FACILITIES NEEDS
ASSESSMENT

STAMFORD PUBLIC SCHOOLS
888 Washington Boulevard
Stamford, Connecticut 06901
Domenick Tramontozzi

Facilities Needs Assessment
of
SCOFIELD MAGNET MIDDLE SCHOOL
641 Scofieldtown Road
Stamford, Connecticut 06903

PREPARED BY:

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EMG Project #: 88166.09R-016.017
Date of Report: August 29, 2009
On site Date: April 16, 2009

Replacement Reserves Report
Middle Schools / Scofield Magnet Middle School
8/29/2009

Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Inflation	3.0%	4.0%	4.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%

Report Section	ID	Cost Description	Lifespan (EUL)	Observed Age (EAge)	Remaining Life (RUL)	Quantity	Unit	Unit Cost *	Subtotal	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Deficiency Repair Estimate
3.1	4300	Replace existing ADA two-way communication system	0	0	0	3	EA	$8,253.00	$24,759	$24,759										**$24,759**
3.1	4299	ADA - Install signage indicating Van Accessible Parking, pole mounted	0	0	0	4	Sign	$134.01	$536	$536										**$536**
5.2	3931	Repair and Seal Coat asphalt	5	4	1	7.53	10000 SF	$5,848.92	$44,042		$44,042					$44,042				**$88,085**
5.2	3932	Replace asphalt curbs	10	4	6	350	LF	$14.63	$5,120							$5,120				**$5,120**
5.5	6187	Replace 2-inch copper pipe	25	25	0	900	LF	$62.31	$56,076	$56,076										**$56,076**
5.5	3933	Entry sign replacement allowance	25	25	0	1	EA	$6,300.00	$6,300	$6,300										**$6,300**
5.5	6194	Install underground irrigation system	0	0	0	60000	SF	$1.26	$75,600	$75,600										**$75,600**
6.3	12246	Stamford Roof Assessment - EPDM Replacement	20	14	6	142	SQ	$1,631.21	$231,632							$231,632				**$231,632**
6.3	12247	Stamford Roof Assessment - EPDM Replacement	20	20	0	115	SQ	$1,595.75	$183,511	$183,511										**$183,511**
6.3	12244	Stamford Roof Assessment Roof Repair Recommendations	0	0	0	1	EA	$3,455.44	$3,455	$3,455										**$3,455**
6.4	4307	Point brick wall first floor	10	2	8	80	CSF	$1,194.48	$95,558									$95,558		**$95,558**
6.4	4308	Caulking, polyurethane,1/4"x1/4", remove and replace	15	8	7	11300	LF	$4.84	$54,674								$54,674			**$54,674**
6.6	4302	Replace 6' x 3' aluminum window upper floor	25	25	0	2	EA	$2,232.72	$4,465	$4,465										**$4,465**
6.6	4303	Horizontal Blinds aluminum 1" slats	7	7	0	1350	SF	$6.49	$8,760	$8,760							$8,760			**$17,520**
6.8	4316	Paint interior walls, CMU,including surface prep	7	2	5	114624	SF	$1.12	$128,539						$128,539					**$128,539**
6.8	4318	Sand and refinish hardwood floor	10	8	2	13615	SF	$6.93	$94,352			$94,352								**$94,352**
6.8	4317	Replace carpet - standard commercial	8	4	4	3766	SY	$63.23	$238,112					$238,112						**$238,112**
7.1	4122	Replace water boiler, gas/oil 2100 MBH	30	28	2	1	EA	$38,317.86	$38,318			$38,318								**$38,318**
7.1	4123	Replace water boiler, gas/oil 2400 MBH	30	28	2	1	EA	$49,738.50	$49,739			$49,739								**$49,739**
7.1	4125	Replace Diesel fuel oil pump set, 350 GPM	15	14	1	1	EA	$1,902.60	$1,903		$1,903									**$1,903**
7.1	4127	Balance HVAC system Scofield Middle School	0	0	0	1	EA	$9,758.70	$9,759	$9,759										**$9,759**
7.1	3935	Replace split System Ductless ceiling mount 2-ton	15	8	7	1	EA	$3,854.34	$3,854								$3,854			**$3,854**
7.1	3939	Replace Circulation pump 1/2 to 3/4 hp	15	12	3	7	EA	$3,584.70	$25,093				$25,093							**$25,093**
7.1	3940	Replace Circulation pump 1/2 to 3/4 hp	15	13	2	3	EA	$3,584.70	$10,754			$10,754								**$10,754**
7.1	3934	Replace Roof-Mounted Condenser 5-ton	15	7	8	1	EA	$6,391.98	$6,392									$6,392		**$6,392**
7.1	3942	Retrofit of HVAC and Controls	0	0	0	1	EA	$5,670.00	$5,670	$5,670										**$5,670**
7.1	3937	Replace UST, Steel, Fuel oil storage, 8,000 gallon	25	21	4	1	EA	$95,339.16	$95,339					$95,339						**$95,339**
7.2	6183	Capital Plan - Install outdoor drinking fountain, pedestal type	0	0	0	4	EA	$2,451.56	$9,806	$9,806										**$9,806**
7.2	6186	Capital Plan - Install one inch copper pipe for drinking fountain	0	0	0	100	LF	$31.63	$3,163	$3,163										**$3,163**
7.4	4301	Video Camera, wireless	15	15	0	2	-	$694.81	$1,390	$1,390										**$1,390**
7.5	3944	Replace passenger cab finishes	20	15	5	1	EA	$18,345.60	$18,346						$18,346					**$18,346**
7.5	3947	Replace elevator hydraulic system, 2,500 lb capacity	20	13	7	1	EA	$27,720.00	$27,720								$27,720			**$27,720**
7.5	3943	Replace elevator hydraulic system, 2,500 lb capacity	20	15	5	1	EA	$27,720.00	$27,720						$27,720					**$27,720**

Replacement Reserves Report
Middle Schools / Scofield Magnet Middle School
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Report Section	ID	Cost Description	Lifespan (EUL)	Observed Age (EAge)	Remaining Life (RUL)	Quantity	Unit	Unit Cost *	Subtotal	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Deficiency Repair Estimate
7.5	3945	Replace passenger cab finishes	20	13	7	1	EA	$18,345.60	$18,346								$18,346			**$18,346**
7.5	4128	Replace elevator hydraulic system, 1,200 lb capacity	20	16	4	1	EA	$13,608.00	$13,608					$13,608						**$13,608**
7.5	3946	Replace passenger cab finishes	20	12	8	1	EA	$12,026.70	$12,027									$12,027		**$12,027**
7.6	3948	Fire alarm panel addressable, with voice	15	6	9	1	EA	$15,264.77	$15,265										$15,265	**$15,265**
8.1	4304	Rekey exsiting locks and new Master Key system	30	25	5	800	Door	$79.83	$63,867						$63,867					**$63,867**
8.1	4313	Horizontal Blinds aluminum 1" slats	7	3	4	5650	SF	$6.49	$36,663					$36,663						**$36,663**
8.2	12248	Stamford Kitchen Equipment Replacement Allowance	10	5	5	1	EA	$75,600.00	$75,600						$75,600					**$75,600**
Totals, Unescalated										**$393,250**	**$45,945**	**$193,162**	**$25,093**	**$383,722**	**$314,072**	**$280,794**	**$113,354**	**$113,977**	**$15,265**	**$1,878,635**
Soft Costs:																				
Architectural/Consultant Fees (10.0%)										**$39,325**	**$4,594**	**$19,316**	**$2,509**	**$38,372**	**$31,407**	**$28,079**	**$11,335**	**$11,398**	**$1,526**	**$187,863**
General Requirements (Bonds, Insurance, GC/CM Mark-up) (10.0%)										**$39,325**	**$4,594**	**$19,316**	**$2,509**	**$38,372**	**$31,407**	**$28,079**	**$11,335**	**$11,398**	**$1,526**	**$187,863**
Prevailing Wage/Labor Compliance (5.0%)										**$19,663**	**$2,297**	**$9,658**	**$1,255**	**$19,186**	**$15,704**	**$14,040**	**$5,668**	**$5,699**	**$763**	**$93,932**
Contingency (5.0%)										**$19,663**	**$2,297**	**$9,658**	**$1,255**	**$19,186**	**$15,704**	**$14,040**	**$5,668**	**$5,699**	**$763**	**$93,932**
Location Factor (1.11)										**$42,078**	**$4,916**	**$20,668**	**$2,685**	**$41,058**	**$33,606**	**$30,045**	**$12,129**	**$12,196**	**$1,633**	**$201,014**
Totals, Escalated (see inflation table above)										**$553,303**	**$66,584**	**$291,130**	**$39,332**	**$631,545**	**$542,757**	**$509,512**	**$215,969**	**$228,014**	**$32,064**	**$3,110,211**

* Markup has been included in unit costs.

3 of 96

TABLE OF CONTENTS

CERTIFICATION

EMG has completed a Comprehensive Facilities Needs Assessment of the subject property, Scofield Magnet Middle School, located at 641 Scofieldtown Road, in Stamford, Connecticut.

The conclusions and recommendations presented in this report are based on the brief review of the plans and records made available to our Project Manager during the site visit, interviews of available Physical Plant personnel familiar with the Property, appropriate inquiry of municipal authorities, our Project Manager's walk-through observations during the site visit, and our experience with similar properties.

No testing, exploratory probing, dismantling or operating of equipment or in depth studies were performed unless specifically required under Section 2 of this report. This evaluation did not include engineering calculations to determine the adequacy of the Property's original design or existing systems. Although walk-through observations were performed, not all areas were observed (See Section 4.2 for areas observed). There may be defects in the Property, which were in areas not observed or readily accessible, may not have been visible, or were not disclosed by the Physical Plant personnel when questioned. The report describes property conditions at the time that the observations and research were conducted.

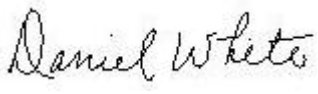
This report has been prepared on behalf of and exclusively for the use of City of Stamford, Connecticut Public Schools for the purpose stated within Section 2.0 of this report. The report, or any excerpt thereof, shall not be used by any party other than City of Stamford, Connecticut Public Schools or for any other purpose than that specifically stated in our agreement or within Section 2.0 of this report without the express written consent of EMG.

Any reuse or distribution of this report without such consent shall be at City of Stamford Public Schools and the recipient's sole risk, without liability to EMG.

Any questions regarding this report should be directed to Bill Champion at bchampion@emgcorp.com or at (800) 733-0660, Extension 6234.

Prepared by: Scott A. Cameron, R.A. and Kevin Lantry, Field Observers

Reviewed by:



Daniel White
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1. EXECUTIVE SUMMARY

1.1. SUMMARY OF FINDINGS

The property information is summarized in the table below. More detailed descriptions may be found in the various sections of the report and in the Appendices.

Property Information	
Address:	641 Scofieldtown Road, Stamford, Fairfield County, Connecticut, 06903
Year constructed:	Original construction in early 1950's Major renovation and construction in 2001
Current owner of property:	City of Stamford
School occupying building:	Scofield Magnet Middle School
Current usage of property:	Middle School
Management Point of Contact:	City of Stamford Engineering, Domenic Tramontozzi and Robert Gerbert, Jr. 203.977.5534 phone 203.977.4137 fax
Site acreage:	45.46 acres
Gross floor area:	149,200 Square Feet
Number of buildings:	One
Number of stories:	Two
Parking type and number of spaces:	251 spaces in two open lots
Building construction:	Entirely reinforced concrete slab-on-grade Masonry non-bearing walls and open web steel joist roofs Steel frame with concrete-topped metal decks
Bay Column Spacing:	Approximately 22 feet x 30 feet
Interior vertical clearance:	1st floor - 12 feet slab-to-slab and 9 feet to underside of ceilings 2nd floor - 14 feet slab-to-deck and 9 feet to underside of ceilings
Roof construction:	Predominantly flat, fully adhered EPDM systems Shallow barrel vaulted, adhered EPDM at gymnasium
Exterior Finishes:	Brick veneer, cast stone ornamentation and anodized aluminum trim

Property Information	
Heating and/or Air-conditioning:	Primary heating, cooling, and ventilation provided by variable volume package roof top units with VAV terminals. Supplemental heating by central system with boilers and finned tube radiant heat units. Supplemental cooling provided by split systems with remote condensing units.
Fire and Life/Safety:	Wet pipe fire sprinkler system, central alarm system with pull stations, alarm horns, strobe lights, and smoke detectors, extinguishers, hydrants
Date of visit:	April 16, 2009
Point of Contact (POC):	Mrs. Jan Rossman, Principal 203.977.2750 Mr. Ronald Powell, Head Custodian 203.977.2777

Generally, the property appears to have been constructed within industry standards in force at the time of construction. The property appears to have been well maintained since it was first occupied and is in good overall condition.

According to City of Stamford Public Schools personnel, the property has not had any capital improvements since the 2001 original construction.

1.2. FOLLOW-UP RECOMMENDATIONS

The following issues require additional study:

- No additional evaluation is necessary.

The following issues should be considered.

- Verify that any alterations, installations, or other improvements since the project was first constructed and occupied have been properly permitted and approved by municipal agencies.
- Verify that no defective materials or equipment are used at the property.

1.3. OPINIONS OF PROBABLE COST

The estimates for the repair and capital reserves items noted within this PCR are attached to the front of this report, following the cover page.

These estimates are based on invoices and/or bid documents provided by the Owner and/or facility, construction costs developed by construction resources such as *R.S. Means* and *Marshall & Swift,* EMG's experience with past costs for similar properties, city cost indexes, and assumptions regarding future economic conditions.

1.3.1. Methodology

Based upon our observations, research and judgment, along with consulting commonly accepted empirical Expected Useful Life (EUL) tables; EMG will render our opinion as to when a system or component will most probably necessitate replacement. Accurate historical replacement records provided by the facility manager are typically the best source for this data. Exposure to the weather elements, initial system quality and installation, extent of use, the quality and amount of preventive maintenance exercised are all factors that impact the effective age of a system or component. As a result, a system or component may have an effective age that is greater or less than its actual age. The Remaining Useful Life (RUL) of a component or system equals the EUL less its effective age.

In addition to determining the EUL and the RUL for each major prime system and building component, EMG will categorize each cited deficiency within one of the following five Priorities:

Priority 1: Currently Critical (Immediate)

Items in this category require immediate action and include corrective measures to:

- Return a building component to normal operation
- Stop accelerated deterioration
- Replace items that have reached or exceeded their useful service life
- Correct a cited safety hazard

Priority 2: Potentially Critical (Years 1-2)

Items in this category require action in the next 1-2 years and include corrective measures to:

- Return a building component to normal operation
- Stop rapid deterioration
- Correct potential life safety issues and/or code hazards
- Correct building components that are experiencing Intermittent operations

Priority 3: Necessary – Not Yet Critical (Years 3-5)

Items in this category require appropriate attention to preclude predictable deterioration, potential downtime, additional damage and higher costs to remediation if deferred further.

Priority 4: Recommended (Years 6-10)

Items in this category represent a sensible improvement to the existing conditions. These are not required for the most basic function of the facility; however, Priority 4 projects will improve overall usability and/or reduce long-term maintenance costs.

Priority 5: Recommended (Years 11+)

Items in this category represent anticipated required capital expenditures due to Estimated Useful Life (EUL) only. These systems are generally in good operational condition, but will require replacement due to the system(s) finite life expectancy.

