# REPORT OF FACILITY CONDITION ASSESSMENT



#### **Brevard Elementary**

Property Address: 399 Greenville Hwy Brevard, NC 28712

Prepared For:

Transylvania County Board of Commissioners 101 South Broad Street Brevard, NC 28712

Prepared By:

Axias

Project No. GA23-017

February 26, 2024













Item No.	Condition	Recommendation	Priority Category	Deficiency Category	Impact of Failure	Condition	Probability of Failure Frequency of	Failure Risk Score	Risk Category	Estimated Useful Life	Remaining Useful Life	Quantity	Unit of Measure	Chit Cost	2024	2025	2026	2027	5 2028	9 2029	7	α 2031	ە 2032	7033	Required
Accessibility Required																									
1	The building was primarily constructed in the early to mid 1970's, before the implementation of the Americans with Disabilities Act of 1991 (ADA). The gymnasium was constructed in the mid to late 1990's after the act had been established, and appears to have been built with the aim to comply with the ADA.	Future renovations for the elementary school will require compliance with ADA.																							\$0
Site System Required																									
1	Concrete sidewalks are provided at various locations around the building. The sidewalks	Replace localized sections of concrete sidewalks.	III	DM	5	2	5	5 17	' Low	30	1	520	SF	\$15.00	\$7,800										\$7,800
2	icracking in various locations, it is	Full-depth replacement of damaged localized sections of asphalt pavement.	111	DM	4	3	4	4 15	Mediur	n 15	1	3,983	SY	\$15.00	\$59,738										\$59,738
3	To maintain extensive life of asphalt, cyclical allowance will be necessary.	Crack fill, seal coat and restripe asphalt surfaces - Cycle 1.	III	SM	5	4	3	5 17	Low	7	1	13,275	SY	\$2.00	\$26,550										\$26,550
4	To maintain extensive life of asphalt, cyclical allowance will be necessary.	Crack fill, seal coat and restripe asphalt surfaces - Cycle 2.	IV	SM	5	4	3	5 17	Low	7	8	13,275	SY	\$2.00								\$26,550			\$26,550
5	The school is provided with two playground areas with various pieces of equipment. Play equipment typically has a service life of 15 to 20 years. It is recommended to budget for the replacement of the playground equipment during the study period.	Replace playground equipment.	IV	CR	5	4	4	5 18	S Low	20	7	4	EA	\$75,000							\$300,000				\$300,000
6	coverage as recommended by industry standards. It is recommended that mulch bed depths at play areas are maintained per industry standards as past of on gains.	playground safety requirements;																							\$0
	budget an allowance for the installation of additional perimeter fencing per the Physical Security Assessment. Cost is a placeholder and could fluctuate.	Install additional site fencing.	Ш	CI	3	3	4	4 14	Mediur	15	2	400	LF	\$90		\$36,000									\$36,000
Required	The building structural systems appeared to	No anticipated capital expenditures.																							\$0











