHUs, fan coil units, and unit ventilators. Outside air is taken directly from outside.

Central Plant Cooling: A new 80-ton Trane air cooled scroll chiller was installed in 2013. The nominal 190-ton chiller was installed around 1999 and is still operating satisfactory. Pumps are badly corroded.

Central Plant Heating: There are two boiler rooms, one located near the kitchen and one located near the gymnasium. The boiler piping is interconnected. Total installed heating capacity is approximately 5600 MBH. Boilers were installed in 1993. Pumps are badly corroded.

The gymnasium is ventilated by exhaust fans and fresh air intakes. Heating is provided by hot water unit heaters.

Corridors throughout the building are not cooled. A few “heating only” fan coil units are located near the exit doors.

Media center return air could not be located and is thought to be covered up under the flooring.

A significant portion of the overhead hot water and chilled water piping is exposed beneath the ceiling. Isolation valves and insulation systems are within an arm's reach by the students.

Distribution Systems:

- Ductwork is constructed of galvanized metal. Much of it contains internal liner.
- Several Janitors closets had no exhaust air.
- HW piping material is copper. Piping is wrapped with fiberglass insulation.

Controls:

- Unit ventilators are controlled by individual wall thermostats.
- The central equipment is currently controlled from the BAS. Chillers, boilers, Library AHU, zone sensors, and time clocks are connected to the BAS. The balance of the control system is pneumatic.

Kitchen:

- Several unit ventilators provide conditioned air to the food preparation areas.
- It was reported that a makeup air system was originally present but has since been covered up by a ceiling installation and abandoned. However, the unit ventilators in the kitchen appeared to have outside air connected to them.
- Wall propeller fan is installed in the exterior wall.
- Two window A/C units are installed in the exterior wall.
- Janitor's room does not have exhaust air.

60. Recommendations

- Provide a building automation system utilizing direct digital controls.
- Provide a new AHU for the gymnasium, media center, auditorium, and admin area. Provide units with heating, cooling, and dehumidification control.
- Verify kitchen grease hood exhaust fan is interlocked with the unit ventilators such that outside air makeup is available whenever the hood is in operation.
- Remove wall prop fan and window A/C units.
- Introduce exhaust air to all janitor's closets and toilet rooms. Provide an unobstructed path for transfer air if makeup is taken from an adjacent space.
- Verify building air balance, especially on exhaust systems. Replace or clean exhaust grilles. Confirm building is appropriately pressurized.

Part 10: Fire Protection

61. Observations

- Sprinkler system installed (Y/N) - N
- System type? Wet, dry, preaction, etc.? – N/A
- Full or Partial Coverage? – N/A
- Standpipes installed (Y/N) - N

- Fire Pump installed (Y/N) – N

62. Recommendations

- Provide a full coverage sprinkler system in accordance with the NC Fire Code and NFPA Standard 13.

Part 11: Electrical, Fire Alarm, Security and Communications Systems

63. Observations

Service Entrance

This facility is fed by one pad-mounted transformer furnished by Duke Energy. The original service is a 1000 ampere, 480GrY277 volt switchboard located in Building A. A second service was installed in 1999 rated 2000 amperes and 480GrY277 volts. This service is located in Building A.

The capacity of the service appear to be adequate, but the equipment for the original service is long past its rated life.

Distribution

The power distribution consists of distribution panelboards and lighting panelboards fed by copper wire in conduit. The main service equipment and some of the distribution and lighting panelboards are well within their life expectancy. There are still some original panelboards that are in poor condition, and have been in service over 50 years, should be replaced. Replacement circuit breakers for these panelboards may not be available. There are some panelboards (actually loadcenters) that have been “tacked” on as new circuits have been needed. These need to be replaced with commercial grade panelboards.

Panelboard labeling, including panelboard directories, is not up to date, some labeling is missing and duplicate panels designations were found. There are standard duplex receptacles too near sinks, which should have GFI protection. Additional receptacle circuits may be needed.

Grounding

Proper grounding is one of the most important factors in an electrical system. Not only is it essential for safety, it is also required for proper operation of electronic equipment. The grounding systems in the older portions of the facility are in question. The original building uses the metal conduit system to distribute grounding throughout the facility. This was legal at the time the building was constructed, but not now. The problem is that the underground conduits installed at that time were galvanized steel, which could have deteriorated in the nearly 50 years since the original facility was constructed, which could result in an increase in ground resistance, or loss of grounding entirely. An earth grounding study needs to be made and corrective measures taken.

The NEC (National Electric Code) requires a minimum ground resistance of 25 ohms. For electronic systems (data rooms, computers, etc.) a minimum ground resistance of 5 ohms is needed.

Lighting

Some of the lighting has been upgraded. DPI recommends T8 lamps and electronic ballasts as a minimum, but suggests T5 and LED as alternates. The exterior lighting is insufficient and in poor condition in most areas.

Lighting levels are, in some cases, within the levels recommended by DPI, but many areas have lighting levels far below DPI recommendations. These levels are recommended, not required. The lighting levels in the Kitchen appear to be in accordance with North Carolina Department of Health which requires 50 footcandles minimum in areas where food is handled, prepared and served, and where utensils are washed.

Emergency Power

This facility has no emergency generator.

Fire Alarm

The existing fire alarm system has a Simplex 4020 addressable control panel. This is a current model. Although the layout of devices in most areas have been updated, some of the layout and distribution of alarm initiating and notification devices does not meet current codes and ADA requirements.

Security

The security system does not meet current Gaston County School guidelines. No access card readers on exterior doors. No Mass Notification System. Video Surveillance System has recently been upgraded, but some additional cameras are needed.

Data/Communications

The data system currently does not meet GCS criteria. The MDF and IDF's are not dedicated and in secure locations. The MDF is located in a Media Office. The IDF's are located in various non-dedicated and unsecured rooms.

Concerns

It was noted in several areas where panels are located that materials, furniture, etc. have been stored too close to the equipment. This is both illegal and dangerous. The National Electrical Code requires a minimum of 36 inches clear in front of these items. We feel that this issue should be addressed as soon as possible.

64. Recommendations

Service Entrance

The existing original service entrance equipment is the original equipment installed in 1959 and should be replaced.

Distribution

All original panels and panels by manufacturers that are no longer in business, or are past their rated life, should be replaced. All equipment should be properly labeled, including directories showing loads for all circuits. All electrical panelboards need to be scanned with an infrared scanner to be sure that there are no "hot" spots, which can indicate that there is an overload, faulty device or connection. Based on the scanning results, corrections need to be made.

Lighting

The lighting in some areas of the facility has recently been replaced, many areas need new lighting. There is practically no exterior lighting, additional exterior lighting needs to be added – some on building walls and some on poles. New exterior lighting should be LED with protective enclosures without the use of polycarbonate lenses. Additional exit signs and egress lighting needs to be installed. All exit signs and egress lighting shall have battery backup with self-diagnostic system unless they are connected to the standby generator. Auditorium, Stage and Gymnasium lighting should be updated, with new dimming system for the Auditorium and Stage. Egress lighting needs to comply with ADA requirements.

Emergency Power

A new generator needs to be provided with capacity to feed life safety, alarm and data requirements.

Fire Alarm

The fire alarm system needs to be updated and expanded.

Security

Security system needs to be upgraded to latest GCS criteria. Door access system and Mass Notification System need to added per GCS standards.

Data/Communications

The wiring system should be updated to current GCS criteria. The main data rack MDF and IDF racks need to be secured. Backup power from a standby generator should be provided.

Sound Systems

The intercom system is outdated, but appears to operate but it should be updated to a VoIP based system. The existing system should be updated and restored to proper operation so that it can be used as a backup system for the new IP intercom and paging system.

The sound systems in the Auditorium and Gymnasium should be updated and made to comply with ADA requirements.

End of Assessment



HIGH SCHOOL ASSESSMENT REPORTS

Gaston County Schools Comprehensive Facilities Study

H I G H S C H O O L S

GASTON COUNTY HIGH SCHOOL ASSESSMENT REPORTS



YATES ■ CHREITZBERG ■ HUGHES



BESSEMER CITY HIGH
119 Yellow Jacket Lane | Bessemer City, NC



YATES ■ CHREITZBERG ■ HUGHES

A S S E S S M E N T

BESSEMER CITY HIGH

Bessemer City High School

Existing Condition Assessment

PART 1: General Narrative of Facility

- 1. **Survey Date:** November 2014
- 2. **School Address:** 119 Yellow Jacket Lane, Bessemer City, NC
- 3. **Total Building Area:** 114,875 square feet
- 4. **Total Site Area:** 34.77 acres
- 5. **Instructional Capacity:** 773 students
- 6. **Enrollment 2014-2015:** 643 students
- 7. **Current Utilization:** 83%
- 8. **Area per Student Capacity:** 148 sf / student

9. Building Size and Dates of Construction:

Building A: 1964 (71,000 sf)	Building B: 1966 (240 sf)	Building C: 1978 (15,675 sf)
Building D: 1971 (1,288 sf)	Building E: 1965 (3,780 sf)	Building F: 1994 (13,910 sf)
Building G: 2009 (962 sf)	Building H: 2010 (4,000 sf)	Building J: Approx. 1965 (4,020 sf)

10. General Description of Facility:

The original school was constructed in 1964, with eight subsequent additions for various Classrooms, Shops, Auxiliary Gym, Field House and Dining Room addition. The majority of the facility consists of load bearing masonry walls with steel bar joist roof structure and low sloped roofing. Exterior walls consist of brick veneer with punched window openings in most areas. The various wings of the main school facility are attached and do not require exterior access. The Auxiliary Gym, Masonry and Carpentry buildings are detached and require exterior access.

The site contains visitor, staff, student and bus parking, and separate bus and car rider drives. Athletic facilities consist of a football field with running track, baseball field, softball field and multi-purpose practice field.

Part 2: General Space Standards

11. General Purpose Classrooms

Room Description	No. of Rooms	Typical Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
General Purpose	17	750 - 900 sf	850 sf	88% - 105%	Fair - Good

Comments: The general purpose classrooms are arranged into 3 wings. The classrooms vary in size, but are mostly close to, or slightly exceed space standards.

All of the classrooms contain smart boards, wireless technology and at least four hardwired computer drops.

- The classrooms in Building A are all approximately 850 square feet, which conforms to space standards. The classrooms each contain a dated teacher storage casework unit.
- Some of the classrooms in Building C contain offices within the classroom, which are used for Student Services and Administration. These offices reduce the area and functionality of the classrooms, and should be removed to enlarge the in instructional rooms. Administrative and Student Services offices should be located in a central office location. The classrooms each contain a dated teacher storage casework unit.
- The classrooms in Building F are all approximately 750 square feet, which is 12% smaller than space standards. The classrooms do not contain a teacher storage casework unit, or any other casework.

12. Science Classrooms

Room Description	No. of Rooms	Typical Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
Biology / Physical Science (301, 302)	2	1,050 sf	1,200 sf	88%	Fair
Chemistry/ Physics (116)	1	1,250 sf	1,500 sf	83%	Fair
Earth Science (120)	1	1,250 sf	1,500 sf	83%	Fair

Comments: Two Science classrooms are located in each of Building A and Building F. A typical classroom in Building F (Room 303), is also currently being utilized as a Science classroom (which is not listed in the chart above).

- The Science classrooms in Building A (116 and 120) are both smaller than space standards. Each room contains an eye wash / shower, but no floor drain. Room 116 contains a dedicated preparation room, which is approximately one half the size of the 250 square foot space standard. Room 120 does not contain a preparation room. Each of the Science rooms contains island casework with chemical resistant tops, sinks and a demonstration island with sink, which are all in poor condition and should be replaced. Room 116 contains a fume hood which is not functioning.
- The Science classrooms in Building F (301 and 302) are both smaller than space standards. Each room contains an eye wash / shower, but no floor drain. The rooms share a Preparation room, which is approximately one half the size of the 250 square foot space standard. Each of the

Science rooms contains perimeter casework with chemical resistant tops, sinks and a demonstration island with sink, which is adequate and in good condition.

- A typical classroom in Building F (Room 303), which is 750 square feet is currently being utilized as a Science classroom. This room does not include and sciences casework.

13. Exceptional Children

Room Description	No. of Rooms	Typical Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
EC Resource	2	820 sf	1,000 sf	82%	Fair
EC Cluster	2	820 sf	1,000 sf	82%	Fair

Comments: The school contains 2 EC Resource and 2 EC Cluster classrooms, all of the EC classrooms are located near the Media Center.

- The EC Resource and EC Cluster classrooms are all smaller than space standards, but of the same size as the general purpose classrooms.
- The EC classrooms are located near a group toilet. The Girl's toilet contains a handicap accessible stall, however the Boy's does not. These toilets should be upgraded to be handicap accessible.
- The EC Cluster classroom is significantly smaller than space standards, and also does not include a dedicated toilet, which should be added if possible. The classroom contains dated casework, which is not consistent with GCS standards, and should also contain a countertop sink
- EC does not have access to a shower / changing room other than those located within the PE Locker rooms.

14. Arts Education

Room Description	No. of Rooms	Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
Art	2	1,200 - 1,300	1,400 sf	90%	Good
Band	1	1,200 sf	1,800 sf	66%	Poor
Chorus	1	850 sf	1,400 sf	60%	Poor
Auditorium	1	8,300 sf	Varies	N / A	N / A
Stage	1	2,100 sf	Varies	N / A	N / A

Comments: The Art and Chorus rooms are located in the classroom wing of Building C. The Band room is located near the Gymnasium, but is far distance away from the Auditorium. The Auditorium is located near Gymnasium and main school entry.

- Both Art rooms are close to space standards. One of the Art rooms contains a Kiln room, but no storage room. The other room contains a storage room, which is currently being utilized as an office for the Testing Manager. This office should be relocated to the Administration or Guidance area, so that this room can be utilized for Art storage. One of the Art classrooms contains a door

- to the exterior and an concrete paved art patio. Both rooms do not contain adequate built in casework.
- The Band room is significantly smaller than space standards. The room contains fixed risers and two storage closets around the perimeter, along with a larger instrument storage room. The storage room contains plywood cubbies that are lockable, but in poor condition. The storage room also contains a wood framed mezzanine with pull down stairs that does not meet building code and should be removed or replaced with code compliant construction. The Band room contains acoustical wall treatments, but a standard lay in ceiling.
 - The Chorus room is significantly smaller than space standards, and also upfitted like a standard classroom. The ceiling is not of adequate height. The room does not contain portable risers or appropriate acoustical treatments, with a VCT floor, CMU walls and standard lay in ceiling.
 - The Auditorium is located adjacent to the main school entry and lobby, and can be secured from the classroom portions of the school for after hours use. The toilets within the lobby that serve the Auditorium and Gym do not contain an adequate number of fixtures for the number of occupants.
 - The Auditorium contains approximately 1,000 dated wood seats, which should be replaced. The room is more than capable of seating the entire student population, and includes handicap seating areas at the back only. The Auditorium contains a control room.
 - The stage is elevated, and is not handicap accessible from any location. A ramp from the audience chamber to the stage is very difficult to add, due to the continuously sloping concrete floor. However, a handicap accessible ramp could be added within the stage area, which would reduce the useable area of the stage and require redesign of the backstage rooms.
 - The Stage is only accessed through the Auditorium or from the exterior, which severely limits the set up and efficiency of performances. Both of the exterior doors near the Stage exit directly to the exterior with steps up to grade and are not handicap accessible.
 - The Auditorium does not contain appropriate acoustical treatments, with brick / hard plaster walls and continuous hard plaster ceiling.
 - The school does not contain a Scene Shop.
 - The Stage contains adequate curtains and rigging, and one small Toilet, which is not functional and used for storage only.

15. Career and Technical Education Classrooms / Shops

Room Description	No. of Rooms	Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
Business Lab (103)	1	1,500 sf	1,200 sf	125%	Excellent
Business Lab (205, 207)	2	750 sf	1,200 sf	62%	Poor
Bus. Career Mgmt.	1	Located in mobile unit			Poor
Health Sciences	1	1,275 sf	2,000 sf	64%	Poor
FACS	1	1,800 sf	1,600 sf	112%	Excellent
Masonry	1	3,000 sf	2,500 sf	120%	Excellent
Carpentry	1	2,500 sf	2,500 sf	100%	Excellent

Comments: The Business Lab, Health Sciences and Family and Consumer Science Classrooms are located in the main school building. The Masonry and Carpentry shops and classrooms are each located in dedicated, detached buildings and require exterior access for all students.

- Business Lab room 103 is larger than space standards. Business Lab rooms 205 and 207 are both significantly smaller than standards and each contain offices within the classroom, which are used for Administration or Student Services. These offices reduce the area and functionality of the classrooms, and should be removed to enlarge the instructional rooms. Administrative offices should be located in a central Administrative location.
- Business Career Management classroom is located in a mobile unit.
- Health Sciences is located between the two Science rooms in Building A, and is significantly smaller than space standards. The room does not contain adequate casework.
- The Family and Consumer Sciences is larger than space standards. However, it contains dated casework, which should be upgraded.
- The Masonry program is located in a dedicated building with a shop, classroom, office and various storage rooms. The shop area is larger than space standards, but the classroom is very small. The building does not contain a toilet room.
- The Carpentry program is located in a dedicated building with a shop, classroom, office and various storage rooms. The shop area meets space standards and the classroom is of adequate size. The building contains one toilet room, which is not handicap accessible.

16. Media Center

Room Description	No. of Rooms	Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
Main Room	1	4,600 sf	3,600 sf	127%	Excellent
Support Areas	Various	250 sf	2,000 sf	13%	Poor

Comments: The Media Center is located in the Classroom wing of Building A, and was renovated in 1999.

- The Media Center includes a Main Room and two attached Computer Labs. Together, all of these spaces are larger than space standards.
- The Media Center support spaces are very limited and include only a small work room and storage room. Due to the location within the school, the support areas cannot be expanded without displacing of a classroom and relocation of a corridor.
- The Media Center does not contain an Office, Conference room or adequate Work room.
- The Media Center does not contain a video studio, production, editing, or equipment rooms.
- The Media Center is located within an area of the school that cannot be secured for after-hours community use.

17. Physical Education / Indoor Athletics

Room Description	Area	Court Size	NCDPI Standard Area	Relation to Standard	Adequacy Rating
Gymnasium	11,400 sf	50 x 94	Varies	N / A	N / A
Auxiliary Gym	6,500 sf	50 x 74	Varies	N / A	N / A

Comments: The Gymnasium is located near Auditorium and main school entry. The Auxiliary Gymnasium is located in a free standing building with locker rooms, showers and an attached field house / weight room.

- The Gymnasium is located adjacent to the main school entry and lobby, and can be secured from the classroom portions of the school for after hours use. The toilets within the lobby that serve the Gym and Auditorium do not contain an adequate number of fixtures for the number of occupants.
- The Gymnasium includes telescoping bleachers on each side, which seat approximately 950. These bleachers are in poor condition and in need of replacement.
- The Gymnasium basketball court is of regulation size for interscholastic play. With the bleachers extended, the safety space on the sides is approximately 3-4 feet, which is less than the 6 foot minimum. The end safety zones are adequate, with wall pads.
- The Girls and Boys PE locker rooms are both in very poor condition with non functioning group showers, toilet fixtures and finishes in poor condition, and contain no lockers. The group showers should be replaced with individual stalls.
- The Boys Team locker room is in very poor condition with non functioning group showers, toilet fixtures and finishes in poor condition. The group showers should be replaced with individual stalls. The team lockers are open stained plywood cubbies, which are not lockable. The Girls Team locker room is currently in the process of renovation.
- The Auxiliary Gymnasium is a free standing building, which requires exterior access. The Auxiliary Gym contains coach's offices, group toilets and additional lockers, which are handicap accessible and in fair to good condition.
- The Auxiliary Gymnasium includes an attached Field House, with exterior exits also. The Field House contains a weight room, training room with whirlpool and coach's office. It also contains an additional locker room, toilets and showers, which are handicap accessible and in good condition.

18. Administration

 Excellent

 Good

 Fair

 Poor

Comments: The Administration area includes approximately 1,650 square feet, with the Guidance area separating the Principal and Assistant Principal offices from the main Office area. Administration consists of the following rooms: (1) Main Office / Reception, (1) Waiting, (1) Principal's Office, (1) Assistant Principal's Office with Toilet, (1) Secretary Office, (1) Data Manager's Office (1) small Work Room, and (1) Toilet. Another Assistant Principal's office is located in Building F. The SRO office is located near, but separate from, the Administration area and the Business Manager's Office is located within a classroom in the 100 wing. The Administration area is very limited in space, located in various parts of the building and should be consolidated together for better working efficiency. However, it cannot be expanded in its current location.

- The Administration area is located on the interior of the school and is not near the main school entry. The school does not contain a secure vestibule for the main entrance. Currently, a temporary control desk is located at the main school entry for monitoring purposes. Design of a new secure entry vestibule with access directly into the Reception area is not possible with the current layout of the school. A secure vestibule can be added at the main entry to the school. However, with the current location of the Administration area, the new vestibule would need to be monitored by camera.
- The Administration area does not have any visibility of the main entry doors, car rider drop off area or visitor parking.
- The Administration area does not include a dedicated Conference Room.
- The Administration Work Room is very small and should be significantly enlarged.
- The Administration area does not contain a Records room, or any other storage.
- The Administration area does not include a private Staff Room.
- The Business Manager's office is located within one of the classrooms in the 100 wing, and requires access through the classroom. This offices reduce the area and functionality of the classrooms, and also does not provide adequate privacy. The offices should be removed from the classroom and relocated near the Administration area.
- The Guidance area separates the Principal and Assistant Principals offices so that they do not have direct access from the main Reception and Office area. Both the Principal and Assistant Principal offices are accessed from a main building corridor, providing little privacy.
- None of the Toilets in the Administration area are handicap accessible. The Admin area should include a dedicated Men's and Women's staff toilet.

19. Student Support Excellent Good Fair Poor

Comments: The Student Support Spaces consist of (3) Guidance Offices and (1) School Nurse Office (1) Social Worker Office, (1) School Therapist Office, (1) Testing Coordinator Office and (1) Career Development Coordinator Office.