In addition to identifying and prioritizing all of the observed deficiencies, EMG will also provide the physical conditions of building components. The physical condition is typically defined as being in one of four categories: Good, Fair, Poor and Not Applicable. For the purposes of our assessments, the following definitions are used:

Good (G) =	Component or system is sound and performing its function. However, it may show signs of normal wear and tear, commensurate with its age, some minor remedial work may be required.
Fair (F) =	Component or system is performing adequately at this time but exhibits deferred maintenance, evidence of previous repairs, workmanship not in compliance with commonly accepted standards, is obsolete, or is approaching the end of its typical Expected Useful Life. Repair or replacement is required to prevent further deterioration, restore it to good condition, prevent premature failure, or to prolong its Expected Useful Life. Component or system exhibits an inherent deficiency of which the cost to remedy is not commensurate with the deficiency but is best remedied by a program of increased preventative maintenance or periodic repairs.
Poor (P) =	Component or system has either failed or cannot be relied upon to continue performing its original function as a result of: having realized or exceeded its typical expected useful life, excessive deferred maintenance, state of disrepair, an inherent design deficiency or workmanship. Present condition could contribute or cause the deterioration of contiguous elements or systems. Repair or replacement is required.
N/A =	Not Applicable

2. PURPOSE AND SCOPE

2.1. PURPOSE

The purpose of this report is to assist the Client in evaluating the physical aspects of this property and how its condition may affect the Client's financial decisions over time. For this Comprehensive Facilities Needs Assessment, the major independent building components were observed and their physical conditions were evaluated in accordance with ASTM E2018-01. These components include the site and building exteriors and representative interior areas. The estimated costs for repairs and/or capital reserve items are included in the enclosed cost tables. All findings relating to these opinions of probable costs are included in the relevant narrative sections of this Report.

The Physical Plant staff and code enforcement agencies were interviewed for specific information relating to the physical property, code compliance, available maintenance procedures, available drawings, and other documentation.

2.2. SCOPE

ASTM E2018-01 requires that any deviations from the Guide be so stated within the report. EMG's probable cost threshold limitation is reduced from the Guide's $3,000 to $1,000, thus allowing for a more comprehensive assessment on smaller scale properties. Therefore, EMG's opinions of probable costs that are individually less than a threshold amount of $1,000 are typically omitted from this PCR. However, comments and estimated costs regarding identified deficiencies relating to life, safety or accessibility items are included regardless of this cost threshold.

In lieu of providing written record of communication forms, personnel interviewed from the facility and government agencies are identified in Section 2.3. Relevant information based on these interviews is included in Sections 2.3, 3.1, and other applicable report sections.

The assessment team will visit each identified property to evaluate the general condition of the building(s) and site improvements, review available construction documents in order to familiarize themselves with and be able to comment on the in-place construction systems, life safety, mechanical, electrical and plumbing systems, and the general built environment. The assessment team will conduct a walk-through survey of the building(s) in order to observe building systems and components, identify physical deficiencies and formulate recommendations to remedy the physical deficiencies.

- As a part of the walk-through survey, the assessment team will survey 100% of the facility's interior. In addition, EMG will survey the exterior of the properties including the building exterior, roofs, and sidewalk/pavement.
- The assessment team will interview the building maintenance staff so as to inquire about the subject property's historical repairs and replacements and their costs, level of preventive maintenance exercised, pending repairs and improvements, and frequency of repairs and replacements.

- The assessment team will develop opinions based on their site assessment, interviews with City of Stamford, Connecticut Public Schools building maintenance staff and experience gained on similar properties previously evaluated. The assessment team may also question others who are knowledgeable of the subject property's physical condition and operation or knowledgeable of similar systems to gain comparative information to use in evaluation of the subject property.
- The assessment team may review documents and information provided by City of Stamford, Connecticut Public Schools building maintenance staff that could also aid the knowledge of the subject property's physical improvements, extent and type of use, and/or assist in identifying material discrepancies between reported information and observed conditions.
- EMG will provide City of Stamford, Connecticut Public Schools with Sustainable Alternative Recommendations that will concentrate on Utility Savings Potential, Health and Environmental Benefits.
- EMG will provide an Energy Benchmarking Analysis to establish energy performance with relation to similar types of buildings.

2.3. PERSONNEL INTERVIEWED

The following personnel from the facility and government agencies were interviewed in the process of conducting the Comprehensive Facilities Needs Assessment:

Name and Title	Organization	Phone Number
Mrs. Jan Rossman Principal	Scofield Magnet Middle School	203.977.2750
Mr. Ronald Powell Head Custodian	Scofield Magnet Middle School	203.977.2777
Mr. Gus Burreisci Project Manager	City of Stamford Public Schools	203.223.8118

The Comprehensive Facilities Needs Assessment was performed with the assistance of Mrs. Jan Rossman, Principal and Mr. Ronald Powell, head custodian, the on site Points of Contact (POC), who were cooperative and provided information that appeared to be accurate based upon subsequent site observations. The on site contacts are very knowledgeable about the subject property and answered most questions posed during the interview process. The POC's management involvement at the property has been for the past 2 years and 1 year, respectively.

2.4. DOCUMENTATION REVIEWED

Prior to the Comprehensive Facilities Needs Assessment, relevant documentation was requested that could aid in the knowledge of the subject property's physical improvements, extent and type of use, and/or assist in identifying material discrepancies between reported information and observed conditions. The review of submitted documents does not include comment on the accuracy of such documents or their preparation, methodology, or protocol. The following documents were provided for review while performing the Comprehensive Facilities Needs Assessment:

- Site plan
- Floor plans

- Original construction drawings by Paul Sternbach & Alton V. Rheaume Architects dated April 20, 1961. Of note, this original school was substantially demolished and replaced in approximately 2001.
- Addition and alteration drawings by Fuller & D'Angelo, P.C. Architects and Planners dated February 4, 2000 (Bid Set).
- Shop drawings for new structural steel by Promoco dated July 19, 2000.
- Shaped steel fabrication drawings by Schenectady Steel Company, Inc. dated May 8, 2000.
- Curtainwall drawings by Massey's Plate Glass & Aluminum, Inc. dated June 9, 2000.
- Casework & laminate furniture drawings by LSI dated October 23, 2001.
- Roof warranty information
- Certificates of occupancy

No other documents were reviewed. The Documentation Request Form is provided in Appendix E.

2.5. PRE-SURVEY QUESTIONNAIRE

A Pre-survey Questionnaire was sent to the POC prior to the site visit. The questionnaire is included in Appendix E. Information obtained from the questionnaire has been used in preparation of this Facilities Needs Assessment.

3. ACCESSIBILITY, CODE & MOLD

3.1. ADA ACCESSIBILITY

Generally, Title III of the Americans with Disabilities Act (ADA) prohibits discrimination by entities to access and use of "areas of public accommodations" and "commercial facilities" on the basis of disability. Regardless of its age, these areas and facilities must be maintained and operated to comply with the Americans with Disabilities Act Accessibility Guidelines (ADAAG).

Buildings completed and occupied after January 26, 1992 are required to comply fully with the ADAAG. Existing facilities constructed prior to this date are held to the lesser standard of compliance to the extent allowed by structural feasibility and the financial resources available. As an alternative, a reasonable accommodation pertaining to the deficiency must be made.

During the Comprehensive Building Condition Assessment, a limited visual observation for ADA accessibility compliance was conducted. The scope of the visual observation was limited to those areas set forth in EMG's *Abbreviated Accessibility Checklist* provided in Appendix D of this report. It is understood by the Client that the limited observations described herein does not comprise a full ADA Compliance Survey, and that such a survey is beyond the scope of EMG's undertaking. Only a representative sample of areas was observed and, other than as shown on the Abbreviated Accessibility Checklist, actual measurements were not taken to verify compliance. ADA compliance issues inside spaces are not within the scope of the survey.

The facility does not appear to be accessible with Title III of the Americans with Disabilities Act. Elements as defined by the ADAAG that are not accessible as stated within the priorities of Title III, are as follows:

Parking

- Currently, seven handicapped accessible parking stalls are provided within the main front and rear parking lots. Four stalls are missing their post mounted sign. All of these spaces are van accessible.

Elevators

- The school is currently equipped with two 2-stop and one 3-stop hydraulic passenger elevators. The faculty stated that the elevator maintenance company indicated that the hands free communication devices located within each cab are not connected to an off site monitoring company. It is recommended that all three cab communication devices be tested and repaired so that that they are connected to an off site monitoring company or the local Fire Department to ensure safety.

A full ADA Compliance Survey may reveal additional aspects of the property that are not in compliance.

Corrections of these conditions should be addressed from a liability standpoint, but are not necessarily code violations. The Americans with Disabilities Act concerns civil rights issues as they pertain to the disabled and its Accessibility Guidelines are not a construction code, although many local jurisdictions have adopted them as such. The estimated costs to address the achievable items noted above are included in the Replacement Reserves Report.

3.2. CODE INFORMATION AND FLOOD ZONE

According to the Tony Olive, Fire Marshal of the Turn-of-River Fire Department, there are no records of any outstanding fire code violations on file. There is no recorded date known of the most recent inspection from the previous Fire Marshall. The fire department should be contacted by school board officials to set up an inspection.

According to the Flood Insurance Rate Map, published by the Federal Emergency Management Agency (FEMA) and dated November 17, 1993, the property is located in Zone X, defined as areas outside the one percent annual chance floodplain, areas of one percent annual chance sheet flow flooding where average depths are less than one foot, areas of one percent annual chance stream flooding where the contributing drainage area is less than one square mile, or areas protected from the one percent annual chance flood by levees. No Base Flood Elevations or depths are shown within this zone. Insurance purchase is not required in these zones. In communities that participate in the NFIP, flood insurance is available to all property owners and renters in this zone.

3.3. MOLD

EMG performed a limited visual assessment for the presence of mold, conditions conducive to mold, and evidence of moisture in readily accessible interior areas of the property. EMG did not note obvious visual indications of the presence of mold, conditions conducive to mold, or evidence of moisture in readily accessible interior areas of the property. No further action or investigation is recommended regarding mold at the property.

4. EXISTING BUILDING EVALUATION

4.1. ROOM TYPES

The following table identifies the reported room types and mix at the subject property.

Room Types and Mix			
Quantity	**Type**	**Vacant Rooms**	**Down Rooms**
40	Classroom	0	0
12	Office	0	0
2	Mechanical	0	0
12	Storage	0	0
1	Gymnasium	0	0
0	Auditorium		
1	Cafeteria	0	0
1	Media Center	0	0
69	**TOTAL**	**0**	**0**

4.2. ROOMS OBSERVED

EMG observed 100 percent of the building in order to gain a clear understanding of the property's overall condition. Other areas accessed included the exterior of the property, a representative sample of the roofs, and the interior common areas.

All areas of the property were available for observation during the site visit.

A "down room" or area is a term used to describe a non-usable room or area due to poor conditions such as fire damage, water damage, missing equipment, damaged floor, wall or ceiling surfaces, or other significant deficiencies. According to the head custodian, there are no down rooms or areas. No down rooms or areas were observed during the site visit.

The following areas were not available for observation during the site visit:

- None

5. SITE IMPROVEMENTS

5.1. UTILITIES

The following table identifies the utility suppliers and the condition and adequacy of the services.

Site Utilities		
Utility	**Supplier**	**Condition & Adequacy**
Sanitary sewer	Septic System	Good
Storm sewer	On site System	Good
Domestic water	Aquarian	Good
Electric service	CL&P	Good
Natural gas service	Yankee Gas	Good

Observations/Comments:

- The utilities provided appear to be adequate for the property.
- See Section 7.1 for descriptions and comments regarding the underground storage tank (UST).
- See Section 7.2 for descriptions and comments regarding the septic system.
- See Section 7.4 for descriptions and comments regarding the emergency generator.

5.2. PARKING, PAVING, AND SIDEWALKS

The main entrance drive is located along Scofieldtown Road on the west side of the property. An additional entrance drive is located along Scofieldtown Road, north of the main entrance. The parking areas and service drives are paved with asphalt.

Based on a physical count, parking is provided for approximately 251 cars. The parking ratio is 1.68 spaces per thousand square feet of floor area. There are a total of eight handicapped–accessible parking stalls, three of which are van-accessible. All of the parking stalls are located in open lots. The south lot is located near the main entrance to the school and contains 167 spaces. The north not is located near the baseball field and contains 84 spaces. A service drive to the dumpsters and maintenance area is provided from the north lot.

The sidewalks throughout the property are constructed of cast-in-place concrete. A concrete pedestrian space is located in the building courtyard. An asphalt paved walking path is located between the north parking lot and the baseball field.

The curbs and gutters are constructed of cast-in-place concrete. The interior curbs in the south parking lot are constructed of extruded, asphalt curbing placed at the edge of the pavement. The pavement edges along the west side of the south parking lot do not have curbing. Surface runoff is directed to the landscaped areas bordering the paved area.

Observations/Comments:

- The asphalt pavement is in good condition. Minor cracking and surface wear was observed. In order to maximize the pavement life, pothole patching, crack sealing, seal coating, and restriping of the asphalt paving will be required during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.
- The asphalt paved pedestrian path is in good condition. Routine cleaning and maintenance will be required during the evaluation period.
- The concrete curbs and sidewalks throughout the property are in good condition. Routine cleaning and maintenance will be required during the evaluation period.
- The concrete pavement in the courtyard is in good condition. Routine cleaning and maintenance will be required during the evaluation period.
- The asphalt curbs in the south parking lot are in good condition. Based on their estimated Remaining Useful Life (RUL), the asphalt curbs will require replacement during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.

Sustainable Recommendations:

- A sustainable recommendation for asphalt is to use recycled asphalt pavement (RAP) from a local source. This will reduce carbon emissions from production and transportation of new asphalt material.
- A sustainable recommendation for concrete is to use recycled concrete aggregate (RCA) from a local source. This will reduce carbon emissions from production and transportation of new concrete material.

5.3. DRAINAGE SYSTEMS AND EROSION CONTROL

Storm water from the roofs, landscaped areas, and paved areas flows into on site inlets and catch basins. There is underground piping, which outfalls to a wetlands area located on the property.

Observations/Comments:

- There is no evidence of storm water runoff from adjacent properties. The storm water system appears to provide adequate runoff capacity. There is no evidence of major ponding or erosion.

Sustainable Recommendations:

- There are no sustainable recommendations for the drainage systems.

5.4. TOPOGRAPHY AND LANDSCAPING

The property slopes gently downward from the west side of the property toward the east property line.

The landscaping consists of trees, shrubs, and grasses.

Surrounding properties include single-family residential developments.

Reinforced concrete retaining walls are located at the grade changes near the dumpsters and the cafeteria entrance at the east side of the building. Chain link fencing is mounted on top of the retaining walls.

Dry set stone walls are located throughout the site.

Observations/Comments:

- The topography and adjacent uses do not appear to present conditions detrimental to the property.
- The landscape materials are in good condition and will require routine maintenance during the evaluation period.
- The retaining walls are in good condition. Routine maintenance will be required during the evaluation period.
- The stone walls are in good to fair condition. Minor repairs and routine maintenance will be required during the evaluation period.

Sustainable Recommendations:

- There are no sustainable recommendations for landscaping.

