FACILITIES NEEDS ASSESSMENT

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

Facilities Needs Assessment
of
ROGERS ELEMENTARY SCHOOL

83 Lockwood Avenue
Stamford, Connecticut 06901

PREPARED BY:

EMG
222 Schilling Circle, Suite 275
Hunt Valley, Maryland 21031
800.733.0660
410.785.6220 (fax)
www.emgcorp.com

EMG CONTACT:

Bill Champion
Director - Asset Management Consulting
800.733.0660, x6234
bchampion@emgcorp.com

EMG Project #: 88166.09R-007.017
Date of Report: August 28, 2009
On site Date: February 19 and 20, 2009

EMG

Replacement Reserves Report
Elementary Schools / Rogers Elementary
8/28/2009

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
1.2	1415	HVAC system study	0	0	0	1	EA	$9,135.00	$9,135	$9,135										**$9,135**
1.2	1413	Mold Study at Buildings	0	0	0	1	EA	$6,174.00	$6,174	$6,174										**$6,174**
1.2	1288	Measured ADA Study of Property	0	0	0	1	EA	$6,930.00	$6,930	$6,930										**$6,930**
1.2	1264	Follow-up Engineering Review of Storm Drainage System	0	0	0	1	EA	$6,930.00	$6,930	$6,930										**$6,930**
3.1	1408	Revise restroom door swing to allow for ADA access	0	0	0	6	EA	$4,101.30	$24,608	$24,608										**$24,608**
3.1	1317	Replace school door knobs with ADA lever	20	19	1	2	EA	$682.92	$1,366		$1,366									**$1,366**
3.1	1319	ADA, lower existing toilet room accessories and mirrors	0	0	0	16	EA	$115.11	$1,842	$1,842										**$1,842**
3.1	1409	Add ADA Grab Bar and blocking	20	19	1	8	EA	$1,575.00	$12,600		$12,600									**$12,600**
3.1	5691	ADA, Renovate restroom for full compliance	20	20	0	14	EA	$15,120.00	$211,680	$211,680										**$211,680**
3.1	1299	ADA, Securely attach existing carpeting	0	0	0	20	SY	$22.68	$454	$454										**$454**
3.1	1411	Provide ADA signage at hoistway entrances	0	0	0	5	Floor	$220.50	$1,103	$1,103										**$1,103**
3.1	5688	Rogers -enlarge existing for ADA Compliance or install new 5-story hydraulic elevator and enclosure	0	0	0	1	EA	$283,500.00	$283,500	$283,500										**$283,500**
3.1	1304	Replace existing ADA two-way communication system	0	0	0	1	EA	$8,253.00	$8,253	$8,253										**$8,253**
3.1	1410	Replace lavatory with ADA lever handles	20	19	1	8	EA	$699.30	$5,594		$5,594									**$5,594**
3.1	1303	ADA Drinking Fountain Cup Dispenser	15	14	1	5	EA	$69.30	$347		$347									**$347**
3.1	1301	ADA Strobe Fire Alarm	15	15	0	12	EA	$630.00	$7,560	$7,560										**$7,560**
3.1	1289	Regrade and level ADA parking stall	0	0	0	1	EA	$6,887.16	$6,887	$6,887										**$6,887**
3.1	1294	ADA, install/replace signage giving direction to accessible entrance	0	0	0	3	Sign	$134.01	$402	$402										**$402**
3.1	1292	ADA, paint van-accessible space with signage	5	4	1	1	EA	$277.20	$277		$277					$277				**$554**
3.1	1297	ADA, install/replace signage giving direction to accessible entrance	0	0	0	11	Sign	$134.01	$1,474	$1,474										**$1,474**
3.1	1290	ADA, paint accessible parking space	5	4	1	2	EA	$207.90	$416		$416					$416				**$832**
3.1	1321	ADA, Wrap drain pipes below accessible lavatory	0	0	0	9	EA	$81.90	$737	$737										**$737**
5.2	1267	Repair and Seal Coat asphalt	5	3	2	3	10000 SF	$5,848.92	$17,547			$17,547					$17,547			**$35,094**
5.2	1269	Repair and seal coat asphalt (up to 10000 SF)	5	2	3	9500	SF	$0.63	$5,985				$5,985					$5,985		**$11,970**
5.2	1271	Replace asphalt curbs	10	3	7	270	LF	$14.63	$3,950								$3,950			**$3,950**
5.2	1268	Cut & Patch asphalt	10	9	1	800	SF	$3.86	$3,084		$3,084									**$3,084**
5.2	1270	Remove & replace 4' wide concrete sidewalk	25	24	1	20	LF	$40.65	$813		$813									**$813**
5.3	5700	Rogers - Site drainage improvement budgetary allowance	0	0	0	1	EA	$100,800.00	$100,800	$100,800										**$100,800**
5.4	4569	Replace stone retaining wall, mortar set	50	46	4	2600	SF Face	$94.82	$246,519					$246,519						**$246,519**
5.4	1273	Re-grading and establishment of ground cover at playing field	25	24	1	4	1000 SF	$1,962.80	$7,851		$7,851									**$7,851**
5.5	4570	Replace metal tube steel fence	20	16	4	1150	LF	$79.70	$91,649					$91,649						**$91,649**
5.5	1419	Replace metal tube steel fence	20	18	2	30	LF	$79.70	$2,391			$2,391								**$2,391**
5.5	6099	Replace irrigation system, residential 1" supply	20	20	0	30000	SF	$1.26	$37,800	$37,800										**$37,800**
6.3	1433	Replace stucco and lath	25	25	0	350	CSF	$913.12	$319,593	$319,593										**$319,593**
6.3	12125	Stamford Roof Assessment - PVC Roof Replacement	20	18	2	25	SQ	$1,595.75	$39,894			$39,894								**$39,894**
6.3	12120	Stamford Roof Assessment - BUR Roof Replacement	20	18	2	506	SQ	$1,702.13	$861,276			$861,276								**$861,276**

Replacement Reserves Report
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6.3	12123	Stamford Roof Assessment - EPDM Replacement	20	12	8	12	SQ	$1,595.75	$19,149									$19,149		**$19,149**
6.3	12122	Stamford Roof Assessment Roof Repair Recommendations	0	0	0	1	EA	$3,546.10	$3,546	$3,546										**$3,546**
6.3	1365	Single Ply EPDM, minor repairs - (2% of roof area)	0	1	0	1	Patch	$409.12	$409	$409										**$409**
6.3	1364	Prefinished Aluminum Parapet Coping	25	24	1	2000	LF	$33.39	$66,780		$66,780									**$66,780**
6.3	4573	Replace Glass Skylight	30	28	2	700	SF	$57.00	$39,902			$39,902								**$39,902**
6.4	1370	Paint existing stucco one coat, spray,medium prep work	5	4	1	30000	SF	$1.78	$53,298		$53,298					$53,298				**$106,596**
6.6	5695	Rogers - Replace approximately 4' x 7' aluminum fixed windows with insulated panes	25	25	0	152	EA	$1,890.00	$287,280	$287,280										**$287,280**
6.6	5696	Rogers - Replace various sized 1'x4' to 6'x6' operable windows w/ insulated pane	25	25	0	170	EA	$1,512.00	$257,040	$257,040										**$257,040**
6.6	1378	Replace 3'-0" x 7'-0" aluminum storefront doors	50	49	1	12	EA	$2,588.67	$31,064		$31,064									**$31,064**
6.6	1377	Replace aluminum storefront 10' tall w/o door	25	24	1	250	SF	$42.34	$10,584		$10,584									**$10,584**
6.6	1379	Replace 3'-0" x 7'-0" steel, insulated core, ptd. door	45	40	5	12	EA	$1,383.48	$16,602						$16,602					**$16,602**
6.6	1380	Replace 9' x 7' steel, single leaf, garage door	35	30	5	2	EA	$1,498.14	$2,996						$2,996					**$2,996**
6.8	1371	Scrape and paint exterior metal	7	6	1	340	LF	$6.24	$2,121		$2,121							$2,121		**$4,241**
6.8	4578	Acoustical folding partition, fire rated to 17' tall	25	22	3	1200	SF	$50.09	$60,102				$60,102							**$60,102**
6.8	1381	Sand and refinish hardwood floor	10	8	2	10000	SF	$6.93	$69,300			$69,300								**$69,300**
6.8	1384	Replace Vinyl tile	18	14	4	3750	SY	$81.90	$307,125					$307,125						**$307,125**
6.8	1385	Replace carpet - standard commercial	8	3	5	1000	SY	$63.23	$63,227						$63,227					**$63,227**
6.8	5704	Stamford - Lead Abatement Allowance	0	0	0	118500	SF	$1.34	$158,269	$158,269										**$158,269**
6.8	4583	Asbestos floor tile and mastic removal	0	0	0	33750	SF	$3.15	$106,313	$106,313										**$106,313**
7.1	1281	Replace air cooled condenser, 20 ton	15	13	2	1	EA	$9,525.60	$9,526			$9,526								**$9,526**
7.1	1277	Replace Unit Ventilator 1250 CFM	15	12	3	12	EA	$9,683.10	$116,197				$116,197							**$116,197**
7.1	1280	Electric Furnace 50 MBH	25	23	2	2	EA	$1,787.81	$3,576			$3,576								**$3,576**
7.1	1275	Replace air handler 8,000 to 12,000 CFM	20	16	4	9200	CFM	$1.68	$15,417					$15,417						**$15,417**
7.1	1284	Replace air handler 4,000 to 8,000 CFM	20	17	3	7100	CFM	$3.78	$26,838				$26,838							**$26,838**
7.1	1417	Replace air handler 30,000 CFM	20	16	4	1	EA	$14,587.02	$14,587					$14,587						**$14,587**
7.1	1428	Make up air unit 3,000 CFM	15	15	0	2	EA	$3,965.22	$7,930	$7,930										**$7,930**
7.1	1276	Replace air handler 4,000 to 8,000 CFM	20	16	4	2700	CFM	$3.78	$10,206					$10,206						**$10,206**
7.1	1429	Make up air unit 3,000 CFM	15	12	3	2	EA	$3,965.22	$7,930				$7,930							**$7,930**
7.1	1274	Replace Circulation pump 1/2 to 3/4 hp	15	6	9	8	EA	$3,584.70	$28,678										$28,678	**$28,678**
7.1	1279	Replace baseboard radiator finned tube 3/4" copper	35	26	9	146	LF	$38.15	$5,570										$5,570	**$5,570**
7.1	1283	Single zone rooftop unit 4-ton	15	10	5	2	EA	$8,856.54	$17,713						$17,713					**$17,713**
7.1	1282	Single zone rooftop unit 10-ton	15	13	2	1	EA	$19,309.50	$19,310			$19,310								**$19,310**
7.1	5699	Stamford Allowance - Upgrade EMS, control points and zoning to correct inconsistencies	20	20	0	118500	SF	$1.26	$149,310	$149,310										**$149,310**
7.1	4585	Remove Asbestos insultion from pipe up to 4-inch dia	0	0	0	300	LF	$12.60	$3,780	$3,780										**$3,780**
7.1	5694	Asbestos containing transite board removal	0	0	0	2500	SF	$4.91	$12,285	$12,285										**$12,285**
7.2	1291	Replace flush valve & water closet	25	21	4	54	EA	$1,123.59	$60,674					$60,674						**$60,674**
7.2	1296	Replace urinal	35	31	4	15	EA	$1,277.51	$19,163					$19,163						**$19,163**
7.2	1293	Replace lavatory porcelain 20"x17"	20	16	4	57	EA	$416.10	$23,718					$23,718						**$23,718**
7.2	1300	Replace drinking fountain	10	6	4	5	EA	$1,505.70	$7,529					$7,529						**$7,529**