- The three Guidance Counselor offices are located near the Administration area with a separate waiting room. The Guidance area separates the Principal and Assistant Principals offices from the main Office area.
- The Nurse's office is near, but separate from the Administration area, and includes one room that contains both an office and holding area. The Health Services area should include rooms for a dedicated Nurse's Office, Holding Room, dedicated Toilet, Shower and Changing area and wheelchair storage.
- The school Social Worker's office is located adjacent to, and shares a small waiting room with the School Nurse.
- The School Therapist office is located near the Administration and Guidance area, with a separate entry.
- The Testing Coordinator office and Career Development Coordinator offices are both located within classrooms in the 100 wing, and require access through the classrooms. These offices reduce the area and functionality of the classrooms, and also do not provide adequate privacy. The offices should be removed from the classrooms and relocated near the Administration / Guidance area.

20. Staff Support Excellent Good Fair Poor

Comments: The Staff Support Spaces consist of two Teacher Work Rooms, located in each separate classroom wings.

- The Teacher Work room in Building F contains the main IT MDF. A portion of this room should be converted into a secure, access controlled room with a gaseous fire suppression system, which will reduce the area of this Work room by approximately one half.
- Additional Teacher Teaming / Work Rooms should be located in each classroom wing.

21. Cafeteria

Students per Seating *	Dining Room Area	Area per Student	NCDPI Standard Area	Capacity of Dining Room	Relation to Standard
214	3,000 sf	14 sf / student	14 sf / student	214	100% Good

* Students per Seating equals the 2014 - 2015 student enrollment for the school divided by 3 seatings (643 / 3 = 214).

Comments: The Cafeteria is located adjacent to the Auditorium off of the main school entry lobby.

- The Cafeteria meets space standards. However, due to the configuration of the two additions not being one large open room, the seating layout is not very efficient. The school employs 4 seatings to alleviate crowding in the Dining Room.
- Three serving lines are located within the Dining Room, which are adequate to serve the number of students. However, the serving lines are not located for easy access or service from the kitchen.
- The Cafeteria contains a pair of doors to the exterior. However, these doors do not offer close access to the loading dock area for trash removal. Trash must be removed through the Kitchen to the loading dock area.

22. Kitchen

Lunches Served per Day *	Kitchen Area	NCDPI Standard Area	Relation to Standard
579	1,500 sf	1,518 (for 500 to 750 lunches served)	98% Good

* Lunches Served per Day equals the 2014 - 2015 student enrollment for the school times 90% participation factor (643 x .90 = 579). This school experiences an elevated participation rate due to free and reduced lunches.

Comments: The Kitchen is very close to the NCDPI guidelines of overall area for the number of students served, but does not contain some needed spaces, and is in generally poor condition. See the Section 7: Food Service Assessment for additional information.

- The Kitchen does not include a secure Manager's Office, as the manager's desk is located in a corner of the kitchen. A dedicated Manager's Office needs to be provided.

- The Dry Storage room requires exterior access from the main Kitchen.
- The Kitchen includes one small toilet, which is not handicap accessible.
- The Kitchen does not include a staff locker area.
- The Kitchen does not have a washer and dryer.
- The loading dock is elevated with stairs, but does not contain a handicap accessible ramp and is too small to access the trash dumpsters. The dock is very small and contains a covered canopy. The dock and canopy should be enlarged and also include a ramp.

23. Toilet Facilities Excellent Good Fair Poor

- The two group toilets in the 100 and 200 classroom wings of Building A are in poor condition and not handicap accessible. However, the rooms are of sufficient overall size that can be redesigned to be handicap accessible.
- The group toilets near the Cafeteria, Gym and Auditorium are in poor condition and not handicap accessible. These toilets also do not contain an adequate number of fixtures for the number of occupants served by these spaces and should be expanded, if possible.
- The group toilets in Building F are handicap accessible. However, the toilet partitions are in poor condition and should be replaced.
- Staff are provided with 7 single toilet rooms throughout the school, 5 of which are in fair condition and handicap accessible. The 2 staff toilets within the Administration and Guidance areas are not handicap accessible and in poor condition, and should be upgraded.
- The Staff toilets in the 100 wing of Building A contain two fixtures each, are not handicap accessible, and in poor condition. These toilets should be upgraded to single fixture and made handicap accessible.
- The Carpentry building contains a single toilet, which is not handicap accessible and in poor condition, and should be upgraded.
- The masonry building does not contain a toilet.

24. Other Spaces

- The school has limited general purpose storage. Many electrical rooms are used for storage, which violates code.
- The school contains 3 mobile units, two for general purpose classrooms and one for CTE Business Career Management.
- The school does not employ an ISS program.
- The MDF is located a Teacher Work Room in Building F, which should be converted into a secure, access controlled room with a gaseous fire suppression system. The IDF's are located throughout the school in classrooms and corridors, most of which will be difficult to relocate into secure rooms due to existing data cabling.

25. Additional Considerations

- Student lockers in Building A appear to be original, but in fair working condition. These lockers should be adjusted, repaired and painted. Student lockers in Building F are newer, but also appear to be in fair condition.

Part 3: School Site

26. Parking Excellent Good Fair Poor

Description	Current Number of Spaces	Number of Spaces Needed	Relation to Number of Spaces Needed
Visitor (West)	50	50	0
Staff (South)	75	85	-10
Student (South)	<u>135</u>	<u>120</u>	<u>+15</u>
Total	260	255	Total +5 spaces
Bus	10	8	+2

Comments: Parking on the school site is fair, with a generally adequate number of parking spaces and four separate areas for visitor, staff, student and bus parking. However, most of the asphalt paving is in poor condition.

- The visitor parking contains an adequate number of spaces, but is located within the car rider drive. This area should be redesigned to separate the car rider drive from parking for safety purposes.
- The staff and student parking are located in the same general area, but separated by a grass median. Both contain an adequate number of spaces. CTE staff have an additional 7 parking spaces near the Carpentry shop.
- The site contains a bus parking area of adequate size within the bus loop. The bus loop also contains overflow parking for staff.
- All of the asphalt paving in parking areas on the site is in poor condition with significant cracking, potholes, patches, etc., and should be replaced.

27. Vehicular Circulation Excellent Good Fair Poor

Comments: Vehicular Circulation on the school site is generally fair, with three separate drives that serve parking areas for student / staff, bus and visitors. However, most of the asphalt paving is in poor condition.

- The main school entry / car rider drive and bus drive are located on Yellow Jacket Lane, which does not contain any dedicated turn or deceleration lanes for the school. The staff and student drives are located on North 12th Street, which also does not contain any dedicated turn or deceleration lanes for the school. Additional investigation should be made with the Department of Transportation about public road improvements.
- The car rider drive runs along the west side of the building and offers adequate stacking for the majority of time. However, this drive contains visitor parking within the stacking area, which is a safety concern. This area should be redesigned to separate the drive from parking for stacking purposes.
- The south staff / student parking area contains one way circulation with a dedicated entry and exit drive onto North 12th Street.
- The east bus drive contains adequate stacking, turn-around loop area and more than adequate parking for busses.
- The kitchen has a dedicated service drive from the bus loop, which is in poor condition. The service drive should be replaced, with a concrete pad under the loading and dumpster areas.

- All of the asphalt paving in drive areas on the site is in poor condition with significant cracking, potholes, patches, etc., and should be replaced.

28. Pedestrian Circulation Excellent Good Fair Poor

Comments: The school site contains adequate sidewalk locations for pedestrian circulation for access to various areas of the school buildings. However, most of the sidewalks are in poor condition.

- Almost all of the sidewalks on site, except around the new field house, are in poor condition and should be replaced.
- Additional sidewalks should be added to provide handicap access to the Athletic Facilities spectator areas.
- The perimeter of the school site does not contain sidewalks on either side of the public roads.

29. Walkway Canopies Excellent Good Fair Poor

Comments: The school contains two walkway canopies that connect some of the various buildings.

- The two canopies connecting the buildings are of substantial prefinished metal construction and in good condition.
- The school does not contain a canopy at either the bus rider or car rider drop off areas, which should be added.
- The main school entry contains a very small exterior cover.

30. Outdoor Play

- The site contains does not contain any outdoor play areas, other than the athletic fields.

31. Athletic Facilities Excellent Good Fair Poor

Comments: The school contains (1) football field / track, (1) baseball field, (1) softball field and (1) multipurpose practice field. Soccer also utilizes the football field. All of the facilities, including the practice field are lighted. The site does not contain tennis courts.

- The football field is in fair condition. However, the score board needs to be replaced.
- The asphalt paving of the track and high jump is cracking in many areas and should be re-surfaced.
- The long jump runway and landing pit are both in poor condition. The runway should be re-paved and the pit reconstructed.
- The football field and track do not contain continuous perimeter fencing between the track and spectator areas, which should be added.
- The baseball field is in good condition. However, the score board needs to be replaced. The dugouts are masonry with concrete roofs and are in fair condition.
- The softball field is in fair condition. However, the score board needs to be replaced. The dugouts are masonry with wood framed roofs and in fair condition.

32. Athletic Spectator Areas Excellent Good Fair Poor

- The football stadium seats approximately 1,150 on the home side and 750 on the visitor side. This is significantly less than the GCS standards, and also that is required to host regional games, of 2,500 home and 1,500 visitor. Significant additional toilets are required by code if the total seating is increased to 4,000.
- The football stadium does not include any nearby handicap parking, or handicap access to the bleacher areas.
- The football stadium does not contain a ticket building, which should be added on the home side.
- The football concessions / toilet building on the home side is in very poor condition. This building should be demolished and a new building constructed to include more toilets. An additional toilet building should also be added at the other side of the home side bleachers.
- The football stadium visitor side contains a concessions building that is in very poor condition and no longer utilized. This building should be demolished and a toilet building added.
- The football stadium visitor side contains a concessions / press box building, which the interior is in poor condition and in need of updating. The press box is not elevated high enough to require handicap accessibility by code.
- The softball field does not include any nearby handicap parking, or handicap access to the bleacher areas.
- The softball field contains a storage / press box building, which is in very poor condition on both the interior and exterior. The ceiling and a portion of the roof has collapsed on the interior and the exterior stairs are also collapsing. This building is not habitable, and should be demolished and a new building constructed. The softball field could share toilets and concessions with the visitor side of the football stadium.
- The baseball stadium does not include any nearby handicap parking, or handicap access to the bleacher areas.
- The baseball stadium contains a small toilet building that is in very poor condition and not handicap accessible. This building should be demolished and a new building constructed to include more toilets.
- The baseball stadium contains a concessions / press box building, which the interior is in poor condition and in need of updating. The press box does not contain enough square footage, or is elevated high enough to require handicap accessibility by code.

33. Grounds / Landscaping Excellent Good Fair Poor

- The school contains very limited foundation shrubs, which are maintained in fair condition.
- The parking lots contain virtually no landscaping.
- The school contains two large, mature trees located between the Masonry shop and school building, which are located too close to the buildings. These trees should be removed and replaced with new lower growing trees for safety considerations of large limbs or the trees falling on the school and for maintenance concerns of leaves clogging the roof gutters.
- The school contains several large, mature trees near the perimeter and parking areas, which are located an appropriate distance from the school and appear to be maintained in good condition.
- The perimeter of the site is significantly overgrown on the east side and should be trimmed back.

34. Utilities Excellent Good Fair Poor

- The school is served by the City of Bessemer for water and sewer, and does not have a backflow preventer for domestic water, which should be added by code. The water line is reported to original cast iron and should be replaced.
- The school does not have a grease interceptor on the sanitary sewer line for the kitchen, which should be added by code. Much of the sewer line has recently been replaced, with no current issues.
- Only two fire hydrants are located in the general area of the school, across North 12th Street. More fire hydrants should be added on the school site to provide adequate coverage of the school and athletic buildings.
- The school is served by natural gas, which is metered separately for the kitchen and the buildings.
- Overhead power lines run in various areas, and along the football field, which presents a safety concern. Further investigations with the service provider should occur about burying these power lines underground.

35. Storm Drainage Excellent Good Fair Poor

- The site does not have a stormwater management pond, which is not required by the municipality unless additional impervious area is added.
- The site contains minimal underground storm drainage for each of the paved parking areas, which daylight into ditches along the public roads and perimeter of the property. Additional storm drainage should be added when the paving is replaced.
- The storm culvert piping beneath the student / staff entry drive from North 12th Street is partially buried and does not provide adequate water flow, creating evidence of ponding. This pipe should be cleaned out, or replaced with a larger pipe if the driveway is replaced. In addition, further investigation should be given to improving the drainage ditches along public roads with the governing Department of Transportation or stormwater authority.
- The area between the main school building, carpentry building and masonry building does not contain any storm drainage, leading to ponding and water infiltration into the masonry building. Additional storm drainage should be added in this area.
- Approximately one third of the downspouts throughout the school are connected directly to the underground stormwater piping system. This connection should be made indirect, with the downspouts spilling above grade into catch basins to prevent clogging. Approximately one third of the downspouts already have this indirect connection.
- Approximately one third of the downspouts spill directly on to grade. Catch basins should be added where possible to direct the roof drainage to an underground storm drainage system to prevent water from ponding next to the buildings.

36. Emergency Access Excellent Good Fair Poor

- The main school building has paved emergency access around the north, east and south sides via parking areas and drives. Access is provided to most of the west side of the main building by two partial drives, but does not provide continuous vehicular access around the perimeter of the building.
- Emergency access to the football, baseball and softball fields are provided by narrow gravel drives. These drives should be widened and paved for both emergency and handicap access.

37. Site Security

Excellent Good Fair Poor

- The site is located in a rural residential area. The Principal and school SRO Officer indicated that the surrounding areas do not typically include significant crime and vandalism at the school is rare.
- The north, east and south portions of the building and site have good visibility from public roads, drives and parking areas. The west side has some vehicular access for police patrol, but does not include a continuous drive.
- The athletic fields all contain perimeter fencing.
- The site contains chain link fencing around the perimeter, including the athletic fields. Isolated areas are damaged and should be replaced. In addition, wooded areas have overgrown the fencing in some areas around the athletic fields and should be cut back.

38. Additional Considerations

- All of the exterior steel handrails and guardrails need painting.
- Directional signage on the school site is poor and should be replaced.

Part 4: Building Envelope**39. Construction Type**

Non-Combustible Combustible

40. Structural Floors

Material:

Concrete Slab on Grade
 Concrete on Metal Deck over Steel Structure
 Wood Deck on Wood Joists
 Other

Evidence of Structural Concerns: Prevalent Isolated None VisibleOverall Condition of Structural Floors: Excellent Good Fair Poor**Comments:** The structural floors consist of concrete slab on grade in all areas.

- Concrete floors generally appear to be in good condition with no major cracks telegraphing through the floor coverings.
- Some minor cracks are visible in the terrazzo flooring in the corridors and cafeteria. These appear to be minor shrinkage cracks.

41. Exterior Walls / CladdingMaterial: Masonry EIFS / Stucco Metal OtherEvidence of Structural Cracking: Prevalent Isolated None Visible

Evidence of Concern with Exterior Cladding:

Cracks / Gaps	<input type="checkbox"/> Prevalent	<input checked="" type="checkbox"/> Isolated	<input type="checkbox"/> None Visible
Efflorescence (Masonry)	<input type="checkbox"/> Prevalent	<input checked="" type="checkbox"/> Isolated	<input type="checkbox"/> None Visible
Moisture Penetration	<input type="checkbox"/> Prevalent	<input checked="" type="checkbox"/> Isolated	<input type="checkbox"/> None Visible
Rot/Decay/Corrosion	<input type="checkbox"/> Prevalent	<input checked="" type="checkbox"/> Isolated	<input type="checkbox"/> None Visible

Overall Condition of Exterior Walls: Excellent Good Fair Poor

Comments: The exterior walls of Buildings A, C and E appear to consist brick / CMU construction that most likely does not include insulation, an air space or flashing. The newer Buildings H and F consists of brick veneer with CMU backup, insulation and an air space. Building F, the Auxiliary Gym is steel framed with both masonry veneer and metal wall panels. Building J, the Masonry shop is steel framed with metal wall and roof panels.

- The brick veneer appears to be in generally good condition, with some areas of efflorescence on the older Buildings A, C and E which may be a result of moisture within the wall due to the lack of an air space.
- A crack in the brick veneer was observed in Building C, near the corner of Classroom 209. The crack has previously been filled with caulk, and shows evidence of further movement. This crack should be further investigated by a structural engineer.
- Expansion joint caulking is failing and has fallen out in several places, and should be replaced on all buildings to prevent water intrusion.
- Buildings A and C contain exterior hard coat stucco soffits with areas of cracks and deterioration, and should be replaced. These soffits are suspected to contain asbestos, although they have not yet been tested.
- The Masonry shop building appears to have new metal wall panels installed within the last several years, which are in good condition.

42. Exterior Glazing

Frame Material: Aluminum Steel Wood Other
 Glazing Material: Un-insulated Insulated Glass Block

Evidence of Concern with Exterior Glazing:

Moisture Penetration Prevalent Isolated None Visible
 Rot/Decay/Corrosion Prevalent Isolated None Visible

Overall Condition of Exterior Glazing: Excellent Good Fair Poor

Comments: Due to the differing ages of the various building wings, the condition of the exterior glazing systems varies substantially, but the majority of glazing is in poor condition.

- The exterior glazing in most areas of the older Buildings A, C and E consists of 1/4" un-insulated glass in a thermally continuous steel framing system, which is very energy inefficient and past its useful life. In addition, this glass appears to be standard plate glass, which presents a safety concern as it is easily broken. All of this glazing should be replaced with insulating glass in a thermally broken aluminum storefront framing system to be more energy efficient and provide better thermal control of the classrooms in particular. The glass should be safety tempered in areas required by code.
- The window glazing in Buildings F, H, the Cafeteria addition, and the main room of the Media Center consists of insulating glass in an aluminum framing system and is in fair to good condition.

43. Exterior Entry / Exit Doors

Door Material: Aluminum Steel Wood Other
 Evidence of Concern with Entry / Exit Doors:

Moisture Penetration Prevalent Isolated None Visible
 Rot/Decay/Corrosion Prevalent Isolated None Visible

Overall Condition Doors: Excellent Good Fair Poor
 Overall Condition of Hardware: Excellent Good Fair Poor

Comments: Due to the differing ages of the various building wings, the condition of the entry / exit doors varies substantially, but the majority of doors are in poor condition. None of the exterior doors include access control hardware, which should be added for security.

- Most of the entry / exit doors in the older Buildings A, C and E appear to be original and are in poor condition, some do not have code compliant panic devices and none have access control for security. These doors should be replaced to include code compliant door hardware and access control for security.
- The doors in Buildings F and H are in generally good condition, but do not have access control hardware, which should be added for security.
- The main front entry doors should have secure access control with buzz-in and security camera tied into the Administration area reception desk.

44. Exterior Classroom Doors

Door Material: Aluminum Steel Wood Other

Evidence of Concern with Classroom Doors:

Moisture Penetration Prevalent Isolated None Visible
 Rot/Decay/Corrosion Prevalent Isolated None Visible
 Other None at this time

Overall Condition of Doors: Excellent Good Fair Poor
 Overall Condition of Hardware: Excellent Good Fair Poor

Comments: One Art and one Science classroom have doors that open directly to the exterior. The Masonry and Carpentry shop buildings also contain doors that open to the exterior.

- All of the exterior classroom doors are generally in poor condition, and should be replaced with insulated hollow metal doors and lever style hardware with new locks.
- The majority of other exterior doors for mechanical rooms, electrical rooms, storage, locker rooms and kitchen service in Buildings A and C are in poor condition and should be replaced.

45. Roofing

An independent roof assessment was performed for Gaston County Schools by Roof Engineering, Inc. (REI) in 2006. The report indicates the following needs regarding the replacement of roofs:

- Building A: Asphalt Built-up Replace in 2015 (Classrooms, Gym, Auditorium, Band Rm)
- Building A: Asphalt Built-up Replace in 2030 (Admin, Cafeteria, Lockers)
- Building C: Asphalt Built-up Replace in 2020
- Building E: Asphalt Built-up Replace in 2015
- Building F: Asphalt Built-up Replace in 2022
- Building H: Asphalt Built-up No information provided in roof assessment. Replace in 2030 (installed in 2011 assume 20 year life cycle)

46. Additional Considerations

- The brick chimney appears to be utilized as a boiler flue, but should be lowered if possible, for safety reasons.

Part 5: Building Interior

47. Interior Walls

Overall Condition of Walls: Excellent Good Fair Poor

Comments: The majority of interior walls are painted CMU or brick and are in fair condition. Several corridors include a glazed face CMU, which is in generally fair condition.

- Some of the walls of offices within the classrooms of Building C contain exposed wood paneling and non-tempered plate glass, and should be replaced with fire resistant drywall and tempered glass, if they are to remain.
- In the Auxiliary Gym, the insulation liner on the interior side of the exterior wall is significantly damaged from baseballs. This insulation should be repaired and a liner panel installed to protect the insulation.

48. Floor Finishes

Classrooms	Flooring Type: VCT (in most areas, some VAT in 100 wing)	Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Corridors	Flooring Type: Terazzo (in most areas, VCT in Building F)	Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Cafeteria	Flooring Type: Terazzo	Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Gymnasium	Flooring Type: Wood	Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor
Auxiliary Gym	Flooring Type: Rubber	Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor
Auditorium	Flooring Type: Concrete	Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Media Center	Flooring Type: Carpet	Condition: <input type="checkbox"/> Excellent <input checked="" type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> Poor
Administration	Flooring Type: Carpet	Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor

Comments: The majority of interior floor finishes in classrooms are VCT and in fair condition, although some classrooms in Building C contain VAT. Most of the Corridors, except in Building F, are Terazzo, and in fair condition.

- Some classrooms in the 100 Classroom wing the contain exposed VAT tile, which should be abated and replaced with VCT.