5.5. GENERAL SITE IMPROVEMENTS

Property identification is provided by a building-mounted sign near the main building entrance. There is no property identification signage near the property entrance at Scofieldtown Road.

Site lighting is provided by property-owned, wood, streetlight standards. The light standards are spaced along the drive aisles throughout the parking lots. Light fixtures mounted on metal poles are located along walkways and drive aisles throughout the property. Exterior building illumination is provided by surface-mounted light fixtures on the exterior walls.

Chain link fencing is located along the retaining walls, around the condensing units at the east side of the property, and around the gas meter at the west side of the property.

A baseball field is located at the north end of the property. The baseball field has a grass outfield and a dirt infield topped with brick dust. The backstop is constructed of chain link fencing. There is no line fencing or outfield fencing. Temporary bleachers, constructed of metal framing with wood benches, are located near the field. Metal players' benches are located behind the backstop.

A soccer field is located at the south side of the property. The soccer field contains two soccer goals and temporary goals for lacrosse.

Dumpsters are located in the maintenance area at the east side of the building and are placed on concrete pads. The dumpsters are not fully enclosed.

Observations/Comments:

- The building-mounted property identification sign is in good condition. Routine maintenance will be required during the evaluation period.
- There is no property identification signage along Scofieldtown Road. It is recommended that signage be installed to identify the property from the public street. The estimated cost of this work is included in the Replacement Reserves Report.
- The exterior site and building light fixtures are in good condition. Routine maintenance will be required during the evaluation period.

- The site fencing is in good condition and will require routine maintenance during the evaluation period.
- The baseball field is in good condition and will require routine maintenance during the evaluation period.
- The soccer field is in fair condition. Barren spots were observed on the field surface. The soccer field will require reseeding. This work can be completed as part of routine maintenance at the property.
- Underground irrigation was not observed or reported at either playfield. EMG recommends installing irrigation systems at each field and the adjacent grassed areas. A cost allowance for this work is included in the Replacement Reserves Report.
- The dumpsters are owned and maintained by the City of Stamford. The dumpster slab is in good condition and will require routine maintenance during the evaluation period.

Sustainable Recommendations:

- A sustainable recommendation for site lighting is to install energy efficient light fixtures controlled by photo cells.
- A sustainable recommendation for fencing is to use fencing constructed of recycled PVC material during future replacements.

6. BUILDING ARCHITECTURAL AND STRUCTURAL SYSTEMS

6.1. FOUNDATIONS

Based on the structural drawings and structures of similar size, configuration, and geographic location, the foundations consist predominantly of cast-in-place concrete, perimeter spread footings supporting wall and column loads and slab-on-grade. A partial basement includes concrete walls and floor.

Observations/Comments:

- The foundations and footings could not be directly observed during the site visit. There is no evidence of movement that would indicate excessive settlement.
- There are some minor accumulations of water in the basement from a suspected previous mechanical leak. EMG recommends that maintenance personnel monitor the condition for changes and take corrective action as necessary.

Sustainable Recommendations:

- There are no sustainable recommendations for foundations.

6.2. SUPERSTRUCTURE

The building is constructed of conventional steel framing, non-load bearing concrete masonry unit (CMU) and brick sidewalls, and interior steel columns and beams, supporting the open web steel roof joists and metal decking with concreter topped roof decks.

Observations/Comments:

- The superstructure is exposed in some locations, allowing for limited observation. Walls and floors appear to be plumb, level, and stable. There are no significant signs of deflection or movement.

Sustainable Recommendations:

- There are no sustainable recommendations for superstructure.

6.3. ROOFING

The primary roofs are all classified as flat roofs. The main roofs are finished with a fully adhered black EPDM roof system. The gymnasium is covered with a shallow pitched, barrel vaulted white EPDM system. The roofs are insulated with tapered rigid insulation boards that direct storm water towards the roof surface drains.

Six pyramidal type skylights are provided in the main EPDM roof above the atrium lobby.

Storm water is drained from the roofs by internal surface drains at the flat roof sections and lead lined integral gutters and hidden leaders. The drains discharge onto paved and landscaped areas and/or into the underground storm drainage system.

Observations/Comments:

- The roof finishes were install in 2001 and are approximately 8-years old. A copy of the flat EPDM 15-year warranty beginning September 26, 2001 is attached in Appendix C. The roofs are maintained by the in-house maintenance staff.
- The skylights are in good overall condition. No repairs or replacements are required at this time. Based on EUL, the six skylights will also not likely require replacement over term.
- EMG also conducted a separate roof assessment for this project. Wet areas of insulation requiring repair were found during infrared scans of the roof. Some sections appear to require complete replacement at this time. Additionally recommendations for anticipated roof replacement work are also provided in this report. Estimated costs from this report recommended during the evaluation period are included in the Replacement Reserves Report. See EMG project number 88166.09R-002.244 for more detailed discussion and findings.
- Several isolated section of the flat roofs have debris, thrown objects and fallen organic matter. In addition, pieces of metal and screws, and empty Freon canisters have been left behind by the HVAC maintenance contractor. All materials should be periodically removed and cleaned by the In-House maintenance staff to prevent accidental membrane punctures and prevent roof surface drain strainer clogs. This work can be performed regularly as part of the Physical Plant's routine maintenance program.
- Several of the textured rubber EPDM walkway pads have lifted and blown around the roofs. One walkway pad lies in the south end of the central courtyard. All walkway pads should be checked for loose edges and all lifted/missing pads should be re-secured with sealant. This work can be performed regularly as part of the Physical Plant's routine maintenance program.
- Several of the roof perimeter lightning arrestor spikes have loosened from their adhesive and now hand from the copper grounding wire run along the inside of the low parapets. All spikes should be checked and any loose spokes should be re-secured with sealant. This work can be performed regularly as part of the Physical Plant's routine maintenance program.
- According to the head custodian, there are no active roof leaks.
- There is no evidence of roof deck or insulation deterioration. The roof substrate and insulation should be inspected during any future roof repair or replacement work.
- There is no evidence of fire retardant treated plywood (FRT) and, according to the head custodian, FRT plywood is not used.
- The EPDM roof flashings are in good condition and will require routine maintenance during the evaluation period.
- Roof drainage appears to be adequate. Clearing and minor repair of drain system components should be performed regularly as part of the Physical Plant's routine maintenance program. Of note, one small section of roof ponding was noted near the base of RTU #5B. This area should be monitored for worsening condition.

Sustainable Recommendations:

- A sustainable recommendation for roofing is to replace the black EPDM roofing with a white single ply membrane at the end of its RUL.

6.4. EXTERIOR WALLS

The exterior walls are finished primarily with brick veneer, cast stone ornamentation and anodized aluminum trim.

Building sealants (caulking) are located between dissimilar materials, at joints, and around window and door openings.

Observations/Comments:

- The exterior brick finishes are in generally good condition. No repairs or repointing of brick is required at this time. However, partial repointing and brick patching may be required during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.
- The window and door frame sealant is flexible, smooth, in good condition and will require periodic re-application over the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.
- One 10 LF section of the anodized aluminum, roof line edge fascia along the 2nd floor (above Room 214) within the central courtyard is missing. This minor repair should be complete by the In-House maintenance staff. This work can be performed as part of the Physical Plant's routine maintenance program.

Sustainable Recommendations:

- A sustainable recommendation for exterior finishes is to use low VOC sealant or caulking around exterior doors and windows and the paint finishes on the wood trim and metals.

6.5. EXTERIOR AND INTERIOR STAIRS

The interior stairs are constructed of steel and have closed risers and concrete-filled, steel pan treads. The balusters are constructed of painted metal with painted metal pipe railings.

The exterior stairs are constructed of reinforced concrete. The handrails and balusters are constructed of painted metal.

Observations/Comments:

- The exterior and interior stairs, balusters, and handrails are in good condition and will require routine maintenance during the evaluation period.

Sustainable Recommendations:

- A sustainable recommendation for interior stairs is to use low VOC coatings for the stairs and guardrails when repainting.

6.6. WINDOWS AND DOORS

Some of the fixed windows are part of a painted metal framed, storefront system incorporating the exterior entry doors. The windows are glazed with insulated panes set in anodized aluminum frames. The doors are fully-glazed, painted metal-framed doors set in the metal framing system. Most of the classroom windows are anodized aluminum framed, insulated double hung units.

The interior office and classroom entrance doors are stained, solid-core, wood doors set in painted metal frames. The entrance doors have locksets with lever handle hardware.

Exterior service doors are of painted metal with various sized glass vision panels set in painted metal frames. The doors have locksets with lever handle hardware.

One overhead type loading dock door exists to provide access to the interior maintenance storage room.

Observations/Comments:

- The lobby atrium and east sidewall curtainwall storefront window system is in good condition and will require routine maintenance during the evaluation period.
- According to the head custodian, the property does not experience any complaints regarding window leaks or window condensation.
- All of the aluminum framed, insulated double hung windows are in good overall condition. No replacements are anticipated over term.
- All exterior doors are in good overall condition. No repairs or replacements are required at this time.
- The single overhead door is good overall condition. No repairs or replacements are required at this time.
- Two 2nd floor corridor windows along the east sidewall were observed to be shattered and covered with cardboard on the inside face of the panes. It appears that the safety class was impacted by a ball, thrown object or bird strike. Both windows require replacement. The estimated cost of this work is included in the Replacement Reserves Report.
- Many of the gymnasium window blinds are damaged and bent from ball playing activities. All gym window blinds should be replaced with a blind system designed for high traffic or heavy duty materials. The estimated cost of this work is included in the Replacement Reserves Report.

Sustainable Recommendations:

- A sustainable recommendation for windows is to replace all single paned windows with insulated paned units with thermal breaks.
- A sustainable recommendation for doors is to replace with insulated, energy efficient doors.

6.7. PATIO, TERRACE, AND BALCONY

Not applicable. There are no patios, terraces, courtyards or balconies.

6.8. COMMON AREAS, ENTRANCES, AND CORRIDORS

The main school office lobby contains display cases, bulletin boards and the entrance to the main administrative office. Corridors are accessed directly from the lobby. The media center is located on the 1st floor.

Classrooms and offices are accessed from corridors beyond the lobby.

Four pairs of common area restrooms are located on each floor. All on site toilet rooms are fully handicapped accessible. The estimated cost of this work is included in the Replacement Reserves Report.

Of note, Scofield Magnet Middle School has no auditorium.

Common Area	Floors	Walls	Ceilings
Lobby	Vinyl tile	Painted gypsum board, painted concrete block	Suspended and painted gypsum board soffits
Corridor	Vinyl tile	Painted concrete block, painted plaster	Suspended acoustic tiles
Common Area Restrooms	Ceramic tile	Ceramic tile or painted drywall or painted concrete masonry units (CMU) or brick	Suspended acoustic tiles
Office	Vinyl tile or carpet	Painted drywall	Suspended acoustic tiles
Media Center	Carpet	Painted drywall and painted concrete block	Suspended acoustic tiles
Gymnasium	Wood plank	Painted concrete masonry units	Exposed roof framing
Cafeteria	Vinyl tile	Painted concrete block and plaster	Suspended acoustic tiles

Observations/Comments:

- It appears that the interior finishes were installed new in 2001 and 8 years old.
- The interior finishes in the common areas are in good condition. Based on its estimated Remaining Useful Life (RUL), the common area carpeting in the offices and media center will require replacement during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.
- Interior painting will also be required during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.
- The wood flooring in the gymnasium is in good condition. Refinishing of the gymnasium flooring will be required during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.
- The cafeteria kitchen vinyl floor tiles, walls and ceiling are in generally good condition and will require routine maintenance during the evaluation period.

- Partial isolated suspended ceiling tile replacement will also be required during the evaluation period due to stains, damage or missing tiles in the corridor outside the boy's toilet room near Room 237 (8 SF) and within classroom 242 (4 SF). This work is considered to be part of routine maintenance operations and no costs are included in the tables.
- Of note, no active kiln exists at the Scofield Magnet Middle School. A new kiln is sitting within a storage room but has never been connected for use. It is recommended that the kiln be properly set up in Room 225B. The kiln will require electrical, natural gas and an exhaust flue. No cost are provided.

Sustainable Recommendations:

- Sustainable recommendations for the interior finishes are to use low VOC paints, linoleum or cork flooring, and recycled material carpeting.

7. BUILDING (CENTRAL) MECHANICAL AND ELECTRICAL SYSTEMS

7.1. BUILDING HEATING, VENTILATING, AND AIR-CONDITIONING (HVAC)

Heating and cooling are provided in the building by individual, direct-expansion, variable-volume, gas-fired, packaged, rooftop-mounted, HVAC units. There are a total of 11 units, ranging in size from 15 to 46 tons. The cooling equipment uses R-22 as a refrigerant.

The following table describes the rooftop units:

Packaged Rooftop Units				
Designation	**Manufacturer**	**Cooling Capacity**	**Heating Type**	**Manufacture Year**
RTU-1A RTU-1B	Carrier	45 tons	Gas-fired	2002
RTU-2A RTU-2B	Carrier	30 tons	Gas-fired	2002
RTU-3A RTU-3B	Carrier	44 tons	Gas-fired	2002
RTU-4A RTU-4B	Carrier	46 tons	Gas-fired	2002
RTU-5A RTU-5B	Carrier	38 tons	Gas-fired	2002
RTU-6	Carrier	15 tons	Gas-fired	2002

Heated and/or cooled air is distributed through ducts to variable air volume (VAV) terminals concealed above the ceilings in the common areas. The VAV terminals are equipped with hot water reheat coils. The heating and cooling system are controlled by the building EMS.

Additional heating is provided in the classrooms, restrooms, stairwells, and corridors by perimeter, cabinet-mounted and baseboard-mounted finned-tube radiant heat units. The radiant units are supplied with heated water by the central system.

Supplemental heating is provided in the locker rooms and gym offices by fan coil units concealed above the ceilings. The fan coil units are supplied with heated water by the central system. Air distribution is provided to supply air registers by ducts concealed above the ceilings. Return air grilles are located adjacent to the fan coil units. The heating and cooling system are controlled by local thermostats. Supplemental cooling is provided in one of the classrooms by a ductless split system. The ductless system has a cooling capacity of two tons. The fan coil unit is ceiling-mounted and the condensing unit is roof-mounted.

Heating and cooling are provided in the cafeteria and electrical room by air handling units equipped with heating and cooling coils. The air handling units are supplied with heated water by the central system and are equipped with direct expansion (DX) cooling loops with remote condensing units. The condensing units for the cafeteria unit are pad-mounted outside of the maintenance entrance and the condensing unit for the electrical room unit is roof-mounted. Ventilation air is provided to the kitchen by a make-up air unit mounted on the roof. Air distribution is provided to supply air registers by ducts concealed above the ceilings. Return air grilles are located in each space. The air handling units are controlled by the building energy management system (EMS). The following table describes the air handling units:

Air Handling Units					
Designation	**Location**	**Area Served**	**Air Flow**	**Cooling**	**Heating**
AC-7	Mechanical Room	Cafeteria	8,200 CFM	20 ton condensing unit 30 ton condensing unit	Hot water coil
AC-9	Electrical Room Ceiling	Electrical Room	900 CFM	5 ton condensing unit	Hot water coil
MUA-1	Roof-mounted	Kitchen (Make-up Air)	4,080 CFM	None	Gas-fired

Hot water for the central heating system is supplied by two, oil-fired boilers. Boiler 1 has a rated input capacity of 27.0 GPH and Boiler 2 has a rated input capacity of 21.0 GPH. Both boilers are located in the boiler room. Fuel oil is supplied to the boilers by a single fuel oil pump and an 8,000-gallon steel underground storage tank (UST). The UST is located near the emergency generator, at the southwest side of the building.