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7.2	6097	Capital Plan - Install outdoor drinking fountain, pedestal type	0	0	0	4	EA	$2,451.56	$9,806	$9,806										**$9,806**
7.2	4589	Replace 2-inch copper pipe	25	20	5	2200	LF	$62.31	$137,075						$137,075					**$137,075**
7.2	6096	Capital Plan - Install one inch copper pipe for drinking fountain	0	0	0	600	LF	$31.63	$18,976	$18,976										**$18,976**
7.2	4590	Replace cast iron pipe 4"	40	35	5	1450	LF	$64.70	$93,816						$93,816					**$93,816**
7.4	5703	Capital Plan -Add Electrical Distribution for Classroom and Office Technology	20	20	0	118500	SF	$3.26	$386,713	$386,713										**$386,713**
7.4	6079	Upgrade lighting for energy conservation	0	0	0	118500	SF	$5.92	$701,757	$701,757										**$701,757**
7.4	5897	Capital Plan - Upgrade computer data system	0	0	0	1	EA	$252,000.00	$252,000	$252,000										**$252,000**
7.4	1425	Replace UPS battery Transformer 1.0 kva	20	13	7	1	EA	$3,969.00	$3,969								$3,969			**$3,969**
7.4	1427	Replace UPS system batteries	15	10	5	20	EA	$880.11	$17,602						$17,602					**$17,602**
7.4	1302	Replace stage lighting equipment	15	13	2	1	EA	$55,629.00	$55,629			$55,629								**$55,629**
7.5	1305	Modernize hydraulic elevator controller and signals, to 3 stories	25	22	3	1	EA	$77,616.00	$77,616				$77,616							**$77,616**
7.6	5898	Capital Plan - Fire pump installation and fire suppression upgrades	0	0	0	1	EA	$157,500.00	$157,500	$157,500										**$157,500**
7.6	1308	Fire alarm panel addressable, with voice	15	10	5	1	EA	$15,264.77	$15,265						$15,265					**$15,265**
8.1	1372	Replace painted gypsum board soffit	0	0	0	2	CSF	$1,064.70	$2,129	$2,129										**$2,129**
8.1	5702	Fire door, wood, flush, 60 minute, incl. demo, with hardware	24	22	2	246	EA	$1,197.00	$294,462			$294,462								**$294,462**
8.1	1383	Paint interior walls, CMU,including surface prep	7	6	1	10000	SF	$1.12	$11,214		$11,214							$11,214		**$22,428**
8.1	1386	Replace acoustical ceiling tile system, fire rated,including demo	20	19	1	200	CSF	$627.48	$125,496		$125,496									**$125,496**
8.1	1387	Replace acoustical ceiling tile system, fire rated,including demo	20	14	6	200	CSF	$627.48	$125,496							$125,496				**$125,496**
8.2	1315	Kitchen Equipment Steamer Electric 27 KW	25	20	5	1	EA	$11,047.68	$11,048						$11,048					**$11,048**
8.2	1310	Range 6-burner 36" wide	20	18	2	1	EA	$2,916.95	$2,917			$2,917								**$2,917**
8.2	1313	Replace gas Bake oven one section	20	15	5	2	EA	$6,783.99	$13,568						$13,568					**$13,568**
9	1414	Replace brass lockset	30	30	0	1	EA	$581.49	$581	$581										**$581**
Totals, Unescalated										**$3,551,485**	**$332,905**	**$1,415,727**	**$294,669**	**$796,587**	**$388,912**	**$179,487**	**$25,465**	**$38,469**	**$34,248**	**$7,057,954**
Soft Costs:																				
Architectural/Consultant Fees (10.0%)										**$355,149**	**$33,291**	**$141,573**	**$29,467**	**$79,659**	**$38,891**	**$17,949**	**$2,547**	**$3,847**	**$3,425**	**$705,795**
General Requirements (Bonds, Insurance, GC/CM Mark-up) (10.0%)										**$355,149**	**$33,291**	**$141,573**	**$29,467**	**$79,659**	**$38,891**	**$17,949**	**$2,547**	**$3,847**	**$3,425**	**$705,795**
Prevailing Wage/Labor Compliance (5.0%)										**$177,574**	**$16,645**	**$70,786**	**$14,733**	**$39,829**	**$19,446**	**$8,974**	**$1,273**	**$1,923**	**$1,712**	**$352,898**
Contingency (5.0%)										**$177,574**	**$16,645**	**$70,786**	**$14,733**	**$39,829**	**$19,446**	**$8,974**	**$1,273**	**$1,923**	**$1,712**	**$352,898**
Location Factor (1.11)										**$380,009**	**$35,621**	**$151,483**	**$31,530**	**$85,235**	**$41,614**	**$19,205**	**$2,725**	**$4,116**	**$3,665**	**$755,201**
Totals, Escalated (see inflation table above)										**$4,996,940**	**$482,449**	**$2,133,754**	**$461,883**	**$1,311,053**	**$672,091**	**$325,686**	**$48,518**	**$76,957**	**$71,940**	**$10,581,272**

* Markup has been included in unit costs.

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CERTIFICATION

EMG has completed a Comprehensive Facilities Needs Assessment of the subject property, Rogers Elementary School, located at 83 Lockwood Avenue, 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.

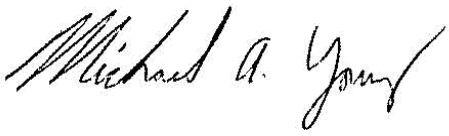
This report has been prepared on behalf of and exclusively for the use of City of Stamford, Connecticut Public Schools for the purpose stated within Section 2.0 of this report. The report, or any excerpt thereof, shall not be used by any party other than City of Stamford, Connecticut Public Schools or 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: Jill Orlov and Kevin Lantry, Field Observers

Reviewed by:



Michael A. Young
mayoung@emgcorp.com for
Bill Champion
Director - Asset Management Consulting
800.733.0660, x6234
bchampion@emgcorp.com

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:	83 Lockwood Avenue, Stamford, Fairfield County, Connecticut, 06901
Year constructed:	1916 1964 – Additions 2006 – Renovation of Media Center
Current owner of property:	City of Stamford
School occupying building:	Rogers Elementary School
Current usage of property:	Elementary School, Pre-K program, Adult Education - ROSSCO Vacation Program, Family Resource Center
Management Point of Contact:	Domenic Tramontozzi and Robert Gerbert, Jr.
Gross floor area:	118,500 Square Feet
Number of buildings:	One
Number of stories:	One to three
Parking type and number of spaces:	58 spaces in open lots
Building construction:	Masonry bearing walls and steel-framed roofs or pre-cast structural concrete panels. South wing has concrete column and concrete bearing wall structure. North wing – masonry bearing walls and wood framed floors and roofs.
Bay Column Spacing:	Approximately 20 Feet
Interior vertical clearance:	Approximately 9 Feet
Roof construction:	Flat roofs with built-up membrane and ballast. Single ply membrane on modular
Exterior Finishes:	Exposed aggregate concrete panels and a thick skim coat with exposed aggregate and epoxy coating

Property Information	
Heating and/or Air-conditioning:	Central heating and cooling system with three boilers, two chillers and a cooling tower. Heated water supplies air handling units and perimeter and baseboard radiant heat units. Chilled water supplies air handling units. Packaged rooftop units supply modular classrooms and classrooms near gymnasium. Split system air-conditioning is provided in the auditorium, media center computer rooms and gymnasium offices.
Fire and Life/Safety:	Fire alarm system, Security system, Fire sprinklers, Ansul system, hydrants, smoke detectors, alarms, extinguishers
Dates of visit:	February 19 & 20, 2009
Point of Contact (POC):	Anne Downey, Assistant Principal Bob Malcolm, Head Custodian

Generally, the property appears to have been constructed within industry standards in force at the time of construction. The property appears to have been maintained in recent years and is in fair overall condition.

According to City of Stamford Public Schools personnel, the property has had a limited capital improvement expenditure program over the past three years, primarily consisting of Media Center interior renovation and domestic boiler replacement. Supporting documentation was not provided in support of these claims but some of the work is evident.

1.2. FOLLOW-UP RECOMMENDATIONS

The following issues require additional study:

- The restrooms are not accessible except in the renovated Media Center. The main pairs may be able to be modified by demolishing one stall and turning it into an accessible stall, but due to local codes, it may not be permissible to lose a stall. An accessibility specialist must be retained to analyze the existing condition, provide recommendations and, if necessary, estimate the scope and cost of any required repairs. The estimated cost to retain a specialist is included in the Replacement Reserves Report. Separate itemized costs for various interim accessibility items are included in the Replacement Reserves Report.
- Maintenance personnel reported inadequate drainage along the west elevation of the building at the visitor parking lot. Flooding reportedly occurs at the entrance doors and heavy ponding occurs along the exterior cafeteria wall during periods of heavy rain. This indicates that the storm drains in the area may have inadequate capacity. It is recommended that a drainage study be performed in order to determine the required drainage capacity recommend any necessary upgrades to prevent ponding and flooding in the area. The cost of the drainage study is included in the Replacement Reserves Report. A budgetary cost allowance to correct drainage concerns is included in the Replacement Reserves Report. The drainage study will determine the appropriate corrective action and estimated cost.
- Based on the numerous locations of isolated suspect mold, a mold assessment should be conducted by a health and safety professional with experience performing microbial investigations. In addition, the source of this moisture should be addressed in order to prevent future mold problems. The estimated costs of corrective action shall be determined as part of the mold assessment recommended. See Section 3.3 for further information. The estimated costs are included in the Replacement Reserves Report.

- The HVAC system is reportedly highly inconsistent. Maintenance and administrative staff reported that temperature control is inadequate in the building and that heating and cooling are at times required simultaneously maintaining a comfortable environment. It is recommended that an HVAC contractor evaluate the building for the potential reconfiguration of the existing control system or to add increased zoning for better temperature control in the classrooms. The cost of the follow-up evaluation is included in the Replacement Reserves Report. A budgetary cost allowance to correct control concerns is included in the Replacement Reserves Report. The HVAC study will determine the appropriate corrective action and estimated cost.

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 four 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
Anne Downey Assistant Principal	Rogers Elementary School	203.977.4564
Bob Malcolm Head Custodian	Rogers Elementary School	203.977.4571
Mr. Gus Burreisci Project Manager	City of Stamford Public Schools	203.223.8118
Receptionist Elevator Contractor	Northeast Elevator	203.353.0099

The Comprehensive Facilities Needs Assessment was performed with the assistance of Anne Downey, Assistant Principal, and Bob Malcolm, Head Custodian, Rogers Elementary School, 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 1.5 and 9 years, 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
- Media Center renovation documents – Partners for Architecture dated April 8, 2005
- ADA & Schematic Design Study – Perkins Eastman Architecture dated July 15, 2004
- Façade repairs documents – Sheldon Lazan P.E. Engineers dated July 9, 1997

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

- Adequate number of designated parking stalls and signage for cars are not provided. Existing stall is non-compliant due to slope of stall and slope of route to door. Provide stalls, access aisle and route that are compliant in slope at teacher's lot. One required.
- Adequate number of designated parking stalls and signage for cars are not provided. Provide stalls at southwest lot. Two required.
- Adequate number of designated parking stalls and signage for vans are not provided. One required.
- Signage directing to accessible parking or accessible building entrances to the facility are not provided. Three required.

Paths of Travel

- Compliant signage indicating accessible entrances and general information is not provided. Approximately 11 locations.
- Existing carpeting is not securely attached in corridor to modular classrooms. Repair/replace approximately 20 SY.
- Add visual alarm and audible fire alarm in restrooms. Twelve required.
- Install cup dispenser at an existing non-conforming water fountain. Five required.

Elevators

- Raised elevator markings at jambs and hall buttons are not provided in Braille and Standard Alphabet. Five split levels.
- Elevator communication equipment not set up for speech impaired communication. None provided. Lower location to be lower than 54″ above the floor. One required.
- The elevator cab turn area of the existing elevator is inadequate. The elevator shaft must be enlarged or an adjacent elevator must be installed. Due to feasibility unknowns, only a budgetary cost allowance for this work is included for this work.

Restrooms

- Existing restroom doors are not wide enough to accommodate wheelchair access, and clear floor space beside the door swing is lacking. Either switch latch and hinge side or relocate door in some cases. Two pairs on each floor level. Six total required.
- Lever action hardware is not provided at Media Center restrooms. Two required.
- Install grab bars in accessible stalls at 36″ above the floor, including Media Center. Eight required.
- Modify existing toilet room accessories and mirrors. Sixteen required.
- Modify existing lavatory faucets to paddle type faucets. Eight required.
- Wrap drain pipes below lavatory with insulation; protect against contact with hot, sharp, or abrasive surfaces. Nine required.
- Overall stalls and toilet rooms are not sufficiently sized for wheelchair turn radius. Just enlarging one stall per restroom will likely reduce the overall stall count or require enlarging the overall size of the room. A budgetary cost allowance to renovate/reconfigure the restrooms is included in the cost tables. Fourteen restrooms will require some degree of renovation for compliance.

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 receptionist for Deputy Fire Marshal Ken Byxbee of the Stamford Fire & Rescue, there are no outstanding fire code violations on file. The most recent inspection was conducted by the fire department on August 4, 2008. The fire department inspects the property on an annual basis.

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.