- The VCT in the classrooms of Building F is in poor condition and should be replaced. VCT in the corridors of Building F is in fair condition.
- The Band room contains VCT with rubber nosing that is in poor condition and should be replaced with carpet.
- The carpet in the Administration area is in generally poor condition, with areas of significant wear in high traffic areas and should be replaced. The carpet is assumed to be installed over VAT, which should be abated when the carpet is replaced.
- The wood Gymnasium floor is in poor condition and should be refinished.
- The rubber flooring in the Auxiliary Gym is in poor condition and should be replaced.
- The Auditorium contains only concrete floors. Carpet should be installed within the aisles, with exposed polished concrete beneath the seats.
- The wood Stage floor is in poor condition, and should be refinished and painted black.

49. Ceilings

Lay-in	Locations: Building A (except as noted below, Building C, Building F) Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Plaster	Locations: Building A (100 wing, group toilets and locker rooms) Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Drywall	Locations: Group toilets in Building F Condition: <input type="checkbox"/> Excellent <input checked="" type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> Poor
Open Structure	Locations: Gymnasium, Auxiliary Gym, Field House, Masonry, Carpentry Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor

Comments:

- Most of the ceilings in Buildings A, C and F are lay-in and in generally fair to good condition.
- The ceilings in the 100 corridor of Building A and a portion of the Cafeteria are a type of textured plaster coating applied to a sheathing material attached directly to the underside of the roof joists. This material is not reported to contain asbestos in all areas. These continuous plaster coated ceilings do not offer any access to the plenum space and all light fixtures, conduit, piping, etc. are surface mounted. These ceilings should be removed and replaced with 2x2 lay-in, for better acoustics, reflectivity, installation of new light fixtures and concealment of conduit and piping. The plaster coating is peeling off in many areas of group toilets and should be replaced with moisture resistant drywall.
- The Auditorium contains a continuous textured plaster coating ceiling that is reported to contain asbestos. This ceiling should be removed and replaced with a series of drywall or lay-in ceiling baffles that offer better acoustics, and access to above ceiling electrical and wiring for lighting and sound upgrades.
- The Band and Chorus room appear to contain standard lay-in ceilings. These should be upgraded to a high NRC ceiling for acoustical purposes.
- The PE and Team locker rooms contain smooth plaster ceilings, which are in poor condition and should be replaced with moisture resistant drywall.
- The Kitchen contains a smooth plaster ceiling, which is in fair condition.

50. Casework

Classrooms	Casework Type: Wood and Plastic Laminate Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor
Science Rooms	Casework Type: Wood with Chemical Resistant Counters Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Media Center	Casework Type: Wood and Plastic Laminate Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Administration	Casework Type: Wood and Plastic Laminate Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor

Comments: The majority of the casework in the school is in poor condition.

- The Classrooms in Building A and C each contain a lockable teacher storage cabinet, which are in poor condition and should be replaced. The remainder of the casework in the room consists of various mobile cabinets and bookshelves considered to be furniture / equipment.
- The Classrooms in Building F do not contain any casework. A lockable teacher storage cabinet should be added to these rooms.
- Both of the Art rooms do not contain adequate built in casework for storage of materials, which should be replaced.
- The Media Center contains adequate casework, which is in fair condition. The and Media Support rooms contain a variety of very dated casework, which is inadequate and should be replaced.
- The Administration area contains inadequate and dated casework, which needs to be replaced. The main reception counter is not handicap accessible.
- The Science classrooms in Building A contain island casework with chemical resistant tops, sinks and a demonstration island with sink, which are all in poor condition and should be replaced.
- The Science classrooms in Building F contain perimeter casework with chemical resistant tops, sinks and a demonstration island with sink, which is adequate and in fair condition.

51. Interior Doors

Overall Condition Doors:	<input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor
Overall Condition of Hardware:	<input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor

Comments: Due to the differing ages of the various building wings, the condition of the interior doors and hardware varies substantially, but the majority are in poor condition.

- The interior doors and hardware in most areas of the older Buildings A, C, E and J appear to be original and do not have code compliant lever style hardware. These original doors should be replaced, and the classroom doors should also include lockdown hardware.
- The interior doors and hardware in Building F are in generally good condition and have lever style hardware, but should be upgraded with lockdown hardware in the classrooms. These doors also have glass sidelites, which appear to be tempered glass, but should be replaced with solid panels for security purposes.

52. Additional Considerations

- Most of the window blinds, except those in Building G, are in poor condition and in need of replacement.

Part 6: Handicap Accessibility

53. Exterior Handicap Accessibility

Accessible Parking:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input checked="" type="checkbox"/> Fair	<input type="checkbox"/> Poor
Accessible Route to Building(s):	<input type="checkbox"/> Excellent	<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Fair	<input type="checkbox"/> Poor
Accessible Entrances / Egress:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input checked="" type="checkbox"/> Fair	<input type="checkbox"/> Poor
Accessible Routes between Buildings:	<input type="checkbox"/> Excellent	<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Fair	<input type="checkbox"/> Poor
Accessible Athletic Fields:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor

Comments: The overall exterior handicap accessibility for the school varies, with inadequate parking, but entrances / egresses from the building that meet handicap accessibility requirements.

- The site contains 8 marked accessible parking spaces in the student and staff parking areas, two of which are van accessible. Only 2 handicap spaces are located near the main school entry. Additional accessible spaces need to be added near the main entry.
- The Masonry shop, Carpentry shop, Auxiliary Gym and Field House all require exterior access and have an accessible route between buildings on site.
- All of the main entry / exit doors exit to grade without stairs.
- Both of the exit doors from the Auditorium near the Stage exit directly to the exterior with steps up to grade and are not handicap accessible.
- None of the Athletic Facilities contains handicap accessible parking within close proximity.
- The football field / track contains an accessible route to the main entry gate, but does not include an accessible route to any of the spectator bleachers. The bleachers do not include any handicap seating areas, on either the home or visitors side.
- The baseball and softball fields do not include an accessible route from the parking to any of the spectator areas. The bleachers do not include any handicap seating areas.

54. Interior Handicap Accessibility

Accessible Routes:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input checked="" type="checkbox"/> Fair	<input type="checkbox"/> Poor
Accessible Doors and Hardware:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor
Accessible Signage:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor

Comments: The interior of the school is on one finished floor level and contains no interior stairs or ramps.

- The majority of classroom doors in the school are 3'-0" wide. However, most of the doors in Buildings A, C, E and J have knob style hardware, and should be replaced with code compliant levers.
- The Auditorium is accessible only from the entries at the rear, but does not contain any handicap seating areas. Both of the entries near the Stage contain steps on the exterior and are not accessible.
- The Auditorium Stage is not handicap accessible from any location.
- The Administration area reception counter and the Media Center circulation counter are both not handicap accessible.
- Most of the signage in Buildings A, C, E and J does not meet current accessibility requirements and should be replaced.

55. Toilet Rooms Accessibility

Accessible Group Toilets:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor
Accessible Staff Toilets:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor
Accessible Athletic Facility Toilets:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor

Comments: The handicap accessibility of the group toilets is generally poor, as only one is handicap accessible. Only one of the Staff toilets is handicap accessible.

- The 3 group toilets in Buildings A and C are not handicap accessible. However, the toilet rooms are of sufficient overall size and should be upgraded to include handicap accessible partitions and fixtures, which would reduce the watercloset fixture count.
- The group toilets in the in Building F are handicap accessible.
- The Carpentry building contains a single toilet, which is not handicap accessible.
- The Boys and Girls PE and Team Locker room toilets in Building A do not contain handicap accessible stalls or fixtures. However, the rooms are of sufficient overall size and should be upgraded to include handicap accessible partitions and fixtures, which would reduce the watercloset fixture count.
- The school contains a total of four Staff toilets, two of which are located in the Administration area and two across from the Media Center, none of which are handicap accessible. Additional accessible Staff toilets should be provide in each classroom wing.
- The football stadium contains a new toilet building on the visitor side, which is handicap accessible. None of the other toilets in the Athletic Facilities are handicap accessible and should be upgraded.

Part 7: Food Service**56. Observations and Recommendations**

Storage:

- Cold Storage Assembly is minimum 20 years old and is in ok condition for its age. Size is adequate per manager. Strip curtains also need to be added to hold temperature. Freezer door does not shut properly and needs to be replaced.
- Cold Storage shelving (10 units) to be replaced as they are worn and rusting.
- Dry storage shelving (10 units) to be replaced with NSF approved units. The square footage is adequate for number of students being served.
- Reach-in Refrigerator (2-Door) is approximately 10 years old and in good condition. Temperature currently is holding at 40 degrees.
- Fly fan is old but in good condition.

Food Preparation:

- Prep Worktables are in ok condition. Bases have galvanized/painted legs and need to be repainted or replaced.
- Prep sinks are in good condition but waste is direct and recommend running to floor sink and thru a grease trap.
- Ice Machine is in good condition and does not need replaced.

Cooking:

- Convection Oven (15 years old) is in good working condition.
- (2) Gas Fryer (15 years old) but in good working condition.
- Steamer (3 years old) is in good condition
- Combi Oven (15 years old) is in good condition
- All cooking equipment is reported by manager to have no issues at all currently.
- Exhaust Hood (30 years old) is painted and in-efficient. Recommend replacement of hood, fire system, and addition of an s/s utility chase.
- Heated Cabinet (3) are old but in good condition as they are currently keeping appropriate temperature. (1) Unit is approximately 2 years old and in good condition.

Dishwash:

- Dish machine (15 years old) is a chemical machine and currently in good working condition.
- Soiled dishtable to be replaced. Front edge is above 34" working height. Add scrap basket. Replace pre-rinse spray unit as it is worn. Soiled and clean dishtable has galvanized legs and needs painted or replaced.
- 3-compartment sink is missing and recommend adding as required by health code.

Serving:

- Serving lines are minimum 20 years old. All drop-ins are currently in good working condition. Recommend replacement in next 5 years. Tray slides are bent. Sneeze guards do not currently meet NSF.
- Milk Cabinet unit (2) are in good condition.

Auxiliary Spaces:

- Add private office for manager.
- Plumbing gets backed up at prep sinks.
- No grease trap
- Recommend adding (1) more hand sink.
- Kitchen square footage is adequate.

Part 8: Plumbing Systems

57. Observations

Roof drainage is a gutter and downspout system. No reported problems.

Gas service is provided to the kitchen appliances, water heaters, and heating boiler. Gas to the kitchen is metered separately.

Several water coolers are non-compliant with current code for accessibility.

The incoming water service to classroom wing, building F, has a backflow preventer installed. The remaining buildings are not currently protecting the city water supply at this time. It was noted that there is good water pressure in the building.

Building A locker rooms and admin/office area fixtures are fed with hot water from the boiler room on the east side of the gymnasium. Arrival of hot water is considerably delayed since there is not a recirculation line installed.

Maintenance personnel have stated that there are not a sufficient quantity of sanitary waste cleanouts on the original construction, Buildings A and C.

Piping:

- Copper water supply piping was observed inside. Most all exposed piping was uninsulated. There is a significant portion of underground galvanized water piping installed beneath the floor slab intersecting Buildings A and C. An unusable gate valve, serving as shutoff to the boiler room, is located in a floor box. Valve is badly deteriorated. Floor box is located inside Bldg C janitor's closet.
- Galvanized and PVC waste piping was observed in kitchen. Much of the sanitary piping inside is cast iron.
- Gas piping had been installed under the floor slab serving Building D science rooms. This piping leaked in the past and has since been shut off and abandoned in place.

Fixtures:

- Restrooms have flush valve type water closets and urinals, and lavatory fixtures. Restrooms appeared to have proper ventilation, floor drains, installed fixture heights, and hose bibbs for housekeeping and priming the floor drain trap.
- Lavatories in Bldg A group toilets do not have hot water.

Water Heaters:

- A 100 gal gas fired water heater serves the kitchen and appears to be 15 yrs old. A 320 MBH gas fired water heater and two 120 gal storage tanks serve the classroom wings in Buildings A & C and the gymnasium. A 199 MBH gas fired water heater serves the Aux. Gym Addition, Building H, and is good operating condition. An 80gal electric water heater serves classroom wing, Building F and was installed in 1995.

Kitchen:

- No grease interceptor installed.
- Sanitary waste from 2- and 3- compartment sinks were observed to be direct connections with no air gaps.

58. Recommendations

- Install a grease interceptor outside of building in an accessible location.
- Install backflow preventer
- Replace water coolers
- Install indirect waste connections as required by code
- Replace hand sink in the kitchen
- Replace all fixtures in Buildings A & C group toilets, private toilets, and locker rooms.
- Install a new local water heater and hot water piping to serve the group lavatories in Building A
- Replace 100 gal gas fired water heater serving Kitchen.

- Replace 80 gal electric water heater serving Bldg F
- Insulate exposed domestic water piping in mechanical rooms.
- Replace service sinks with floor mop sinks.

Part 9: HVAC Systems

59. Observations

The building HVAC system consists of the following combination.

- 2-pipe system utilizing unit ventilators (chilled water/hot water)
- DX AHUs with steam heating
- Packaged rooftop units
- Window A/C units

Water source heat pumps have been abandoned in Buildings A and C. Lobby is currently being served from Auditorium AHUs. Bldg C classrooms are currently being conditioned with window A/C units.

Dual temperature unit ventilators serve Bldg F. Ventilation air is taken directly from outside via intake louver.

Many of the corridors and lobbies have unit ventilators. "Heating only" fan coil units were observed at the entry doors.

Gymnasiums in Buildings A & F are heated by hot water unit heaters. Outside air ventilation is provided by exhaust fans and intake louvers.

Steam trap maintenance is an ongoing issue.

HVAC operation is based on time-of-day scheduling. Humidity is extremely difficult to control in the building, particularly during the fall and spring seasons. Mold and mildew has been a problem in Building F classroom wing.

Central Plant Cooling: There are two chillers. A McQuay nominal 60 ton air cooled chiller was installed around 1995. A York nominal 80 ton standard efficiency scroll chiller was installed around 2011. There were no operational issues reported with these units.

Central Plant Heating: The central heating plant consists of two gas fired cast iron steam boilers as manufactured by Weil-McLain. Each boiler has a net output capacity of 4283 MBH and appears to be in good working condition. Age of equipment is unknown but they are estimated to be 10 yrs old or less.

Distribution Systems:

- Ductwork is constructed of galvanized metal.
- All ductwork observed in mechanical rooms contains inner liner material.
- All AHUs and pumps are constant volume air systems.
- HW piping material is copper. Piping is wrapped with fiberglass insulation.
- Condensate piping is not insulated in the boiler and mechanical rooms.

Controls:

- Unit ventilators are served by the 2-pipe system and controlled by individual wall thermostats.
- HVAC control system is a hybrid between pneumatics and electronic control devices. The JCI system installed in the early '90s is not functioning and has been abandoned.

Kitchen:

- An existing grease hood is installed complete with a wet chemical fire suppression system. There is no direct air makeup to the hood. Location and source of hood makeup air could not be identified.
- Kitchen area is conditioned by an indoor DX AHU located in the food prep area. Existing unit ventilators do not operate and have been abandoned in place.
- Dry storage does not have conditioned air supplied to it.

60. Recommendations

- Replace HVAC controls with a building wide automation system utilizing direct digital controls. Remove all control air compressors and pneumatic controls.
- Provide a makeup air source for the kitchen hood via a dedicated roof mounted ventilator unit.
- Remove dual temp unit ventilators in Kitchen and install new chw/hw AHU in a designated mechanical room.
- Provide supply/return air in dry storage room.
- Verify building air balance, especially on exhaust systems. Replace or clean all exhaust grilles. Confirm building is appropriately pressurized.
- Install a new 2-pipe system alongside the existing system. Convert from 2-pipe to 4-pipe system
- Replace unit ventilators in classroom with 4-pipe FCUs. Install Dedicated Outside Air Systems.
- Remove all steam and steam condensate piping distribution. Convert boiler operation to hot water.
- Replace chilled and hot water distribution pumps. Install VFDs.
- Remove lined ductwork. Install new duct with external fiberglass insulation wrap.
- Provide standalone packaged DX AHUs with dehumidification controls for the two gymnasiums
- Provide new central station units for the Cafeteria, Auditorium, and Stage.
- Provide a dedicated space and ductless DX split system for IT rack.
- Install exhaust in group toilets in Building A
- Replace roof mounted toilet exhaust fans throughout.
- Install 4-pipe FCU and ductwork in corridors.
- Replace AHU and dust collector system in the shop building.

Part 10: Fire Protection**61. Observations**

- Sprinkler system installed (Y/N) - N
- System type? Wet, dry, preaction, etc.? – N/A
- Full or Partial Coverage? – N/A
- Standpipes installed (Y/N) - N
- Fire Pump installed (Y/N) – N

62. Recommendations

- Provide a full coverage sprinkler system in accordance with the NC Fire Code and NFPA Standard 13.

Part 11: Electrical, Fire Alarm, Security and Communications Systems

63. Observations

Service Entrance

This facility is fed by two (2) pad-mounted transformers by Duke Energy. One (1) transformer (located adjacent to Building A) is rated 480GrY277-volts at 600 amperes and feeds new air conditioning (installed in 1990) as well as the original service (1000 amperes @ 208GrY120-volt) via an Owner owned pad mounted transformer. The second pad-mounted transformer located near Building F feeds that wing.

The capacity of the services appear to be adequate.

Distribution

The power distribution consists of distribution panelboards and lighting panelboards fed by copper wire in conduit. The main service equipment and some of the distribution and lighting panelboards are well within their life expectancy. There are still some original panelboards that are in poor condition, and have been in service over 50 years, should be replaced. Replacement circuit breakers for these panelboards may not be available. There are some panelboards (actually loadcenters) that have been “tacked” on as new circuits have been needed. These need to be replaced with commercial grade panelboards.

Panelboard labeling, including panelboard directories, is not up to date, some labeling is missing and duplicate panels designations were found. There are standard duplex receptacles too near sinks, which should have GFI protection. Additional receptacle circuits may be needed.

Grounding

Proper grounding is one of the most important factors in an electrical system. Not only is it essential for safety, it is also required for proper operation of electronic equipment. The grounding systems in the older portions of the facility are in question. The original building uses the metal conduit system to distribute grounding throughout the facility. This was legal at the time the building was constructed, but not now. The problem is that the underground conduits installed at that time were galvanized steel, which could have deteriorated in the nearly 50 years since the original facility was constructed, which could result in an increase in ground resistance, or loss of grounding entirely. An earth grounding study needs to be made and corrective measures taken.

The NEC (National Electric Code) requires a minimum ground resistance of 25 ohms. For electronic systems (data rooms, computers, etc.) a minimum ground resistance of 5 ohms is needed.

Lighting

Some of the lighting has been upgraded. DPI recommends T8 lamps and electronic ballasts as a minimum, but suggests T5 and LED as alternates. The exterior lighting is insufficient and in poor condition in most areas.

Lighting levels are, in some cases, within the levels recommended by DPI, but many areas have lighting levels far below DPI recommendations. These levels are recommended, not required. The lighting levels

in the Kitchen appear to be in accordance with North Carolina Department of Health which requires 50 footcandles minimum in areas where food is handled, prepared and served, and where utensils are washed.

Emergency Power

This facility has no emergency generator.

Fire Alarm

The existing fire alarm system has a Simplex 4100U addressable control panel. This is a current model. Although the layout of devices in most areas have been updated, some of the layout and distribution of alarm initiating and notification devices does not meet current codes and ADA requirements.

Security

The security system does not meet current Gaston County School guidelines. No access card readers on exterior doors. No Mass Notification System. Video Surveillance System needs upgrading with additional cameras (this work is currently being priced).

Data/Communications

The data system currently does not meet GCS criteria. The MDF and IDF's are not dedicated and in secure locations. The MDF is located in a Work Room. The IDF's are located in various non-dedicated and unsecured rooms.

Concerns

It was noted in several areas where panels are located that materials, furniture, etc. have been stored too close to the equipment. This is both illegal and dangerous. The National Electrical Code requires a minimum of 36 inches clear in front of these items. We feel that this issue should be addressed as soon as possible.

64. Recommendations

Service Entrance

The existing service entrances are relatively new and appears to be in good condition except for some labeling issues.

Distribution

All original panels and panels by manufacturers that are no longer in business, or are past their rated life, should be replaced. All equipment should be properly labeled, including directories showing loads for all circuits. All electrical panelboards need to be scanned with an infrared scanner to be sure that there are no "hot" spots, which can indicate that there is an overload, faulty device or connection. Based on the scanning results, corrections need to be made.

Lighting

The lighting in some areas of the facility has recently been replaced, many areas need new lighting. There is practically no exterior lighting, additional exterior lighting needs to be added – some on building walls and some on poles. New exterior lighting should be LED with protective enclosures without the use of polycarbonate lenses. Additional exit signs and egress lighting needs to be installed. All exit signs and egress lighting shall have battery backup with self-diagnostic system unless they are connected to the standby generator. Auditorium, Stage and Gymnasium lighting should be updated, with new dimming system for the Auditorium and Stage. Egress lighting needs to comply with ADA requirements.

Emergency Power

A new generator needs to be provided with capacity to feed life safety, alarm and data requirements.

Fire Alarm

The fire alarm system needs to be updated and expanded.

Security

Security system needs to be upgraded to latest GCS criteria. Door access system and Mass Notification System need to added per GCS standards.

Data/Communications

The wiring system should be updated to current GCS criteria. The main data rack MDF and IDF racks need to be secured. Backup power from a standby generator should be provided.

Sound Systems

The intercom system is outdated, but appears to operate but it should be updated to a VoIP based system. The existing system should be updated and restored to proper operation so that it can be used as a backup system for the new IP intercom and paging system.

The sound systems in the Auditorium and Gymnasium should be updated and made to comply with ADA requirements.

End of Assessment



CHERRYVILLE HIGH
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ASSESSMENT

CHERRYVILLE HIGH

Part 2: General Space Standards

11. General Purpose Classrooms

Room Description	No. of Rooms	Typical Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
General Purpose	19	700 - 900 sf	850 sf	82% - 105%	Fair - Good

Comments: The general purpose classrooms are arranged into 2 circular wings. The classrooms vary in size, but most are close to, or equal to space standards. All of the classrooms contain two curved walls, which limits the instructional efficiency of the rooms.

All of the classrooms contain smart boards, wireless technology and at least four hardwired computer drops.