Circulating pumps provide heated water to each temperature-controlled space via a two-pipe distribution system. The heated water supplies the fan coil units, air handling units, VAV terminals, and finned tube radiant heat units.

The bathrooms are ventilated by mechanical exhaust fans. Ventilation fans are mounted on the roof and are connected by concealed ducts to each ventilated space.

The heating and cooling system is controlled by a building energy management system (EMS), located in the custodial office. The EMS provides individual control and performance data for the boilers, rooftop units, air handling units, ventilation units, and the domestic water heating system. The system is actuated by direct digital controls (DDC).

Observations/Comments:

- The HVAC systems are maintained by an outside contractor.
- The HVAC equipment varies in age. The rooftop units and VAV terminals were installed in 2002. The air handling units and condensing units were installed in 2002. The boilers appear to be at least 20 years old, but had new burners installed in 2001.
- The rooftop units appear to be in good condition and will require routine maintenance during the evaluation period. Intermittent issues were reported with units 4A and 4B. It is recommended that these units be inspected and repaired as part of routine maintenance at the property.

- The VAV terminals appear to be in good condition and will require routine maintenance during the evaluation period.
- The air handling units appear to be in good condition and will require routine maintenance during the evaluation period.
- The fan coil units appear to be in good condition and will require routine maintenance during the evaluation period.
- The condensing units appear to be in good condition. Based on its estimated Remaining Useful Life (RUL), the 5 ton condensing unit will require replacement during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.
- The ductless split system appears to be in good condition. Based on its estimated Remaining Useful Life (RUL), the ductless system will require replacement during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.
- The boilers appear to be in fair condition. Based on their estimated Remaining Useful Life (RUL), the boilers will require replacement during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.
- The underground storage tank for fuel oil could not be directly observed during the assessment. Based on its estimated Remaining Useful Life (RUL), the UST will require replacement during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.
- The fuel oil pump appears to be in fair condition. Based on its estimated Remaining Useful Life (RUL), the fuel oil pump will require replacement during the evaluation period. At the time of replacement, it is recommended that a pump set with a primary and standby pump be installed to reduce down time due to pump failure. The estimated cost of this work is included in the Replacement Reserves Report.
- The circulating pumps appear to be in fair to poor condition. Two leaking pumps were observed at the time of the assessment. The leaking pumps should be repaired as part of routine maintenance at the property. Based on their estimated Remaining Useful Life (RUL), the pumps will require replacement during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.
- The finned tube radiant heat units appear to be in good condition and will require routine maintenance during the evaluation period.
- The mechanical ventilation system and equipment appear to be in good condition and will require routine maintenance during the evaluation period. Equipment or component replacements can be performed as part of the Physical Plant's routine maintenance program.
- Inconsistent heating and cooling was reported in some of the classrooms. It is recommended that a test and balance assessment be performed on the HVAC system to ensure proper temperature control is attainable in each conditioned space. The estimated cost of this work is included in the Replacement Reserves Report.
- The building EMS appeared to be in good condition. Pending the results of the test and balance report, the EMS may require upgrades to provide consistent heating and cooling throughout the building. The estimated cost of this work is also included in the Replacement Reserves Report.

Sustainable Recommendations:

- A sustainable recommendation for HVAC is to replace existing air-conditioning equipment with high-efficiency components.
- A sustainable recommendation for HVAC is to install high efficiency boilers with dual-fuel capability at the time of replacement.

7.2. BUILDING PLUMBING

The plumbing systems include the incoming water service, the cold water piping system, and the sanitary sewer and vent system. The risers and the horizontal distribution piping are reported to be copper. The sanitary sewer and vent systems are reported to be polyvinyl chloride (PVC) plastic and cast iron. The water meter is located in a vault adjacent to Scofieldtown Road.

A septic system is installed on the property. The septic system components include two lift stations, two storage tanks, and a leaching area. The first lift station is located at the east side of the building, near the maintenance entrance and pumps waste from the lower level to the holding tank at the west side of the building. The second lift station is located at the west side of the building and pumps waste from the holding tanks to the leaching area. The holding tanks are 4,000 gallons and 6,000 gallons in size and are both located at the west side of the building. The leaching area is located at the southwest corner of the property and contains even-flow distribution boxes and leaching trenches beneath the surface.

Domestic hot water is supplied by three, gas-fired boilers. Each boiler has a rated input capacity of 399 MBH and a storage capacity of 300 gallons. The boilers are located in the boiler room.

The common area restrooms have commercial-grade fixtures and accessories, including water closets, urinals, and lavatories. Drinking fountains are installed in the corridors.

Observations/Comments:

- The plumbing system appears to be well maintained and in good condition. The water pressure appears to be adequate. The plumbing system will require routine maintenance during the evaluation period.
- There is no evidence that the property uses polybutylene piping for the domestic water distribution system. According to the POC, polybutylene piping is not used at the property.
- The septic system appears to be in good to fair condition. A damaged cleanout was observed west of the south parking lot. It is recommended that septic pipes be cleaned and the cleanout be repaired immediately. This work can be completed as part of routine maintenance at the property.
- Additional maintenance will be required on the septic system and should be performed as part of routine maintenance at the property.
- The pressure and quantity of hot water appear to be adequate.
- The boilers appear to be in good condition and will require routine maintenance during the evaluation period.
- The accessories and fixtures in the restrooms are in good condition and will require routine maintenance during the evaluation period.
- The drinking fountains are in good condition and will require routine maintenance during the evaluation period. No drinking fountains were observed at either playfield. The installation of two fountains is recommended at each field. The estimated cost of this work is included in the Replacement Reserves Report.

Sustainable Recommendations:

- A sustainable recommendation for plumbing is to install high-efficiency boilers for the domestic hot water system.
- A sustainable recommendation for plumbing is to install low flush volume toilets and faucet aerators to reduce domestic water consumption.

7.3. BUILDING GAS DISTRIBUTION

Gas service is supplied from the gas main on the adjacent public street. The gas meter and regulator are located in a chain link enclosure at the west side of the building. The gas distribution piping within the building is malleable steel (black iron).

Observations/Comments:

- The pressure and quantity of gas appear to be adequate.
- The gas meter and regulator appear to be in good condition and will require routine maintenance during the evaluation period.
- Only limited observation of the gas distribution piping can be made due to hidden conditions. The gas piping is in good condition and, according to the POC, there have been no gas leak.

Sustainable Recommendations:

- There are no sustainable recommendations for gas distribution.

7.4. BUILDING ELECTRICAL

The electrical supply lines run underground to a pad-mounted transformer that feeds the interior-mounted electrical meter.

The main electrical service size is 5,000-Amps, 277/480-Volt, three-phase, four-wire, alternating current (AC). Step down transformers are located in each electrical room. The electrical wiring is reportedly copper, installed in metallic conduit. Circuit breaker panels are located throughout the building.

The building is equipped with a public address and intercom system, which allows communication between the main office and each classroom. The public address control unit is located in the main office. There is also a CCTV video security system.

A diesel-powered, 528-kVA, emergency generator is located in an enclosure at the southwest side of the building. The generator provides back-up power for elements of the fire and life safety systems. The fuel tank is belly tank located directly beneath the generator.

Observations/Comments:

- The on site electrical systems are owned and maintained by the utility company. This includes transformers, meters, and all elements of the on site systems.
- The electrical power appears to be adequate for the property's demands.
- The switchgear, circuit breaker panels, and electrical meters appear to be in good condition and will require routine maintenance during the evaluation period.
- The public address system appears to be in good condition and will require routine maintenance during the evaluation period.

- The faculty described limitations with the current CCTV camera system due to a lack of cameras. Two additional exterior cameras would greatly improve site visibility and safety. One camera is needed at the 2nd bus ramp location (near Room 139). The second camera is needed outside the band room (near the gymnasium and Room 147). Both new cameras should be connected to the existing video matrix so that they are viewable on the main office monitor screen.
- The generator is in good condition and is reportedly tested on a weekly basis. The generator will require routine maintenance during the evaluation period.

Sustainable Recommendations:

- A sustainable recommendation for building electrical is to install occupancy sensors in all classrooms, restrooms, and offices to ensure that lights are turned off when the space is not occupied.
- An additional sustainable recommendation for building electrical is to install high-efficiency fluorescent light fixtures with electronic ballasts which support the use of T-8 bulbs for reduced energy consumption.

7.5. ELEVATORS AND CONVEYING SYSTEMS

There are three hydraulic, passenger elevators. The elevators were manufactured by Elmo Elevator. The main elevator has a rated capacity of 2,500 pounds and a speed of 100 feet per minute. The cafeteria elevator has a rated capacity of 2,500 pounds and a speed of 100 feet per minute. The bus entrance elevator has a rated capacity of 1,200 pounds and a speed of 60 feet per minute. The elevator machinery is located in a room adjacent to the base of each elevator shaft.

Each elevator cab has vinyl-tiled floors, metal wall panels, and recessed, ceiling light fixtures. The doors are fitted with electronic safety stops. Emergency communication equipment is provided in each cab.

Observations/Comments:

- The elevators, and their responsiveness, appear to be inadequate. The main elevator reportedly fails often resulting in an excessive number of service calls. The main elevator was not functioning at the time of the assessment. It is recommended that the issues with the main elevator be corrected by the elevator contractor as part of routine maintenance at the school. The elevators are serviced by Northeast Elevator on a routine basis.
- The elevator machinery and controls are the originally installed systems. Based on their current condition and estimated Remaining Useful Life (RUL), the elevator equipment will require replacement during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.
- The elevators are inspected on an annual basis by the municipality, and a certificate of inspection is displayed in the elevator cabs.
- The emergency communication equipment in the elevators appears to be functional. Equipment testing is not within the scope of a Facilities Needs Assessment.
- The finishes in the elevator cabs appear to be in good to fair condition. Based on their estimated Remaining Useful Life (RUL), the cab finishes will require replacement during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.

Sustainable Recommendations:

- A sustainable recommendation for the elevators is to equip the hydraulic pumps with high efficiency motors to reduce energy consumption.

7.6. FIRE PROTECTION SYSTEMS

The fire protection systems consist of a wet-pipe sprinkler system, a wet standpipe with fire department hose valves and connections in each stair tower, portable fire extinguishers, smoke detectors, and a central alarm system with pull stations, strobe lights, and alarm horns. Siamese connections are located on the exterior of the building, near the main entrance. Hardwired smoke detectors are located throughout the building. The nearest fire hydrants are located along the property's drive aisles and are approximately 40 feet from the building.

Common areas and corridors are equipped with battery back-up exit lights, illuminated exit signs, pull stations, alarm horns, and strobe light alarms.

Fire sprinkler risers are located in the boiler room. The system is equipped with a backflow preventor.

A central fire alarm panel is located in the main office and monitors the pull stations, smoke detectors, and flow switches. The alarm panel also sounds the alarm and automatically notifies the monitoring service or the fire department in the event of trouble. An annunciator panel is located at the main building entrance.

The building is equipped with a security system, including motion sensors and door alarms. The main security panel is located in an electrical closet. Interface panels for the security system are located in the main office and the custodial office.

The commercial kitchen in the building is equipped with a dry-chemical, fire suppression system. Fire suppression heads are located in the exhaust hoods above the cooking areas, and the chemical tanks are mounted adjacent to the hood.

Observations/Comments:

- Information regarding fire department inspection information is included in Section 3.2.
- The fire sprinklers appear to be in good condition and are inspected by a qualified contractor on a routine basis. The fire sprinklers will require routine maintenance during the evaluation period.
- The fire extinguishers are tested annually and appear to be in good condition. The fire extinguishers were tested and inspected within the last year.
- The pull stations and alarm horns appear to be in good condition and will require routine maintenance during the evaluation period.
- Smoke detector replacement is considered to be routine maintenance.
- Exit sign and emergency light replacement is considered to be routine maintenance.
- The central alarm panel appears to be in good condition and is tested regularly by a qualified fire equipment contractor. Equipment testing is not within the scope of a Facilities Needs Assessment. Based on the estimated Remaining Useful Life (RUL), and because replacement parts and components for this type of equipment may be obsolete, the alarm panel will require replacement over the assessment period. The estimated cost of this work is included in the Replacement Reserves Report.
- The security panel appears to be in good condition. Equipment testing is not within the scope of a Facilities Needs Assessment.

- The dry-chemical, fire suppression system appears to be in good condition and is tested regularly by a qualified fire equipment contractor.

Sustainable Recommendations:

- There are no sustainable recommendations for fire protection.

8. INTERIOR SPACES

8.1. INTERIOR FINISHES

The following table generally describes the interior finishes in units:

Typical Space Finishes			
Room	**Floor**	**Walls**	**Ceiling**
Classrooms	Vinyl tile, area rugs, few with wall-to-wall carpet	Painted drywall and concrete block	Suspended acoustic tiles
Maintenance Shop & Storage	Painted concrete slab, Vinyl tile	Painted drywall and concrete block	Suspended acoustic tiles
Kitchens	Vinyl tile	Painted drywall and concrete block, ceramic tile	Suspended acoustic tiles
Restrooms	Ceramic tile	Painted drywall and plaster	Suspended acoustic tiles

The interior doors are stained, solid-core, wood doors set in painted metal frames. The interior doors have locksets with lever type handle hardware.

Observations/Comments:

- The interior finishes are in good condition. Based on the Estimated Useful Life and the observed conditions, replacement of the vinyl floor tiles, carpeting and repainting is not recommended during the term.
- The interior doors and door hardware are in good condition and will not require replacement during the evaluation period.
- All interior window blinds are in good condition. All window blinds should be replaced late in the evaluation period due to EUL. The estimated cost of this work is included in the Replacement Reserves Report.
- Several of the teachers interviewed complained of a lack of keys for their classroom storage cabinets. It appears to be a fairly widespread problem. All classrooms should be surveyed for operational and damaged or missing storage locks and then re-key to the existing master key system. The estimated cost of this work is included in the Replacement Reserves Report.

Sustainable Recommendations:

- Sustainable recommendations for the interior finishes are to use low VOC paints, linoleum or cork flooring, and recycled material carpeting.

8.2. COMMERCIAL KITCHEN EQUIPMENT

The kitchen area has a variety of commercial kitchen appliances, fixtures, and equipment. The kitchen includes the following major appliances, fixtures, and equipment:

Appliance	Comment
Refrigerators	Walk-in, Upright, Chest
Freezers	Walk-in, Upright, Chest
Ranges	Gas
Ovens	Convection
Griddles / Grills	No
Fryers	Yes
Hood	Exhaust ducted to exterior
Steamer	Yes
Dishwasher	Yes
Microwave	No
Ice Machines	Yes
Steam tables	Yes
Work tables	Stainless steel
Shelving	Stainless steel

Observations/Comments:

- The kitchen appliances appear to be in good condition. Based on their estimated Remaining Useful Life (RUL), some of the kitchen appliances will require replacement during the evaluation period. A cost allowance for this work is included in the Replacement Reserves Report.