No suspect mold was observed, but moisture was observed in the following areas:

- Classroom A2. The area affected by the moisture was approximately nine square feet in size.
- Classroom A1. The area affected by the moisture was approximately 20 square feet in size.
- Classroom A3. The area affected by the moisture was approximately five square feet in size.
- Corridor of modular classroom meets corridor adjacent to auditorium. The area affected by the moisture was approximately five square feet in size.
- Storage area of Classroom B1. The area affected by the moisture was approximately four square feet in size.

Suspect mold growth or moisture was observed in the following area:

- Cafeteria ceiling, section that is used for After School Adult Education. The area affected by the suspect mold was approximately three square feet in size.

Prior to remediation by personnel specifically trained in the handling of hazardous materials, a mold assessment should be conducted by a health and safety professional with experience performing microbial investigations. In addition, the source of this moisture should be addressed in order to prevent future mold problems. The estimated costs of corrective action shall be determined as part of the mold assessment recommended. See Section 1.2 for follow up recommendations and costs.

Additional discussion and description of the correction efforts required with regard to the moisture infiltration issues are discussed in Sections 6.3 and 6.8 of this report, and associated costs are included within those sections.

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**
44	Classroom	0	0
14	Office	0	0
11	Mechanical	0	0
18	Storage	0	1
1	Gymnasium	0	0
1	Cafeteria	0	0
1	Auditorium	0	0
1	Media Center	0	0
91	**TOTAL**	**0**	**1**

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. Based on observations, the former boys' shower room and storage area on the north side of the gymnasium had high humidity levels and leaks on the exposed roof structure. Until the roof finishes are replaced, these areas are unusable.

The following areas were not available for observation during the site visit: due to locked doors and no key access was available:

- Storage rooms at far west end.
- Fan room behind auditorium.
- Physical Ed office.

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	City of Stamford	Good
Storm sewer	City of Stamford	Good
Domestic water	Aquarian	Good
Electric service	CLMP	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 fuel storage tank.
- See Section 7.4 for descriptions and comments regarding the emergency power system.

5.2. PARKING, PAVING, AND SIDEWALKS

The main entrance to the staff parking lot is located along William Street, on the south side of the property. An additional entrance is located along Frank Street, on the north side of the property. The parking areas are paved with asphalt.

Based on a physical count, parking is provided for approximately 58 cars. The parking ratio is 0.49 spaces per thousand square feet of floor area. The south lot is the main staff parking area and contains 40 parking spaces. The north lot is the visitor and administrative parking area and contains 18 parking spaces. All of the parking stalls are located in open lots. There is one handicapped-accessible parking stall located in the visitor lot, near the building entrance.

An additional paved area is located at the north side of the property, adjacent to the visitor parking lot, and is used as a student play area. A small paved area is located around the playground near the southwest corner of the property.

The sidewalks throughout the property are constructed of exposed aggregate cast-in-place concrete. Isolated areas near the Lockwood Avenue entrance are finished with concrete pavers.

The curbs are constructed of extruded, asphalt curbing placed at the edge of the pavement.

Observations/Comments:

- The asphalt pavement in the parking areas is in good to fair condition. Alligator cracking was observed in the visitor parking lot. The damaged areas of pavement will require full depth repair in order to prevent further deterioration. The estimated cost of this work is included in the Replacement Reserves Report.

- In order to maximize the pavement life, pothole patching, crack sealing, seal coating, and restriping of the asphalt paving in the parking lots will be required during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.
- The asphalt pavement in the student play areas is in good to fair condition with minor cracking observed. Minor repairs, including patching, crack sealing and seal coating, of the paved play areas will be required during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.
- The concrete pedestrian pavement is in good to fair condition. Tripping hazards due to vertical displacement of the concrete were observed in the sidewalks and pavers near the Lockwood Avenue entrance. It is recommended that the tripping hazards be repaired. The estimated cost of this work is included in the Replacement Reserves Report.
- The extruded asphalt curbs throughout the property are in good to fair condition. Repair and sectional replacement of the asphalt curbs will be required 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 with underground piping connected to the municipal storm water management system.

Observations/Comments:

- There is no evidence of storm water runoff from adjacent properties.
- Maintenance personnel reported inadequate drainage along the west elevation of the building, at the visitor parking lot. Flooding reportedly occurs at the entrance doors and heavy ponding occurs along the exterior cafeteria wall during periods of heavy rain. This indicates that the storm drains in the area may have inadequate capacity. It is recommended that a drainage study be performed in order to determine the required drainage capacity recommend any necessary upgrades to prevent ponding and flooding in the area. The cost of the drainage study is included in section 1.2. A budgetary cost allowance to correct drainage concerns is included in the Replacement Reserves Report. The drainage study will determine the appropriate corrective action and estimated cost.

Sustainable Recommendations:

- There are no sustainable recommendations for the drainage systems.

5.4. TOPOGRAPHY AND LANDSCAPING

The property is relatively flat.

The landscaping consists of trees, shrubs, and grasses.

The soccer field at the northwest corner of the property is irrigated by an in-ground sprinkler system consisting of underground piping, shut-off valves, pop-up sprinkler heads, and automatic timers. The irrigation controls are located in the electrical room.

Surrounding properties include single-family residential developments.

Stone masonry retaining walls are located at the grade change along the perimeter of the playground at south side of the property. Fencing is installed along the top of the retaining walls.

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 underground irrigation system appears to be in good working order. Replacement of sprinkler heads and minor repairs will be required during the evaluation period. This work is considered to be routine maintenance.
- The retaining walls are in fair condition. Based on their estimated Remaining Useful Life (RUL) and condition, the retaining walls 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 irrigation is to install a rain water harvesting system to supply the irrigation system. This will reduce domestic water consumption by providing an alternate supply source for irrigation water.

5.5. GENERAL SITE IMPROVEMENTS

Property identification is provided by building-mounted signage located above the main entrance at Lockwood Avenue.

Site lighting is provided by property-owned, wood, streetlight standards. Two light standards are located in the visitor parking area. Exterior building illumination is provided by surface-mounted light fixtures on the exterior walls. Recessed and surface-mounted lights are at the soffits.

A perimeter fence is located along the west property line and along portions of the north and south property lines. Additional fencing is located around the playground area. The fences are constructed of painted, metal, tube steel.

Two playgrounds are located on the property. One playground is located at the south side of the property, near William Street. The south playground contains a jungle gym structure, a swing set, and other small play equipment. The playground surface is covered with fiber. A rubber surfaced play area is located adjacent to the south playground and contains two Funnel Ball structures and a hopscotch grid. The other playground is located near the southwest corner of the property. The southwest playground contains a large jungle gym structure and has a fiber surface surround by wood timbers and asphalt pavement.

A soccer field is located at the northwest corner of the property. There are no permanent goals in place. Two basketball goals are located along the west edge of the paved play area.

Dumpsters are located in the visitor parking area near the service entrance and are placed on the asphalt paving. The dumpsters are not enclosed.

Observations/Comments:

- The property identification sign is in good condition. Routine maintenance will be required during the evaluation period.
- The exterior site and building light fixtures are in good to fair condition. Routine maintenance will be required during the evaluation period. One of the exterior wall-mounted light fixtures near the south side entrance and one of the surface-mounted soffit light fixtures adjacent to the main entrance are loose and will require repair. The cost of this work is relatively insignificant; therefore the work can be performed through routine maintenance.
- The site fencing is in good to fair condition. Scraping and painting are considered to be routine maintenance. Damage to the metal fencing was observed near the parking lot entrance from Frank Street. The damaged sections will require immediate repair. The estimated cost of this work is included in the Replacement Reserves Report.
- The perimeter fencing will require replacement during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.
- The playground equipment is in good condition. Routine maintenance will be required during the evaluation period.
- The soccer fields are partially barren and will require grading and reestablishment of ground cover. EMG also recommends installing additional underground irrigation systems for the field and adjacent grassed play areas. The estimated cost of this work is included in the Replacement Reserves Report.
- The basketball goals are in good condition. Routine maintenance will be required during the evaluation period.
- The dumpsters are owned and maintained by the refuse contractor.

Sustainable Recommendations:

- A sustainable recommendation for site lighting is to install photo sensors on exterior lighting. This will reduce energy consumption by reducing the time the exterior lights are used.
- A sustainable recommendation for fencing is to install recycled PVC fence sections during fencing replacement.
- A sustainable recommendation for playground equipment is to install recycled PVC play structures at the time replacement.

6. BUILDING ARCHITECTURAL AND STRUCTURAL SYSTEMS

6.1. FOUNDATIONS

Based on structures of similar size, configuration, and geographic location, it is assumed that the foundations consist of cast-in-place, concrete, perimeter, wall footings with concrete and masonry foundation walls. The foundation systems include reinforced, concrete, column pads.

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.

Sustainable Recommendations:

- There are no sustainable recommendations for foundations.

6.2. SUPERSTRUCTURE

The north wing has a conventional, wood-framed floor structure and has load-bearing, masonry exterior and interior steel columns supporting the upper floors and roof. The upper floors are constructed with wood joists and are sheathed with wood planking. The roof is constructed of wood rafters and is sheathed with wood planking.

The remainder of the building is a mix of masonry bearing walls or concrete columns supporting the floors and roofs. The floors and roofs are constructed of concrete panels or metal decks supported by reinforced concrete beams or steel beams and open-web, steel joists.

The gymnasium has load-bearing, reinforced, precast, concrete, tilt-up, exterior wall panels supporting the roof. The roof is sheathed with lightweight Tectum structural roof panels.

The modular classrooms are wood-framed structures and have load-bearing, wood-framed exterior and interior walls supporting the roof. The raised floors are constructed with wood joists and are sheathed with plywood.

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. Minor settlement was observed in the wall of classroom B-1. The staff can monitor for further settlement and take corrective action is additional movement is observed. No costs are included for this work.

Sustainable Recommendations:

- There are no sustainable recommendations for superstructure.

6.3. ROOFING

The primary roofs are classified as flat roofs. The roofs are finished with a multi-ply, bituminous, built-up membrane and topped with small stone ballast. The roofs are insulated with rigid insulation boards. Secondary flat roofs are finished with EPDM and PVC membranes.

The majority of the exterior perimeter walls extend above the surface of the roofs, creating parapet walls. The roof membrane terminates along a flashed cant strip at the base of the parapet walls. Most of the parapets are topped with sheet metal copings. A small portion of parapet between the original school and a lower roof is topped with terra cotta tile or with cast stone copings. Some of the roof finishes wrap up and over the parapets and terminate at metal drip edges on the outside perimeter of the walls. The roofs have sheet metal flashing elements and built-up base and edge flashing. The roofs at the auditorium and the modular classroom section do not have parapet walls. The membrane terminates at sheet metal drip edges.

Storm water is drained from the roofs by internal drains and sheet metal scuppers. The scuppers discharge onto paved and landscaped areas.

Curb-mounted skylights provide natural illumination in the gymnasium and some spaces flanking the gymnasium.

There are no attics. The roof structures are concealed by ceiling finishes.

The secondary roofs are finished with a single ply membrane at the modular classroom wing.

Observations/Comments:

- The roof finishes vary in age between eleven and 12 years old. Copies of the warranties were requested, but were not available. The roofs are maintained by the in-house maintenance staff and contractors are retained when required.
- The fields of the BUR roofs are in good to poor condition. The roof topping compound was found to be cracked in corners. Moss build up was observed in isolated areas. Isolated ponding was observed. These areas will require resloping to existing drains during the next replacement work. Based on their estimated Remaining Useful Life (RUL) and condition, the roof membranes will require replacement during the evaluation period. Based on the amount of leaks in the south wing and various other smaller roofs, it is recommended that these roofs be replaced in the near future. The estimated cost of this work is included in the Replacement Reserves Report.
- EMG also conducted a separate roof assessment for this project. Wet areas of insulation requiring repair were found during infrared scans of the roof. Additionally recommendations for anticipated repairs and 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.
- According to the POC and based on observation, there are active roof leaks. There is evidence of active roof leaks, see Section 3.3 for more information on locations.
- These leaks will require immediate repair. The estimated cost of this work is included in the Replacement Reserves Report.
- 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 POC, FRT plywood is not used.
- The roof flashings are in fair to poor condition and will require replacement in conjunction with the membrane replacement above.