- The classrooms in Building A are all between approximately square feet, which exceeds space standards. Each of the classrooms share a small room, which was originally designed as an office, but are mostly utilized for storage. Removal of these rooms will increase the area and functionality of the instructional rooms somewhat. The walls are wood framed with non-tempered plate glass, and should be replaced with fire resistant drywall, if the rooms are to remain. The classrooms each contain a dated teacher storage casework unit.
- The classrooms in Building B vary in size, but are all smaller than space standards. Room 22 is especially small, at only 600 square feet. Each of the classrooms share a small room, which was originally designed as an office, but are mostly utilized for storage. Removal of these rooms will increase the area and functionality of the instructional rooms somewhat. The walls are wood framed with non-tempered plate glass, and should be replaced with fire resistant drywall, if the rooms are to remain. The classrooms each contain a dated teacher storage casework unit.
- Some of the classrooms in Building B contain demising walls of folding panels, which do not offer adequate acoustical separation, and also limit the amount of electrical / communications outlets within the rooms. These demising walls should all be replaced with fixed walls including sound insulation.

12. Science Classrooms

Room Description	No. of Rooms	Typical Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
Biology and Physical Science (29, 44)	2	750 sf	1,200 sf	62%	Poor
Chemistry / Phys (31)	1	1,300 sf	1,500 sf	86%	Fair
Earth Science (11, 12)	2	910 sf	1,400 sf	65%	Poor

Comments: Three Science classrooms are located in Building A and two in Building B. Four of the five Science rooms are significantly smaller than space standards.

- The Chemistry / Physics classroom in Building B (31) is smaller than space standards. The room does not contain an eye wash / shower, which should be added. The room shares a Preparation room with the Biology room, which is approximately two thirds the space standard

size of 250 square feet. The room contains island casework with chemical resistant tops, sinks and a demonstration island with sink, which is in poor condition and should be replaced. The room also contains a fume hood which is not functioning. The room contains two curved walls along which the science casework is located, limiting the efficiency of the room.

- The Biology classroom in Building B (29) is significantly smaller than space standards. The room does not contain an eye wash / shower, which should be added. The room shares a Preparation room with the Chemistry room (31) above. The room contains only a demonstration island with sink, which is in poor condition and should be replaced.
- The Physical Science classroom (44) is located on the lower level of Building A in the old Auto Shop office. The room requires access through the old Auto shop which is currently being utilized as a Team Locker room area. The room does not have handicap access, as the school does not include an elevator.
- The two Earth Science classrooms in Building B (11,12) are both significantly smaller than space standards. Neither room contains an eye wash / shower, which should be added. The rooms share a Preparation room, which is 215 square feet and close to the space standards of 250 sf. Each of the Science rooms contains perimeter casework with chemical resistant tops, sinks and a demonstration island with sink, which are in poor condition and should be replaced.

13. Exceptional Children

Room Description	No. of Rooms	Typical Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
EC Resource	3	700-880 sf	1,000 sf	70-88%	Fair - Poor

Comments: The school contains 3 EC Resource classrooms, two are located in Building A and one is located in Building B.

- The EC Resource classrooms are all smaller than space standards, but of the same size as the general purpose classrooms. EC Resource room 26 is especially small, at 700 square feet.
- The EC classroom in Building B is not located near a group toilet. However, the only group toilet in this wing is handicap accessible. These toilets should be upgraded to be handicap accessible.
- The EC classrooms in Building A are located near a group toilet, which is handicap accessible.
- EC does not have access to a shower / changing room other than those located within the PE Locker rooms.

14. Arts Education

Room Description	No. of Rooms	Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
Art	1	1,050 sf	1,400 sf	75%	Poor
Band	1	1,480 sf	1,800 sf	82%	Fair
Chorus	1	1,120 sf	1,400 sf	80%	Fair
Auditorium	1	5,000 sf	Varies	N / A	N / A
Stage	1	1,500 sf	Varies	N / A	N / A

Comments: The Art room is located in the classroom wing of Building B. The Band and Chorus rooms are located near the Cafeteria dining room. The Auditorium is a free standing building, shared with Beam Intermediate School, located a few blocks away and requires bussing of students back and forth.

- The Art room is significantly smaller than space standards and includes a very small storage room and kiln room. The Art classroom contains a door to the exterior and an concrete paved art patio. The room does not contain adequate built in casework.
- The Band room is somewhat smaller than space standards. The room contains fixed risers and two storage closets around the perimeter, and an office. The instrument storage room is small and contains open plywood cubbies that are not lockable, and in poor condition. The room contains carpet flooring, but does not contain appropriate acoustical wall and ceiling treatments, with CMU walls and standard lay in ceiling. The risers are depressed below the finished floor and could be infilled with a concrete slab to create a flat floor.
- The Chorus room is somewhat smaller than space standards. The room contains fixed risers and no secure storage rooms. The room does not contain appropriate acoustical treatments, with a VCT floor, CMU walls and standard lay in ceiling. The risers are depressed below the finished floor and could be infilled with a concrete slab to create a flat floor.
- The Auditorium is a free standing building, shared with Beam Intermediate School, located a few blocks away and requires bussing of students back and forth, which is a safety and security concern.
- The Auditorium contains 950 dated wood seats, which should be replaced.
- The Auditorium does not contain any handicap seating areas. The stage is elevated, and is not handicap accessible from any location. A ramp from the audience chamber to the stage is very difficult to add, due to the continuously sloping concrete floor. However, a handicap accessible ramp could be added within the stage area, which would reduce the useable area of the stage and require redesign of the backstage rooms.
- The Auditorium does not contain appropriate acoustical treatments, with continuous hard plaster walls and standard lay-in ceiling.
- The backstage area contains two small Toilets, which are not handicap accessible.
- The Stage is only accessed through the Auditorium or from very narrow corridors on either side of the Stage.
- The Stage does not contain adequate curtains and rigging.
- The school does not contain a Scene Shop.

15. Career and Technical Education Classrooms / Shops

Room Description	No. of Rooms	Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
Business Lab	1	880 sf	1,200 sf	73%	Poor
Technology Lab	1	1,350 sf	1,200 sf	112%	Excellent
Health Sciences	1	1,450 sf	2,000 sf	72%	Poor
FACS	1	1,000 sf	1,600 sf	63%	Poor
Carpentry	1	1,600 sf	2,500 sf	64%	Poor

Comments: All of the CTE classrooms / labs are significantly smaller than space standards, except for the Technology Lab.

- The Business Lab is significantly smaller than standards and is the size of a typical classroom. The Technology Lab meets space standards, but is located in a circular room, which limits the efficiency of the room.
- Health Sciences is located on the lower level of Building A, and is smaller than space standards. The room does not contain any built in casework. The room also does not have handicap access, as the school does not include an elevator.
- The Family and Consumer Sciences classroom is significantly smaller than space standards and also contains dated casework, which should be upgraded.
- The Carpentry shop is located on the lower level of Building B and is only accessed only from the exterior.

16. Media Center

Room Description	No. of Rooms	Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
Main Room	1	4,800 sf	3,600 sf	133%	Excellent
Support Areas	Various	1,350 sf	2,000 sf	67%	Poor

Comments: The Media Center is located in the center of Building B.

- The Media Center Main Room exceeds space standards. The room is circular, which does not adversely affect the efficiency of the Main Room.
- The Media Center support spaces include an Office, Work Room, Conference Room and Storage Room. Due to the location within the school, the support areas cannot be expanded without expansion into the Main Room.
- A TV Broadcasting / Video Production room is located in the classroom wing of Building A. This room is approximately 500 square feet. Although not located within the Media Center, when space is added to the Media Center support space area, the Support Spaces are in the "Good" adequacy rating.
- The School Nurse is located in an office within the Media Center and should be relocated for safety and privacy.
- The School Therapist shares a Conference room within the Media Center and should be relocated for privacy.
- The Media Center contains a Computer Lab located in a separate room. .
- The Media Center is located within an area of the school that cannot be secured for after-hours community use.

17. Physical Education / Indoor Athletics

Room Description	Area	Court Size	NCDPI Standard Area	Relation to Standard	Adequacy Rating
Main Gymnasium	5,700 sf	50 x 74	Varies	N / A	N / A
Auxiliary Gym	5,700 sf	50 x 74	Varies	N / A	N / A
Nixon Gym	9,900 sf	50 x 94	Varies	N / A	N / A

Comments: The Gymnasium and Auxiliary Gymnasium are located at the front of the school. Nixon Gym is a free standing building located a few blocks away and is shared with Beam Intermediate School, and requires bussing of students back and forth. The football field house is located on the lower level of Nixon Gym, which is adjacent to the football field.

- The Main Gymnasium is located at the front of the school, adjacent to the Cafeteria. It does not contain a separate entry that can be secured from the rest of the school for after hours use.
- The Main Gymnasium basketball court is not of regulation size for interscholastic play at 50 x 74 feet. The Gymnasium includes telescoping bleachers on one side, which seat approximately 300. These bleachers are in poor condition and in need of replacement. Competition games are played in the Nixon Gym, which contains a regulation size court and more bleachers.
- The Auxiliary Gym is located directly adjacent to the Main Gym and also contains a 50 x 74 size court, but no bleachers. The Auxiliary Gym has a dedicated entry from the exterior for after hours use. However, it has no toilets except those located in the adjacent Main Gym locker rooms.
- The Girls and Boys PE locker rooms are located off the Main Gymnasium, and are both in poor condition with non functioning group showers, toilet fixtures and finishes in poor condition, and contain no lockers. The group showers should be replaced with individual stalls.
- Nixon Gym is a free standing building, shared with Beam Intermediate School, located a few blocks away and requires bussing of students back and forth, which is a safety and security concern. Competition games are played in Nixon Gym.
- Nixon Gym contains a basketball court that is of regulation size for interscholastic play with adequate safety zones and wall pads.
- Nixon Gym has telescoping bleachers on each side which seat approximately 825. The bleachers are in fair to good condition.
- The Boys Team lockers in Nixon Gym are in poor condition, with a group shower and toilets without any stall partitions. The Girls Team lockers are in fair condition with marble shower partitions and newer toilet stall partition. Neither of the team locker rooms contain lockers, which should be added.
- The Field House is located on the lower level of Nixon Gym, and contains two coach's offices, two small toilets, a group shower and weight room, but no training room or whirlpool.

18. Administration

Excellent Good Fair Poor

Comments: The Administration area includes approximately 1,100 square feet. Administration consists of the following rooms: (1) Main Office / Reception / Waiting, (1) Principal's Office, (1) Secretary Office, (1) Data Manager's Office, (1) SRO Office (1) small Work Room, (1) Lounge and (1) Toilet. The school has (1) Assistant Principal, located in the classroom wing of Building A. The Administration area is very limited in space, and can only be expanded with an addition to the front of the building.

- The Administration area is located across the main corridor from the main school entry and the school does not contain a secure vestibule for the main entrance. Design of a new secure entry vestibule with access directly into the Reception area is not possible without interruption of the main interior corridor. Within the current layout of the school, a secure vestibule would have to be added on the exterior of the school and would not have direct access into the Administration area.
- The Administration area does not have visibility of the main entry doors.
- The Principal's Office is not located in the Main Administration area, but is located in the Guidance area across the main corridor, and should be located with the rest of the Admin offices.
- The Assistant Principal's Office is located within the classroom wing of Building A.
- The Administration area does not include a dedicated Conference Room.
- The Administration Work Room is very small and should be significantly enlarged.
- The Administration area does not include a private Staff Room.
- None of the Toilets in the Administration area are handicap accessible. The Admin area should include a dedicated Men's and Women's staff toilet.

19. Student Support Excellent Good Fair Poor

Comments: The Student Support Spaces consist of (2) Guidance Offices (1) School Nurse Office, (1) Social Worker Office, (1) School Therapist Office, (1) Career Development Coordinator Office and (1) Student Success Coordinator.

- The two Guidance Counselor offices are located directly within a Guidance area, which is near, but separate from the Administration area, with a separate entry and waiting room.
- The Social Worker office is located within the Guidance area.
- The Nurse's Office is located in the Media Center Support Spaces and includes one room that contains both an office and holding area. The Health Services area should be located near, but separate from the Administration area and include rooms for a dedicated Nurse's Office, Holding Room, dedicated Toilet, Shower and Changing area and wheelchair storage.
- The School Therapist utilizes a shared conference room located in the Media Center. The Therapist should have a dedicated office near, but separate from the Administration area.
- The Student Success Coordinator office is located within the CTE Tech Lab, and the Career Development Coordinator is located between the CTE Tech and Business Labs.

20. Staff Support Excellent Good Fair Poor

Comments: The Staff Support Spaces consist of only one Teacher Work in Building A.

- An additional Teacher Teaming / Work Room should be located in the Building B classroom wing.

21. Cafeteria

Students per Seating *	Dining Room Area	Area per Student	NCDPI Standard Area	Capacity of Dining Room	Relation to Standard
183	2,500 sf	13.6 sf / student	14 sf / student	178	97% Good

* Students per Seating equals the 2014 - 2015 student enrollment for the school divided by 3 seatings (550 / 3 = 183).

Comments: The Cafeteria is located near the center of the school.

- The Cafeteria is very close to space standards. However, due to the configuration of the two Dining room areas not being one large open room, the seating layout is not very efficient
- Three serving lines are located within the Dining Room, which are adequate to serve the number of students and is easily served from the kitchen.
- The main school corridor between classroom wings runs adjacent to, and is open to the Dining Room. This side of the Dining room could be enclosed from the corridor for noise and circulation purposes.
- The Cafeteria contains a pair of doors to the exterior. However, these doors do not offer close access to the loading dock area for trash removal. Trash must be removed through the Kitchen to the loading dock area.

22. Kitchen

Lunches Served per Day *	Kitchen Area	NCDPI Standard Area	Relation to Standard
495	1,500 sf	1,518 (for 500 to 750 lunches served)	98% Good

* Lunches Served per Day equals the 2014 - 2015 student enrollment for the school times 90% participation factor (550 x .90 = 495). This school experiences an elevated participation rate due to free and reduced lunches.

Comments: The Kitchen is very close to the NCDPI guidelines of overall area for the number of students served, but does not contain some needed spaces, and is in generally poor condition. See the Section 7: Food Service Assessment for additional information.

- The Kitchen does not include a secure Manager's Office, as the manager's desk is located in a corner of the kitchen. A dedicated Manager's Office needs to be provided.
- The Kitchen includes one small toilet, which is not handicap accessible.
- The Kitchen does not include a staff locker area.
- The Kitchen does not have a washer and dryer.
- The loading dock is elevated with stairs, but does not contain a handicap accessible ramp and is too small to access the trash dumpsters. The dock is very small and contains a covered canopy. The dock and canopy should be enlarged and also include a ramp.

23. Toilet Facilities Excellent Good Fair Poor

- The group toilets near the main corridor on the main level of Building A are handicap accessible and in good condition.
- The group toilets in the classroom wing on the main level of Building A contain new partitions, but are not handicap accessible and in poor condition, and should be upgraded.
- The group toilets in Building B are handicap accessible. However, the toilet partitions and most plumbing fixtures are in poor condition and should be replaced.
- The toilets on the lower level of Building A contain two fixtures each, are not handicap accessible, and in poor condition. These toilets should be combined to single fixture and made handicap accessible.
- Nixon Gym contains public group toilets on the main level that are poor condition and not handicap accessible. However, the rooms are of sufficient overall size that can be redesigned to be handicap accessible
- Staff are provided with 5 single toilets, 3 in the Administration / Guidance area and 2 in the classroom wing of Building B. Each of these toilets is very small, not handicap accessible and in poor condition. They should be combined and upgraded in size to be accessible, which will reduce the number of toilets. The classroom wing of Building A does not contain any Staff toilets, which should be added if possible.

24. Other Spaces

- The school has limited general purpose storage. Many electrical rooms are used for storage, which violates code.
- The school does not include any mobile classroom units.
- The school does not employ an ISS program.
- The MDF is located an office within the CTE Tech Lab, which should be converted into a secure, access controlled room with a gaseous fire suppression system. The IDF's are located throughout the school in classrooms and corridors, most of which will be difficult to relocate into secure rooms due to existing data cabling.

25. Additional Considerations

- Student lockers in Building B are in poor condition and should be replaced. Student lockers in Building A are in fair condition.

Part 3: School Site

26. Parking Excellent Good Fair Poor

Description	Current Number of Spaces	Number of Spaces Needed	Relation to Number of Spaces Needed
Visitor	50	50	0
Staff	85	85	0
<u>Student</u>	<u>152</u>	<u>140</u>	<u>+12</u>
Total	287	275	Total +12 spaces
Bus	14	0	-14

Comments: Parking on the school site is generally poor. The site contains an overall adequate number of parking spaces, however some parking is located within both the bus and car rider drives, and over half of the student parking is located across Ridge Ave. Most of the asphalt paving is in poor condition.

- The front of the school contains 12 designed visitor spaces that are located directly within the car rider drive, which presents a safety concern. This area should be redesigned to separate the parking from car rider drive, if possible. Visitors park in other open spaces on site, where available.
- The staff and student parking on the west side of the school are located in the same general lot, with little separation.
- 85 Student parking spaces are located across Ridge Ave, which presents a safety concern of students crossing the road. This parking area was recently constructed and in good condition.
- The site does not contain bus parking, the busses are parallel parked along the bus drive, which presents a safety concern. 27 Staff parking areas are located within the bus loop. These spaces could be relocated and used for bus parking if the east parking is expanded. However, this expansion requires additional land that does not appear to be owned by the school.
- All of the asphalt paving in parking areas on the site, except in the student parking located across Ridge Ave, is in poor condition with significant cracking, potholes, patches, etc., and should be replaced.

27. Vehicular Circulation Excellent Good Fair Poor

Comments: Vehicular Circulation on the school site is generally fair, with three separate drives that serve parking areas for student / staff, bus and visitors. However, most of the asphalt paving is in poor condition.

- The main school entry and car rider drive are located on Ridge Ave., which does contain a center turn lane, but no deceleration lanes. The bus drive appears to be a public road, North Pink Street up to the bus loop and parking area. Additional investigation should be made with the Department of Transportation about public road improvements.
- The car rider drive runs along the front of the building and offers only moderate stacking area, however the Principal indicates that back-ups onto Ridge Road occur infrequently. This drive also contains visitor parking within the stacking area, which is a safety concern. This area should be redesigned to separate the drive from parking for stacking purposes, however the existing site area does not allow for any expansion.
- The bus drive contains adequate stacking and turn-around loop area.

- The kitchen service drive is located directly off the bus loop, and is in poor condition. The service drive should be replaced, with a concrete pad under the loading and dumpster areas.
- All of the asphalt paving in drive areas on the site is in poor condition with significant cracking, potholes, patches, etc., and should be replaced.

28. Pedestrian Circulation Excellent Good Fair Poor

Comments: The school site contains adequate sidewalk locations for pedestrian circulation for access between various areas of the school buildings, but does not contain adequate sidewalks from the main student / staff parking area. Most of the sidewalks are in poor condition.

- The site does not contain adequate sidewalks from the main student / staff parking area to the main school entry. Most students walk through a dirt area near the CTE courtyard. Additional sidewalks should be added from the parking to main entry.
- Additional sidewalk ramps should be added to provide handicap access to the softball field spectator areas.
- Almost all of the sidewalks on site are in poor condition and should be replaced.
- The perimeter of the school site contains a partial sidewalk along Ridge Road, but does not extend along the whole school property.

29. Walkway Canopies Excellent Good Fair Poor

Comments: The school contains one walkway canopy that connects the two classroom wings and one canopy at the bus loop.

- The bus canopy is in fair condition, but not of substantial construction and should be replaced with more a durable system.
- The canopy that connects the two classroom wings is in fair condition, but not of substantial construction. However, this exterior walk is not currently used for circulation between buildings, and the canopy could be removed.
- The main school entry contains a very small exterior cover.

30. Outdoor Play

- The site contains does not contain any outdoor play areas, other than the athletic fields.

31. Athletic Facilities Excellent Good Fair Poor

Comments: The main school site contains (1) softball field and (1) multipurpose practice field. The satellite athletic site is located a few blocks away with Nixon Gym, and includes (1) football field / track and (1) baseball field. Soccer also utilizes the football field. All of the facilities, including the practice field are lighted. The school does not contain tennis courts.

- The softball field is in fair condition. The dugouts appear to have been recently constructed of masonry with wood framed roofs and are in good condition.
- The football field is in fair condition. The spectator areas were recently improved, but the project does not appear include work to the field itself.

- The track is only 4 lanes wide and does not contain a long jump or high jump area. The track does not appear to be a regulation distance and cannot be expanded or widened to 6 lanes, due to site constraints and location of the new bleachers.
- The baseball field is in poor condition, but appears that improvement work to the infield is currently underway. The dugouts are masonry with concrete roofs and are in fair condition.

32. Athletic Spectator Areas Excellent Good Fair Poor

- The football stadium has been recently been renovated with new bleachers and toilet / concessions buildings on the home and visitor side, which are all in good condition.
- The football stadium does not include any dedicated parking, and shares approximately 60 spaces with Beam Intermediate School and the Nixon Gym. Spectators park along roads and in other lots in the area.
- The softball field contains minimal bleachers for approximately 30. However, the bleachers do not have handicap access from the parking area, and a handicap ramp should be added.
- The softball field contains a new toilet / concessions building that was recently construction and in good condition.
- The baseball stadium does not include any nearby handicap parking, but does have handicap access to the bleacher areas. The bleachers seat a total of approximately 800, but are in poor condition and should be replaced.
- The baseball stadium contains a small toilet building that is in very poor condition and not handicap accessible. This building should be demolished and a new building constructed to include more toilets.
- The baseball stadium contains a very small ticket building, which is in very poor condition. This building should be demolished and a new ticket building constructed, or incorporated into a the toilets / concession building.
- The baseball stadium contains a concessions / press box building, which the exterior and interior are in poor condition and in need of updating. The press box does not contain enough square footage, or is elevated high enough to require handicap accessibility by code.

33. Grounds / Landscaping Excellent Good Fair Poor

- The school contains very limited foundation shrubs, which are overgrown in a few areas and should be replaced with lower growing plants.
- The parking lots contain virtually no landscaping.