Sustainable Recommendations:

- A sustainable recommendation for the cooking equipment is to replace the appliances and refrigeration units with Energy Star rated or equivalent equipment.

8.3. HVAC

See Section 7.1 for building mechanical systems.

8.4. PLUMBING

Domestic water is supplied by the central system described in Section 7.2.

9. OTHER STRUCTURES

No other structures exist on site.

10. ENERGY BENCHMARKING

This section is pending additional information from the client.

11. APPENDICES

APPENDIX A: Photographic Record

APPENDIX B: Site Plan

APPENDIX C: Supporting Documentation

APPENDIX D: EMG Abbreviated Accessibility Checklist

APPENDIX E: Pre-Survey Questionnaire and Documentation Request Checklist

APPENDIX F: Acronyms and Out of Scope Items

APPENDIX G: Resumes for Report Reviewer and Field Observer

APPENDIX A:
PHOTOGRAPHIC RECORD

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-016.017 **Project Name: Scofield Magnet Middle School**

Photo #1:	Overview of the front façade of the Scofield Magnet Middle School

Photo #2:	Five handicapped accessible parking stalls are provided in front

Photo #3:	Two handicapped accessible parking stalls are provided in the rear

Photo #4:	Typical secondary egress door

Photo #5:	Typical secondary common entrance with steps and an ADA ramp

Photo #6:	West side elevation

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-016.017 **Project Name: Scofield Magnet Middle School**

Photo #7:	View of the north (rear) elevation

Photo #8:	West side elevation

Photo #9:	Rear elevation, service area and cafeteria

Photo #10:	Two 2nd floor windows were observed to be shattered

Photo #11:	South sidewall and gymnasium exterior beyond

Photo #12:	East side of the inner courtyard area

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-016.017 **Project Name: Scofield Magnet Middle School**

Photo #13:	West side of the inner courtyard area

Photo #14:	One section of roof edge fascia is missing, minor repairs are needed

Photo #15:	Overview of the flat and shallow barrel vaulted EPDM roofs

Photo #16:	Most areas of the school are covered with a fully adhered EPDM

Photo #17:	Several skylights are provided above the 2nd floor atrium lobby

Photo #18:	The gymnasium is covered with a shallow barrel vaulted EPDM

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-016.017 **Project Name: Scofield Magnet Middle School**

Photo #19:	Roof levels are accessed by fixed ladders

Photo #20:	Isolated sections of roof debris were noted

Photo #21:	Several lightning arrestor spikes have delaminated from the roof

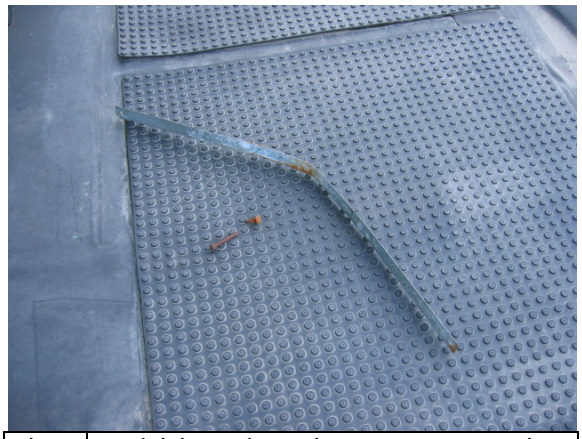


Photo #22:	Roof debris of metal straps, screws and nails were observed

Photo #23:	Fallen organic matter exists in some roof corners

Photo #24:	Main lobby

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-016.017 **Project Name: Scofield Magnet Middle School**

Photo #25:	Administrative corridors

Photo #26:	Typical 1st floor classroom corridor

Photo #27:	Handicapped-accessible water fountains are found throughout the corridors

Photo #28:	Main office, note teacher mailboxes on public side of counter

Photo #29:	Cafeteria

Photo #30:	Central kitchen

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-016.017 **Project Name: Scofield Magnet Middle School**

Photo #31:	ADA accessible toilets are provided in cafeteria

Photo #32:	Storage room

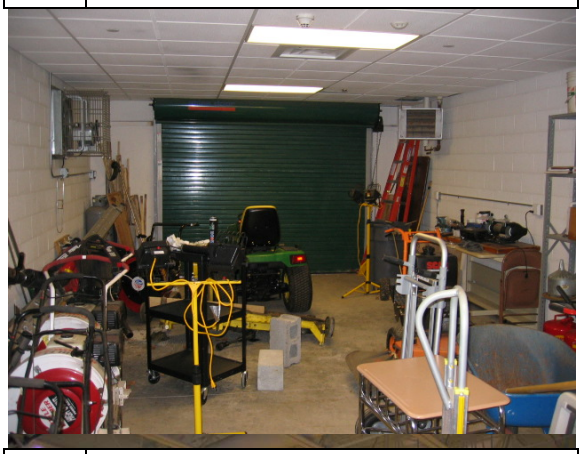


Photo #33:	Maintenance shop storage room

Photo #34:	Gymnasium

Photo #35:	Detail of the damaged gymnasium window blinds

Photo #36:	Fitness center

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-016.017 **Project Name: Scofield Magnet Middle School**

Photo #37:	All common toilet rooms throughout the school provide full ADA access

Photo #38:	Restroom lavatories

Photo #39:	Handicap-accessible toilet stall

Photo #40:	Conference room

Photo #41:	Staff dining room

Photo #42:	Nurse's office

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-016.017 **Project Name: Scofield Magnet Middle School**

Photo #43:	A full ADA accessible, single user toilet room exists in the nurse's office

Photo #44:	Dental office

Photo #45:	Computer lab

Photo #46:	Several stairwells provided access and egress to the 2nd floor

Photo #47:	Typical first floor classroom interior

Photo #48:	Typical first floor classroom interior

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-016.017 **Project Name: Scofield Magnet Middle School**

Photo #49:	2nd floor classroom corridor with lockers

Photo #50:	Typical first floor classroom interior, note exposed brick

Photo #51:	Each stairwell provides an area of refuge at top landing

Photo #52:	2nd floor atrium lobby space

Photo #53:	Typical 2nd floor classroom interior

Photo #54:	Typical 2nd floor classroom interior

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-016.017 **Project Name: Scofield Magnet Middle School**

Photo #55:	The school's kiln is currently in storage and not connected for use

Photo #56:	Inside view of two corridor windows that have shattered and been covered with cardboard

Photo #57:	A few isolated stained acoustic ceiling tiles were noted

Photo #58:	Television studio

Photo #59:	Math lab

Photo #60:	Media center

Photo #61:	Second view of the media center towards the book stacks

Photo #62:	Computer lab within the media center

Photo #63:	2-stop hydraulic elevator near the 5th grade wing

Photo #64:	3-stop hydraulic elevator at cafeteria

Photo #65:	2-stop hydraulic elevator near the main office

Photo #66:	Each elevator provides substantial ADA access

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-016.017 **Project Name: Scofield Magnet Middle School**

Photo #67:	Boiler 1

Photo #68:	Boiler 2

Photo #69:	Hot water circulating pumps

Photo #70:	Expansion tanks

Photo #71:	Cabinet-mounted finned tube radiant heat unit

Photo #72:	Baseboard-mounted finned tube radiant heat unit

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-016.017 **Project Name: Scofield Magnet Middle School**

Photo #73:	Rooftop Unit 1A

Photo #74:	Rooftop Unit 1B

Photo #75:	Rooftop Unit 2A

Photo #76:	Rooftop Unit 2B

Photo #77:	Rooftop Unit 3A

Photo #78:	Rooftop Unit 3B

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-016.017 **Project Name: Scofield Magnet Middle School**

Photo #79:	Rooftop Unit 4A

Photo #80:	Rooftop Unit 4B

Photo #81:	Rooftop Unit 5A

Photo #82:	Rooftop Unit 5B

Photo #83:	Rooftop Unit 6

Photo #84:	Typical VAV terminal

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-016.017 **Project Name: Scofield Magnet Middle School**

Photo #85:	AC-7 serving cafeteria

Photo #86:	Condensing units for AC-7

Photo #87:	AC-9 serving electrical room

Photo #88:	Condensing unit for AC-9

Photo #89:	Make-up air unit for kitchen

Photo #90:	Condensing unit for wall-mounted AC

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-016.017 **Project Name: Scofield Magnet Middle School**

Photo #91:	Roof-mounted exhaust fans

Photo #92:	Ceiling-mounted exhaust fan

Photo #93:	Domestic water service

Photo #94:	Domestic water boilers

Photo #95:	Septic system holding tanks and lift station at west side of property

Photo #96:	Lift station at east side of property

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-016.017 **Project Name: Scofield Magnet Middle School**

Photo #97:	Septic system cleanouts

Photo #98:	Area of septic leach fields

Photo #99:	Typical restroom fixtures

Photo #100:	Typical drinking fountains

Photo #101:	Gas meter and regulator

Photo #102:	Gas feed for domestic water boiler

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-016.017 **Project Name: Scofield Magnet Middle School**

Photo #103:	Electric meter

Photo #104:	Main switchgear

Photo #105:	Step down transformers

Photo #106:	Emergency generator enclosure

Photo #107:	Emergency generator

Photo #108:	Transfer switches

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-016.017 **Project Name: Scofield Magnet Middle School**

Photo #109:	PA system in main office

Photo #110:	PA panel in classroom

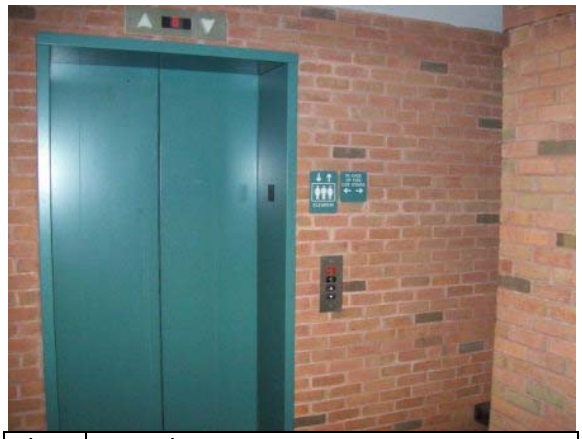


Photo #111:	Main elevator

Photo #112:	Main elevator hydraulic equipment

Photo #113:	Cafeteria elevator

Photo #114:	Cafeteria elevator hydraulic equipment

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-016.017 **Project Name: Scofield Magnet Middle School**

Photo #115:	Cafeteria elevator cab interior

Photo #116:	Cafeteria elevator control panel

Photo #117:	Bus entrance elevator

Photo #118:	Bus entrance elevator hydraulic equipment

Photo #119:	Bus entrance elevator cab interior

Photo #120:	Bus entrance elevator control panel

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-016.017 **Project Name: Scofield Magnet Middle School**

Photo #121:	Typical sprinkler head

Photo #122:	Sprinkler stand pipe and test valves

Photo #123:	Fire alarm control panel

Photo #124:	Fire alarm annunciator panel

Photo #125:	Emergency exit sign and pull station

Photo #126:	Security interface panel

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-016.017 **Project Name: Scofield Magnet Middle School**

Photo #127:	Overview of main parking lot

Photo #128:	Asphalt detail

Photo #129:	Accessible parking stalls

Photo #130:	Overview of back parking lot

Photo #131:	Entrance to back parking lot

Photo #132:	Accessible parking stalls with missing signage

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-016.017 **Project Name: Scofield Magnet Middle School**

Photo #133:	Extruded asphalt curbing

Photo #134:	Asphalt with no curbing

Photo #135:	Asphalt pedestrian path

Photo #136:	Concrete sidewalk

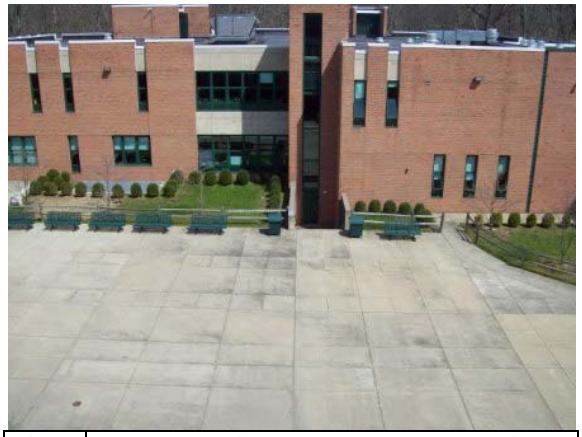


Photo #137:	Concrete pedestrian area in courtyard

Photo #138:	Typical catch basin

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-016.017 **Project Name: Scofield Magnet Middle School**

Photo #139:	Concrete retaining wall at east side of building

Photo #140:	Stone wall on property

Photo #141:	Typical site light standard

Photo #142:	Pole mounted site lighting

Photo #143:	Baseball field

Photo #144:	Infield and backstop

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-016.017 **Project Name: Scofield Magnet Middle School**

Photo #145:	Baseball field bleachers

Photo #146:	Soccer field

Photo #147:	Barren grass on soccer field

Photo #148:	Soccer goal

Photo #149:	Dumpster pad and retaining wall

Photo #150:	Typical entry gate

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-016.017 **Project Name: Scofield Magnet Middle School**

Photo #151:	Commercial kitchen

Photo #152:	Gas range

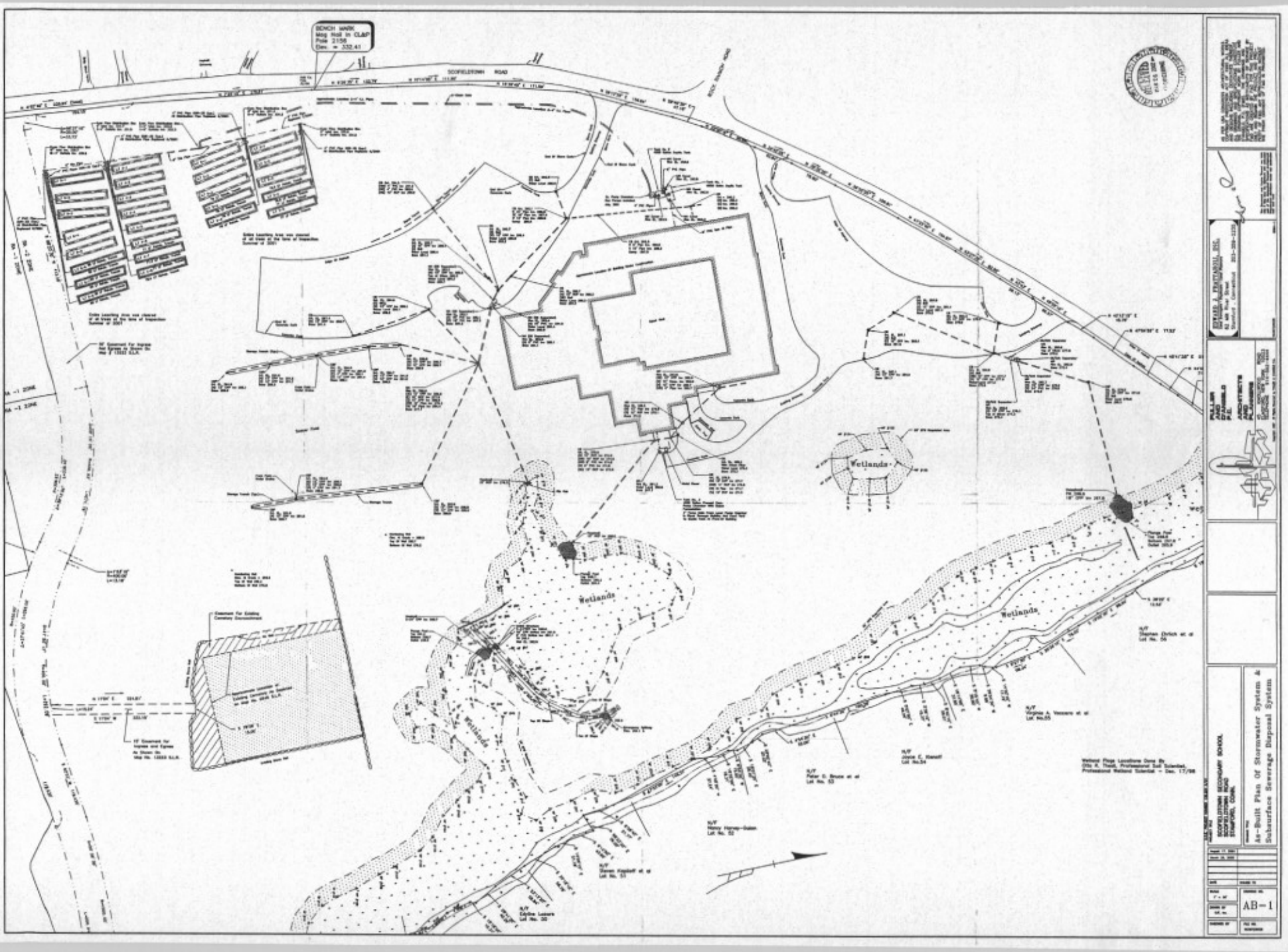
Photo #153:	Ansul system in exhaust hood