- The parapet walls and copings are in good to poor condition. The terra cotta tile is in good condition and will require routine maintenance. Diligent maintenance of the parapet walls with roofing membranes wrapped up and over without metal copings will be required due to the brittle nature of the material and roofing compound. In addition, the built up topping on the parapet is sloped inward to the center so water does not have positive drainage off of the parapet. This condition may accelerate failure. Metal copings are recommended to replace the built up parapet topping. No parapet coating was observed at the rear bump out areas of the north wing. Cracking of the coating was observed on the parapet walls and will require removal and replacement or a surface coating should be applied. This work can be done in conjunction with the roof replacement. The estimated cost of this work is included in the Replacement Reserves Report.
- Roof drainage appears to be adequate except for some isolated areas such as at the canopy over the main entrance and at some spaces adjacent to the gymnasium. Clearing and minor repair of drain system components should be performed regularly as part of the Physical Plant's routine maintenance program.
- The skylights are in fair condition. Based on their estimated Remaining Useful Life (RUL) and condition, the skylights will require replacement during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.
- According to the client provided AHERA document damaged asbestos-containing material is located crawl space accessed from the second floor stairwell, in the form of damaged air cell insulation. The damaged air cell insulation will require repair as recommended in the AHERA report. The cost to repair the damaged material is relatively insignificant and is not included in the Replacement Reserves Report. This recommendation is based solely on the information presented in the client provided AHERA document. An excerpt of this AHERA document is included in the appendices. Identifying asbestos-containing material is not within the scope of this facility condition assessment.

Sustainable Recommendations:

- A sustainable recommendation for roofing is to replace the built up roofing with a light colored single ply membrane.

6.4. EXTERIOR WALLS

Portions of the exterior walls and trim are finished with thick exposed aggregate stucco over the original masonry. The south wing is covered with precast concrete panels with exposed aggregate, supported by steel angles.

The gymnasium portion of the exterior walls are finished with stucco covered precast concrete panels. The modular wing has painted T-1-11 panels.

The soffits are concealed and finished with stucco covered panels.

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

Observations/Comments:

- The exterior finishes are in fair to poor condition. Isolated areas throughout the building have spalling or peeling stucco or coating with and without aggregate. Immediate patching will be required in isolated areas as they present life safety issues. The estimated cost of this work is included in the Replacement Reserves Report.
- In addition to the work above, painting and patching will be required during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.

- The steel angle supporting the concrete panels at the south wing are rusted and require scraping and painting to prevent further deterioration. The estimated cost of this work is included in the Replacement Reserves Report.
- The soffits are in fair to poor condition. Mildew was observed at the soffit adjacent to the rear corridor near the auditorium. Once the roofing is repaired, the soffit material will require replacement. The estimated cost of this work is included in the Replacement Reserves Report.
- The sealant throughout the school is in fair to poor condition. It is cracked and dry rotted. Based on their estimated Remaining Useful Life (RUL) and current conditions, the sealant will require replacement early in the evaluation period. The sealant costs are covered within the window replacements. The estimated cost of this work is included in the Replacement Reserves Report.
- The modular structures are approximately 30 years old. Permanent structures should be explored. No additional costs are provided for the removal of the modular classrooms or building of permanent structures at this time.

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 stucco.

6.5. EXTERIOR AND INTERIOR STAIRS

There are no exterior stairs.

Some of the interior stairs are constructed of steel and have open risers and bent steel treads. The balusters are constructed of metal and have wood handrails.

Some of the interior stairs have closed risers and are finished with slate slabs on the risers and treads or have concrete filled metal pans and epoxy painted treads.

Observations/Comments:

- The 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 windows are part of an aluminum-framed, storefront system incorporating the entry doors. The windows are glazed with single panes set in metal frames. The doors are fully-glazed, aluminum-framed doors set in the metal framing system.

The windows are aluminum-framed, single-pane glazed, sliding or basket type units.

The service doors are painted, metal doors set in metal frames. The doors have cylindrical locksets with knob handle hardware.

A total of two overhead doors are located in the loading areas. One small overhead door is a flush-paneled metal door and the other is a coiling door. Both are equipped with mechanical openers.

Observations/Comments:

- The storefront window system is in fair to poor condition.
- According to the POC, the property does experience a significant number of complaints regarding window leaks and window condensation. Based on the Remaining Useful Life and condition and that they are single paned with significant evidence regarding the lack of energy efficiency, all of the single paned windows should be replaced with insulated paned windows. The estimated cost of this work is included in the Replacement Reserves Report.
- The windows in the north wing are very large sliding units and it was reported that due to the size and weight of each panel and material of the hardware, they are very difficult if not impossible to operate. Replacements should take this into consideration and ensure hardware can handle the inherent weight.
- The exterior doors are in fair to poor condition. The storefront doors allow air infiltration at all joints to penetrate because no weather-stripping was observed. Replacement of the single paned glazed doors is recommended. The service doors are in fair condition. Based on their Remaining Useful Life, the service doors will require replacement. The estimated cost of this work is included in the Replacement Reserves Report.
- The overhead doors are in fair to poor condition. Based on the Remaining Useful Life and condition, the overhead doors will require replacement. 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

The front patio adjacent to the main entrance is finished with slate slabs.

Observations/Comments:

- The patio is in fair to poor condition. There are some areas of vertical displacement. See Section 5.2 for costs and repair recommendations.

6.8. COMMON AREAS, ENTRANCES, AND CORRIDORS

The front vestibule enters a stair landing in which the main lobby is half a level up from the entrance. On the same level as the entrance is access to the elevator lobby. The main office lobby contains display cases, bulletin boards and the entrance to the main administrative office. Corridors and the Media Center are accessed directly from the lobby.

Classrooms and offices are accessed from corridors beyond the lobby and from corridors on each floor.

Common area restrooms located off the lobby and a unisex restroom is located within the main office. There are a total of three sets of common area restrooms; a pair on each level. The only handicapped accessible restrooms are located in the Media Center and the classroom for ELL B-7; although, some accessories and other ADA modifications are required.

The following table identifies the interior common areas and generally describes the finishes in each common area.

Common Area	Floors	Walls	Ceilings
Lobby	Honed slate with wax sealant	Painted plaster or ceramic tile	Adhered acoustic tiles
Corridor	Honed slate with wax sealant or vinyl tile	Painted plaster or open and lined with lockers	Adhered acoustic tiles or suspended acoustic tiles
Common Area Restroom	Ceramic tile	Ceramic tile or painted drywall or painted concrete masonry units (CMU) or brick	Painted plaster
Office	Vinyl tile or carpet	Painted drywall	Suspended acoustic tiles and adhered acoustic tiles
Media Center	Carpet	Painted drywall and stained wood panels	Painted drywall and suspended acoustic tiles
Auditorium	Painted concrete and carpet with wood stage	Painted concrete masonry units and plaster	Adhered acoustic tiles
Cafeteria	Vinyl tile	Painted concrete masonry units and plaster	Suspended acoustic tiles
Gymnasium	Wood	Painted concrete panels	Exposed structure

Observations/Comments:

- It appears that the interior finishes in the common areas have not been renovated within the last five to ten years.
- The interior finishes in the common areas are in good to fair condition. Based on its estimated Remaining Useful Life (RUL), the common area carpet will require replacement during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.
- Interior painting and wall finish replacement will also be required during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.
- The suspended ceiling tiles are mismatched and some are stained from active roof leaks. Suspended and adhered ceiling tile replacement will also be required during the evaluation period based on Remaining Useful Life (RUL) and condition. The estimated cost of this work is included in the Replacement Reserves Report.
- In addition to this work and based on its estimated Remaining Useful Life (RUL), the vinyl tile flooring finishes will require replacement during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.

- The wood flooring in the gymnasium and the auditorium stage are in good to fair condition. Refinishing will be required during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.
- The slate flooring is in fair condition. The wax build up has created a dull film layer. Removal of wax with chemical stripping and resealing with a stone sealer is recommended for easier cleaning and maintenance. The cost of this work is relatively insignificant; therefore the work can be performed through routine maintenance.
- The movable partition in the cafeteria is in fair condition. Based on its estimated Remaining Useful Life (RUL), the cafeteria partition will require replacement during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.
- According to the client provided AHERA document asbestos-containing material is located in the majority of the classrooms and corridors in the form of vinyl asbestos tile. A cost allowance for proper removal and disposal of the asbestos-containing vinyl tile is included in the Replacement Reserves Report as part of the recommended vinyl tile repair/replacement work. This allowance is based solely on the information presented in the client provided AHERA document. An excerpt of this AHERA document is included in the appendices. Identifying asbestos-containing material is not within the scope of this facility condition assessment.
- A cost allowance for the abatement of lead containing materials is included in the client provided JMOA five year capital plan. Lead containing materials were not reported; however, based on the cost budgeted in the capital plan, an allowance for lead abatement is included in 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.

7. BUILDING (CENTRAL) MECHANICAL AND ELECTRICAL SYSTEMS

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

Heating and cooling are provided in the classrooms, offices, corridors, and auditorium by high-capacity, air handling units equipped with heating and cooling coils. The air handling units are located in mechanical rooms and are supplied with heated and/or chilled water by the central system. Air distribution is provided to supply air registers by ducts concealed above the ceilings. Return air grilles are located in each space. The following table describes the air handling units:

Air Handling Units					
Designation	**Location**	**Area Served**	**Air Flow**	**Cooling**	**Heating**
AC-1 (New Unit)	Central Mechanical Room	A Wing/Media Center	32,515 CFM	Chilled water coil	None
AC-2	North Mechanical Room	B Wing	34,425 CFM	Chilled water coil	None
AC-3	North Mechanical Room	Cafeteria	9,200 CFM	Chilled water coil	Hot water coil
AC-4	North Mechanical Room	Art Wing	2,700 CFM	Chilled water coil	Hot water coil
AC-5	West Mechanical Room	Auditorium	7,100 CFM	Air Cooled Condensing Unit	Hot water coil

Heating and cooling are provided in the Kindergarten/1st Grade wing by unit ventilators mounted along the exterior walls. The unit ventilators are supplied with heated and chilled water by the central system and supply fresh air to each conditioned space through an exterior wall louver. The units have an airflow capacity of 1,500 CFM each. The unit ventilators have limited control provided by local thermostats.

Hot water for the central heating system is supplied by three cast iron boilers. The boilers have dual-fuel capability, utilizing natural gas or fuel oil. Each boiler has a rated input capacity of 5,862 MBH and is located in the central mechanical room. The hot water loop contains three expansion tanks. Each expansion tank has a capacity of 220 gallons and is located in the mechanical room. Fuel oil is supplied to the boilers by a fuel oil pump set and a 12,000-gallon fiberglass underground storage tank (UST). The UST is located beneath the parking lot near the north elevation of the building. A 250-gallon day tank is located in the central mechanical room.

Chilled water for the central cooling system is supplied by two water-cooled chillers and a cooling tower. Each chiller has a nominal rating of 157 tons and uses R-134a as a refrigerant. The chillers are located in the central mechanical room.

The cooling tower is constructed of galvanized steel and is located in an enclosure at the north side of the building. The cooling tower has a capacity of 375 tons.

Circulating pumps provide heated and chilled water to each temperature-controlled space via a four-pipe distribution system. The heated and chilled water supplies the air handling units, radiant units, and unit ventilators.

Heating is provided in the classrooms by perimeter, cabinet-mounted, finned-tube, radiant heat units. The radiant units are supplied with heated water by the central system. Heating is provided in the restrooms by wall-mounted finned-tube radiant heat units. Heating is provided in the corridors by baseboard-mounted finned-tube radiant heat units. Heating is provided in the gym offices by electric forced air furnaces.

Cooling is provided in the auditorium by an air-cooled condensing unit, which supplies a central air handling unit (AC-5). The condensing unit is mounted on the roof. Supplemental cooling is provided in the media center and computer rooms by split system air-conditioning units. The fan coil units are concealed above the ceilings and the condensing units are mounted on the roofs.

Heating and cooling are provided in the classrooms near the gymnasium and the modular classrooms by individual, direct-expansion, constant-volume, gas-fired, packaged, rooftop, HVAC units. The cooling equipment uses R-22 as a refrigerant. The following table describes the rooftop units:

Packaged Rooftop Units				
Quantity	**Manufacturer**	**Cooling Capacity**	**Heating Type**	**Manufacture Year**
1	Unavailable (AC-6)	Unavailable	Electric Resistance	1973
2	Trane	4 tons	Electric Resistance	1996

Ventilation is provided in the gymnasium by four make-up air units with electric heating coils and two manually activated exhaust fans.

The bathrooms are ventilated by mechanical exhaust fans. High-capacity ventilation fans are mounted on the roofs 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, chillers, circulating pumps, rooftop units, air handling units, ventilation units, and domestic water heating system. The system is actuated by pneumatic controls. The air compressor is located in the mechanical room.