34. Utilities Excellent Good Fair Poor

- The school is served by the City of Cherryville for water and sewer, and does not have a backflow preventer for domestic water, which should be added by code. The water line is presumed to be original, but not reported to have any current issues.
- The school does not have a grease interceptor on the sanitary sewer line for the kitchen, which should be added by code. The sewer line is presumed to be original, but not reported to have any current issues.

- Three fire hydrants are located in the general area of the school, two along Ridge Road and one at the end of the bus loop. More fire hydrants should be added on the school site to provide adequate coverage of the school and athletic buildings.
- The school is served by natural gas, which is metered separately for the kitchen and the buildings.
- Overhead power lines run through the site, which presents a safety concern. Further investigations with the service provider should occur about burying these power lines underground.

35. Storm Drainage Excellent Good Fair Poor

- The site does not have a stormwater management pond, which is not required by the municipality unless additional impervious area is added.
- The site contains minimal underground storm drainage in the area of the student and staff parking. This storm drain appears to be undersized or damaged, as the Principal reports overflowing and ponding during heavy rains. This storm drain should be replaced when the paving in this area is replaced.
- The car rider drive / visitor parking area and the bus loop / staff parking area do not contain any storm drain, and sheet flow into the public roads. Storm drainage should be added when the paving is replaced.
- Several roof drain leaders run to daylight along North Pink Street. These should be tied into the underground storm drain at the corner of Ridge Ave. and North Pink Street.
- Approximately half of the downspouts throughout the school are connected directly to the underground stormwater piping system. This connection should be made indirect, with the downspouts spilling above grade into catch basins to prevent clogging. Approximately half of the downspouts already have this indirect connection.

36. Emergency Access Excellent Good Fair Poor

- The main school building has paved emergency access around the north, east and south sides via parking areas and drives. Access could be provided along the west side by removing the walkway canopy between classroom wing (which is not utilized) and providing continuous paved vehicular access around the perimeter of the building.
- The athletic facilities contain paved emergency access to the football field / track and baseball field, and access near the softball field.

37. Site Security Excellent Good Fair Poor

- The site is located in a residential area. The Principal and school SRO Officer indicated that the surrounding areas do not typically include significant crime and vandalism at the school is rare.
- The south and east portions of the building and site have good visibility from public roads, drives and parking areas. The west side does not have vehicular access for police patrol.
- The main building site does not contain perimeter fencing around the north and west sides.
- The athletic facilities site contain chain link fencing around the perimeter, including the athletic fields. Isolated areas are damaged and should be replaced.

38. Additional Considerations

- All of the exterior steel handrails and guardrails need painting.
- Directional signage on the school site is poor and should be replaced.

Part 4: Building Envelope

39. Construction Type Non-Combustible Combustible

40. Structural Floors

Material: Concrete Slab on Grade
 Concrete on Metal Deck over Steel Structure
 Wood Deck on Wood Joists
 Other

Evidence of Structural Concerns: Prevalent Isolated None Visible

Overall Condition of Structural Floors: Excellent Good Fair Poor

Comments: The structural floors consist of concrete slab on grade, with two areas of elevated concrete slab two story construction in Buildings A and B.

- Concrete floors generally appear to be in good condition with no major cracks telegraphing through the floor coverings.
- Various minor cracks are visible in the terrazzo flooring. These cracks appear to be minor shrinkage cracks due to limited control joints.

41. Exterior Walls / Cladding

Material: Masonry EIFS / Stucco Metal Other

Evidence of Structural Cracking: Prevalent Isolated None Visible

Evidence of Concern with Exterior Cladding:

Cracks / Gaps Prevalent Isolated None Visible

Efflorescence (Masonry) Prevalent Isolated None Visible

Moisture Penetration Prevalent Isolated None Visible

Rot/Decay/Corrosion Prevalent Isolated None Visible

Overall Condition of Exterior Walls: Excellent Good Fair Poor

Comments: The exterior walls of Buildings A appear to consist brick / CMU construction that most likely does not include insulation, an air space or flashing. Building B consists of brick veneer with CMU backup, insulation but no air space.

- The brick veneer varies in condition, with some areas of efflorescence on Building A, which may be a result of moisture within the wall due to the lack of an air space.

- One corner of the building near the south side of the kitchen contains a crack through the brick veneer on both sides of the corner that should be further investigated by a structural engineer.
- In the circular classroom of Building A, the steel lintels over all of the mechanical louvers appear to have deteriorated significantly. The mortar bed joints around the lintels has deteriorated and fallen out. This should be further investigated by a structural engineer, but it appears that the lintels need to be removed and replaced and the mortar joints re-pointed.
- In several areas on the interior of the circular classroom wings, the joint between the interior masonry walls perpendicular to the exterior CMU have gaps which have opened up approximately one inch in many areas. This appears to reflect evidence of movement of the exterior wall and should be investigated further by a structural engineer.
- The south wall of the Auxiliary Gymnasium was recently removed and reconstructed due to structural concerns. The CMU wall that was demolished was reported not to have any vertical reinforcing within the cells.
- An area of the circular classroom wing of Building B has been previously remediated with helical anchors due to structural concerns of the wall bowing outwards. This may be due to lack of reinforcing also, since this wing was building at the same time as the Auxiliary Gym.

42. Exterior Glazing

Frame Material: Aluminum Steel Wood Other

Glazing Material: Un-insulated Insulated Glass Block

Evidence of Concern with Exterior Glazing:

Moisture Penetration	<input type="checkbox"/> Prevalent	<input checked="" type="checkbox"/> Isolated	<input type="checkbox"/> None Visible
Rot/Decay/Corrosion	<input type="checkbox"/> Prevalent	<input checked="" type="checkbox"/> Isolated	<input type="checkbox"/> None Visible

Overall Condition of Exterior Glazing: Excellent Good Fair Poor

Comments: The condition of the exterior glazing systems in the majority of the school is poor. .

- The exterior glazing in all areas of the main school building and Nixon Gym consists of 1/4" un-insulated glass in a thermally continuous steel framing system, which is very energy inefficient and past its useful life. The glazing also includes an exterior louvered shutter system at each of the classrooms. In addition, this glass appears to be standard plate glass, which presents a safety concern as it is easily broken. All of this glazing should be replaced with insulating glass in a thermally broken aluminum storefront framing system to be more energy efficient and provide better thermal control of the classrooms in particular. The glass should be safety tempered in areas required by code.
- The glazing in the Auditorium building has been replaced with insulating glass in an aluminum framing system and is in good condition.

43. Exterior Entry / Exit Doors

Door Material: Aluminum Steel Wood Other

Evidence of Concern with Entry / Exit Doors:

Moisture Penetration	<input type="checkbox"/> Prevalent	<input checked="" type="checkbox"/> Isolated	<input type="checkbox"/> None Visible
Rot/Decay/Corrosion	<input type="checkbox"/> Prevalent	<input checked="" type="checkbox"/> Isolated	<input type="checkbox"/> None Visible

Overall Condition Doors: Excellent Good Fair Poor

Overall Condition of Hardware: Excellent Good Fair Poor

Comments: Most of the entry / exit doors are in poor condition. None of the exterior doors include access control hardware, which should be added for security.

- Most of the entry / exit doors on the main school building appear to be original and are in poor condition, some do not have code compliant panic devices and none have access control for security. These doors should be replaced to include code compliant door hardware and access control for security.
- The main front entry doors should have secure access control with buzz-in and security camera tied into the Administration area reception desk.
- All of the entry / exit doors on Nixon Gym are wood, appear to be original and are in poor condition, do not have code compliant panic devices or access control for security. These doors should be replaced to include code compliant door hardware and access control for security.

44. Exterior Classroom Doors

Door Material: Aluminum Steel Wood Other

Evidence of Concern with Classroom Doors:

Moisture Penetration Prevalent Isolated None Visible

Rot/Decay/Corrosion Prevalent Isolated None Visible

Other None at this time

Overall Condition of Doors: Excellent Good Fair Poor

Overall Condition of Hardware: Excellent Good Fair Poor

Comments: One Art classroom has a door that open directly to the exterior.

- The Art room contains a hollow metal door to the exterior art patio. This door is in poor condition and should be replaced.
- The majority of other exterior doors for mechanical rooms, electrical rooms, storage, locker rooms and kitchen service in the building are in poor condition and should be replaced.

45. Roofing

An independent roof assessment was performed for Gaston County Schools by Roof Engineering, Inc. (REI) in 2006. The report indicates the following needs regarding the replacement of roofs:

- Building A: Asphalt Built-up Replace in 2015 (Admin, Cafeteria and Lockers)
- Building A: Asphalt Built-up Replace in 2030 (Classroom and Gymnasium)
- Building B: Asphalt Built-up Replace in 2024
- Building C: Modified Bitumen Replace in 2028
- Building D: No information in roof report is provided for the Auditorium roof.

46. Additional Considerations

- The brick chimney appears to be utilized as a boiler flue, but should be lowered if possible, for safety reasons.

Part 5: Building Interior

47. Interior Walls

Overall Condition of Walls: Excellent Good Fair Poor

Comments: The majority of interior walls are painted CMU or brick and are in fair condition.

- The offices within the classrooms in both classroom wings, and within the CTE Technology Lab contain exposed wood paneling and non-tempered plate glass, and should be replaced with fire resistant drywall and tempered glass, if they are to remain.
- In several areas on the interior of the circular classroom wings, the joint between the interior masonry walls perpendicular to the exterior CMU have gaps which have opened up approximately one inch in many areas. This appears to reflect evidence of movement of the exterior wall and should be investigated further by a structural engineer.

48. Floor Finishes

Classrooms	Flooring Type: VCT (in most areas, some VAT in Building A) Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Corridors	Flooring Type: Terazzo (in all areas) Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Cafeteria	Flooring Type: Terazzo Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Gymnasium	Flooring Type: Wood Condition: <input type="checkbox"/> Excellent <input checked="" type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> Poor
Auxiliary Gym	Flooring Type: Wood Condition: <input type="checkbox"/> Excellent <input checked="" type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> Poor
Nixon Gym	Flooring Type: Wood Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor
Auditorium	Flooring Type: Carpet in aisles Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor
Media Center	Flooring Type: Carpet Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor
Administration	Flooring Type: Carpet Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor

Comments: The majority of interior floor finishes in classrooms are VCT and in varying condition. Isolated rooms in Building A contain VAT. The corridors are Terazzo and in fair condition.

- The VCT in Building A is in fair condition. The VCT in Building B varies in condition throughout the wing, but is generally poor. In many areas, large gaps have opened between the tile joints and the VCT should be replaced.
- The Science room on the lower level of Building A contains exposed VAT tile, which should be abated and replaced with VCT.
- The Band room carpet is in poor condition and should be replaced.
- The carpet in the Administration area is in generally poor condition, with areas of significant wear in high traffic areas and should be replaced.

- The wood floors in the Gymnasium and Auxiliary Gym floor have recently been refinished and are in good condition.
- The wood floor in the Nixon Gym is in poor condition. The wood appears to be beyond the capability of refinishing and should be replaced entirely.
- The Auditorium contains carpet in the aisles and exposed concrete under the seats. The carpet is in poor condition and should be replaced.
- The wood Stage floor is in poor condition, and should be refinished and painted black.

49. Ceilings

Lay-in	Locations: Building A and B (in most areas, except as noted below) Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Plaster	Locations: Building A (Auditorium, group toilets and locker rooms) Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Drywall	N / A
Open Structure	Locations: Gymnasium, Auxiliary Gym, Nixon Gym, Field House Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor

Comments:

- The corridors and interior rooms of Building A contain a textured plaster coating ceiling that is reported to contain asbestos. This ceiling should be removed and replaced with 2x2 lay-in, for better acoustics, reflectivity, installation of new light fixtures and concealment of conduit and piping.
- The majority of ceilings in Building B are 2x4 lay-in. Most of these ceilings are in poor condition, with stained or damaged tile, curled tile edges and areas of sagging grid. These ceilings should be replaced 2x2 lay-in.
- The Auditorium contains a continuous textured plaster coating ceiling that is reported to contain asbestos. This ceiling should be removed and replaced with a series of drywall or lay-in ceiling baffles that offer better acoustics, and access to above ceiling electrical and wiring for lighting and sound upgrades.
- The Band and Chorus rooms contain standard lay-in ceilings. These should be upgraded to a high NRC ceiling for acoustical purposes.
- The PE locker rooms contain smooth plaster ceilings, which are in fair condition.
- The Kitchen contains a smooth plaster ceiling, which is in fair condition.

50. Casework

Classrooms	Casework Type: Wood and Plastic Laminate Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor
Science Rooms	Casework Type: Wood with Chemical Resistant Counters Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor
Media Center	Casework Type: Wood and Plastic Laminate Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Administration	Casework Type: Wood and Plastic Laminate Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor

Comments: The majority of the casework in the school is in poor condition.

- Most of the Classrooms in the building contain a lockable teacher storage cabinet, which are in poor condition and should be replaced. The remainder of the casework in the room consists of various mobile cabinets and bookshelves considered to be furniture / equipment.
- The Art room does not contain adequate built in casework for storage of materials, which should be replaced.
- The Media Center Support rooms contain a variety of very dated casework, which is inadequate and should be replaced.
- The Administration area contains inadequate and dated casework, which needs to be replaced. The main reception counter is not handicap accessible.
- The casework in all of the Science classrooms is in poor condition and should be replaced.

51. Interior Doors

Overall Condition Doors: Excellent Good Fair Poor
 Overall Condition of Hardware: Excellent Good Fair Poor

Comments: The majority of the doors within the building are in poor condition.

- All of the interior doors and hardware in the school appear to be original, do not have code compliant lever style hardware, and are in poor condition. These original doors should be replaced, and the classroom doors should also include lockdown hardware.

52. Additional Considerations

- Most of the window blinds, are in poor condition and in need of replacement.
- The stair guardrails in Building A do not meet current code for picket spacing and should be replaced.

Part 6: Handicap Accessibility

53. Exterior Handicap Accessibility

Accessible Parking: Excellent Good Fair Poor
 Accessible Route to Building(s): Excellent Good Fair Poor
 Accessible Entrances / Egress: Excellent Good Fair Poor
 Accessible Routes between Buildings: Excellent Good Fair Poor
 Accessible Athletic Fields: Excellent Good Fair Poor

Comments: The overall exterior handicap accessibility for the school is fair, with only one building egress not being accessible.

- The site contains 6 marked accessible parking spaces in the student / staff parking areas, four of which are van accessible. No visitor handicap spaces are located near the main school entry, which should be added.
- The main school entry contains exterior stairs, and also a handicap accessible ramp.

- The exterior egress from the upper level of the classroom wing of Building A is not handicap accessible with several exterior stairs and no ramp. The rest of the building entry / exit doors exit to grade.
- The football stadium and Nixon gym only include 4 handicap parking spaces in close proximity to the facilities. The baseball field does not contain any handicap parking spaces nearby.
- The football field / track contains an accessible route to the ticket booth / main entry gate, and to the home side bleachers. The visitor side contains two handicap parking spaces with accessibility to the bleachers. Both the home and visitor bleachers are handicap accessible and include handicap seating areas.
- The baseball field includes an accessible route to the spectator areas. The bleachers do not include any handicap seating.
- The softball field does not include an accessible route to the bleacher area.

54. Interior Handicap Accessibility

Accessible Routes:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor
Accessible Doors and Hardware:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor
Accessible Signage:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor

Comments: The interior of the school is on four finished floor levels, with two interior stairs, and one ramp. The school does not contain an elevator.

- The school contains one ramp near the classroom wing of Building B, which includes a 1:12 rise/run and meets code.
- Building A contains a stair within the interior corridor, which is the only interior access to the Gymnasium and Auxiliary Gym, with no accessible ramp. This renders both Gyms inaccessible from inside the school building. An accessible ramp should be added in this area.
- The school does not contain an elevator for access to the lower level of Building A.
- The majority of classroom doors in the school are 3'-0" wide. However, most of the doors in Building A have knob style hardware, and should be replaced with code compliant levers.
- The Auditorium is accessible from both the entries at the rear and near the stage, but does not contain any handicap seating.
- The Auditorium Stage is not handicap accessible from any location.
- The Administration area reception counter and the Media Center circulation counter are both not handicap accessible.
- Most of the signage in the school does not meet current accessibility requirements and should be replaced.

55. Toilet Rooms Accessibility

Accessible Group Toilets:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input checked="" type="checkbox"/> Fair	<input type="checkbox"/> Poor
Accessible Staff Toilets:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor
Accessible Athletic Facility Toilets:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input checked="" type="checkbox"/> Fair	<input type="checkbox"/> Poor

Comments: The handicap accessibility of the group toilets in the main school building is fair, as two of the three are handicap accessible. None of the Staff toilets are handicap accessible.

- The group toilets near the main corridor on the main level of Building A, and the group toilets in Building B are handicap accessible.
- The group toilets in the classroom wing on the main level of Building A are not handicap accessible. However, the rooms are of sufficient overall size and should be upgraded to include handicap accessible partitions and fixtures, which would reduce the watercloset fixture count.
- The toilets on the lower level of Building A contain two fixtures each, and are not handicap accessible. These toilets should be upgraded to single fixture and made handicap accessible.
- The Boys and Girls PE Locker room toilets in Building A do not contain handicap accessible stalls or fixtures. However, the rooms are of sufficient overall size and should be upgraded to include handicap accessible partitions and fixtures, which would reduce the watercloset fixture count.
- The school contains a total of five Staff toilets, none of which are handicap accessible.
- The softball field contains a relatively new toilet building, which is handicap accessible.
- The football stadium contains new toilet buildings on both the home and visitor side, which are handicap accessible.
- None of the toilets in Nixon Gym, or the Auditorium are handicap accessible and should be upgraded.
- None of the toilets for the baseball field are handicap accessible and should be upgraded.

Part 7: Food Service

56. Observations and Recommendations

Storage:

- Cold Storage Assembly cooler and freezer assembly needs to be replaced. The freezer compartment is very small (Nom. 8x5) and should be at least doubled in size.
- Shelving in dry food storage room is relatively new NSF adjustable polymer type in very good condition.
- An air curtain fan needs to be added at the receiving door.

Food Preparation:

- 2-Compartment sink is NSF construction and in good overall condition. Direct waste to be converted to indirect waste and run to floor sink per code requirements.
- Ice Machine is in good working condition.
- Tables with galvanized legs and under shelves are in good condition, No worktables are in need of immediate replacement.
- Add second hand sink should be added in the prep area near pot wash sink.
- Reach-in refrigerator and mobile food holding cabinets are in excellent condition.

Cooking:

- The double stack Convection oven is new and in good repair.
- A new double steamer has been added and is in excellent condition.
- The two-burner range is also a new item.
- The Fryers are regularly used and in good working order.
- The single convection oven is an older model and should be scheduled for replacement.
- Exhaust hood is not adequate in size, and not compliant with NFPA 96 construction. This must be replaced with a new hood sized to provide proper overhang for all equipment located underneath.

- The wet chemical system may remain, but would be reconfigured to suit the new hood installation.

Dishwash:

- Existing dish wash tables are in good condition and have galvanized legs. The pre-rinse sink in the soiled dish table has non-NSF welded square corners, and we advise replacing just this sink with a new coved corner type to be field cut and welded in place.
- The dishwasher is used for food pan sanitizing, and is a newer model in excellent condition. It is properly vented with connections to each end of the machine. The drain line, however, is direct connected and should be indirectly wasted to an accessible floor sink having a proper air-gap as required by code.
- The existing 2-compartment pot wash sink has square corners and must be replaced with a new 3-Compartment sink. Direct waste to be converted to indirect waste and run to floor sink per code requirements.

Serving:

- The existing modular serving counters do not match in type and finish.
- Sneeze guards are not compliant with NSF guidelines.
- There are three serving lines, all need to be replaced.
- New serving equipment should include two smaller capacity drop-front milk cabinets.

Auxiliary Spaces:

- Floor has tile finish, which appears to be in good condition.
- Ceiling tiles are smooth plaster finish.
- Plumbing section to address code requirements for grease traps.

Part 8: Plumbing Systems

57. Observations

Roof drainage is a gutter and downspout system. Gymnasium roof downspouts discharge on to the adjacent walkway cover. Water sheds off covered walkway roof down into court yard.

Gas service is provided to the kitchen appliances, water heaters, and heating boiler.

Backflow preventer is not installed on incoming water service.

The dishwasher is gas fired.

The gas piping is in sub-standard condition. Piping for kitchen/classrooms routes across the roof to a regulator outside the kitchen. Service piping for the kitchen is buried in the dirt below slab.

Piping:

- All water piping is copper. Junior high circle is below slab, senior high is above slab. None of the building has isolation valves for the individual group toilets. Outdoor valve isolates the entire high school circle. Isolating junior high circle requires shutting off the whole school. Gate valve (existing) does not work. Valve cannot be replaced.
- Waste piping inside is cast iron. No issues were noted. Waste piping exterior to the building is terra cotta and was noted to be problematic.

Fixtures:

- All water closets are flush valves. Galvanized nipples connect to the copper pipe and is off an age we would anticipate failure at the connection.
- No hot water is provided in the student bathrooms.
- Urinals in the junior high circle are floor mounted style not typically used anymore. Urinals in the high school circle are more typical.

Water Heaters:

- A single Water heater serves the kitchen, admin, and band room. Heater is 199 MBH, 100 gallons. No mixing valve is provided. Recirculation pump serves kitchen only (time clock).
- Hot water for staff restrooms is provided by point of use electric water heaters.
- Hot water is provided for the locker room showers. Hot water is not provided for the locker room lavatories.
- Water heater for locker area is 360 MBH input, 75 gallon tank type. A recirculation pump is not provided. Makeup air louver was blanked off to prevent freezing. Heater was installed in 1966. (Gas was turned off to heater)

Kitchen:

- No grease interceptor is installed.
- Sanitary waste from 2- and 3- compartment sinks were observed to be direct connections with no air gaps.