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Item No.	Condition	Recommendation	Priority Category	Deficiency Category Impact of	Condition	Failure Frequency of Failure Risk Score	Risk Category	Estimated Useful Life	Remaining Useful Life	Quantity	Unit of Measure	Unit Cost	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Required
Danfing Co.												Year	1	2	3	4	5	6	7	8	9	10	
Roofing Sys Required	tems																						
1	The main building roof is covered with a modified bitumen asphalt roof system which slopes toward internal roof drains. This roof covering is in poor condition with curling and buckling of the roof membrane evident. Remove the modified bitumen roo system down to the deck. Provide new roof system such as an adhered TPO or EPDM membrane system. This cost includes gutte and downspout replacement.	Replace built-up roof with TPO system.	II	DM 3	2	2 3 10	High	20	1	68,500	SF	\$25	\$1,712,500										\$1,712,500
2	The special needs education wing of the building is covered with a pitched roof which dresses into the flat roof on one side The roof is covered with asphalt shingles. The roof appeared to be in fair condition, but will need replacement due to age durin the term.	Replace asphalt shingle roof.	IV	CR 4	3	3 4 14	Medium	20	10	3,237	SF	\$6.00										\$19,422	\$19,422
3	The gymnasium, associated connector corridor, and classrooms are covered with a standing seam coated metal roof. This appears to be in fair to good condition. However, we anticipate ongoing maintenance to preserve the age during the term.	Repair sealants where disconnected and deteriorated.	d III	DM 4	4	3 3 14	Medium	25	1	850	LF	\$10	\$8,500										\$8,500
4	In addition to the main building components, the school has covered walkways from the classrooms and at the main entrance. These are formed with a profiled metal covering, with open joints, and a structural rainwater management system. The beams and posts have damage and corrosion, resulting in leaks.	Replace profiled metal covering along walkways.	ш	DM 5	3	5 17	Low	25	1	7,000	SF	\$18	\$126,000										\$126,000
Exterior Ele																							
Required 1	The exterior walls consist of a brick veneer with steel lintels supporting the masonry above openings. Office and entrance areas consist of masonry finishes and perimeter gutters. Around the remainder of building brickwork is topped with profiled metal capping.	Repaint all exterior painted elements including profiled metal sheeting, lintels doors and handrails where provided - Cycle 1.	s, III	DM 4	4	3 4 15	Medium	7	1	12,348	SF	\$2.50	\$30,870										\$30,870
2	The exterior walls consist of a brick veneer with steel lintels supporting the masonry above openings. Office and entrance areas consist of masonry finishes and perimeter gutters. Around the remainder of building brickwork is topped with profiled metal capping.	Repaint all exterior painted elements including profiled metal sheeting, lintels doors and handrails where provided - Cycle 2.	s, IV	SM 4	4	3 4 15	Medium	7	8	12,348	SF	\$2.50								\$30,870			\$30,870
3	Construction joints, such as those at the permitter of windows and doors, are weather sealed with flexible sealant. The exterior sealants appeared to be in poor condition and have become dried and brittle. Remove existing exterior sealants joints and replace. Coordinate works with Cycle 1 painting project.	Replace exterior sealants.	III	DM 4	4	3 4 15	Medium	10	1	2,300	LF	\$10.00	\$23,000										\$23,000











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Item No.	Condition	Recommendation	Priority Category Deficiency	Category	Failure	Condition Probability o Failure	Frequency of Failure Risk Score	Risk Categon	Estimated Useful Life	Remaining Useful Life	Quantity	Unit of Measure	Unit Cost	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Required
Interiors													Year	1	2	3	4	5	6	7	8	9	10	
Required																								
1	Ceiling tiles were noted to be in general good condition. We did note numerous stained ceiling tiles throughout. It is recommended to budget for the replacement of the stained ceiling tiles in the near-term. Some ceiling tiles could protentially be fire rated and would need to be replaced with the space type of rated material.	Replace stained and/or damaged ceiling tiles.	·     [	DM 5	5	3 4	5 17	Low		1	2,000	SF	\$8.00	\$16,000										\$16,000
2	Interiors appeared to be typical finishes and fair condition for an educational establishment. Allowance for interior finishes renewal. Timing and scope will vary based on future program needs. Allowance only includes renewal of interior finishes and minor renovations of restrooms. Does not include reconfiguration of space or address items related to educational adequacy.		V	CR 5	5	3 5	5 18	Low	15	6	87,200	SF	\$75.00						\$6,540,000					\$6,540,000
3	recommendation, it is recommended to budget for the installation of vestibules to limit access throughout the school.		п	CI S	3	3 3	3 12	High		2	87,200	SF	\$2.00		\$174,400									\$174,400
Mechanical																								
Required 1	Heating hot water for the building is provided via a boiler manufactured by Lochinvar with a capacity of 985 MBH . The boiler appears to be original and is due for replacement due to age.		11 (	CR 3	3	3 4	4 14	Medium	20	1	985	МВН	\$110	\$108,350										\$108,350
2	Cooling is provided by way of five Trane 50 ton chillers dating from 2012, 2013, 2017, 2017 and 2017. Air-cooled chillers typically have a service life of 15-20 years depending on maintenance levels. Based on the age of the 2012 and 2013 ton chillers, it is recommended to budget for their replacement during the study period.	Replace 2012 and 2013 Trane chillers.	IV (	CR 4	4	3 4	4 15	Medium	20	9	100	Ton	\$2,400									\$240,000		\$240,000
3	Burman boiler is from approximately 2001 and it is at the end of its useful life based on age.	Replace 2001 Burnham Boiler along with the pumps, valves, and accessories	1 111	CR S	3	3 4	4 14	Medium	25	3	3,584	МВН	\$85			\$304,640								\$304,640
4	Air handling units provided conditioned air to the various areas of the building. The units were manufactured by McQuay, Trane and Environmental Technologies. The units appeared to be in fair condition but should be budgeted for replacement during the study period.	Replace air handling units throughout the building.	111	CR 3	3	3 4	4 14	Medium	25	5	9	EA	\$35,000					\$315,000						\$315,000