Observations/Comments:

- The HVAC systems are maintained by the in-house maintenance staff.
- The HVAC equipment varies in age. The boilers were replaced in 2001. The chillers and the cooling tower were replaced in 2002. Air handling unit AC-1 was replaced in 2006.
- The HVAC system is reportedly highly inconsistent. Maintenance and administrative staff reported that temperature control is inadequate in the building and that heating and cooling are at times required simultaneously maintaining a comfortable environment. It is recommended that an HVAC contractor evaluate the building for the potential reconfigure the existing control system or to add increased zoning for better temperature control in the classrooms. The cost of the follow-up evaluation is included in section 1.2. A budgetary cost allowance to correct control concerns is included in the Replacement Reserves Report. The HVAC study will determine the appropriate corrective action and estimated cost.
- The boilers appear to be in good condition and will require routine maintenance during the evaluation period.
- The expansion tanks appear to be in good condition and will require routine maintenance during the evaluation period.
- The underground storage tank could not be directly observed and was reportedly recently replaced. The UST will require routine maintenance during the evaluation period.
- The fuel oil pump set appears to be in good condition and will require routine maintenance during the evaluation period.

- The chillers appear to be in good condition and will require routine maintenance during the evaluation period.
- The cooling tower appears to be in good condition and will require routine maintenance during the evaluation period.
- The circulating pumps appear to be in good condition. 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 air handling units appear to be in good to fair condition. Based on their estimated Remaining Useful Life (RUL), air handling units AC-2, AC-3, AC-4 and AC-5 will require replacement during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.
- The unit ventilators appear to be in good to fair condition. Based on their estimated Remaining Useful Life (RUL), the unit ventilators 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. Based on their estimated Remaining Useful Life (RUL), the radiant heat units will require replacement during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.
- The electric forced-air furnaces appear to be in fair condition. Based on their estimated Remaining Useful Life (RUL), the furnaces will require replacement during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.
- The air-cooled condensing unit for the auditorium (AC-5) appears to be in fair condition. Based on its estimated Remaining Useful Life (RUL), the air-cooled condensing unit will require replacement during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.
- The split system air-conditioning units appear to be in good condition and will require routine maintenance during the evaluation period.
- The rooftop units appear to be in good to fair condition. Based on their estimated Remaining Useful Life (RUL), the rooftop units will require replacement during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.
- The ventilation units in the gymnasium are in fair to poor condition. Two of the units are reportedly not functioning. Based on their current condition and estimated Remaining Useful Life (RUL), the ventilation units will require replacement during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.
- The exhaust 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.
- According to the client provided AHERA document asbestos-containing material is located behind radiators in approximately 21 classrooms. A cost allowance for proper removal and disposal of the asbestos-containing transite board is included in the Replacement Reserves Report as part of the recommended radiator repair/replacement work. This allowance is based solely on the information presented in the client provided AHERA document. An excerpt of this AHERA document is included in the appendices. Identifying asbestos-containing material is not within the scope of this facility condition assessment.

Sustainable Recommendations:

- A sustainable recommendation for HVAC is to replace all unitary air-conditioning equipment with high-efficiency, energy-star rated cooling equipment.
- An additional sustainable recommendation for HVAC is to install a heat exchanger between the primary and secondary chilled water loops so that water from the cooling tower can be used for cooling during seasons of moderate temperatures.

- An additional sustainable recommendation for HVAC is to replace remaining original handling units with modern air handlers, which include economizer modes and a centralized exhaust air system with an enthalpy wheel. This would reduce energy consumption by managing the amount of energy used in ventilating the areas supplied by the air handling units.

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 cast iron. The domestic water meter is located in the sprinkler room.

Domestic hot water is supplied by two, gas-fired commercial domestic water heaters. Each water heater has a rated input capacity of 199,900 MBH and a storage capacity of 100 gallons. The water heaters are located in the central mechanical room.

The common area restrooms have commercial-grade fixtures and accessories, including water closets, urinals, and lavatories.

Observations/Comments:

- The plumbing system appears to be well maintained and in good to fair condition. The water pressure appears to be adequate.
- Based on its current condition and estimated Remaining Useful Life (RUL), the domestic water piping and sanitary waste piping will require significant replacement during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.
- 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 pressure and quantity of hot water appear to be adequate.
- The water heaters were replaced in 2004 and 2008 and appear to be in good condition. The water heaters will require routine maintenance during the evaluation period.
- The accessories and fixtures in the common area restrooms are in good to fair condition. Based on the estimated Remaining Useful Life (RUL), some of the restroom fixtures will require replacement. The estimated cost of this work is included in the Replacement Reserves Report.
- The drinking fountains are in good to fair condition. Based on the estimated Remaining Useful Life (RUL), the drinking fountains will require replacement. The estimated cost of this work is included in the Replacement Reserves Report.
- Drinking fountains are not currently provided at the two playgrounds and soccer field. A budgetary cost allowance for the water supply line and four fountains are included in the Replacement Reserves Report.
- According to the client provided AHERA document asbestos-containing material is located in the equipment rooms and gym storage rooms in the form of pipe fitting insulation. A cost allowance for proper removal and disposal of the asbestos-containing pipe fitting insulation is included in the Replacement Reserves Report as part of the recommended piping repair/replacement work. This allowance is based solely on the information presented in the client provided AHERA document. An excerpt of this AHERA document is included in the appendices. Identifying asbestos-containing material is not within the scope of this facility condition assessment.

Sustainable Recommendations:

- A sustainable recommendation for plumbing is to replace the restroom fixtures with water-saving devices, such as low-flow faucet aerators and low-flush volume toilets and urinals.

- An additional sustainable recommendation for plumbing is to replace the domestic water heaters with high-efficiency, energy star rated commercial water heaters.

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 along the exterior wall of the building. The gas distribution piping within the buildings 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 leaks.

Sustainable Recommendations:

- There are no sustainable recommendations for gas distribution.

7.4. BUILDING ELECTRICAL

The electrical supply lines run underground to an underground transformer, located in a vault near the service connection at Lockwood Avenue. The service feeds the interior-mounted electrical meter.

The main electrical service size is 2,500-Amps, 277/480-Volt, three-phase, four-wire, alternating current (AC). 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 commutation between the main office and each classroom. The public address control unit is located in the main office. The auditorium is equipped with a stage lighting system and a sound system.

An emergency battery backup system is located near the electrical room. The battery system provides back-up power for elements of the fire and life safety systems.

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 interior lighting is in fair condition. Upgrades and replacements to the interior lighting have not been performed in recent years. Based on energy conservation and current condition, EMG recommends replacing all lighting fixtures with high-efficiency fluorescent light fixtures or LED fixtures. A budgetary allowance for this work is included in the Replacement Reserves Report.
- The public address system appears to be in good condition and will require routine maintenance during the evaluation period.

- The auditorium stage lighting system appears to be the originally installed equipment. Based on its estimated Remaining Useful Life (RUL), the auditorium lighting system will require replacement during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.
- The auditorium sound system appears to be in good condition and will require routine maintenance during the evaluation period.
- According to the client provide JMOA five year capital plan, electrical service and distribution upgrades are needed. A cost allowance for this work is included in the Replacement Reserves Report.
- According to the client provide JMOA five year capital plan, computer data system upgrades are needed. A cost allowance for this work is included in the Replacement Reserves Report.
- The emergency battery backup system is in good condition. Based on its estimated Remaining Useful Life (RUL), the backup system will require battery replacement during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report. A secondary containment system should be installed in case leakage should occur. The cost of this work is relatively insignificant; therefore the work can be performed through routine maintenance.

Sustainable Recommendations:

- A sustainable recommendation for building electrical is to install occupancy sensors in place of light switches.
- An additional sustainable recommendation for building electrical is to install high-efficiency fluorescent light fixtures or LED fixtures in place of older, less efficient fluorescent fixtures and incandescent fixtures.

7.5. ELEVATORS AND CONVEYING SYSTEMS

There is one hydraulic passenger elevator. The elevator was manufactured by Allied Elevator. The elevator has a rated capacity of 2,000 pounds and a speed of 100 feet per minute. The elevator machinery is located in a room adjacent to the base of the shaft.

The elevator cab has vinyl-tiled floors, plastic-laminated wood wall panels, and recessed, ceiling light fixtures. The doors are fitted with electronic safety stops. Emergency communication equipment is not provided in the cab.

Observations/Comments:

- A detailed message was left with the elevator contractor, Northeast Elevator, regarding recommendations and maintenance practices. Pertinent information will be forwarded upon receipt.
- The elevator, and its responsiveness, appears to be adequate. The elevator is serviced by Northeast Elevator on a routine basis. The elevator machinery and controls appear to be the originally installed system. Based on its estimated Remaining Useful Life (RUL), the elevator modernization will be required during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.
- The elevator is inspected on an annual basis by the municipality, and a certificate of inspection is displayed in the elevator cab.
- The emergency communication equipment in the elevator does not appear to be functional. It is recommended that the emergency communication equipment be replaced. The estimated cost of this work is included in the Replacement Reserves Report.
- The finishes in the elevator cab appears to be in good condition. Based on their estimated Remaining Useful Life (RUL), the cab finishes will require replacement during the evaluation period. The cost to replace the finishes is relatively insignificant and the work can be performed as part of the Physical Plant's routine maintenance program. The estimated cost of this work is not included in the cost tables.

Sustainable Recommendations:

- A sustainable recommendation for the elevator 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, portable fire extinguishers, smoke detectors, pull stations, and alarm horns. A Siamese connection is located on the exterior of the building. Hardwired smoke detectors are located throughout the corridors. The nearest fire hydrants are located along the public streets bordering the property and are approximately 75 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 a fire protection equipment room. The system is equipped with a backflow preventer.

A central fire alarm panel is located in the electrical room and monitors the pull stations, smoke detectors, and flow switches. An annunciator panel is located near the Lockwood Avenue entrance. The alarm panel also sounds the alarm and automatically notifies the monitoring service or the fire department in the event of trouble.

The building is equipped with a security system, including motion sensors and door alarms. The central security panel is located in the main office and is monitored by Sonitrol.

The commercial kitchen in the unit 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 tank is 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. According to the client provide JMOA five year capital plan, a fire pump and fire suppression system upgrades are needed. A cost allowance for this work is included in the Replacement Reserves Report.
- 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. Parts may become obsolete or difficult to find. Based on the Remaining Useful Life (RUL), the panel will require replacement during the evaluation period. The 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. The dry-chemical system will require routine maintenance during the evaluation period.

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 with ceramic tile at restroom and sink area	Painted plaster or painted CMU	Suspended acoustic tiles or adhered acoustic tiles
Maintenance Shop & Storage	Painted concrete	Painted plaster or painted CMU	Suspended acoustic tiles
Kitchens	Quarry tile	Painted plaster or painted CMU	Suspended acoustic tiles
Restrooms	Ceramic tile	Painted drywall	Painted plaster

The interior doors are stained, solid-core, wood doors set in metal frames. The interior doors have cylindrical locksets with knob or push/pull handle hardware.

Observations/Comments:

- The interior finishes are in good to fair condition. Based on the Estimated Useful Life and the observed conditions, replacement of the flooring, ceiling tiles and painting is recommended during the term. The costs are included in the Replacement Reserves Report.
- Most classrooms are an open plan configuration and are divided by lockers along the corridors and non-used operable partitions between classrooms. Offices and other spaces utilize doors.
- The interior doors and door hardware are in good to poor condition. Based on the Estimated Useful Life and the observed conditions, the interior doors will require replacement during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.
- The sprinkler room door is missing locking hardware and this poses a possible life safety issue. Locking hardware is recommended for this door to be provided immediately. The costs are 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	Upright (2), Chest (2)
Freezer	Upright
Ranges	Gas
Ovens	Convection
Griddles / Grills	Gas
Fryers	Yes
Hood	Exhaust ducted to exterior
Dishwasher	No
Microwave	No
Ice Machines	No
Steam tables	Stainless steel (2)
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. The estimated cost of this work is included in the Replacement Reserves Report.
- The refrigeration equipment appears to be in good condition and will require routine maintenance during the evaluation period.

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

Not applicable. There are no major accessory structures.

10. ENERGY BENCHMARKING

This section is pending additional information from the client.