Nixon Gym:

- The men's locker room urinals, lavatories and water closets have been re-piped with copper. The remainder of the building is the original galvanized piping (under concrete). Some piping in the mechanical room is copper. Water main is galvanized to meter. Main enters in basement boiler room.
- All fixtures are flush valve type.
- Urinals are floor type.
- Hot water is not provided for entrance toilets.
- Concession stand area has two sinks. Hot water is provided by a 4.5 KW, 40 gallon tank type water heater.
- Waste piping is cast iron inside the building. Exterior piping is terra cotta.
- Shower room is full of equipment and does not appear to be used.
- Lobby restrooms sewer outfall routes across the baseball field to an unknown area. It is independent of the building system.
- Original irrigation system riser is valved off in weight room and is not used.
- Water heater is gas fired tank type 540 MBH input, 125 gallon. Heater is connected to a separate storage tank of undetermined size.

Beam Auditorium:

- Tank type water closets are installed for the toilets on either side of the stage. Hot water is not provided to the lavatories.
- Tank type water closets are installed for the toilets in the auditorium lobby. Hot water is not provided to the lavatories (faucet has hot water capability).
- Piping that was visible was copper (with pro-press fittings). No issues were noted with concealed piping.

58. Recommendations

- Install a grease interceptor outside of building in an accessible location.
- Install indirect waste connections as required by code.
- Replace gas piping system, including underground to food service equipment.
- Install isolation valves to service systems.
- Replace packaged rooftop units
- Remove outside air connections to unit ventilators and provide dedicated outside air system to provide ventilation air to classrooms.
- Replace exterior terra cotta piping.
- Replace water coolers
- Provide hot water in student restrooms adjacent to cafeteria.
- Replace galvanized nipples at water closet flush valve connections.
- Replace gym water heater.
- Nixon Gym – replace remaining galvanized water piping
- Nixon Gym – provide water heater for entrance toilets
- Nixon Gym – install new water heater

Part 9: HVAC Systems

59. Observations

The building HVAC system consists primarily of space mounted unit ventilators with direct outside air connections. The unit ventilators in the junior high circle are approximately 10 years old. The units in the remainder of the building are greater than 30 years old.

The condensate drains for the unit vent are run exterior to the building. They tie directly to the downspouts and could possibly cause flooding of the spaces if there is a major failure of the underground storm drainage system. (Note that system has been in place for greater than 30 years and condition has not occurred yet).

Toilet exhaust is provided. Some fans did not appear to be in operation.

The “Center” of the circles are conditioned by packaged gas fired rooftop units. Units appear to all be in the 10-15 years age range.

Individual control for the exterior admin area offices is provided by packaged terminal heat pumps (4 total).

Both gyms are heated through four space mounted gas unit heaters. Ventilation is provided by two sidewall propeller fans. The gym is not air conditioned. Air is drawn through the new gym to the old gym. The gas unit heaters have been installed within the last five years.

The locker rooms are heated with cabinet unit heaters. Air conditioning is not provided. Ventilation fans are provided for the locker room and the shower area. Fans are not provided for the toilet area.

The majority of the classrooms have dedicated dehumidifier. It was noted the school has humidity problems.

The HVAC System runs 24/7.

Central Plant Cooling:

- The energy plant for the school consists of two chillers and two boilers supplying a four pipe/two pipe distribution system. Two boilers (approximately 2600 MBH each) provide hot water.
- All equipment in the boiler room is greater than 30 years old with the exception of two hot water pumps.
- Two chillers serve the building. A 60 ton chiller (approximately 10 years old) and a 75 ton chiller (20 years old) constitute the energy plant. The chillers are not manifolded together
- There is likely asbestos in the boiler room.

Distribution Systems:

- The junior high circle unit ventilators are supplied by a four pipe chilled water/hot water distribution system. The remainder of the building is supplied by a two pipe dual temperature water system.

Controls:

- The automation system is pneumatic/electric with some electronic overlay. The automation system does not comply with GCS Standards and for the most part is building control is minimal.

Kitchen:

- The existing grease hood appears to be original to the building. There is no direct air makeup to the hood. Location and source of hood makeup air could not be identified.
- Kitchen area is conditioned through a 5 ton split system air conditioning unit. Heating is provided through cabinet unit heaters.
- Dry storage does not have conditioned air supplied to it.

Nixon Gym:

- Locker rooms are conditioned by window units with electric heat.
- The original boiler and piping system has been abandoned in place.
- Ventilation is not provided in the locker rooms.
- The volleyball office is conditioned by a ductless split system.
- Gym is heated through two 300 MBH gas unit heaters. Ventilation is provided by two sidewall fans. Intakes are not provided. Air conditioning is not provided.
- No conditioning is provided for "back" lobby. Entrance lobby is conditioned by two electric unit heaters. Ventilation or AC is not provided.
- Concession stand is not heated or ventilated.
- Referees dressing area does not have any HVAC.
- No HVAC is provided in locker room or shower areas. Shower is ventilated with a sidewall propeller fan. The weight room is conditioned by a single window unit.

Beam Auditorium:

- The auditorium and stage are conditioned by two packaged gas roof top units. Units are located on the adjoining grade and duct routes up the exterior of the building to an overhead distribution system. Duct and units are approximately 10 years old and appear to be in good condition.
- The original H&V system was abandoned in place.
- An HVAC system is not provided for the lobby or the lobby toilets. The toilets in the area do have exhaust.

60. Recommendations

- Provide a building wide automation system utilizing direct digital controls.
- Provide a makeup air source for the kitchen hood via a dedicated roof mounted ventilator unit.
- Provide supply/return air in dry storage room.
- Replace toilet exhaust fans.
- Replace unit ventilators in the high school circle and replace with new four pipe system.
- Remove all control air compressors and pneumatic controls.
- Replace chilled and hot water distribution pumps and both building boilers. Install VFDs on the pumps.
- Nixon Gym – provide HVAC system compliant with current industry standards.
- Beam Auditorium – provide ductless split systems to condition entry lobby.

Part 10: Fire Protection

61. Observations

- Sprinkler system installed (Y/N) - N
- System type? Wet, dry, preaction, etc.? – N/A
- Full or Partial Coverage? – N/A
- Standpipes installed (Y/N) - N
- Fire Pump installed (Y/N) – N

62. Recommendations

- Provide a full coverage sprinkler system in accordance with the NC Fire Code and NFPA Standard 13.

Part 11: Electrical, Fire Alarm, Security and Communications Systems

63. Observations

Service Entrance

This facility is fed by a pole-mounted bent rated 480GrY277 volt 1200 amperes located adjacent to Building B (this is the original service location).

The capacity of the service appear to be adequate, but the equipment is long past its rated life.

Distribution

The power distribution consists of distribution panelboards and lighting panelboards fed by copper wire in conduit. The main service equipment and some of the distribution and lighting panelboards are well within their life expectancy. There are still some original panelboards that are in poor condition, and have been in service almost 50 years, should be replaced. Replacement circuit breakers for these panelboards may not be available. There are some panelboards (actually loadcenters) that have been “tacked” on as new circuits have been needed. These need to be replaced with commercial grade panelboards.

Panelboard labeling, including panelboard directories, is not up to date, some labeling is missing and duplicate panels designations were found. There are standard duplex receptacles too near sinks, which should have GFI protection. Additional receptacle circuits may be needed.

Grounding

Proper grounding is one of the most important factors in an electrical system. Not only is it essential for safety, it is also required for proper operation of electronic equipment. The grounding systems in the older portions of the facility are in question. The original building uses the metal conduit system to distribute grounding throughout the facility. This was legal at the time the building was constructed, but not now. The problem is that the underground conduits installed at that time were galvanized steel, which could have deteriorated in the nearly 50 years since the original facility was constructed, which could result in an increase in ground resistance, or loss of grounding entirely. An earth grounding study needs to be made and corrective measures taken.

The NEC (National Electric Code) requires a minimum ground resistance of 25 ohms. For electronic systems (data rooms, computers, etc.) a minimum ground resistance of 5 ohms is needed.

Lighting

Some of the lighting has been upgraded. DPI recommends T8 lamps and electronic ballasts as a minimum, but suggests T5 and LED as alternates. The exterior lighting is insufficient and in poor condition in most areas.

Lighting levels are, in some cases, within the levels recommended by DPI, but many areas have lighting levels far below DPI recommendations. These levels are recommended, not required. The lighting levels in the Kitchen appear to be in accordance with North Carolina Department of Health which requires 50 footcandles minimum in areas where food is handled, prepared and served, and where utensils are washed.

Emergency Power

This facility has no emergency generator.

Fire Alarm

The existing fire alarm system has a Silent Knight Model 5808 addressable control panel. This is a current model. Although the layout of devices in most areas have been updated, some of the layout and distribution of alarm initiating and notification devices does not meet current codes and ADA requirements.

Security

The security system does not meet current Gaston County School guidelines. No access card readers on exterior doors. No Mass Notification System. Video Surveillance System has recently been upgraded, but some additional cameras are needed.

Data/Communications

The data system currently does not meet GCS criteria. The MDF and IDF's are not dedicated and in secure locations. The MDF is located in an office. The IDF's are located in various non-dedicated and unsecured rooms.

Concerns

It was noted in several areas where panels are located that materials, furniture, etc. have been stored too close to the equipment. This is both illegal and dangerous. The National Electrical Code requires a minimum of 36 inches clear in front of these items. We feel that this issue should be addressed as soon as possible.

64. Recommendations

Service Entrance

The existing service entrance equipment is the original equipment installed in 1965 and should be replaced.

Distribution

All original panels and panels by manufacturers that are no longer in business, or are past their rated life, should be replaced. All equipment should be properly labeled, including directories showing loads for all circuits. All electrical panelboards need to be scanned with an infrared scanner to be sure that there are no “hot” spots, which can indicate that there is an overload, faulty device or connection. Based on the scanning results, corrections need to be made.

Lighting

The lighting in some areas of the facility has recently been replaced, many areas need new lighting. There is practically no exterior lighting, additional exterior lighting needs to be added – some on building walls and some on poles. New exterior lighting should be LED with protective enclosures without the use of polycarbonate lenses. Additional exit signs and egress lighting needs to be installed. All exit signs and egress lighting shall have battery backup with self-diagnostic system unless they are connected to the standby generator. Auditorium, Stage and Gymnasium lighting should be updated, with new dimming system for the Auditorium and Stage. Egress lighting needs to comply with ADA requirements.

Emergency Power

A new generator needs to be provided with capacity to feed life safety, alarm and data requirements.

Fire Alarm

The fire alarm system needs to be updated and expanded.

Security

Security system needs to be upgraded to latest GCS criteria. Door access system and Mass Notification System need to added per GCS standards.

Data/Communications

The wiring system should be updated to current GCS criteria. The main data rack MDF and IDF racks need to be secured. Backup power from a standby generator should be provided.

Sound Systems

The intercom system is outdated, but appears to operate but it should be updated to a VoIP based system. The existing system should be updated and restored to proper operation so that it can be used as a backup system for the new IP intercom and paging system.

The sound systems in the Auditorium and Gymnasium should be updated and made to comply with ADA requirements.

End of Assessment



SOUTH POINT HIGH
906 South Point Rd | Belmont, NC



YATES ■ CHREITZBERG ■ HUGHES

A S S E S S M E N T

SOUTH POINT HIGH

South Point High School

Existing Condition Assessment

PART 1: General Narrative of Facility

- 1. **Survey Date:** December 2014
- 2. **School Address:** 906 South Point Road, Belmont, NC
- 3. **Total Building Area:** 147,458 square feet
- 4. **Total Site Area:** 33.37 acres
- 5. **Instructional Capacity:** 1061 students
- 6. **Enrollment 2014-2015:** 1097 students
- 7. **Current Utilization:** 103%
- 8. **Area per Student Capacity:** 139 sf / student

9. Building Size and Dates of Construction:

Building A: 1964 (117,835 sf) Building B: Not used Building C: 1995 (8,310 sf)
Building D: 1995 (16,218 sf) Building E: 1999 (5,095 sf)
Building F: 1987 Field House (not included in overall square footage)

10. General Description of Facility:

The original school was constructed in 1964, with three subsequent additions for various Classrooms and Auxiliary Gym. The building contains one classroom wing that is 2 stories in height. The majority of the facility consists of load bearing masonry walls with steel bar joist roof structure and low sloped roofing. Exterior walls consist of brick veneer and significant windows in the older classroom areas, with more moderate windows in the newest classroom wing. The main school facility contains three detached wings, which each require exterior access. The Field House is located near the football stadium.

The site contains visitor, staff, student and bus parking, and separate bus and car rider drives. Athletic facilities consist of a football field with running track, baseball field, softball field, multi-purpose practice field and tennis courts.

Part 2: General Space Standards

11. General Purpose Classrooms

Room Description	No. of Rooms	Typical Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
General Purpose	29	750 - 850 sf	850 sf	88% - 100%	Fair - Good

Comments: The general purpose classrooms are arranged into 3 wings on the main level and 1 wing on the upper level. The classrooms vary in size, but are mostly close to, or equal to space standards.

All of the classrooms contain smart boards, wireless technology and at least four hardwired computer drops.

- The classrooms in Building A are all approximately 750 square feet, which is 12% smaller than space standards. Each of the classrooms share a small room, which was originally designed as an office, but are mostly utilized for storage. Removal of these rooms will not significantly increase the area or functionality of the instructional rooms. The walls are wood framed with non-tempered plate glass, and should be replaced with fire resistant drywall, if the rooms are to remain. The classrooms each contain a dated teacher storage casework unit.
- The classrooms in Building D are all approximately 850 square feet, which is equal to space standards. The classrooms do not contain a teacher storage casework unit, or any other casework.

12. Science Classrooms

Room Description	No. of Rooms	Typical Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
Biology and Physical Science (117, 119)	2	1,050 sf	1,200 sf	88%	Fair
Chemistry (113)	1	1,150 sf	1,500 sf	76%	Poor
Earth Science (308, 310)	2	1,000 sf	1,400 sf	83%	Fair
Physics (115)	1	1,150 sf	1,200 sf	96%	Good

Comments: Four Science classrooms are located in Building A and two in Building F. A typical classroom in Building A (Room 116), is also currently being utilized as a Science classroom (which is not listed in the chart above).

- The four Science classrooms in Building A (113, 115, 117 and 119) are mostly smaller than space standards. None of the rooms contain an eye wash / shower. The Science rooms share two preparation rooms, which are approximately one half the size of the 250 square foot space standard. Chemistry room 113 room contains island casework with chemical resistant tops, sinks and a demonstration island with sink. Rooms 115, 117 and 119 contain perimeter casework with chemical resistant tops, sinks and a demonstration island with sink. All of the science casework in Building A is in poor condition and should be replaced. Rooms 113 and 115 each contain a fume hood which are not functioning.

- The two Earth Science classrooms in Building D (308 and 310) are both smaller than space standards. Each room contains an eye wash / shower, but no floor drain. The rooms do not have Preparation room. Each of the Science rooms contains perimeter casework with chemical resistant tops, sinks and a demonstration island with sink, which is adequate and in good condition.
- A typical classroom in Building A (Room 116), which is 750 square feet is currently being utilized as a Chemistry / Biology Science classroom. This room does not include and sciences casework.

13. Exceptional Children

Room Description	No. of Rooms	Typical Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
EC Resource	2	750 sf	1,000 sf	75%	Poor
EC Cluster	1	750 sf	1,000 sf	75%	Poor

Comments: The school contains 2 EC Resource and 1 EC Cluster classrooms, all of the EC classrooms are located in Building A.

- The EC Resource and EC Cluster classrooms are all smaller than space standards, but of the same size as the general purpose classrooms.
- The EC classrooms are located near a group toilet, which are not handicap accessible. These toilets should be upgraded to be handicap accessible.
- The EC Cluster classroom is significantly smaller than space standards, and also does not include a dedicated toilet, which should be added if possible. The classroom contains dated casework, which is not consistent with GCS standards, and should also contain a countertop sink.
- EC does not have access to a shower / changing room other than those located within the PE Locker rooms.

14. Arts Education

Room Description	No. of Rooms	Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
Art (316)	1	850 sf	1,400 sf	60%	Poor
Art (317)	1	1,400 sf	1,400 sf	100%	Excellent
Band	1	1,800 sf	1,800 sf	100%	Excellent
Chorus	1	850 sf	1,400 sf	60%	Poor
Auditorium	1	7,400 sf	Varies	N / A	N / A
Stage	1	2,800 sf	Varies	N / A	N / A

Comments: The Art and Chorus rooms are located in the detached Building E and require exterior access for all students. The Band room is located near the Gymnasium and Auditorium. The Auditorium is located adjacent to the Gymnasium and shares a dedicated exterior entry, lobby and toilets.

- Art room 316 is significantly smaller than space standards and does not contain a storage room. Art room 317 meets space standards, and contains both a Kiln room and storage room. One of the Art classrooms contains a door to the exterior and an concrete paved art patio. Both rooms contain adequate built in casework.
- The Band room meets space standards. The room contains fixed risers and two storage closets around the perimeter, along with a larger instrument storage room, uniform storage and 3 practice rooms. The practice rooms are utilized for storage, and this whole area could be redesigned to be more efficient for storage. The instrument storage room contains open plywood cubbies that are not lockable, and in poor condition. The Band room contains some acoustical wall treatments, but a standard lay in ceiling. The risers are depressed below the finished floor and could be infilled with a concrete slab to create a flat floor.
- The Chorus room is significantly smaller than space standards and the ceiling is not of adequate height. The room contains portable risers and proper acoustical treatment on the walls and ceiling.
- The Auditorium is located adjacent to an entry and lobby shared with the Gymnasium, and can be secured from the classroom portions of the school for after hours use. The toilets within the lobby that serve the Auditorium and Gym do not contain an adequate number of fixtures for the number of occupants.
- The Auditorium contains approximately 800 dated wood seats, which should be replaced. The room is not capable of seating the entire student population. The Auditorium does not include any handicap seating areas, which cannot be added since the sloping floor does not contain any flat spot at the top near the main entry doors. The addition of handicap seating requires construction of a flat seating area at the back of the Auditorium. The Auditorium contains a control room.
- The stage is elevated, and contains two ramps which greatly exceed the accessible rise / run. These ramps should be replaced with accessible rise / run, which requires redesign of the backstage rooms.
- The Stage is only accessed through the Auditorium or from the exterior, which severely limits the set up and efficiency of performances. Both of the exterior doors from the Stage exit directly to the exterior.
- The Auditorium does not contain appropriate acoustical treatments, with brick / wood panel walls and continuous hard plaster ceiling.
- The school does not contain a Scene Shop.
- The Stage contains adequate curtains and rigging. The backstage area contains two storage rooms and also a dressing room with two small Toilets, which is not functional and used for storage only.
- A Theater Arts classroom is located in a mobile unit.

15. Career and Technical Education Classrooms / Shops

Room Description	No. of Rooms	Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
Business Lab	3	750 sf	1,200 sf	62%	Poor
Technology Lab	1	1,200 sf	1,200 sf	100%	Excellent
Health Sciences	1	930 sf	2,000 sf	46%	Poor
FACS	1	1,700 sf	1,600 sf	106%	Excellent
Interior Design	1	850 sf	1,600 sf	53%	Poor
Drafting	1	850 sf	1,600 sf	53%	Poor

Comments: All of the CTE classrooms / labs are significantly smaller than space standards, except for the Technology Lab and Family and Consumer Sciences. The school does not contain any trades shops.

- The 3 Business Labs are all located on the second level and significantly smaller than standards. The Technology Lab meets space standards.
- Health Sciences is located near the Science rooms, and is significantly smaller than space standards. The room does not contain adequate casework.
- The Family and Consumer Sciences is larger than space standards. However, it contains dated casework, which should be upgraded.
- Both the Interior Design and Drafting classrooms are significantly smaller than space standards, and are the size of typical classrooms.

16. Media Center

Room Description	No. of Rooms	Area	GCS / NCDPI Standard Area	Relation to Standard	Adequacy Rating
Main Room	1	2,200 sf	3,600 sf	61%	Poor
Support Areas	Various	1,000 sf	2,000 sf	50%	Poor

Comments: The Media Center is located near the Administration area at the front of the school.

- The Media Center Main Room is significantly smaller than space standards, and cannot be expanded without a building addition.
- The Media Center support spaces are limited and include an Office, Work Room and Storage Room. Due to the location within the school, the support areas cannot be expanded without expansion into the Main Room, or a building addition.
- The Media Center does not contain Conference room.
- A portion of the Media Center storage room is being utilized for a small video production room, but does not contain an adequately sized video studio, production, editing, or equipment rooms.
- The Media Center is located within an area of the school that cannot be secured for after-hours community use.

17. Physical Education / Indoor Athletics

Room Description	Area	Court Size	NCDPI Standard Area	Relation to Standard	Adequacy Rating
Gymnasium	11,400 sf	50 x 94	Varies	N / A	N / A
Auxiliary Gym	6,500 sf	50 x 74	Varies	N / A	N / A

Comments: The Gymnasium is located adjacent to the Auditorium and shares a dedicated exterior entry, lobby and toilets. The Auxiliary Gymnasium is located in a free standing building with locker rooms and showers. The weight room is located in an exterior building room near the locker rooms.

- The Gymnasium is located adjacent to an entry and lobby shared with the Auditorium, and can be secured from the classroom portions of the school for after hours use. The toilets within the lobby that serve the Auditorium and Gym do not contain an adequate number of fixtures for the number of occupants.
- The Gymnasium includes telescoping bleachers on each side, which seat approximately 1,400. These bleachers are in poor condition and in need of replacement.
- The Gymnasium basketball court is of regulation size for interscholastic play. With the bleachers extended, the safety space on the sides is approximately 3-4 feet, which is less than the 6 foot minimum. The end safety zones are adequate, with wall pads.
- The Girls PE and Team locker room contains individual showers and shower partitions, which are in fair condition. The toilet partitions are damaged and in poor condition, and neither the PE or Team locker rooms contain lockers.
- The Boys PE and Team locker room contains a group shower which are in fair condition, but should be converted to individual stalls. The toilet partitions are damaged and in poor condition, and neither the PE or Team locker rooms contain lockers.
- The Auxiliary Gymnasium is a free standing building, which requires exterior access. The Auxiliary Gym contains coach's offices, group toilets and additional lockers, which are handicap accessible and in fair to good condition.
- The Weight Room is located in the former carpentry shop building and requires exterior access from the locker rooms. It contains two coach's offices and a small storage room, but no training room or whirlpool.