Photo #154:	Dishwashing equipment

Photo #155:	Walk-in cooler and freezer

Photo #156:	Compressors for walk-in units

APPENDIX B:
SITE PLAN


BENCH MARK
Mag Nail in CLMP
Pole 2158
Elev. = 332.41
SCOFIELDTOWN ROAD
Wetlands
Wetlands
Wetlands
Wetlands
Cemetery Encroachment
Wetland Flags Locations Done By:
Eric K. Thiel, Professional Soil Scientist
Professional Wetland Scientist - Dec. 17/98
SCOFIELDTOWN SECONDARY SCHOOL
SCOFIELDTOWN ROAD
STAMFORD, CONN.
As-Built Plan Of Stormwater System &
Subsurface Sewerage Disposal System
AB-1

APPENDIX C:
SUPPORTING DOCUMENTATION

Single-Ply Systems

SERIAL NO. TS33576

DATE OF ISSUE: OCTOBER 4, 2001

CARLISLE GOLDEN SEAL™ TOTAL ROOFING SYSTEM WARRANTY

BUILDING OWNER: STAMFORD BOARD OF EDUCATION
NAME OF BUILDING: SCHOFIELDTOWN SCHOOL AB#010532N
BUILDING ADDRESS: STAMFORD, CT
DATE OF COMPLETION OF THE CARLISLE TOTAL ROOFING SYSTEM: 09/26/01
DATE OF ACCEPTANCE BY CARLISLE: E B WARRANTY (10/04/01)

Carlisle Roofing Systems, Inc., warrants to the Building Owner **(OWNER)** of the above described building, that; subject to the terms, conditions and limitations stated in this warranty, Carlisle will repair any leak in the Carlisle Golden Seal™ Total Roofing System **(CARLISLE TOTAL ROOFING SYSTEM)** installed by a Carlisle Authorized Roofing applicator for a period of 15 years commencing with the date of Carlisle's acceptance of the Carlisle Total Roofing System installation. However, in no event shall Carlisle's obligations extend beyond 15.5 years subsequent to the date of substantial completion of the Carlisle Total Roofing System. See below for exact date of warranty expiration.

The Carlisle Total Roofing System is defined as the following Carlisle brand materials: Membrane, Flashings, Counterflashings, Adhesives and Sealants, Insulation, Recovery Board, Fasteners, Fastener Plates, Fastening Bars, Metal Edging, Metal Termination Bars, and any other Carlisle brand products utilized in this installation.

TERMS, CONDITIONS, LIMITATIONS

1. Owner shall provide Carlisle with written notice within thirty (30) days of the discovery of any leak in the Carlisle Total Roofing System. Owner should send written notice of a leak to Carlisle's Warranty Services Department at the address set forth at the bottom of this warranty. By so notifying Carlisle, the Owner authorizes Carlisle or its designee to investigate the cause of the leak. Should the investigation reveal the cause of the leak to be outside the scope of this Warranty, investigation and repair costs for this service shall be paid by the Owner.
2. If, upon inspection, Carlisle determines that the leak is caused by a defect in the Carlisle Total Roofing System's materials, or workmanship of the Carlisle Authorized Roofing Applicator in installing the same, Owner's remedies and Carlisle's liability shall be limited to Carlisle's repair of the leak.
3. This warranty shall not be applicable if, upon Carlisle's inspection, Carlisle determines that any of the following has occurred:
   (a) The Carlisle Total Roofing System is damaged by natural disasters, including, but not limited to, lightning, fire, insect infestations, earthquake, tornado, hail, hurricanes, and winds of peak gust speeds of 72 mph or higher measured at 10 meters above ground; or
   (b) The Carlisle Total Roofing System is damaged by any intentional or negligent acts, accidents, misuse, abuse, vandalism, civil disobedience, or the like.
   (c) Deterioration or failure of building components, including, but not limited to, the roof substrate, walls, mortar, HVAC units, non-Carlisle brand metal work, etc., occurs and causes a leak, or otherwise damages the Carlisle Total Roofing System; or
   (d) Acids, oils, harmful chemicals and the like come in contact with the Carlisle Total Roofing System and cause a leak, or otherwise damage the Carlisle Total Roofing System.
4. This Warranty shall be null and void if any of the following shall occur:
   (a) If, after installation of the Carlisle Total Roofing System by a Carlisle Authorized Roofing Applicator there are any alterations or repairs made on or through the roof or objects such as, but not limited to, structures, fixtures, or utilities are placed upon or attached to the roof without first obtaining written authorization from Carlisle; or
   (b) Failure by the Owner to use reasonable care in maintaining the roof, said maintenance to include, but not be limited to, those items listed on Carlisle's Care & Maintenance Information sheet which accompanies this Warranty.
5. Only Carlisle brand insulation products are covered by this warranty. Carlisle specifically disclaims liability, under any theory of law, for damages sustained by or caused by non-Carlisle brand insulation products.
6. During the term of this Warranty, Carlisle shall have free access to the roof during regular business hours.
7. Carlisle shall have no obligation under this Warranty while any bills for installation, supplies, service, and warranty charges have not been paid in full to the Carlisle Authorized Roofing Applicator, Carlisle, or material suppliers.
8. Carlisle's failure at any time to enforce any of the terms or conditions stated herein shall not be construed to be a waiver of such provision.
9. Carlisle shall not be responsible for the cleanliness or discoloration of the Carlisle Total Roofing System caused by environmental conditions including, but not limited to, dirt, pollutants, or biological agents.
10. This warranty is not assignable by operation of law or otherwise. Application may be made by a new building owner for reissuance of the warranty during the original warranty period. Certain procedures including, but not limited to, an inspection of the Roofing System by a Carlisle representative and fees will apply to any reissuance. Carlisle reserves the right, in its sole discretion, to refuse to reissue this warranty.

CARLISLE DOES NOT WARRANT PRODUCTS UTILIZED IN THIS INSTALLATION WHICH IT HAS NOT FURNISHED; AND SPECIFICALLY DISCLAIMS LIABILITY, UNDER ANY THEORY OF LAW, ARISING OUT OF THE INSTALLATION AND PERFORMANCE OF, OR DAMAGES SUSTAINED BY OR CAUSED BY, PRODUCTS NOT FURNISHED BY CARLISLE.

THE REMEDIES STATED HEREIN ARE THE SOLE AND EXCLUSIVE REMEDIES FOR FAILURE OF THE CARLISLE TOTAL ROOFING SYSTEM OR ITS COMPONENTS. THERE ARE NO WARRANTIES EITHER EXPRESSED OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE AND MERCHANTABILITY, WHICH EXTEND BEYOND THE FACE HEREOF. CARLISLE SHALL NOT BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR OTHER DAMAGES INCLUDING, BUT NOT LIMITED TO, LOSS OF PROFITS OR DAMAGE TO THE BUILDING OR ITS CONTENTS UNDER ANY THEORY OF LAW.

BY: Patrick D. McGrady
AUTHORIZED SIGNATURE..... Patrick D. McGrady
TITLE: Director, Technical & Warranty Services
THIS WARRANTY EXPIRES: OCTOBER 3, 2016

YOUR SINGLE-PLY SOLUTION™

CARLISLE

INFORMATION

ROOM #	LOCKED AREA	PROMETHEAN BOARD	CONVERTED CLASSROOM
120	Yes	Yes	
122	Yes	Yes	No
124 Paley		NO	NO
127	Yes - 2	NO	NO
129 Brooker			↓
139	Yes	Yes	↓
130	Yes	NO	? Barocas
~~128~~ 136		NO	? Sampel
143	~~NO~~ Yes	NO	NO
149		NO	NO
260	?	NO	NO
243	Yes	Yes	NO
242	Yes Y2 opens easily	Yes	NO
241		NO	NO
240 Fern's	?	NO	NO
232	~~Yes~~	NO but really wants one ↓	↓
230		No	↓
228	Yes	Yes	↓
225	Yes	NO	↓

INFORMATION

111 desk, cab, closet NO

ROOM #	LOCKED AREA	PROMETHEAN BOARD	CONVERTED CLASSROOM
	some		
121	~~cab~~ cab., closet desk, filing cab	Yes	
123	closets, cabinets desk	NO	
125	1 closet cab, filing	NO	
128	1/2 closets locks	NO	
142	?	NO	
146	Yes	NO	
147	Yes	NO	
255	~~Yes~~ 2 out functional	NO	
254		NO	
247	Yes	NO	
237	non-functional	NO	
231	Yes	~~NO~~ Yes	
229	non-functional	NO	
227	?	NO	
226	non-functional	NO	?
224	?		office of AP

INFORMATION

ROOM #	LOCKED AREA	PROMETHEAN BOARD	CONVERTED CLASSROOM
218	YES	NO	
~~212~~ 212	?	NO	
210	NO	NO	office of security
208	Yes.	YES.	
206	YES	~~NO~~ YES	
264	YES	NO	?
263	YES	NO	TV STUDIO

INFORMATION

ROOM #	LOCKED AREA	PROMETHEAN BOARD	CONVERTED CLASSROOM
222	door only	NO	Book room
214	?	NO	NO
215	Yes	NO	NO
213	Yes	NO	↓
211	?	NO	↓
209		NO	↓
207	Yes	Yes	↓
205	Yes	Yes	↓
265	Yes	NO	↓
~~270~~			

Scofield Magnet Staff Roster
2008-2009

6th WHITE

	Name	Rm.	Cap.	Subject
Ms.	Mininger, Joy	125	26	LA/Reading
Mrs.	Norton, Keely	123	26	SS
Mrs.	Therrien, Tanya	121	26	MATH
Mrs.	Engel, Linda	120	26	SCIENCE
Mr.	Freeman, Herm	146	26	ART

6th TURQUOISE

	Name	Rm.	Cap.	Subject
Mrs.	Brooker,Kathleen	129	27	LA/Reading
Mr.	Ellsworth, Jim	127	27	SS
Ms.	Helms, Michelle*	122	27	MATH
Ms.	Diomandes, Kerry	139	27	SCIENCE
Mrs.	Wieken, Sharon	111	27	TECH

7th BLACK

	Name	Rm.	Cap	Subject
Mr.	Fallon, James	230	25	LA/Reading
Mr.	Suthers, Max	229*	25	SS
Ms	Sileo, Kristen*	228*	25	MATH
Mr.	Forde, James	231	25	SCIENCE
Mr.	Forsyth, Allen	265	25	TECH

7th SILVER

	Name	Rm.	Cap.	Subject
Mrs.	Black, Priscilla	241	25	LA/Reading
Ms.	Ferris, Jennifer	240*	25	SS
Mr.	Hanau, Christoph	242	25	MATH
Mrs.	Littlestone, Antonia	243	25	SCIENCE
Ms.	Robertson, Jennifer	247	25	ART

8th GOLD

	Name	Rm.	Cap.	Subject
Mrs.	Muoio, Annie	214	25	LA/Reading
Mrs.	Vodola, Tracy	215	25	SS
Mr.	Bloomberg, Eliot	208	25	MATH
Mrs.	Kulish, Karen	205	25	SCIENCE
Mr.	Melillo, Steve	225	25	ART

8th PURPLE

	Name	Rm.	Cap.	Subject
Mr.	Sollitto, Nick	211	25	LA/Reading
Mr.	Santorella, Frank	213	25	SS
Mrs.	Wargo, Eileen	207	25	MATH
Ms.	McMinn, Louise	206	25	SCIENCE
Mrs.	Nagurney, Betsy	218	25	TECH

COPPER - NEW ARRIVALS

	Name	Cap.	Ext.
Mrs.	Kessler-Banner, Dorothy	18	

Scofield Magnet Staff Roster
2008-2009

RESOURCE

	Name	Rm.	CA	
Mrs.	Barocas, Lisa	130	6	Resource Teacher
Mrs.	Sampel, Susan*	136	2	Resource Teacher
Mrs.	Tendler, Barbara	237*	6	Resource Teacher
Mrs.	Pastula, Holly	237	6	Resource Teacher
Mrs.	Butler, Angela	212*	4	Resource Teacher

SUPPORT SERVICES

	Name	Rm.	CA	Title
Mrs.	Grant, Denise	105E*	12	ESL
Ms.	D'Agostino, Frances	264	8	Math Coach
Mrs.	Paley, Susan*	124	18	Math Support
Mrs.	LaRusso, Miriam	227	6	Literacy Support 7
Mrs.	Louth, Nancy	209	6	Literacy Support 8

EXPLORATORY

	Name	Rm.	CA	Subject
Ms.	Gubitosa, Linda	255*	28	Spanish
Dr.	Paris, Lou	254	28	Spanish
Mrs.	Marciano, Nicole	128	28	Spanish
Mrs.	Cerreta, Rose	142	54	Music
Mrs.	Bucko, Christopher	147	35	Instrumental Music
Mrs.	Moriarty, Theresa	149	28	Music
Mr.	Chalmers, Bill*	232*	28	Reading
Mrs.	Heyward, MaryAnn*	227*	28	Reading

APPENDIX D:
EMG ABBREVIATED ACCESSIBILITY CHECKLIST

Property Name: Scofield Magnet Middle School
Date: April 16, 2009
Project Number: 88166.09R-016-017