11. APPENDICES

APPENDIX A: Photographic Record

APPENDIX B: Site and Floor Plans

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-007.017 **Project Name: Rogers Elementary School**

Photo #1:	Main entrance off Lockwood Avenue

Photo #2:	Partial front elevation off Lockwood – left end

Photo #3:	Left side elevation of south wing

Photo #4:	West elevation of south wing

Photo #5:	Alternate entrance facing south

Photo #6:	Condition of window sealant and gasket

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-007.017 **Project Name: Rogers Elementary School**

Photo #7:	South elevation of gymnasium

Photo #8:	West elevation of gymnasium

Photo #9:	North elevation of gymnasium

Photo #10:	Elevation of corridor on north side

Photo #11:	Modular elevation

Photo #12:	Upper partial north facing elevation

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-007.017 **Project Name: Rogers Elementary School**

Photo #13:	ADA entrance from teachers parking lot

Photo #14:	West elevation of north wing

Photo #15:	North elevation of north wing

Photo #16:	Partial front elevation along Lockwood – right section

Photo #17:	Underside detail south wing – steel angle supporting exposed aggregate panels

Photo #18:	Peeling of heavy skim coat application

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-007.017 **Project Name: Rogers Elementary School**

Photo #19:	Potential for ADA entrance from south lot

Photo #20:	Mildew on soffit at north facing corridor elevation

Photo #21:	Condition of small roll up door

Photo #22:	Service door condition

Photo #23:	Spalling at cornice

Photo #24:	Spalling at cornice and peeling of heavy skim coat

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-007.017 **Project Name: Rogers Elementary School**

Photo #25:	Spalling of heavy skim coat at window sill, elevation and cornice

Photo #26:	Side entrance into connector between main entrance and south wing

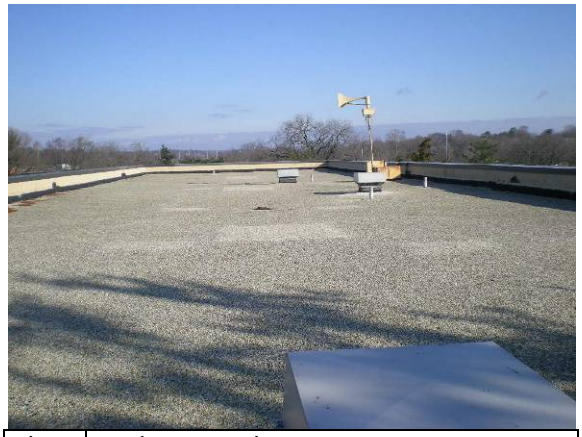


Photo #27:	Roof over north wing

Photo #28:	Various roofs looking towards gymnasium, including modular roofing

Photo #29:	Middle section of school roofing

Photo #30:	Ponding at roof canopy on Lockwood

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-007.017 **Project Name: Rogers Elementary School**

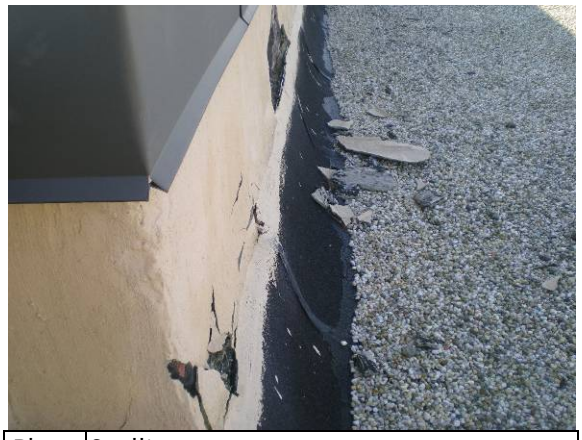


Photo #31:	Spalling at parapet

Photo #32:	Moss build up

Photo #33:	Roof over south wing

Photo #34:	Cracked roofing compound and coating at parapet

Photo #35:	South parking lot

Photo #36:	North parking lot

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-007.017 **Project Name: Rogers Elementary School**

Photo #37:	Extruded asphalt curbs

Photo #38:	Catch basin for municipal storm drainage

Photo #39:	Alligator cracking in north parking lot

Photo #40:	Pedestrian pavement near Lockwood Avenue entrance

Photo #41:	Tripping hazard near main entrance

Photo #42:	Tripping hazard near main entrance

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-007.017 **Project Name: Rogers Elementary School**

Photo #43:	South playground area

Photo #44:	Damage to rubber playground surface

Photo #45:	South playground equipment

Photo #46:	Southwest playground equipment

Photo #47:	Retaining wall and fencing

Photo #48:	Damaged gate at north entrance

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-007.017 **Project Name: Rogers Elementary School**

Photo #49:	Soccer field

Photo #50:	Irrigation controls for soccer field

Photo #51:	Area of drainage issue in north parking lot

Photo #52:	Ponding at adjacent to building near building at soccer field

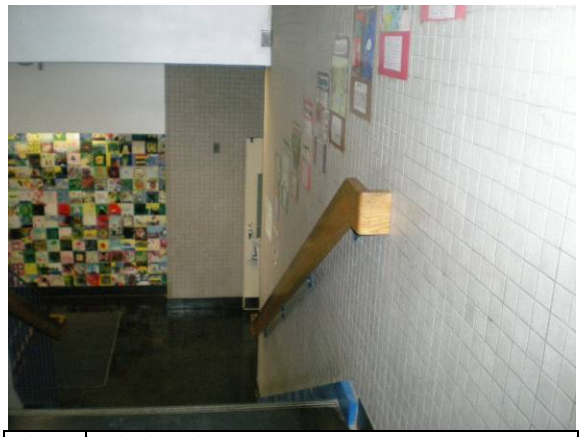


Photo #53:	Split level main entrance

Photo #54:	Split level main entrance – looking down to main office level

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-007.017 **Project Name: Rogers Elementary School**

Photo #55:	Restroom

Photo #56:	Main office

Photo #57:	Elevator with no emergency communication

Photo #58:	Open corridor with classrooms beyond lockers

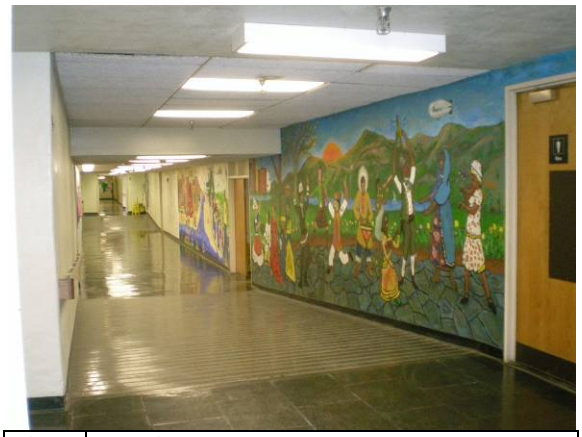


Photo #59:	Corridor

Photo #60:	Classroom beyond locker lined corridor

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-007.017 **Project Name: Rogers Elementary School**

Photo #61:	Classroom

Photo #62:	Elevator without Braille on jambs

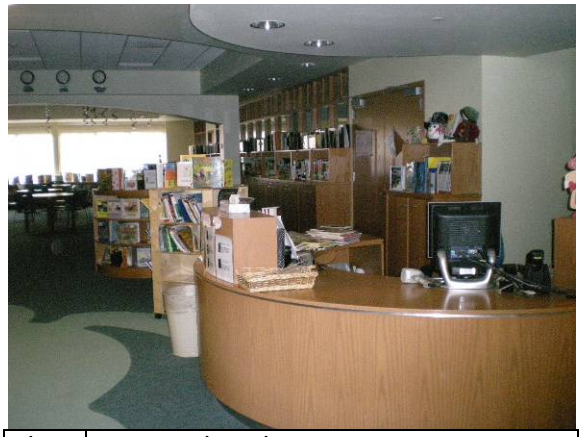


Photo #63:	Renovated Media Center

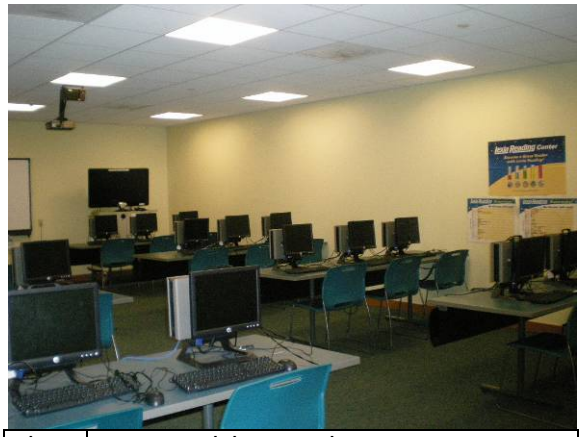


Photo #64:	Computer lab in Media Center

Photo #65:	Sink and restroom within classroom

Photo #66:	Evidence of water staining due to broken window sealant

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-007.017 **Project Name: Rogers Elementary School**

Photo #67:	Roof leak off storage area off classroom B1

Photo #68:	Open riser stair

Photo #69:	Evidence of leaks

Photo #70:	Open corridor in south wing

Photo #71:	No weather stripping at door

Photo #72:	Ramp access to art rooms – no railings

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-007.017 **Project Name: Rogers Elementary School**

Photo #73:	Art room

Photo #74:	Suspect mold at ceiling in room off cafeteria

Photo #75:	Cafeteria

Photo #76:	Teachers lounge

Photo #77:	Floor structure in north wing

Photo #78:	Life safety issue – missing door hardware at sprinkler room

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-007.017 **Project Name: Rogers Elementary School**

Photo #79:	Auditorium

Photo #80:	Auditorium stage

Photo #81:	Roof leak at juncture between building and modular wing

Photo #82:	Leaking evidence at area north of gymnasium

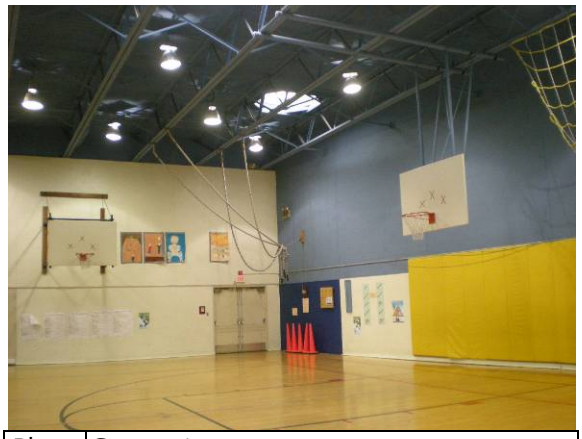


Photo #83:	Gymnasium

Photo #84:	Windowless offices near gymnasium

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-007.017 **Project Name: Rogers Elementary School**

Photo #85:	Boiler (1 of 3)

Photo #86:	Hot water circulating pumps

Photo #87:	Fuel oil pump set

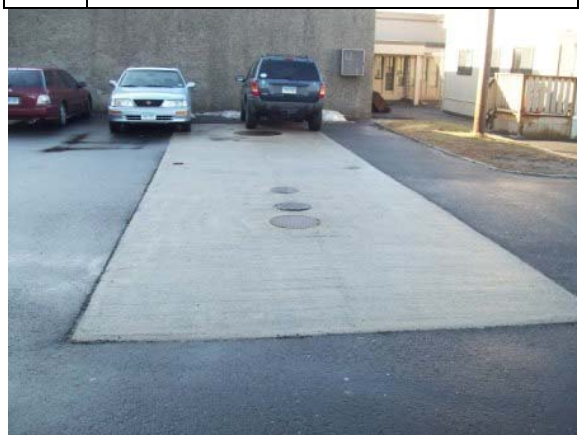


Photo #88:	Underground storage tank location

Photo #89:	Hot water loop expansion tanks

Photo #90:	Chillers

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-007.017 **Project Name: Rogers Elementary School**

Photo #91:	Cooling tower

Photo #92:	Chiller water circulating pump

Photo #93:	Air handling unit (AC-1)

Photo #94:	Air handling unit (AC-2)

Photo #95:	Air handling unit (AC-3)

Photo #96:	Air handling unit (AC-4)

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-007.017 **Project Name: Rogers Elementary School**

Photo #97:	Air handling unit (AC-5)

Photo #98:	Air-cooled condensing unit for AC-5

Photo #99:	Packaged rooftop unit (AC-6)

Photo #100:	Packaged rooftop unit for modular classroom (1 of 2)

Photo #101:	Split system condensing units for media center computer rooms

Photo #102:	Fan coil unit for gym offices

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-007.017 **Project Name: Rogers Elementary School**