18. Administration

 Excellent

 Good

 Fair

 Poor

Comments: The Administration area includes approximately 2,100 square feet, and contains the Guidance spaces directly within the Admin area. Administration consists of the following rooms: (1) Main Office / Reception, (1) Waiting, (1) Principal's Office, (1) Secretary Office, (1) Data Manager's Office, (1) Business Manager's Office (1) small Work Room, (1) Records room and (2) Toilets. The school has (3) Assistant Principals, one is located in the 2nd floor classroom wing, one across from the Media Center and the other AP office is located in the Building D classroom wing. The SRO office is located near the Cafeteria. The Administration area is very limited in space, but can be expanded with an addition to the front of the building.

- The Administration area is located directly adjacent to the two main entries to the school. A secure vestibule could be added to one of the entries, with direct access in the Administration Reception / Waiting area.

- The Administration area has visibility of the main entry doors, bus drive area and visitor parking.
- The Administration area does not include a dedicated Conference Room.
- The Administration Work Room is very small and should be significantly enlarged.
- The Administration area does not include a private Staff Room.
- The Guidance offices are located directly within the Administration area. The Guidance area should be located near, but with a separate entry from the Admin area.
- None of the Toilets in the Administration area are handicap accessible. The Admin area should include a dedicated Men's and Women's staff toilet.

19. Student Support Excellent Good Fair Poor

Comments: The Student Support Spaces consist of (3) Guidance Offices (1) Office shared by the School Nurse and Social Worker, (1) School Therapist Office and (1) Career Development Coordinator Office.

- The three Guidance Counselor offices are located directly within Administration area. The Guidance offices should be located near, but with a separate entry from the Administration area.
- The Social Worker and Nurse share an office near the Administration area. Each should have a dedicated office for privacy.
- The Health Services area should include rooms for a dedicated Nurse's Office, Holding Room, dedicated Toilet, Shower and Changing area and wheelchair storage.
- The School Therapist utilizes a shared conference room located in the Classroom areas. The Therapist should have a dedicated office near, but separate from the Administration area.
- The Career Development Coordinator office is located in a classroom storage room on the upper level that requires access through the CTE Classrooms, or the Assistant Principals office. This office should be relocated closer to Guidance for better access.

20. Staff Support Excellent Good Fair Poor

Comments: The Staff Support Spaces consist of one Teacher Work Room and two Teacher lounges.

- The Teacher Work room in Building D is small and does not contain adequate space for meeting or teaming.
- Two small Teacher lounges are located across from the Media Center, one for men and one for women. These should be combined into one large Teaming / Work Room
- Additional Teacher Teaming / Work Rooms should be located in each classroom wing.

21. Cafeteria

Students per Seating *	Dining Room Area	Area per Student	NCDPI Standard Area	Capacity of Dining Room	Relation to Standard
366	4,500 sf	12 sf / student	14 sf / student	321	87% Fair

* Students per Seating equals the 2014 - 2015 student enrollment for the school divided by 3 seatings (1,097 / 3 = 366).

Comments: The Cafeteria is located at the rear of the school.

- The Cafeteria is smaller than space standards. In addition, a main school corridor runs through the dining area and the seating layout is not very efficient. The school employs 4 seatings to alleviate crowding in the Dining Room.
- The Cafeteria contains a pair of doors to the exterior. However, these doors do not offer close access to the loading dock area for trash removal. Trash must be removed through the Kitchen to the loading dock area.

22. Kitchen

Lunches Served per Day *	Kitchen Area	NCDPI Standard Area	Relation to Standard
987	1,800 sf	2,208 (for 1,000 lunches served)	81% Fair

* Lunches Served per Day equals the 2014 - 2015 student enrollment for the school times 90% participation factor (1,097 x .90 = 987). This school experiences an elevated participation rate due to free and reduced lunches.

Comments: The Kitchen is smaller than the NCDPI guidelines of overall area for the number of students served, does not contain some needed spaces, and is in generally poor condition. See the Section 7: Food Service Assessment for additional information.

- Four serving lines are located within the Kitchen, which are adequate to serve the number of students. However, circulation for serving occurs within the kitchen area and does not provide adequate stacking space for students in line.
- The Kitchen does not include a secure Manager's Office, as the manager's desk is located in a corner of the kitchen. A dedicated Manager's Office needs to be provided.
- The Kitchen includes one small toilet, which is not handicap accessible.
- The Kitchen does not include a staff locker area.
- The Kitchen does not have a washer and dryer.
- The loading dock is elevated with stairs, but does not contain a handicap accessible ramp and is too small to access the trash dumpsters. The dock is very small and contains a covered canopy. The dock and canopy should be enlarged and also include a ramp.

23. Toilet Facilities

Excellent Good Fair Poor

- The classroom portion of Building A contains three group toilets, all of which are in poor condition and not handicap accessible. However, the rooms are of sufficient overall size that can be redesigned to be handicap accessible.
- The group toilets near the Gym and Auditorium are in poor condition and not handicap accessible. These toilets also do not contain an adequate number of fixtures for the number of occupants served by these spaces and should be expanded, if possible.
- The group toilets in Building D are in fair to good condition and also handicap accessible.
- Buildings D and E contain 3 staff toilets, which are in fair to good condition and also handicap accessible.

- Staff are provided with 2 single toilets, across from the Media Center, which are not handicap accessible and in poor condition. Additional Staff toilets need to be within each of the other classroom wings. Staff are also provided with 2 group toilets in the Administration area, which are also not handicap accessible and in poor condition.

24. Other Spaces

- The school has limited general purpose storage. Many electrical rooms are used for storage, which violates code.
- The school contains 5 mobile units for ELA, ISS, Theater Arts, Social Studies and Language.
- The MDF is located a Records Storage room near the Administration area, which should be converted into a secure, access controlled room with a gaseous fire suppression system. The IDF's are located throughout the school in classrooms and corridors, most of which will be difficult to relocate into secure rooms due to existing data cabling.

25. Additional Considerations

- Student lockers in Building A are in such poor condition that the school does not utilize them. Student lockers in Building D and E are newer and in good condition.

Part 3: School Site

26. Parking

 Excellent

 Good

 Fair

 Poor

Description	Current Number of Spaces	Number of Spaces Needed	Relation to Number of Spaces Needed
Visitor	48	50	-2
Staff	72	100	-28
<u>Student</u>	<u>321</u>	<u>325</u>	<u>-4</u>
Total	260	510	Total -34 spaces
Bus	13	11	+2

Comments: Parking on the school site is poor, with an inadequate number of spaces and poor separation of student and staff parking. Most of the asphalt paving is in poor condition.

- The 48 parking spaces at the east side of the site are utilized by both Visitors and Staff.
- Staff utilize 50 parking spaces along the south side of the school. These spaces are located directly within the car rider and service drive, which presents a safety concern.
- The staff and student parking on the west side of the school are located in the same general lot, with no separation.
- The site contains a bus parking area of adequate size within the bus loop.
- All of the asphalt paving in parking areas on the site, except in the student parking located north of the bus lot, is in poor condition with significant cracking, potholes, patches, etc., and should be replaced.

27. Vehicular Circulation Excellent Good Fair Poor

Comments: Vehicular Circulation on the school site is generally fair, with three separate drives that serve parking areas for student / staff, bus and visitors. However, most of the asphalt paving is in poor condition.

- The main school entry and car rider drive are located on South Point Road, which does contain a center turn lane, but no deceleration lanes. Four drives are located on Nixon Road for the bus drive and access to most of the parking areas, which does not contain a center turn lane or deceleration lane. Additional investigation should be made with the Department of Transportation about public road improvements.
- The car rider drive runs along the south side of the building and offers significant stacking. However, this drive contains staff parking within the stacking area, which is a safety concern. This drive also runs through most of the service areas at the rear of the school. This area should be redesigned to separate the drive from parking for stacking purposes, however the existing site area does not allow for any expansion.
- All of the Student parking is accessed by 4 drives on Nixon Road. The storm culvert piping beneath each of these drives are mostly buried and do not provide adequate stormwater flow. The edges of the drives have eroded, creating an unsafe drop-off condition for vehicles that should be corrected immediately.
- The bus drive contains adequate stacking, turn-around loop area and more than adequate parking for busses.
- The kitchen service drive is located directly off the south drive for car rider and staff parking, and is in poor condition. The service drive should be replaced, with a concrete pad under the loading and dumpster areas.
- All of the asphalt paving in drive areas on the site is in poor condition with significant cracking, potholes, patches, etc., and should be replaced.

28. Pedestrian Circulation Excellent Good Fair Poor

Comments: The school site contains adequate sidewalk locations for pedestrian circulation for access to various areas of the school buildings. However, most of the sidewalks are in poor condition.

- Almost all of the sidewalks on site, except around Buildings D and E, are in poor condition and should be replaced.
- The sidewalks near the tennis courts are in poor condition and should be replaced.
- Additional sidewalks should be added to provide handicap access to the softball field spectator areas.
- The perimeter of the school site contains a sidewalk near the intersection of South Point Road and Nixon Road, and from the student parking to tennis court areas, but does not extend along the whole school property.

29. Walkway Canopies Excellent Good Fair Poor

Comments: The school contains several walkway canopies that connect the various buildings.

- Approximately one half of the walkway canopies on site are in poor condition, rusting and should be replaced. The other half are in fair condition, but not of substantial construction and should be replaced with more a durable system.
- The school does not contain a canopy at either the bus rider or car rider drop off areas, which should be added.

- The main school entry contains a very small exterior cover.

30. Outdoor Play

- The site contains does not contain any outdoor play areas, other than the athletic fields.

31. Athletic Facilities Excellent Good Fair Poor

Comments: The school contains (1) football field / track, (1) baseball field, (1) softball field, (6) tennis courts and (1) multipurpose practice field. Soccer also utilizes the football field. All of the facilities, including the practice field are lighted.

- The football field is in fair condition. The asphalt paving of the track and high jump is cracking in many areas and should be re-surfaced.
- The long jump runway and landing pit are both in poor condition. The runway should be re-paved and the pit reconstructed.
- The football field and track do not contain continuous perimeter fencing between the track and spectator areas, which should be added.
- The baseball field is in good condition. The dugouts are masonry with concrete roofs and are in fair condition.
- The softball field is in fair condition. The dugouts are chain link with wood framed roofs and in fair condition.
- The tennis courts are in very poor condition, and practically unusable. The asphalt surface paving is cracked in almost all areas.

32. Athletic Spectator Areas Excellent Good Fair Poor

- The football stadium seats approximately 3,500 on the home side and 2,000 on the visitor side. The visitor side bleachers have been recently installed, and include handicap access and seating.
- The home side bleachers consist of precast concrete structure and steps, with aluminum bench seats. The aluminum seats are in poor condition and should be replaced. The concrete structure appears to be in fair condition, but was not inspected for any structural issues. The aisles are very narrow and do not include handrails. The aisles and steps should be widened and handrails installed for safety. The bleachers also do not include any handicap access to the seating area, or any handicap access or seating, which should be added.
- The football stadium does not include any nearby handicap parking. A new sidewalk has recently been added to provide handicap access from the ticket building to spectator area.
- The Field House contains a concessions / toilet building on the lower level. The toilet rooms are in poor condition not handicap accessible. However, the rooms are of sufficient overall size that can be redesigned to be handicap accessible.
- The Field House contains lockers, group showers, toilets, training room and coach's office on the upper level. The toilet areas are in poor condition and the showers are non functioning. The toilet fixtures and partitions should be replaced and the group showers replaced with individual stalls.
- The football stadium visitor side contains a new toilet / concessions building that was recently construction and in good condition.
- The softball field does not include any nearby handicap parking, or handicap access to the bleacher areas.

- The softball field contains minimal bleachers for approximately 75. Some of the bleachers are sitting one half on concrete and one half on dirt. The concrete pad should be extended beneath the bleachers and also to provide handicap access.
- The baseball stadium does not include any nearby handicap parking, but does have handicap access to the bleacher areas. The bleachers seat a total of approximately 400, but contain safety rails which do not meet code for picket spacing. Chain link fencing should be added to the bleacher safety rails.
- The baseball stadium contains a concessions / toilet / press box building, which was not able to be accessed during the assessment.
- The tennis courts contain minimal bleachers for approximately 30, which sit directly on dirt. The bleachers are damaged and should be replaced. A concrete pad should be provided beneath the bleachers and also to provide handicap access.
- The tennis courts contain a small toilet building, which appears to be in good functioning condition.

33. Grounds / Landscaping Excellent Good Fair Poor

- The school contains very limited foundation shrubs, which are overgrown in a few areas and should be replaced with lower growing plants.
- The parking lots contain virtually no landscaping.
- The perimeter of the site is overgrown on the west side of the athletic fields and should be trimmed back.

34. Utilities Excellent Good Fair Poor

- The school is served by the City of Belmont for water and sewer, and does not have a backflow preventer for domestic water, which should be added by code. Much of the water line has recently been replaced, with no current issues.
- The school does not have a grease interceptor on the sanitary sewer line for the kitchen, which should be added by code. Much of the sewer line has recently been replaced, with no current issues.
- Only three fire hydrants are located in the general area of the school, along both South Point Road and Nixon Road. More fire hydrants should be added on the school site to provide adequate coverage of the school and athletic buildings.
- The school is served by natural gas, which is metered separately for the kitchen and the buildings.
- Some minor overhead power lines run in various areas to the school building, which presents a safety concern. Further investigations with the service provider should occur about burying these power lines underground.

35. Storm Drainage Excellent Good Fair Poor

- The site does not have a stormwater management pond, which is not required by the municipality unless additional impervious area is added.
- The site contains minimal underground storm drainage for each of the paved parking areas, which daylight into ditches along the public roads and perimeter of the property. Additional storm drainage should be added when the paving is replaced.
- The storm culvert piping beneath the four drives from Nixon Road are mostly buried and do not provide adequate water flow, creating evidence of ponding and erosion under the drives. These pipes

should be cleaned out, or replaced with a larger pipe if the driveway is replaced. In addition, further investigation should be given to improving the drainage ditches along public roads with the governing Department of Transportation or stormwater authority.

- Storm drainage should be added to the tennis court area to prevent ponding water and wash out ever the sidewalks
- Approximately half of the downspouts throughout the school are connected directly to the underground stormwater piping system. This connection should be made indirect, with the downspouts spilling above grade into catch basins to prevent clogging.
- Approximately half of the downspouts spill directly on to grade. Catch basins should be added where possible to direct the roof drainage to an underground storm drainage system to prevent water from ponding next to the buildings.

36. Emergency Access Excellent Good Fair Poor

- The main school building has continuous paved emergency access around all sides of the building.
- The site contains paved emergency access to the football, baseball, softball fields and tennis courts.

37. Site Security Excellent Good Fair Poor

- The site is located in a residential area. The Principal and school SRO Officer indicated that the surrounding areas do not typically include significant crime and vandalism at the school is rare.
- The north and east portions of the building and site have good visibility from public roads, drives and parking areas. The entire perimeter of the school building has vehicular access for police patrol.
- The stairs down to the basement level Boiler Room are not secured. A security fence around the area well and gate should be added for safety and security.
- The athletic fields all contain perimeter fencing.
- The site contains chain link fencing around the perimeter, including the athletic fields. Isolated areas are damaged and should be replaced. In addition, wooded areas have overgrown the fencing in most areas around the athletic fields and should be cut back.

38. Additional Considerations

- All of the exterior steel handrails and guardrails need painting.
- Directional signage on the school site is poor and should be replaced.

Part 4: Building Envelope

39. Construction Type Non-Combustible Combustible

40. Structural Floors

- Material:
- Concrete Slab on Grade
 - Concrete on Metal Deck over Steel Structure
 - Wood Deck on Wood Joists
 - Other

Evidence of Structural Concerns: Prevalent Isolated None Visible
 Overall Condition of Structural Floors: Excellent Good Fair Poor

Comments: The structural floors consist of concrete slab on grade, with one area of elevated concrete slab two story construction in the classroom wing of Building A.

- Concrete floors generally appear to be in good condition with no major cracks telegraphing through the floor coverings.
- In the classrooms on the south side of Building D, the VCT shows evidence of staining through the joints of the tile. This may be due to moisture migration through the concrete floor slab and should be investigated further.
- In an area within the Administration area, the concrete slab appears to have settled about 1/4" below the wall base. However, the floor feels solid and no significant structural cracks in the adjacent walls are visible.
- Several cracks are visible in the terrazzo flooring in the corridor and Cafeteria areas of Building A. These cracks appear to be minor shrinkage cracks due to the absence of control joints.

41. Exterior Walls / Cladding

Material: Masonry EIFS / Stucco Metal Other
 Evidence of Structural Cracking: Prevalent Isolated None Visible
 Evidence of Concern with Exterior Cladding:
 Cracks / Gaps Prevalent Isolated None Visible
 Efflorescence (Masonry) Prevalent Isolated None Visible
 Moisture Penetration Prevalent Isolated None Visible
 Rot/Decay/Corrosion Prevalent Isolated None Visible
 Overall Condition of Exterior Walls: Excellent Good Fair Poor

Comments: The exterior walls of Buildings A appear to consist brick / CMU construction that most likely does not include insulation, an air space or flashing. The newer Buildings D and E consists of brick veneer with CMU backup, insulation and an air space. Building C, the Auxiliary Gym is steel framed with both masonry veneer and metal wall panels.

- The brick veneer appears to be in generally good condition, with some areas of efflorescence on Building A, which may be a result of moisture within the wall due to the lack of an air space.
- The mortar bed and head joints in some areas of Building A on the auditorium wall have deteriorated. The horizontal bed joints have deteriorated and some of the vertical head joints are missing. Additional investigation should be provided to determine the cause, which is most likely moisture within the wall. The open mortar joints continue to allow water into the wall cavity and should be re-pointed.
- Expansion joint caulking is failing and has fallen out in several places, and should be replaced on all buildings to prevent water intrusion.
- Buildings A contains exterior hard coat stucco soffits with areas of cracks and deterioration, and should be replaced. These soffits are suspected to contain asbestos, although they have not yet been tested.

42. Exterior Glazing

Frame Material: Aluminum Steel Wood Other

Glazing Material: Un-insulated Insulated Glass Block

Evidence of Concern with Exterior Glazing:

Moisture Penetration Prevalent Isolated None Visible

Rot/Decay/Corrosion Prevalent Isolated None Visible

Overall Condition of Exterior Glazing: Excellent Good Fair Poor

Comments: Due to the differing ages of the various building wings, the condition of the exterior glazing systems varies substantially, but the majority of glazing is in poor condition.

- The exterior glazing in all areas of Building A consists of 1/4" un-insulated glass in a thermally continuous steel framing system, which is very energy inefficient and past its useful life. In addition, this glass appears to be standard plate glass, which presents a safety concern as it is easily broken. All of this glazing should be replaced with insulating glass in a thermally broken aluminum storefront framing system to be more energy efficient and provide better thermal control of the classrooms in particular. The glass should be safety tempered in areas required by code.
- The window glazing in Buildings C, D and E consists of insulating glass in an aluminum framing system and is in fair to good condition. Some of the operable windows in building D are reported not to lock and should be repaired.

43. Exterior Entry / Exit Doors

Door Material: Aluminum Steel Wood Other

Evidence of Concern with Entry / Exit Doors:

Moisture Penetration Prevalent Isolated None Visible

Rot/Decay/Corrosion Prevalent Isolated None Visible

Overall Condition Doors: Excellent Good Fair Poor

Overall Condition of Hardware: Excellent Good Fair Poor

Comments: Due to the differing ages of the various building wings, the condition of the entry / exit doors varies substantially, but the majority of doors are in poor condition. None of the exterior doors include access control hardware, which should be added for security.

- Most of the entry / exit doors Building A, appear to be original and are in poor condition, some do not have code compliant panic devices and none have access control for security. These doors should be replaced to include code compliant door hardware and access control for security.
- The doors in Buildings C, D and E are in generally good condition, but do not have access control hardware, which should be added for security.
- The main front entry doors should have secure access control with buzz-in and security camera tied into the Administration area reception desk.

44. Exterior Classroom Doors

Door Material: Aluminum Steel Wood Other

Evidence of Concern with Classroom Doors:

Moisture Penetration Prevalent Isolated None Visible

Rot/Decay/Corrosion Prevalent Isolated None Visible

Other None at this time

Overall Condition of Doors: Excellent Good Fair Poor

Overall Condition of Hardware: Excellent Good Fair Poor

Comments: One Art classroom has a door that open directly to the exterior.

- The Art room in Building E contains an aluminum storefront door to the exterior art patio. This door is in good condition.
- The majority of other exterior doors for mechanical rooms, electrical rooms, storage, locker rooms and kitchen service in Building A are in poor condition and should be replaced.

45. Roofing

An independent roof assessment was performed for Gaston County Schools by Roof Engineering, Inc. (REI) in 2006. The report indicates the following needs regarding the replacement of roofs:

- Building A: Asphalt Built-up Replace in 2015
- Building C: Asphalt Built-up Replace in 2015
- Building D: Asphalt Built-up Replace in 2015
- Building E: Asphalt Built-up Replace in 2018
- Building F: No information in roof report is provided for the Field House roof.

46. Additional Considerations

- The brick chimney appears to be utilized as a boiler flue, but should be lowered if possible, for safety reasons. The chimney is much taller than most schools.

Part 5: Building Interior**47. Interior Walls**

Overall Condition of Walls: Excellent Good Fair Poor

Comments: The majority of interior walls are painted CMU or brick and are in fair condition. Corridors in Building A include areas of glazed face CMU, which is in generally fair condition.

- The offices within the classrooms and the Media Center support spaces in Building A contain exposed wood paneling and non-tempered plate glass, and should be replaced with fire resistant drywall and tempered glass, if they are to remain.
- Horizontal cracks were observed at the bottom of the glazed face CMU wing walls of the locker recesses in the corridors of Building A. These walls are not structural, but should be investigated further for the cause of these cracks.

- In the Auxiliary Gym, the insulation liner on the interior side of the exterior wall is significantly damaged from baseballs. This insulation should be repaired and a liner panel installed to protect the insulation.