EMG Abbreviated Accessibility Checklist					
	Building History	**Yes**	**No**	**N/A**	**Comments**
1.	Has the management previously completed an ADA review?	✓			2001 Building code
2.	Have any ADA improvements been made to the property?	✓			
3.	Does a Barrier Removal Plan exist for the property?	✓			
4.	Has the Barrier Removal Plan been reviewed/approved by an arms-length third party such as an engineering firm, architectural firm, building department, other agencies, etc.?	✓			
5.	Has building ownership or management received any ADA related complaints that have not been resolved?		✓		
6.	Is any litigation pending related to ADA issues?		✓		None reported
	Parking	**Yes**	**No**	**N/A**	**Comments**
1.	Are there sufficient parking spaces with respect to the total number of reported spaces?	✓			
2.	Are there sufficient van-accessible parking spaces available (96" wide/ 96" aisle for van)?	✓			
3.	Are accessible spaces marked with the International Symbol of Accessibility? Are there signs reading "Van Accessible" at van spaces?	✓	✓		Four ADA parking spaces with no signs
4.	Is there at least one accessible route provided within the boundary of the site from public transportation stops, accessible parking spaces, passenger loading zones, if provided, and public streets and sidewalks?	✓			

EMG Abbreviated Accessibility Checklist					
5.	Do curbs on the accessible route have depressed, ramped curb cuts at drives, paths, and drop-offs?	✓			
6.	Does signage exist directing you to accessible parking and an accessible building entrance?	✓			
	Ramps	**Yes**	**No**	**N/A**	**Comments**
1.	If there is a ramp from parking to an accessible building entrance, does it meet slope requirements? (1:12)	✓			
2.	Are ramps longer than 6 ft complete with railings on both sides?	✓			
3.	Is the width between railings at least 36 inches?	✓			
4.	Is there a level landing for every 30 ft horizontal length of ramp, at the top and at the bottom of ramps and switchbacks?	✓			
	Entrances/Exits	**Yes**	**No**	**N/A**	**Comments**
1.	Is the main accessible entrance doorway at least 32 inches wide?	✓			
2.	If the main entrance is inaccessible, are there alternate accessible entrances?	✓			
3.	Can the alternate accessible entrance be used independently?	✓			
4.	Is the door hardware easy to operate (lever/push type hardware, no twisting required, and not higher than 48 inches above the floor)?	✓			
5.	Are main entry doors other than revolving door available?	✓			
6.	If there are two main doors in series, is the minimum space between the doors 48 inches plus the width of any door swinging into the space?	✓			
	Paths of Travel	**Yes**	**No**	**N/A**	**Comments**
1.	Is the main path of travel free of obstruction and wide enough for a wheelchair (at least 36 inches wide)?	✓			
2.	Does a visual scan of the main path reveal any obstacles (phones, fountains, etc.) that protrude more than 4 inches into walkways or corridors?	✓			

EMG Abbreviated Accessibility Checklist					
3.	Are floor surfaces firm, stable, and slip resistant (carpets wheelchair friendly)?	✓			
4.	Is at least one wheelchair-accessible public telephone available?	✓			
5.	Are wheelchair-accessible facilities (toilet rooms, exits, etc.) identified with signage?	✓			
6.	Is there a path of travel that does not require the use of stairs?	✓			
7.	If audible fire alarms are present, are visual alarms (strobe light alarms) also installed in all common areas?	✓			
	Elevators	**Yes**	**No**	**N/A**	**Comments**
1.	Do the call buttons have visual signals to indicate when a call is registered and answered?	✓			
2.	Is the "UP" button above the "DOWN" button?	✓			
3.	Are there visual and audible signals inside cars indicating floor change?	✓			
4.	Are there standard raised and Braille marking on both jambs of each host way entrance?	✓			
5.	Do elevator doors have a reopening device that will stop and reopen a car door if an object or a person obstructs the door?	✓			
6.	Do elevator lobbies have visual and audible indicators of car arrival?	✓			
7	Does the elevator interior provide sufficient wheelchair turning area (51" x 68")?	✓			
8.	Are elevator controls low enough to be reached from a wheelchair (48 inches front approach/54 inches side approach)?	✓			
9.	Are elevator control buttons designated by Braille and by raised standard alphabet characters (mounted to the left of the button)?	✓			
10.	If a two-way emergency communication system is provided within the elevator cab, is it usable without voice communication?	✓	✓		Repairs needed to connect to off site monitoring
	Restrooms				
1.	Are common area public restrooms located on an accessible route?	✓			
2.	Are pull handles push/pull or lever type?	✓			

EMG Abbreviated Accessibility Checklist					
3.	Are there audible and visual fire alarm devices in the toilet rooms?	✓			
4.	Are corridor access doors wheelchair-accessible (at least 32 inches wide)?	✓			
5.	Are public restrooms large enough to accommodate a wheelchair turnaround (60″ turning diameter)?	✓			
6.	In unisex toilet rooms, are there safety alarms with pull cords?	✓			
7.	Are stall doors wheelchair accessible (at least 32″ wide)?	✓			
8.	Are grab bars provided in toilet stalls?	✓			
9.	Are sinks provided with clearance for a wheelchair to roll under (29″ clearance)?	✓			
10.	Are sink handles operable with one hand without grasping, pinching or twisting?	✓			
11.	Are exposed pipes under sink sufficiently insulated against contact?	✓			
12.	Are soap dispensers, towel, etc. reachable (48″ from floor for frontal approach, 54″ for side approach)?	✓			
13.	Is the base of the mirror no more than 40″ from the floor?	✓			

APPENDIX E:
PRE-SURVEY QUESTIONNAIRE AND DOCUMENTATION REQUEST CHECKLIST

PRE-SURVEY QUESTIONNAIRE

This questionnaire was completed by the property owner, the owner's designated representative, or someone knowledgeable about the subject property. ***This completed form*** was ***presented to EMG's Field Observer on the day of the site visit***.

Project Name:	**Scofield Magnet Middle School**	**Project Number:**	**88166.09R-016.017**
Person completing form:	**Mr. Ronald Powell**	**Date:**	**April 16, 2009**
Association with Project:	**Head Custodian**	**Phone Number:**	**203.977.2777**
Years associated w/Proj.:	**6 months**	**Fax Number:**	**203.977.5103**
Current Owner:		**Estimated Value:**	

Unk = Unknown, NA = Not Applicable

	Yes	No	Unk	NA	Comments
1. Does the property have full-time maintenance personnel on site?	✓				
2. Have there been any capital improvements in the last five years?			✓		
If so, are details available?					
3. Are there any unresolved building, fire, or zoning code issues?		✓			
If so, what additional info is available?	None, Fire Marshall will not respond				
4. Are there any "down", unusable units?		✓			
5. Are there any problems or hazards at the property?	✓				
6. Has the property ever had an ADA accessibility review?			✓		
If so, is a copy available?					
7. Does a Barrier removal plan exist for the property?			✓		
8. Are there any unresolved accessibility issues at the property?			✓		
9. Is there any pending litigation concerning the property?			✓		
10. Is site drainage adequate?	✓				
11. Has a termite inspection occurred within the last year?		✓			
Is a copy of an inspection report available?					
12. Are there any problems with foundations or structures?		✓			
If so, are there plans to address?					
13. Is there any water infiltration in basements or crawl spaces?	✓				
14. Are there any wall or window leaks?		✓			
15. Are there any poorly insulated areas?		✓			
16. Are there any current roof leaks at the property?		✓			
17. Are any roof finishes more than ten years old?	✓				
18. Is the roofing covered by a warranty or bond?	✓				
19. Is Fire Retardant Treated (FRT) plywood used at the property?		✓			
20. Does the property have an exterior insulation and finish system (EIFS) with a synthetic stucco finish		✓			
21. Do the utilities (electric, gas, sewer, water) provide adequate service?	✓				

	Yes	No	Unk	NA	Comments
22. Is the property served by an on site water system?		✓			
23. Is the property served by an on site septic system?	✓				
24. If present, do irrigation systems function properly?				✓	
25. Are HVAC systems at the property inspected and maintained, at a minimum, annually?			✓		
26. Is the HVAC equipment more than ten years old?			✓		
27. Do any of the HVAC systems use R-11, 12, or 22 refrigerants?			✓		
28. Does the jurisdiction perform their own HVAC work?	✓				
29. Has any HVAC system, or any other part of the property, ever contained visible suspect mold growth?		✓			
If so, where and when?					
30. Has the property ever been tested for indoor air quality or suspect mold?			✓		
If so, where and when? Results?					
31. Is there a response action in place to prevent mold growth or respond to its presence?		✓			
If so, describe. Is a copy available?					
32. Are the water heaters/boilers more than ten years old?	✓				
33. Is polybutylene piping used at the property?			✓		
34. Are there any plumbing leaks or water pressure problems?	✓				
35. Are the any leaks or pressure problems with natural gas service?			✓		
36. Does any part of the electrical system use aluminum wiring?			✓		
37. Is the electrical service adequate?	✓				
38. Has elevator equipment been replaced in the last ten years?		✓			
39. Are the elevators maintained by a contractor on a regular basis?	✓				
40. Is the elevator emergency communication equipment functional?			✓		
41. Is the elevator emergency communication equipment ADA compliant?			✓		
42. Have the fire/life safety systems been inspected within the last year?	✓				
43. Are there any smoke evacuation or pressurization systems?			✓		
44. Are there any recalled Omega or Central brand fire sprinkler heads that have not yet been replaced?		✓			Simplex recently stated all Central heads
45. Are there any emergency electrical generators?	✓				
46. Are the generators maintained on a regular basis?	✓				
47. Do tenants contract for their own improvement work?	✓				
48. Are tenants responsible for any roof, HVAC, or exterior wall maintenance, repair, or replacement?	✓				
If so, what, where and how?					
49. Have there been previous due diligence, engineering, environmental, or geological studies done?			✓		
If so, are copies available?					

	Yes	No	Unk	NA	Comments
50. Is there anything else that EMG should know about when assessing this property? If so, what?	✓				Elevators need repair more than average, plus HVAC units need replacement or replacement parts

On the day of the site visit, provide EMG's Field Observer access to all of the available documents listed below. Provide copies if possible.

INFORMATION REQUIRED

1. All available construction documents (blueprints) for the original construction of the building or for any tenant improvement work or other recent construction work.

2. A site plan, preferably 8 1/2" X 11", which depicts the arrangement of buildings, roads, parking stalls, and other site features.

3. For commercial properties, provide a tenant list which identifies the names of each tenant, vacant tenant units, the floor area of each tenant space, and the gross and net leasable area of the building(s).

4. For apartment properties, provide a summary of the apartment unit types and apartment unit type quantities, including the floor area of each apartment unit as measured in square feet.

5. For hotel or nursing home properties, provide a summary of the room types and room type quantities.

6. Copies of Certificates of Occupancy, building permits, fire or health department inspection reports, elevator inspection certificates, roof or HVAC warranties, or any other similar, relevant documents.

7. The names of the local utility companies which serve the property, including the water, sewer, electric, gas, and phone companies.

8. The company name, phone number, and contact person of all outside vendors who serve the property, such as mechanical contractors, roof contractors, fire sprinkler or fire extinguisher testing contractors, and elevator contractors.

9. A summary of recent (over the last 5 years) capital improvement work which describes the scope of the work and the estimated cost of the improvements. Executed contracts or proposals for improvements. Historical costs for repairs, improvements, and replacements.

10. Records of system & material ages (roof, MEP, paving, finishes, furnishings).

11. Any brochures or marketing information.

12. Appraisal, either current or previously prepared.

13. Current occupancy percentage and typical turnover rate records (for commercial and apartment properties).

14. Previous reports pertaining to the physical condition of property.

15. ADA survey and status of improvements implemented.

16. Current / pending litigation related to property condition.

Your timely compliance with this request is greatly appreciated.

APPENDIX F:
ACRONYMS AND OUT OF SCOPE ITEMS

ASTM E2018-01 ACRONYMS

ADA - The Americans with Disabilities Act
ASTM - American Society for Testing and Materials
BOMA - Building Owners & Managers Association
BUR - Built-up Roofing
DWV – Drainage, Waste, Ventilation
EIFS - Exterior Insulation and Finish System
EMF – Electro Magnetic Fields
EMS - Energy Management System
EUL - Expected Useful Life
FEMA - Federal Emergency Management Agency
FFHA - Federal Fair Housing Act
FIRMS - Flood Insurance Rate Maps
FNA – Facilities Needs Assessment
FRT- Fire Retardant Treated
FOIA - U.S. Freedom of Information Act (5 USC 552 et seq.) and similar state statutes.
FOIL - Freedom of Information Letter
FM - Factory Mutual
HVAC - Heating, Ventilating and Air-conditioning
IAQ - Indoor Air Quality
MEP – Mechanical, Electrical & Plumbing
NFPA - National Fire Protection Association
PCR - Property Condition Report
PML - Probable Maximum Loss
RTU - Rooftop Unit
RUL - Remaining Useful Life
STC – Sound Transmission Class
UBC – Uniform Building Code

Ref #	Section 8: ASTM E 2018-01 Out of Scope Items
8.4.1.8	***Utilities:*** Operating conditions of any systems or accessing manholes or utility pits.
8.4.2.2	***Structural Frame and Building Envelope:*** Entering of crawl or confined space areas (however, field observer should observe conditions to the extent easily visible from the point of access to the crawl or confined space areas), determination of previous substructure flooding or water penetration unless easily visible or if such information is provided.
8.4.3.2	***Roofs:*** Walking on pitched roofs, or any roof areas that appear to be unsafe, or roofs with no built-in access, or determining any roofing design criteria.
8.4.4.2	***Plumbing:*** Determining adequate pressure and flow rate, fixture-unit values and counts, or verifying pipe sizes and verifying the point of discharge for underground systems.
8.4.5.2	***Heating:*** Observation of flue connections, interiors of chimneys, flues or boiler stacks, or -owned or maintained equipment.
8.4.6.2	***Air-conditioning and Ventilation:*** Evaluation of process related equipment or condition of owned/maintained equipment.
8.4.7.2	***Electrical:*** Removing of electrical panel covers, except if removed by building staff, EMF issues, electrical testing, or operating of any electrical devices. Process related equipment or owned equipment.
8.4.8.2	***Vertical Transportation:*** Examining of cables, sheaves, controllers, motors, inspection tags, or entering elevator/escalator pits or shafts
8.4.9.1	***Life Safety / Fire Protection***: Determining NFPA hazard classifications, classifying, or testing fire rating of assemblies.
8.4.10.2	***Interior Elements:*** Operating appliances or fixtures, determining or reporting STC (Sound Transmission Class) ratings, and flammability issues/regulations.

Ref #	Section 11: ASTM E 2018-01 Out of Scope Items
11.1	*Activity Exclusions* - The activities listed below are generally excluded from or otherwise represent limitations to the scope of a Comprehensive Building Condition Assessment prepared in accordance with this *guide*. These should not be construed as all-inclusive or implying that any exclusion not specifically identified is a Comprehensive Building Condition Assessment requirement under this *guide*.
11.1.1	Removing or relocating materials, furniture, storage containers, personal effects, debris material or finishes; conducting exploratory probing or testing; *dismantling* or operating of equipment or appliances; or disturbing personal items or *property* which obstructs access or visibility.
11.1.2	Preparing *engineering* calculations (civil, structural, mechanical, electrical, etc.) to determine any *system's*, *component's*, or equipment's adequacy or compliance with any specific or commonly accepted design requirements or *building codes*, or preparing designs or specifications to remedy any *physical deficiency*.
11.1.3	Taking measurements or quantities to establish or confirm any information or representations provided by the *owner* or *user* such as: size and dimensions of the *subject property* or *subject building*, any legal encumbrances such as easements, dwelling unit count and mix, building *property* line setbacks or elevations, number and size of parking spaces, etc.
11.1.4	Reporting on the presence or absence of pests such as wood damaging organisms, rodents, or insects unless evidence of such presence is readily apparent during the course of the *field observer's walk-through survey* or such information is provided to the *consultant* by the *owner*, *user*, property manager, etc. The *consultant* is not required to provide a *suggested remedy* for treatment or remediation, determine the extent of infestation, nor provide *opinions of probable costs* for treatment or remediation of any deterioration that may have resulted.
11.1.5	Reporting on the condition of subterranean conditions such as underground utilities, separate sewage disposal *systems*, wells; *systems* that are either considered process-related or peculiar to a specific tenancy or use; waste water treatment plants; or items or *systems* that are not permanently installed.