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															Year	1	2	3	4	5	6	7	8	9	10	
5	_	Replace ICP R22 ICP complete cooling system.	III	CR	3	3	4	4 1	4 Med	dium	20	1	3	EA	\$6,000	\$18,000										\$18,000
6	As part of the kitchen hood system, make- up air is provided via a Reznor make-up air (MUA) unit. Based on age and usage the system should be replaced.	Replace Reznor MUA unit.	III	CR	3	3	4	4 1	4 Med	dium	20	1	1	EA	\$40,000	\$40,000										\$40,000
	BMS controls are manufactured by Johnson & Johnson. This system is in poor condition and is obsolete.	Install new BMS system throughout building.	III	DM	4	3	3	4 1	4 Med	dium	12	1	87,200	SF	\$2.35	\$204,920										\$204,920
Electrical																										
Required																										
1	The building electrical systems appeared to be in fair condition, although some equipment appeared original to construction, with newer panel boards having been installed as necessary. Replacement components remain available for the older GE panels; however, they will become increasingly difficult to obtain. It is recommended to budget for the replacement of the vintage GE electrical panels.	Replace original GE electrical equipment.	111	CR	2	3	3	5 1	3 Hi	igh	30	5	87,200	AMPS	\$6.00					\$523,200						\$523,200
2		Allowance to improve school security systems and school safety.	II	CI	2	3	3	4 1	2 Hi	igh	20	2	87,200	SF	\$3.25		\$283,400									\$283,400
Plumbing																										
Required 1	The domestic water heater is provided by two A.O. Smith water heaters installed in 2018. The water heaters appeared to be in good condition. Based on age, replacement in the far term of the study period is anticipated.		IV	CR	3	4	5	5 1	7 Lc	ow	15	7	2	EA	\$45,000							\$90,000				\$90,000
	The school has one 20,000-gallon underground storage tank which stores No. 2 fuel oil. The tank was reportedly installed in 1974 and reported to be a single wall type tank. Based on the age of the tank it is recommended to continue to monitor the condition of the tank through annual testing and active monitoring. An allowance for removal of the tanks has been provided; however, the timing will be driven by monitoring and testing results.	Remove underground storage tank and install new above ground	III	CR	3	3	4	4 1	4 Mec	dium	30	3	1	ALLOW	\$175,000			\$175,000								\$175,000











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Required	alety																								
1	An addressable fire detection and alarm system is provided within the building. The system was AFP-400 manufactured by Notifier and has been discontinued. Due to the age of the system, we recommend replacement of the fire alarm panel.	Upgrade fire alarm control panel and as needed devices.	111	CR	2	4	4	5 15	Medium	15	1	1	EA	\$20,000	\$20,000										\$20,000
2		Provide additional exit signage and egress lighting.	VI	DM	3	3	4	4 14	Medium	20	1	22	EA	\$750	\$16,500										\$16,500
3	Existing drawings detailing to which codes the school was designed in accordance were not available for review. The school is not provided with a fire-sprinkler system.  Buildings of this size typically are required to either have a sprinkler system or an approved rated assembly to protect structural elements. It is recommended to complete a more detailed fire and life safety assessment to review the code enforced at construction and the last renovation along with any details on how these ratings were achieved.	Complete life safety and code evaluation.	111	CI	3	3	4	4 14	Medium		1	1	EA	\$10,000	\$10,000										\$10,000
Conveyance	Systems																								
Required 1	The building has no conveyance systems.																								\$0
Deficienc	Scheduled Maintenance		Risk Critical		al (4-8)	1)							(20	equired Cost 23 US-Dollars)	\$2,428,728	\$493,800	\$479,640	\$0	\$838,200	\$6,540,000	\$390,000	\$57,420	\$240,000	\$19,422	\$11,487,210
DM	Deferred Maintenance	U. Detentially Critical	High	-	(9-13)									id Cook											
CR	Capital Renewal	II Necessary / Not yet Critical	Лedium	_	ium (14									equired Cost for 1st 3 years then 3% Per	\$2,623,026	\$575,968	\$604,208	\$0	\$971,704	\$7,809,102	\$479,651	\$72,738	\$313,146	\$26,102	\$13,475,644
EN	Energy & Sustainability	V Recommended V Appearance	Low	Low	(17-20)	)								Yr.)											
CI	Capital Improvement			_									1	Total Cost										1	