48. Floor Finishes

Classrooms	Flooring Type: VCT (in most areas, some VAT in Building A)
	Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Corridors	Flooring Type: Terazzo (in most areas, VCT in Building D and E)
	Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Cafeteria	Flooring Type: Terazzo
	Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Gymnasium	Flooring Type: Wood
	Condition: <input type="checkbox"/> Excellent <input checked="" type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> Poor
Auxiliary Gym	Flooring Type: Rubber
	Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor
Auditorium	Flooring Type: Concrete
	Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Media Center	Flooring Type: Carpet
	Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Administration	Flooring Type: Carpet
	Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor

Comments: The majority of interior floor finishes in classrooms are VCT and in fair condition, although several classrooms in Building A contain VAT. Most of the Corridors, except in Building D and E, are Terazzo, and in fair condition.

- Several classrooms in the Building A contain exposed VAT tile, which should be abated and replaced with VCT.
- In the classrooms on the south side of Building D, the VCT shows evidence of staining through the joints of the tile. This may be due to moisture migration through the concrete floor slab and should be investigated further. The VCT should be removed and replaced.
- The Band room contains VAT and should be replaced with carpet.
- The carpet in the Administration area is in generally poor condition, with areas of significant wear in high traffic areas and should be replaced.
- The wood Gymnasium floor has recently been refinished and is in good condition.
- The rubber flooring in the Auxiliary Gym is in poor condition and should be replaced.
- The Auditorium contains VAT in all areas. This VAT should be abated, with polished concrete under the seats and carpet in the aisles.
- The wood Stage floor is in poor condition, and should be refinished and painted black.

49. Ceilings

Lay-in	Locations: Building A, D and E (in most areas)
	Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor

Plaster	Locations: Building A (Media Cntr, Auditorium, group toilets and locker rms) Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Drywall	Locations: Group toilets in Building D Condition: <input type="checkbox"/> Excellent <input checked="" type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> Poor
Open Structure	Locations: Gymnasium, Auxiliary Gym, Field House Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor

Comments:

- The majority of ceilings in Building A are 2x4 lay-in. Most of these ceilings are in poor condition, with stained or damaged tile, curled tile edges and areas of sagging grid. These ceilings should be replaced 2x2 lay-in.
- The ceilings in Buildings D and E are lay-in and in generally fair condition.
- The Media Center contains a textured plaster coating ceiling that is reported to contain asbestos. This ceiling should be removed and replaced with 2x2 lay-in, for better acoustics, reflectivity, installation of new light fixtures and concealment of conduit and piping.
- The Auditorium contains a continuous textured plaster coating ceiling that is reported to contain asbestos. This ceiling should be removed and replaced with a series of drywall or lay-in ceiling baffles that offer better acoustics, and access to above ceiling electrical and wiring for lighting and sound upgrades.
- The Band room contains standard lay-in ceilings. These should be upgraded to a high NRC ceiling for acoustical purposes.
- The PE locker rooms contain smooth plaster ceilings, which are in fair condition.
- The Kitchen contains a smooth plaster ceiling, which is in fair condition.

50. Casework

Classrooms	Casework Type: Wood and Plastic Laminate Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor
Science Rooms	Casework Type: Wood with Chemical Resistant Counters Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor
Media Center	Casework Type: Wood and Plastic Laminate Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor
Administration	Casework Type: Wood and Plastic Laminate Condition: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor

Comments: The majority of the casework in the school is in poor condition.

- Most of the Classrooms in Building A contain a lockable teacher storage cabinet, which are in poor condition and should be replaced. The remainder of the casework in the room consists of various mobile cabinets and bookshelves considered to be furniture / equipment.
- The Classrooms in Building D and E do not contain any casework. A lockable teacher storage cabinet should be added to these rooms.
- Both of the Art rooms contain adequate built in casework for storage of materials, which should be replaced.

- The Media Center and Media Support rooms contain a variety of very dated casework, which is inadequate and should be replaced.
- The Administration area contains inadequate and dated casework, which needs to be replaced. The main reception counter is not handicap accessible.
- The Science classrooms in Building A contain both island and perimeter casework with chemical resistant tops, sinks and a demonstration island with sink, which are all in poor condition and should be replaced.
- The Science classrooms in Building D contain perimeter casework with chemical resistant tops, sinks and a demonstration island with sink, which is adequate and in fair condition.

51. Interior Doors

Overall Condition Doors: Excellent Good Fair Poor

Overall Condition of Hardware: Excellent Good Fair Poor

Comments: Due to the differing ages of the various building wings, the condition of the interior doors and hardware varies substantially, but the majority are in poor condition.

- The interior doors and hardware in most areas of Building A appear to be original and do not have code compliant lever style hardware. These original doors should be replaced, and the classroom doors should also include lockdown hardware.
- The classroom doors in Building A also contain glass transom and sidelite panels, which appear to be standard plate glass. The transoms should be removed and replaced with tempered glass or solid panels for safety purposes and the sidelites replaced with solid panels for security purposes.
- The interior doors and hardware in Buildings D and E are in generally good condition and have lever style hardware, but should be upgraded with lockdown hardware in the classrooms. These doors also have glass sidelites, which appear to be tempered glass, but should be replaced with solid panels for security purposes.

52. Additional Considerations

- Most of the window blinds, except those in Buildings D and E, are in poor condition and in need of replacement.
- The elevator appears to be in good working condition.
- The stair guardrails in Building A do not meet current code for picket spacing and should be replaced.

Part 6: Handicap Accessibility

53. Exterior Handicap Accessibility

Accessible Parking: Excellent Good Fair Poor

Accessible Route to Building(s): Excellent Good Fair Poor

Accessible Entrances / Egress: Excellent Good Fair Poor

Accessible Routes between Buildings: Excellent Good Fair Poor

Accessible Athletic Fields: Excellent Good Fair Poor

Comments: The overall exterior handicap accessibility for the school is poor, with several main entrances / exits not being accessible.

- The site contains 4 marked accessible parking spaces in the student / staff parking areas, all of which are van accessible. Only 2 handicap spaces are located near the main school entry, both of which are also van accessible. Additional accessible spaces need to be added in both the student / staff parking and near the main entry.
- Five of the main entry / exit doors are not handicap accessible with several exterior stairs and no ramp.
- None of the Athletic Facilities, except the tennis courts, contains handicap accessible parking within close proximity.
- The football field / track contains an accessible route to the main entry gate, and a new sidewalk has been recently installed to provide handicap access to the bleacher area. However, the home side bleachers do not include any handicap access or seating. The visitor side bleachers have been recently installed, and do include handicap access and seating.
- The baseball field includes an accessible route to the spectator areas. The bleachers do not include any handicap seating.
- The softball field does not include an accessible route to the spectator areas. The bleachers do not include any handicap seating.

54. Interior Handicap Accessibility

Accessible Routes: Excellent Good Fair Poor
 Accessible Doors and Hardware: Excellent Good Fair Poor
 Accessible Signage: Excellent Good Fair Poor

Comments: The interior of the school is on four finished floor levels, with two interior stairs, one elevator and various ramps.

- The school contains 4 ramps that are the full width of the corridor, three on the interior and one on an exterior covered walkway. All of the ramps exceed the 1:12 rise/run, which does not meet the accessibility code, and should be modified.
- The majority of classroom doors in the school are 3'-0" wide. However, most of the doors in Building A have knob style hardware, and should be replaced with code compliant levers.
- The Auditorium is accessible from both the entries at the rear and near the stage. The Auditorium does not include any handicap seating areas, which cannot be added since the sloping floor does not contain any flat spot at the top near the main entry doors. The addition of handicap seating requires construction of a flat seating area at the back of the Auditorium.
- The Auditorium Stage contains two ramps which greatly exceed the 1:12 accessible rise / run. These ramps should be replaced with accessible rise / run, which requires redesign of the stage and backstage rooms.
- The Administration area reception counter and the Media Center circulation counter are both not handicap accessible.
- Most of the signage in the school does not meet current accessibility requirements and should be replaced.

55. Toilet Rooms Accessibility

Accessible Group Toilets:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor
Accessible Staff Toilets:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor
Accessible Athletic Facility Toilets:	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor

Comments: The handicap accessibility of the group toilets is generally poor, as only one is handicap accessible. None of the Staff toilets is handicap accessible.

- The 4 group toilets in Buildings A are not handicap accessible. However, the toilet rooms are of sufficient overall size and should be upgraded to include handicap accessible partitions and fixtures, which would reduce the watercloset fixture count.
- The group toilets in Building D are handicap accessible.
- The Boys and Girls PE and Team Locker room toilets in Building A do not contain handicap accessible stalls or fixtures. However, the rooms are of sufficient overall size and should be upgraded to include handicap accessible partitions and fixtures, which would reduce the watercloset fixture count.
- The school contains a total of four Staff toilets, two of which are located in the Administration area and two across from the Media Center, none of which are handicap accessible. Additional accessible Staff toilets should be provide in each classroom wing.
- None of the toilets in the Athletic Facilities are handicap accessible and should be upgraded.

Part 7: Food Service**56. Observations and Recommendations****Storage:**

- Cold Storage Assembly is minimum 20 years old and is in ok condition for its age. Strip curtains also need to be added to hold temperature. New compressor recently provided for the cooler. New door just provided for the freezer. Freezer size is not adequate.
- Cold Storage shelving (10 units) to be replaced as they are worn and rusting.
- Dry storage shelving is wood/painted and is to be replaced with NSF approved units (10). The square footage is adequate for number of students being served.
- Fly fan is missing but not required because of vestibule.

Food Preparation:

- Prep Worktables are in ok condition (8 units). Bases have galvanized/painted legs and need to be repainted or replaced.
- Prep sinks are in good condition but waste is direct and recommend running to floor sink and thru a grease trap.
- Ice Machine is in good condition (5 years old) and does not need replaced.

Cooking:

- Convection Oven (1) (5 years old) is in good working condition.
- Convection Oven (1) (20 years old) and needs to be replaced.
- (2) Gas Fryer (15 years old) but in good working condition. Sides are rusted.
- Steamer (10 years old) bottom unit is good condition and top unit is broke. Recommend replacing 2 stack unit.

- Exhaust Hood (30 years old) is old and in-efficient. Recommend replacement of hood, fire system, and addition of a s/s utility chase.
- Heated Cabinet (2) (15 years old) are old but in good condition as they are currently keeping appropriate temperature

Dishwash:

- Dish machine (Pot Washer) (10 years old) is a chemical machine and currently in good working condition.
- Soiled dishtable to be replaced. Missing cross rail. Replace pre-rinse spray unit as it is worn.
- 3-compartment sink is missing and recommend adding as required by health code.

Serving:

- Serving lines are minimum 10 years old. All drop-ins are currently in good working condition but limited in their options. A la carte line is not used. Recommend replacement in next 5 years.
- Milk Cabinet unit (2) are in good condition.

Auxiliary Spaces:

- No grease trap
- Recommend adding (1) more hand sink.
- Kitchen square footage is adequate.
- Paint is coming off the walls and ceiling

Part 8: Plumbing Systems

57. Observations

Roof drainage is a gutter and downspout system. Gymnasium roof downspouts discharge on to the adjacent walkway cover. Water sheds off covered walkway roof down into court yard.

Gas service is provided to the kitchen appliances, water heaters, and heating boiler. Gas to the kitchen is metered separately. Gas flow to kitchen appliances appears to be interlocked with the grease hood fire suppression system.

Several water coolers are non-compliant with current code for accessibility.

Backflow preventer is installed on incoming water service.

Piping:

- A combination of copper and galvanized water supply piping was observed inside. Most all exposed piping was uninsulated (restrooms, mechanical rooms, etc).
- Galvanized and PVC waste piping was observed in kitchen.
- Underground water and sewer systems have been replaced except where the piping is beneath concrete walkways and floor slabs.
- Galvanic corrosion is evident on water heater systems at dielectric fittings.
- A leak in the underground gas line serving Home Economics and Science Lab was previously discovered. The pipe has since been capped.

Fixtures:

- Restrooms have flush valve type water closets and urinals, and lavatory fixtures. Restrooms appeared to have proper ventilation, floor drains, installed fixture heights, and hose bibbs for housekeeping and priming the floor drain trap.
- Several lavatories are lacking hot water (eg. Bldg A group toilets).

Water Heaters:

- A 199 MBH gas fired water heater and storage tank serve the kitchen. Water heater appears to have been installed in 2013 but the storage tank is showing signs of wear.
- An 80-gal electric water heater serves Buildings D & E. It was installed in 1994 and is at the end of its serviceable life.
- A 100-gal gas water heater serves the Auxiliary Gym in Building C. It was installed in 1994 and is at the end of its serviceable life.

Kitchen:

- No grease interceptor installed.
- Sanitary waste from 2- and 3- compartment sinks were observed to be direct connections with no air gaps.

58. Recommendations

- Install a grease interceptor outside of building in an accessible location.
- Replace water coolers
- Install indirect waste connections as required by code
- Replace hand sink in the kitchen
- Replace all fixtures in group toilets in Building A and gymnasium locker rooms in Building A.
- Replace lavatory facets in Building C locker rooms, Building D group toilets.
- Install a new local water heater and hot water piping to serve the group lavatories in Building A
- Install new gas service to Home Economics & Science Lab.
- Install new hot water storage tank for Kitchen water heater
- Replace 80-gal water heater serving Buildings D & E.
- Replace 100-gal water heater serving the Aux. Gym in Building C.

Part 9: HVAC Systems**59. Observations**

The building HVAC system consists of the following combination.

- 2-pipe system utilizing unit ventilators (chilled water/hot water)
- DX AHUs with steam heating
- Steam unit heaters

Dual temperature unit ventilators are original to construction. The most recent classroom additions, Buildings D and E, were completed around 1994 and 1999, respectively. Ventilation air is taken directly from outside via intake louver.

Many of the corridors and lobbies have unit ventilators. "Heating only" fan coil units were observed at the entry doors.

“Building A” Gymnasium is heated by steam unit heaters. Outside air ventilation is provided by exhaust fans and intake louvers.

Hot water convertor, steam controls and condensate equipment are located in a small pit in Building C and are very difficult and dangerous to access. Steam piping & equipment is uninsulated presenting a burn hazard for anyone coming in contact with it.

Steam trap maintenance is an ongoing issue.

HVAC operation is based on time-of-day scheduling. Humidity is extremely difficult to control in the building, particularly during the fall and spring seasons.

Central Plant Cooling: A nominal 250 ton air cooled chiller was installed around 2009. There were no operational issues reported with this Carrier unit.

Central Plant Heating: The central heating plant consists of two gas fired cast iron steam boilers as manufactured by Weil-McLain. Each boiler has a net output capacity of 4283 MBH and appears to be in good working condition. The boilers were installed approximately 2009.

Distribution Systems:

- Ductwork is constructed of galvanized metal.
- Several Janitors closets had no exhaust air.
- All ductwork observed in mechanical rooms contains inner liner material.
- All AHUs and pumps are constant volume air systems.
- HW piping material is copper. Piping is wrapped with fiberglass insulation.
- Condensate piping is not insulated in the boiler and mechanical rooms.

Controls:

- Unit ventilators are served by the 2-pipe system and controlled by individual wall thermostats.
- Pneumatics make up the majority of the HVAC control system.

Kitchen:

- An existing grease hood is installed complete with a wet chemical fire suppression system. There is no direct air makeup to the hood. Location and source of hood makeup air could not be identified.
- Kitchen area is conditioned by a unit ventilators
- Dry storage does not have conditioned air supplied to it.
- Exhaust is not connected to the dish wash machine.

60. Recommendations:

- Provide a building wide automation system utilizing direct digital controls.
- Provide a makeup air source for the kitchen hood via a dedicated roof mounted ventilator unit.
- Remove dual temp unit ventilators in Kitchen and install new AHU.
- Install exhaust ductwork and fan system for dish wash.
- Provide supply/return air in dry storage room.
- Verify building air balance, especially on exhaust systems. Replace or clean all exhaust grilles. Confirm building is appropriately pressurized.
- Install a new 2-pipe system alongside the existing system. Convert from 2-pipe to 4-pipe system

- Replace unit ventilators in classroom Wings with 4-pipe FCUs. Install Dedicated Outside Air Systems.
- Remove all steam and steam condensate piping distribution. Convert boiler operation to hot water.
- Remove all control air compressors and pneumatic controls.
- Replace chilled and hot water distribution pumps. Install VFDs.
- Remove lined ductwork. Install new duct with external fiberglass insulation wrap.
- Provide a new standalone packaged DX AHUs with dehumidification controls for the two gymnasiums, Admin, and Library.
- Provide new central station units for the Cafeteria, Auditorium, and Stage.
- Provide a dedicated space and ductless DX split system for IT rack.
- Install exhaust in Janitor's closets.
- Replace roof mounted toilet exhaust fans throughout.
- Install 4-pipe FCU and ductwork in corridors.

Part 10: Fire Protection

61. Observations

- Sprinkler system installed (Y/N) - N
- System type? Wet, dry, preaction, etc.? – N/A
- Full or Partial Coverage? – N/A
- Standpipes installed (Y/N) - N
- Fire Pump installed (Y/N) – N

62. Recommendations

- Provide a full coverage sprinkler system in accordance with the NC Fire Code and NFPA Standard 13.

Part 11: Electrical, Fire Alarm, Security and Communications Systems

63. Observations

Service Entrance

This facility is fed by two (2) pad-mounted transformers furnished by Duke Energy. The original service is a 1600 ampere, 480GrY277 volt switchboard located in Building A. It is fed by busduct from a main service switch located in an unconditioned space on the exterior of the building. This equipment is past its rated life. The second service is rated 600 amperes at 480GrY277 volts.

The capacity of the service appear to be adequate, but the equipment for the original service is long past its rated life.

Distribution

The power distribution consists of distribution panelboards and lighting panelboards fed by copper wire in conduit. The main service equipment and some of the distribution and lighting panelboards are well within their life expectancy. There are still some original panelboards that are in poor condition, and have been in service almost 60 years, should be replaced. Replacement circuit breakers for these

panelboards may not be available. There are some panelboards (actually loadcenters) that have been “tacked” on as new circuits have been needed. These need to be replaced with commercial grade panelboards.

Panelboard labeling, including panelboard directories, is not up to date, some labeling is missing and duplicate panels designations were found. There are standard duplex receptacles too near sinks, which should have GFI protection. Additional receptacle circuits may be needed.

Grounding

Proper grounding is one of the most important factors in an electrical system. Not only is it essential for safety, it is also required for proper operation of electronic equipment. The grounding systems in the older portions of the facility are in question. The original building uses the metal conduit system to distribute grounding throughout the facility. This was legal at the time the building was constructed, but not now. The problem is that the underground conduits installed at that time were galvanized steel, which could have deteriorated in the nearly 50 years since the original facility was constructed, which could result in an increase in ground resistance, or loss of grounding entirely. An earth grounding study needs to be made and corrective measures taken.

The NEC (National Electric Code) requires a minimum ground resistance of 25 ohms. For electronic systems (data rooms, computers, etc.) a minimum ground resistance of 5 ohms is needed.

Lighting

Some of the lighting has been upgraded. DPI recommends T8 lamps and electronic ballasts as a minimum, but suggests T5 and LED as alternates. The exterior lighting is insufficient and in poor condition in most areas.

Lighting levels are, in some cases, within the levels recommended by DPI, but many areas have lighting levels far below DPI recommendations. These levels are recommended, not required. The lighting levels in the Kitchen appear to be in accordance with North Carolina Department of Health which requires 50 footcandles minimum in areas where food is handled, prepared and served, and where utensils are washed.

Emergency Power

This facility has no emergency generator.

Fire Alarm

The existing fire alarm system has a Notifier NFW2-100 addressable control panel. This is a current model. Although the layout of devices in most areas have been updated, some of the layout and distribution of alarm initiating and notification devices does not meet current codes and ADA requirements.

Security

The security system does not meet current Gaston County School guidelines. No access card readers on exterior doors. No Mass Notification System. Video Surveillance System has recently been upgraded, but some additional cameras are needed.

Data/Communications

The data system currently does not meet GCS criteria. The MDF and IDF's are not dedicated and in secure locations. The MDF is located in a Records Room. The IDF's are located in various non-dedicated and unsecured rooms.

Concerns

It was noted in several areas where panels are located that materials, furniture, etc. have been stored too close to the equipment. This is both illegal and dangerous. The National Electrical Code requires a minimum of 36 inches clear in front of these items. We feel that this issue should be addressed as soon as possible.

64. Recommendations**Service Entrance**

The existing original service entrance equipment is the original equipment installed in 1955 and should be replaced.

Distribution

All original panels and panels by manufacturers that are no longer in business, or are past their rated life, should be replaced. All equipment should be properly labeled, including directories showing loads for all circuits. All electrical panelboards need to be scanned with an infrared scanner to be sure that there are no "hot" spots, which can indicate that there is an overload, faulty device or connection. Based on the scanning results, corrections need to be made.

Lighting

The lighting in some areas of the facility has recently been replaced, many areas need new lighting. There is practically no exterior lighting, additional exterior lighting needs to be added – some on building walls and some on poles. New exterior lighting should be LED with protective enclosures without the use of polycarbonate lenses. Additional exit signs and egress lighting needs to be installed. All exit signs and egress lighting shall have battery backup with self-diagnostic system unless they are connected to the standby generator. Auditorium, Stage and Gymnasium lighting should be updated, with new dimming system for the Auditorium and Stage. Egress lighting needs to comply with ADA requirements.

Emergency Power

A new generator needs to be provided with capacity to feed life safety, alarm and data requirements.

Fire Alarm

The fire alarm system needs to be updated and expanded.

Security

Security system needs to be upgraded to latest GCS criteria. Door access system and Mass Notification System need to added per GCS standards.

Data/Communications

The wiring system should be updated to current GCS criteria. The main data rack MDF and IDF racks need to be secured. Backup power from a standby generator should be provided.

Sound Systems

The intercom system is outdated, but appears to operate but it should be updated to a VoIP based system. The existing system should be updated and restored to proper operation so that it can be used as a backup system for the new IP intercom and paging system.

The sound systems in the Auditorium and Gymnasium should be updated and made to comply with ADA requirements.

End of Assessment



December 12, 2014

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