Ref #	Section 11: ASTM E 2018-01 Out of Scope Items
11.1.6	Entering or accessing any area of the premises deemed to pose a threat of *dangerous or adverse conditions* with respect to the *field observer* or to perform any procedure, which may damage or impair the physical integrity of the *property*, any *system*, or *component*.
11.1.7	Providing an opinion on the condition of any *system* or *component,* which is *shutdown,* or whose operation by the *field observer* may significantly increase the registered electrical demand-load. However, *consultant* is to provide an opinion of its physical condition to the extent reasonably possible considering its age, obvious condition, manufacturer, etc.
11.1.8	Evaluating acoustical or insulating characteristics of *systems* or *components*.
11.1.9	Providing an opinion on matters regarding security of the *subject property* and protection of its occupants or *users* from unauthorized access.
11.1.10	Operating or witnessing the operation of lighting or other *systems* typically controlled by time clocks or that are normally operated by the building's operation staff or service companies.
11.1.11	Providing an environmental assessment or opinion on the presence of any environmental issues such as asbestos, hazardous wastes, toxic materials, the location and presence of designated wetlands, IAQ, etc.
11.2	*Warranty, Guarantee and Code Compliance Exclusions* - By conducting a Comprehensive Building Condition Assessment and preparing a PCR, the *consultant* is merely providing an opinion and does not warrant or guarantee the present or future condition of the *subject property,* nor may the Comprehensive Building Condition Assessment be construed as either a warranty or guarantee of any of the following:
11.2.1	any *system's* or *component's* physical condition or use, nor is a Comprehensive Building Condition Assessment to be construed as substituting for any *system*'s or equipment's warranty transfer inspection;
11.2.2	compliance with any federal, state, or local statute, ordinance, rule or regulation including, but not limited to, *building codes*, safety codes, environmental regulations, health codes or zoning ordinances or compliance with trade/design standards or the standards developed by the insurance industry. However, should there be any conspicuous *material* present violations *observed* or reported based upon *actual knowledge* of the *field observer* or the *PCR reviewer*, they should be identified in the PCR;
11.2.3	compliance of any material, equipment, or *system* with any certification or actuation rate program, vendor's or manufacturer's warranty provisions, or provisions established by any standards that are related to insurance industry acceptance/approval such as FM, State Board of Fire Underwriters, etc.
11.3	Additional/General Considerations:
11.3.1	Further Inquiry - There may be physical condition issues or certain physical improvements at the *subject property* that the parties may wish to assess in connection with a *commercial real estate transaction* that are outside the scope of this *guide*. Such issues are referred to as non-scope considerations and if included in the PCR, should be identified under Section 10.9.
11.3.2	*Non-Scope Considerations* - Whether or not a *user* elects to inquire into non-scope considerations in connection with this *guide* is a decision to be made by the *user*. No assessment of such non-scope considerations is required for a Comprehensive Building Condition Assessment to be conducted in compliance with this *guide*.

APPENDIX G:
RESUMES FOR REPORT REVIEWER AND FIELD OBSERVER

DANNY WHITE

Project Manager

Project Experience

- ***Hendrick Auto Group (HAG), Charlotte, NC –*** Mr. White served as a Project Manager on the property needs assessment (PNA) of 20 HAG automotive dealerships, primarily located throughout the state of North Carolina. The assessments included major structural, mechanical and electrical components of buildings and infrastructures. Dealerships ranged in size from approximately 20,000 to 80,000 SF and occupying sites ranging from two to 25 acres. The client found his observations critical to their final business decisions.
- ***Alexandria City Public Schools (ACPS), Alexandria, VA –*** As a Project Manager, Mr. White performed a Facility Condition Assessment of five public schools in the ACPS system ranging in size from a 62,760 SF elementary school to a 237,332 SF middle school. The assessments included multi-acre site infrastructures including landscapes, pavements and playground equipment. He reviewed the condition of the building structure and systems and developed a thorough report. His work helped EMG complete this project on schedule and within the budget.
- ***City of San Buenaventura Assessments, Ventura, CA –*** Mr. White served as a Project Manager on the San Buenaventura Public Housing physical needs assessments (PNA) project. Structures assessed included multi-family housing apartments, senior citizen multi-level towers, rental offices, community centers, and maintenance buildings. Structural, mechanical, electrical, and site systems and finishes were assessed for current condition and cost recommendations for a 20-year term. Interviews were conducted with maintenance and administrative personnel to discuss known deficiencies. Findings were used to establish Expected Useful Life (EUL), and Remaining Useful Life (RUL) of the systems and components.

Industry Tenure

- A/E: 1988
- EMG: 2007

Related Experience

- Educational Facility Condition Assessment reports
- Assisted Living Portfolios
- Retail Portfolios
- Hospitality Portfolios

Industry Experience

- Government Facilities
- Municipal Facilities
- Office
- Industrial
- Housing/Multi-family
- K-12
- Higher Education
- Hospitality
- Healthcare
- Retail/Wholesale
- Assisted Living

Special Skills & Training

- Roof Inspection & Management - Diagnosis & Repair – RIEI
- Pavement Management University of Illinois

Regional Location

- Norfolk - Virginia Beach, VA

- ***City of Dallas Assessments (Dallas Zoo), Dallas, TX –*** As a Project Manager, Mr. White performed facility condition assessments of approximately 100 buildings comprising over 320,000 SF, and 95 acres of infrastructure at the Dallas Zoo. Buildings included offices, auditoriums, garages, maintenance facilities, warehouses, restrooms, animal hospital, schools, and various exhibit and animal holding structures. Additional Dallas assessments included the Arlington Hall Conservatory and the Royal Preston Library. Mr. White also served as a Technical Report Reviewer (TRR) for final review of various other assessment reports.
- ***County of San Diego Assessments, San Diego, CA –*** Mr. White served as a Project Manager and provided facility condition assessments (FCA) of County of San Diego properties. The scope of work included the assessment of numerous buildings and infrastructures including the Kearney Mesa Juvenile Detention Facility, Juvenile Hall, San Diego Courthouse Plant, Law Library, Palomar Mountain Park and others. Reports were generated giving broad details of structural, mechanical, electrical, and site elements and event recommendations for a 20-year evaluation term.
- ***GE Healthcare Financial Services, Multiple Cities –*** As a Project Manager, Mr. White performed eight property condition assessments (PCA) of this portfolio of Genesis Health Care Nursing Homes. The average property size was 48,000 square feet and an average of 140 units. He reviewed the condition of the building structural, mechanical, and electrical systems, and the site infrastructure and developed a thorough report. Repair and replacement costs were provided for a 12 year reserve term. His work helped EMG complete this project on schedule and within the budget.
- ***Barclays Capital Real Estate Inc, Multiple Cities –*** As a Project Manager, Mr. White performed three property condition assessments (PCA) of this portfolio of hospitality properties, including Potomac Mills Courtyard, Potomac Mills Residence Inn, and Springfield TownePlace Suites located in Northern Virginia. The average property size was 80,000 square feet and an average of 124 units. He reviewed the condition of the building structural, mechanical, and electrical systems, and the site infrastructure and developed a thorough report. Repair and replacement costs were provided for a 7 year reserve term. His work helped EMG complete this project on schedule and within the budget.
- ***Lord and Taylor – Fair Oaks Mall, Fairfax, VA –*** As a Project Manager, Mr. White performed a property condition assessment of this retail property. The building occupies 3.67 acres of the Fair Oaks Mall property and is 159,876 square feet in size. He reviewed the condition of the building structural, mechanical, and electrical systems, and the site infrastructure and developed a thorough report. He interviewed management personnel of Lord and Taylor and the Fair Oaks Mall to determine site maintenance responsibilities. Repair and replacement costs were provided for a 12 year reserve term. His work helped EMG complete this project on schedule and within the budget.

City Government Experience

- ***Virginia Beach Municipal Center , Virginia Beach, VA –*** As a Project Engineer/Technician, Mr. White performed structural facility condition assessment of City Hall, Voter Registration Building, Police Station, Court Support Building, Special Education Building, Heating Plant and related infrastructure within the City of Virginia Beach Municipal Complex. Buildings ranged in size from 28,000 to 90,000 square feet. His team met with the Director of Maintenance to discuss known conditions prior to commencing a thorough visual inspection of designated high profile facilities. Inspection scheduling involved strict visit guidelines in order to minimize disruption of normal business activities. Special consideration was required in conjunction with planned major mechanical and structural systems replacements and the anticipated need for removal of known hazardous materials in ceilings and attics. Deficiencies collected included preventative and recurring maintenance items. He created a prioritized backlog of maintenance and repair to affected structural systems for a 10 year plan. An inventory of roof section types and quantities was provided to the client. His work insured the timely completion of the project within the budget guidelines.

Higher Education Experience

- ***Haskell Indian University, Lawrence, KS –*** As a Project Engineer/Technician, Mr. White performed structural facility condition assessment as part of an inspection team. Facilities inspected included administrative offices, maintenance shops, classrooms, cafeteria and gymnasium. His team met with the facility managers to discuss known deficiencies, environmental concerns, and safety issues throughout the approximately 300,000 square feet of assigned buildings. Ideas were exchanged for ways to increase the budget allocation for repairs and upgrades through the identification of some not easily detected deficiencies. He created a prioritized maintenance and repair strategy for a 10 year plan. An inventory of exterior structural components was also provided to the client. His work insured the team's completion of the project within the time constraints and budget.

Department of Defense

- ***US Naval Submarine Base Kings Bay, GA*** – As a Facilities Maintenance Specialist with the federal government, Mr. White applied his expertise in the structural assessment of the nearly one million square feet Trident Training Facility. The comprehensive assessment of interior, exterior, and roof system components was challenging due to size, accessibility, and security. He met with the facility manager to obtain construction drawings, contact names for the various departments, and a history of deficiencies. He provided an overall condition analysis of the building and a brief narrative and inventory of each major structural system. A 5 year maintenance plan was formulated for recurring and deferred maintenance complete with fundable estimates generated from RS Means estimating software. Mr. White entered the deficiency cost data into the activity's maintenance action plan software which is reported to the Department of Defense for budget planning.

BILL CHAMPION, PMP

Program Manager

Cost Segregation Manager

Education

- MBA from the University of Rochester (Simon)
- MS in Mechanical Engineering from the State University of New York at Buffalo
- BS in Mechanical Engineering from the State University of New York at Buffalo

Project Experience

- ***Housing Authority of the City of Pittsburgh, Pittsburgh, PA*** – Mr. Champion was a member of the Quality Assurance Review Team for this Physical Needs Assessment portfolio that encompassed over 6,114 housing units within 20 separate communities in City of Pittsburgh, Pennsylvania. The objective of the PNA was to provide a general description of all physical improvements that the Client would need to undertake to bring its properties, including dwellings and non-dwellings structures, to a level that will provide safe, decent and sanitary living conditions for the residents. Mr. Champion utilized his engineering expertise to ensure that the methodology and protocol were not compromised during the execution of the assessment.
- ***George Mason University, Fairfax, VA***- As Program Manager, Mr. Champion was responsible for meeting with the Client and developing a specific program that exceeded the Client's expectations. The program was designed to provide facility condition assessments and prepare a database for tracking, systems, building components, deficiencies and replacements. This database was customized further to include a detailed equipment inventory. This database was designed based on Client input and the end user in mind. Mr. Champion's ability to troubleshoot issues allowed EMG to conduct this program effectively and maintain the schedule and budget.
- ***University of Virginia, Charlottesville, VA*** – Mr. Champion performed Facilities Condition Audits on academic buildings on the campus of The University of Virginia. He evaluated building condition and systems, outlined physical deficiencies and gave recommendations for prioritizing them to maximize safety and minimize long-term costs.

Industry Tenure

- A/E: 1994
- EMG: 2002

Related Experience

- Multifamily Housing Portfolios
- Government Agency Portfolios
- K-12 Education Portfolios
- Higher Education Portfolios
- Retail Portfolios
- Industrial Portfolios

Industry Experience

- Multi-family Housing
- Cost Segregation
- Government
- Retail
- Industrial
- K-12 Education
- Higher Education

Active Licenses / Registrations

- Certified Project Management Professional (PMP) by the Project Management Institute, # 50241
- Engineer in Training in the State of New York, # 046094
- Member- American Society of Mechanical Engineers

Regional Location

- Baltimore, Maryland

KEVIN M. LANTRY

Project Manager

Education

- BS, Mechanical Engineering, Purdue University School of Mechanical Engineering, 2003

Project Experience

- **Kettering Tower, Dayton, OH –** Project Manager. Completed a Property Condition Assessment of this 30-story building in downtown Dayton. The 486,000 square foot facility contains office and retail space and an attached six level parking garage.
- **Two Illinois Center, Chicago, IL –** Project Manager. Completed an Equity Level Property Condition Evaluation of this 32-story building in Chicago's East Loop office district. The 1.2 million square foot facility contains office and retail space along with a four level subterranean parking garage.
- **Orange County Parks Depreciation Study, Orange County, CA** – Project Manager. Performed facility assessments on over 20 harbor, beach and park properties, including recreational facilities, maintenance facilities, and offices. Compiled data into individual Property Condition Reports, which included a Depreciation Study and 10-year Capital Plan for each facility.
- **Mark to Market Green PCAs, Various Locations –** Project Manager. Completed multiple Mark to Market Green PCAs per Housing and Urban Development (HUD) protocol. Reports included standard Mark to market assessments with energy audits and recommendations for sustainability.
- **Alan Bible Federal Building, Las Vegas, NV –** Project Manager. Completed a Level IV Web Building Engineering Report (BER) for the US Government General Services Administration. Evaluated the mechanical, plumbing, and elevator systems as part of the assessment team sent by EMG to analyze all building components.
- **First Energy Facility Assessments, Multiple Sites, PA -** Project Manager. Performed facility assessments on over forty sites for a large electric utility in central and eastern Pennsylvania. Evaluated a wide range of sites, including district offices, regional headquarters and maintenance facilities. Compiled results into individual Facility Condition Reports and EMG's Assetcalc software to be used by the client for capital planning and facility investment purposes.

Industry Tenure

- A/E: 2001
- EMG: 2004

Related Experience

- GSA Assessment Team

Industry Experience

- Industrial
- Commercial
- Multi-family Residential

Special Skills & Training

- ISO 9000
- AutoCAD
- VFA.Facility Certified
- Cross Trained for Environmental Assessments

Memberships

- ASHRAE
- ASME

Regional Location

- Indianapolis, IN