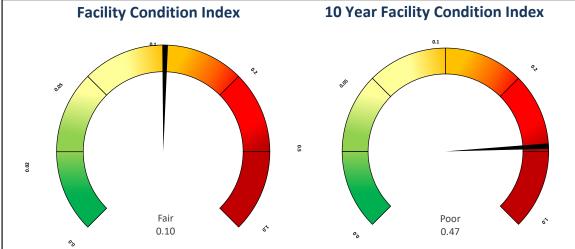






Brevard Elementary 87200 1974 (49 years) 399 Greenville Hwy Brevard, NC 28712

## **Financial Summary**



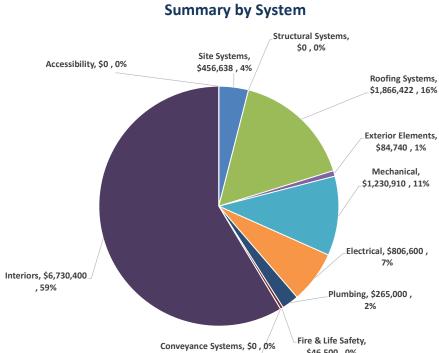
FCI Range	Condition Description
0.00 - 0.02	Excellent condition, typically new construction
0.02 - 0.05	Good Condition, renovations occur on schedule
0.05 - 0.1	Fair Condition, in need of normal renovation
0.1-0.2	Below average condition, major renovationrequired
0.2 - 0.5	Poor condition, total renovation needed

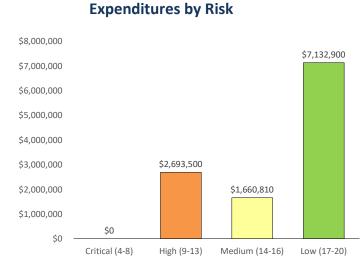
Complete facility replacement indicated

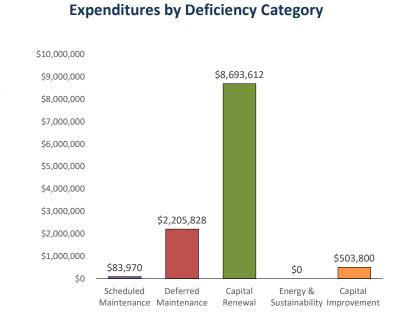
Risk	Definition
Critical	Critical (4-8)
High	High (9-13)
Medium	Medium (14-16)
Low	Low (17-20)

0.5 - 1

Priority	Definition
1	Currently Critical
П	Potentially Critical
Ш	Necessary / Not yet Critical
IV	Recommended
V	Appearance
VI	Does Not Meet Codes / Standards







#### \$7,000,000 \$6,000,000 \$5,000,000 \$4,000,000 \$3,000,000 \$2,278,650 \$1,945,218 \$1,000,000 \$1,000,000 \$1,000,000

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**Expenditures by Priority Category** 



ilding: Brevard Elementary

GSF: 87200
Age: 1974 (49 years)
Address: 399 Greenville Hwy
Brevard, NC 28712

## **Representative Photos**



Main heating hot water boiler.



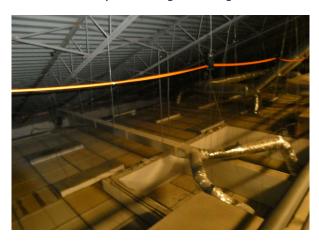
Entrance side of standing seam metal sloped roof and brick masonry exterior



Brick masonry exterior wall and aluminum framed windows



Asphalt with alligator cracking



Steel frame and metal roof structure



Exterior brick masonry and staining to brickwork



Drop off area with profiled metal awning structure and damaged poles.



Asphalt shingle and modified bitumen low-slope roof



Reznor MUA unit



Overview of site



Standing seam metal roof canopy



Notifier fire alarm control panel (FACP) that is obsolete.