Photo #103:	Perimeter finned-tube heating unit for classroom

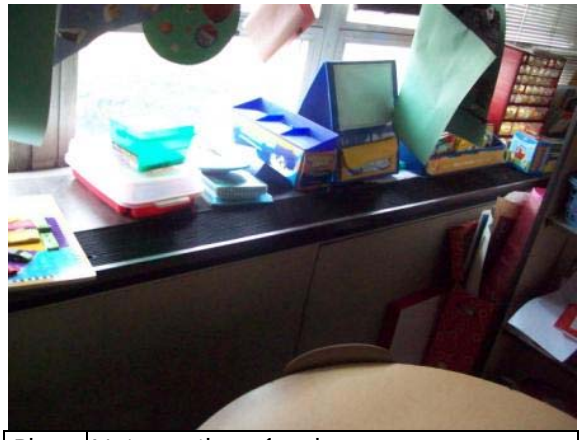


Photo #104:	Unit ventilator for classroom

Photo #105:	Air distribution for classroom air conditioning

Photo #106:	Baseboard finned-tube heating units in corridor

Photo #107:	Wall-mounted finned-tube heating unit for corridor

Photo #108:	Recessed convection unit for restroom

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-007.017 **Project Name: Rogers Elementary School**

Photo #109:	Make-up air unit for gymnasium (1 of 4)

Photo #110:	Exhaust fan for gymnasium (1 of 2)

Photo #111:	Domestic water meter

Photo #112:	Domestic water heaters

Photo #113:	Typical lavatory and urinal plumbing fixtures

Photo #114:	Typical toilet plumbing fixture

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-007.017 **Project Name: Rogers Elementary School**

Photo #115:	Natural gas distribution in boiler room

Photo #116:	Electric meter

Photo #117:	Electrical switchgear

Photo #118:	Emergency battery back-up system

Photo #119:	Audirotium lighting controls

Photo #120:	Auditorium sound system

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-007.017 **Project Name: Rogers Elementary School**

Photo #121:	Elevator cab door

Photo #122:	Interior of elevator cab

Photo #123:	Elevator control panel

Photo #124:	Missing elevator communication equipment

Photo #125:	Hydraulic elevator equipment

Photo #126:	Elevator control unit

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-007.017 **Project Name: Rogers Elementary School**

Photo #127:	Fire alarm annunciator panel

Photo #128	Fire alarm communicator panel

Photo #129:	Security interface panel

Photo #130:	Security control panel

Photo #131:	Fire sprinkler riser

Photo #132:	Fire sprinkler backflow preventer

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-007.017 **Project Name: Rogers Elementary School**

Photo #133:	PA system control unit

Photo #134:	Gas range in kitchen

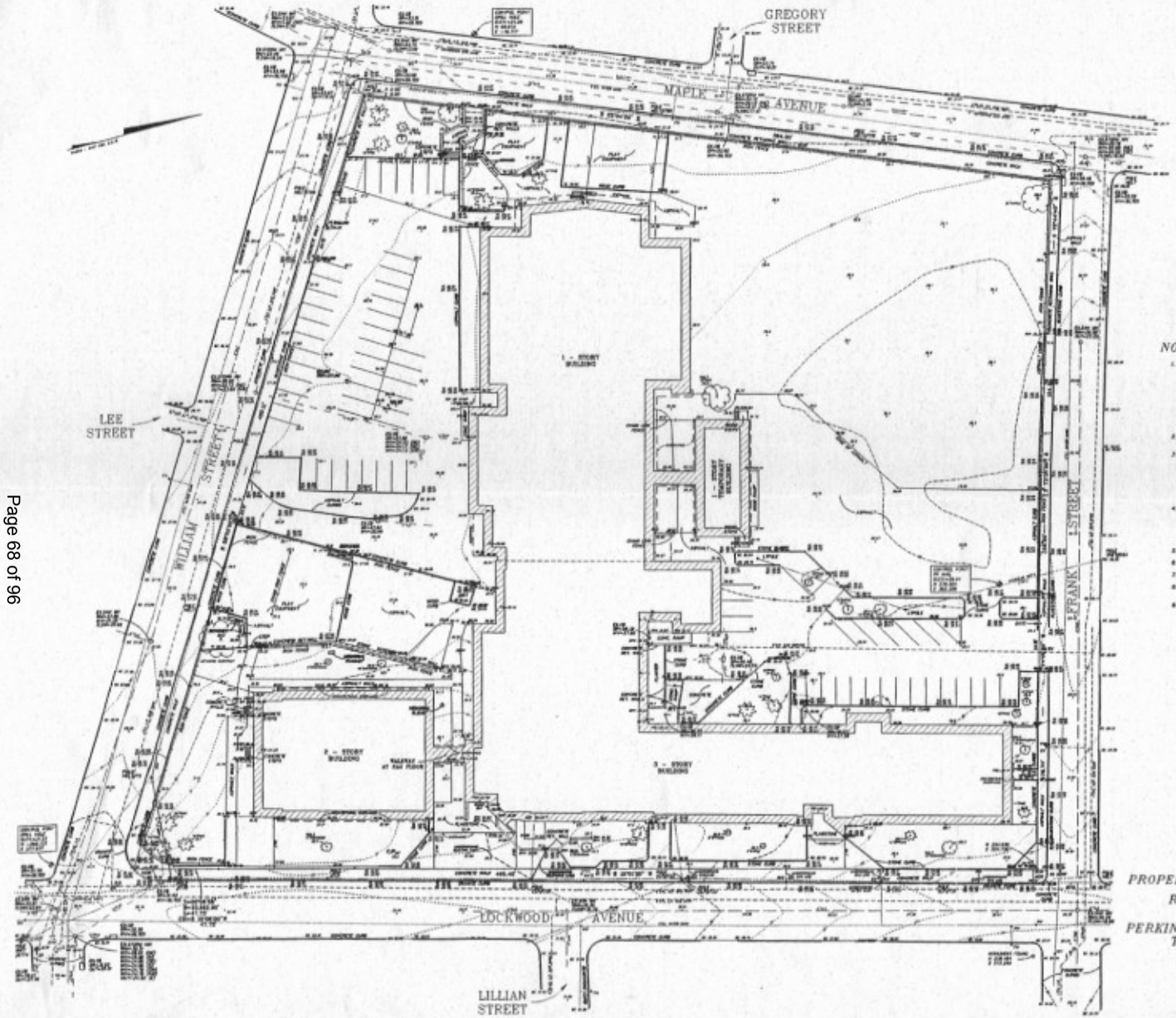
Photo #135:	Convection ovens and steamer in kitchen

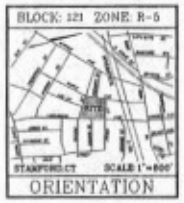
Photo #136:	Refrigeration units in kitchen

Photo #137:	Dry chemical fire protection system in kitchen

Photo #138:	Steam tables in kitchen

APPENDIX B:
SITE AND FLOOR PLANS





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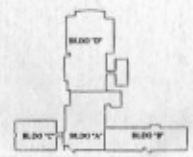
PROPERTY & TOPOGRAPHIC SURVEY
DEPICTING
ROGERS MAGNET SCHOOL
STAMFORD, CT
PREPARED FOR
PERKINS EASTMAN ARCHITECTS PC/
THE CITY OF STAMFORD

NO.	DATE	REVISION
2	7/15/04	DDS SUBMISSION
1	1/30/03	SDS PROGRESS SET

SEAL



KEY PLAN

PERKINS EASTMAN ARCHITECTS PC
422 SUMMER STREET
STAMFORD CONNECTICUT
06901-2479
203 251 7400
FAX 251 7474

LZA Associates
A Division of the Thornton-Tomasetti Group
1 Cambridge Drive, Ste. 203
Trumbull, Connecticut 06611-4763
Tel. 203-374-3799
Fax. 203-374-4078

PROJECT TITLE:

ROGER MAGNET ELEMENTARY

SCHEMATIC DESIGN REPORT – 2002

83 LOCKWOOD AVENUE
STAMFORD, CT 06901

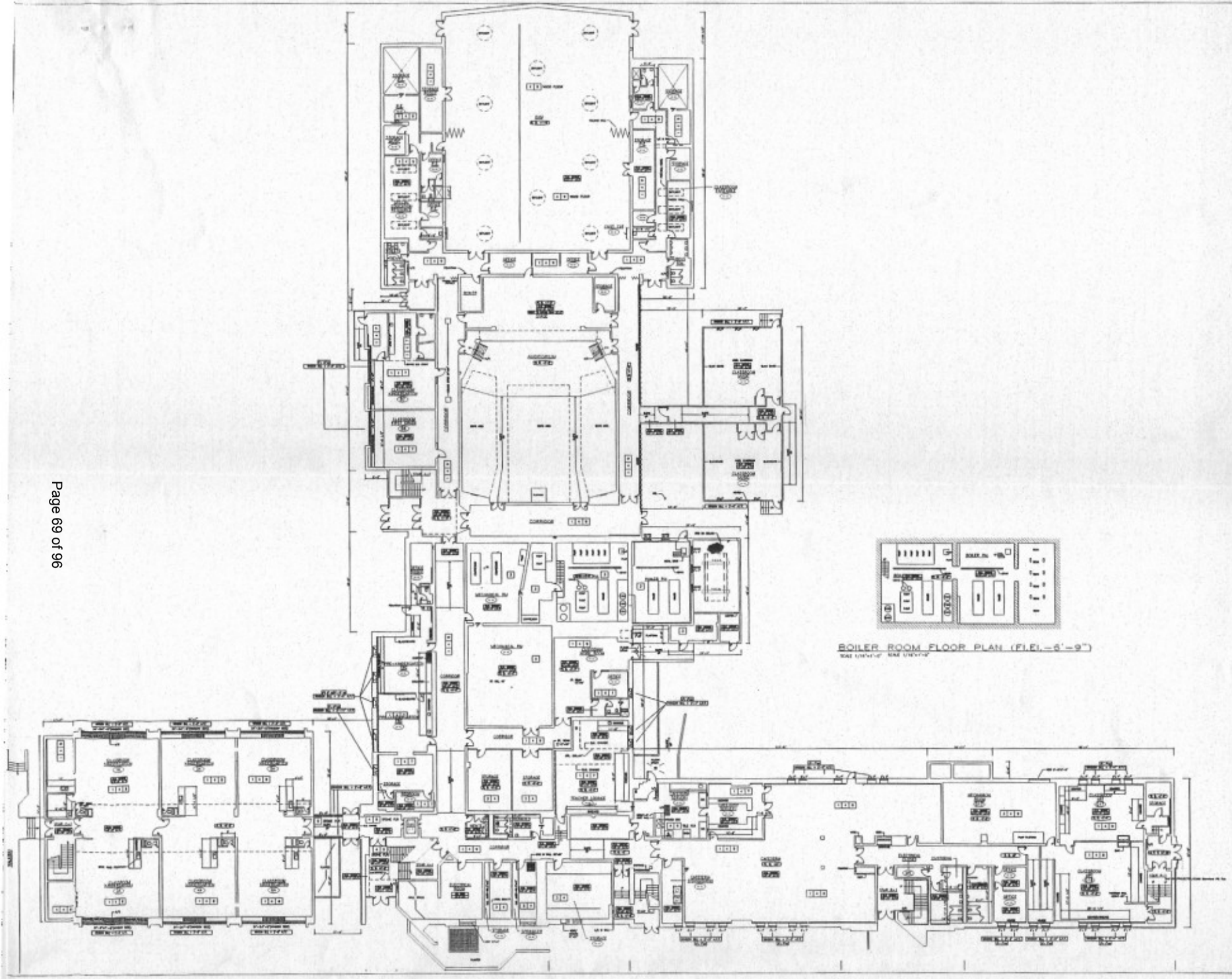
PROJECT NO.: 15260

DRAWING TITLE:

EXISTING SITE PLAN

SCALE: 1'-0" = 30'-0"

EX-C100



BOILER ROOM FLOOR PLAN (F.F.El. -6'-9")

NO.	DATE	REVISION
2	7/15/04	100% SUBMISSION
1	1/30/02	50% PROGRESS SET

SEAL

KEY PLAN

PERKINS EASTMAN ARCHITECTS PC

LZAssociates

PROJECT TITLE:

ROGER MAGNET ELEMENTARY

SCHEMATIC DESIGN REPORT – 2002

83 LOCKWOOD AVENUE
STAMFORD, CT 06901

PROJECT NO.: 15260

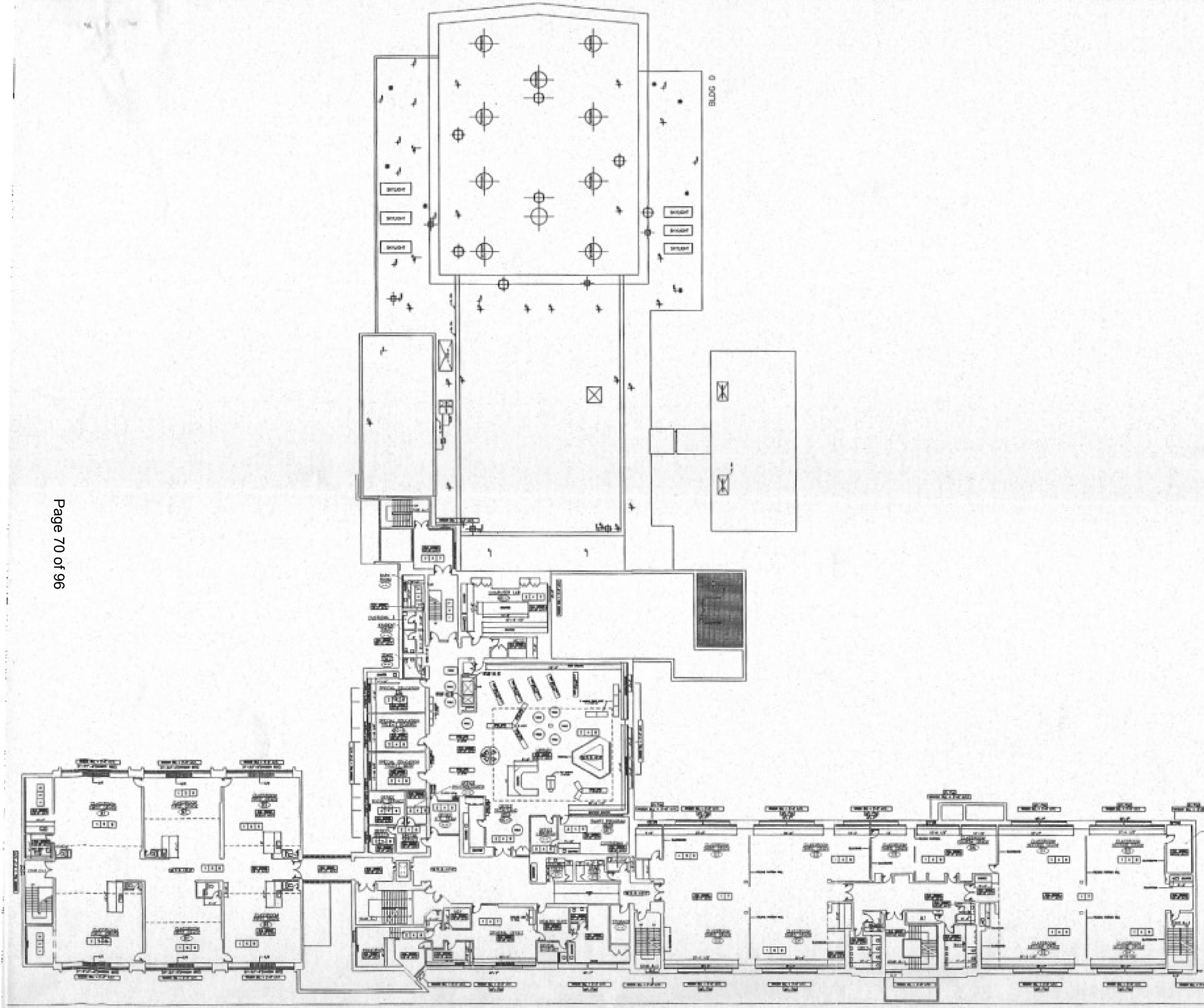
DRAWING TITLE:

EXISTING PLANS

FIRST FLOOR

SCALE: 1/16" = 1'-0"

EX-A100



NO.	DATE	REVISION
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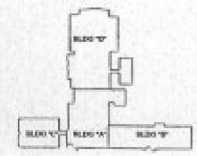
1	1/30/02	50% PROGRESS SET

SEAL



KEY PLAN

PERKINS EASTMAN ARCHITECTS PC
422 SUMMER STREET
STAMFORD CONNECTICUT
06901-2415
203 251 7400
FAX 251 7474

LZA Associates
A Division of The Thornton-Tomasetti Group

PROJECT TITLE:

ROGER MAGNET ELEMENTARY

SCHEMATIC DESIGN REPORT – 2002

83 LOCKWOOD AVENUE
STAMFORD, CT 06901

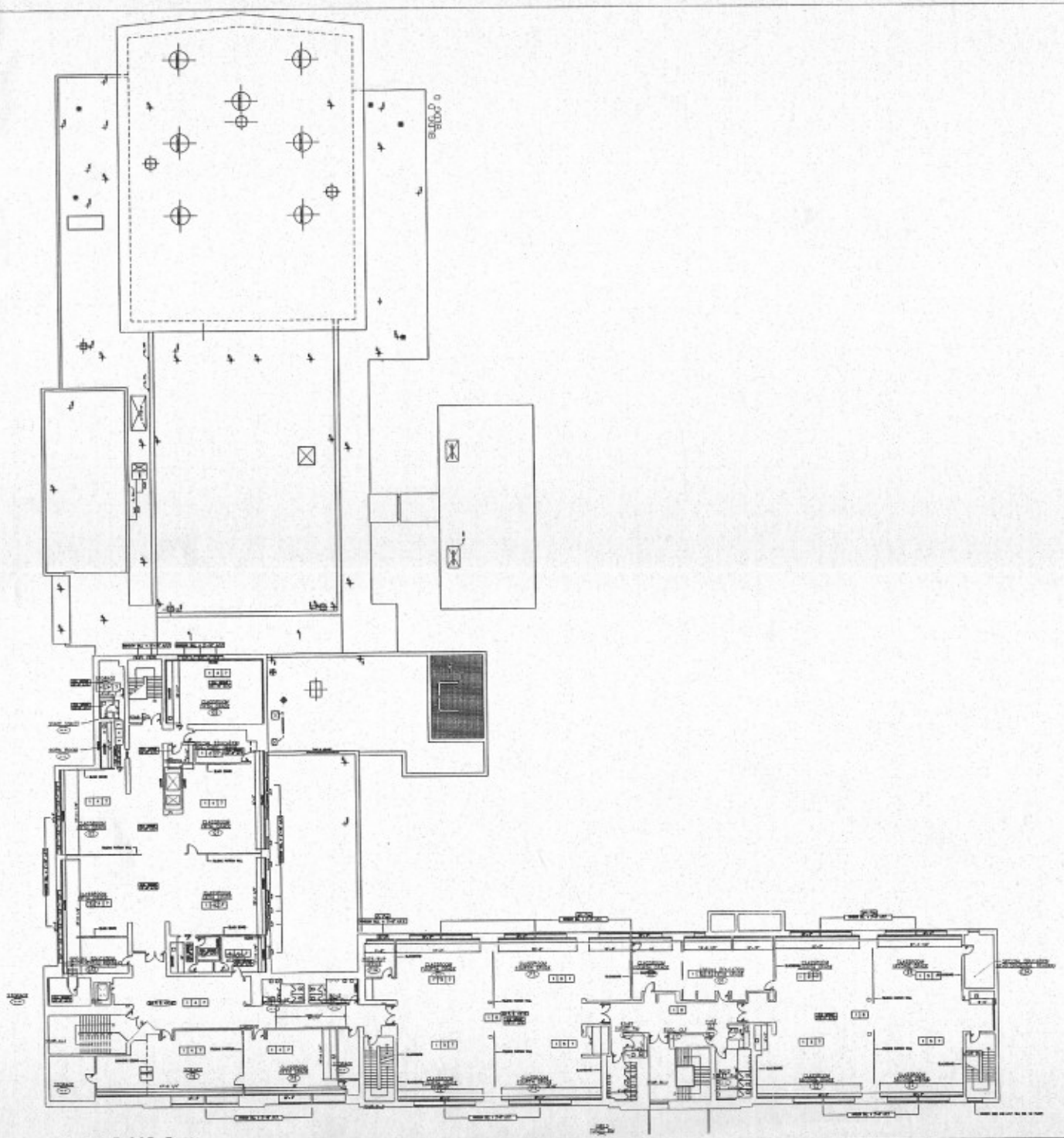
PROJECT NO.: 15260

DRAWING TITLE:

EXIST PLAN SECOND FLOOR

SCALE: 1/16" = 1'-0"

EX-A101



NO.	DATE	REVISION
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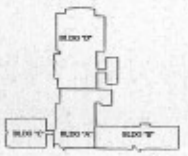
1	1/30/02	50% PROGRESS SET

SEAL



KEY PLAN

PERKINS EASTMAN ARCHITECTS PC
422 SUMMER STREET
STAMFORD CONNECTICUT
06901-2615
203 251 7400
FAX 251 7474

LZAssociates
A Division of The Thornton-Tomasetti Group

PROJECT TITLE:

ROGER MAGNET ELEMENTARY

SCHEMATIC DESIGN REPORT – 2002

83 LOCKWOOD AVENUE
STAMFORD, CT 06901

PROJECT NO.: 15260

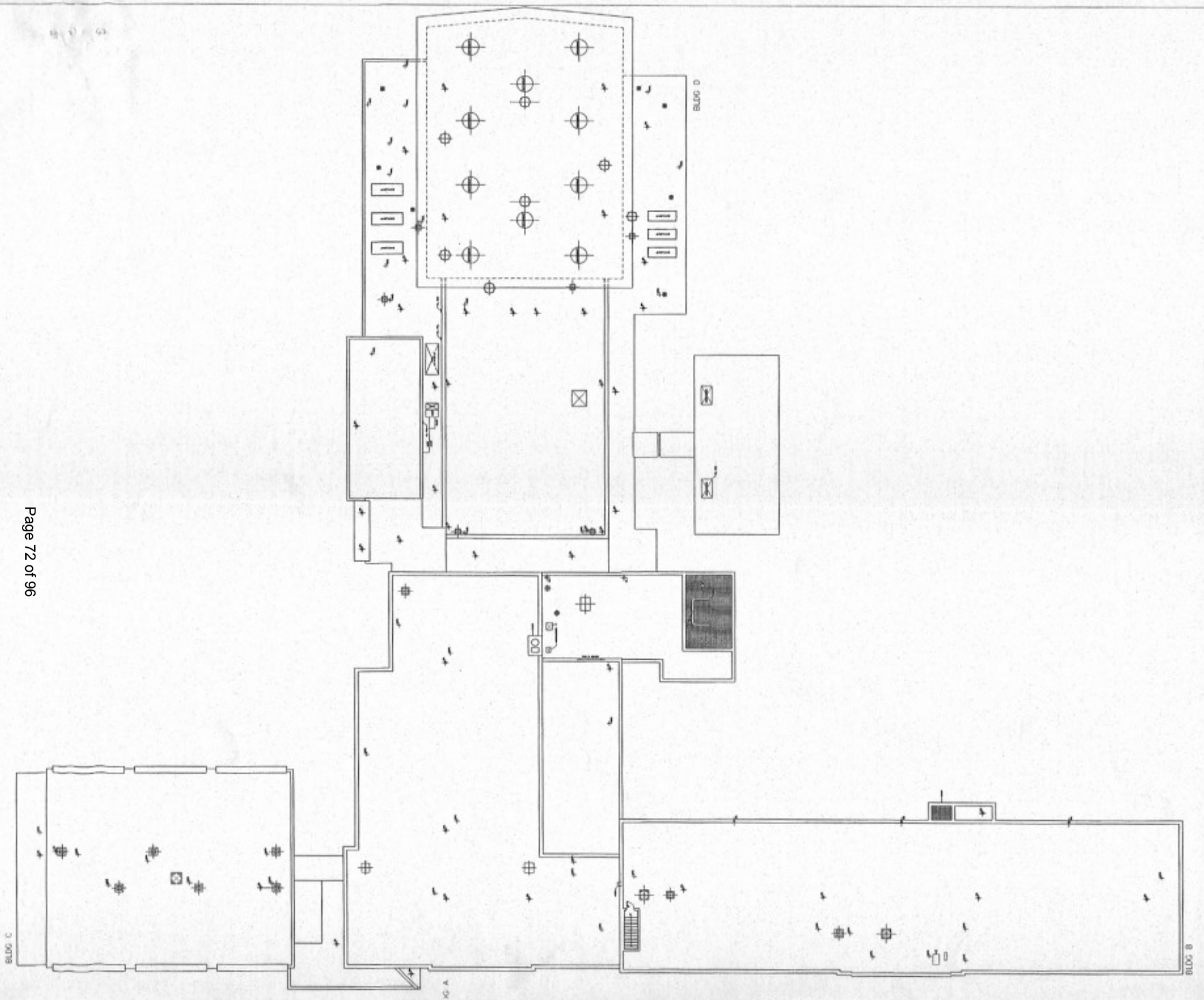
DRAWING TITLE:

EXISTING PLAN

THIRD FLOOR

SCALE: 1/16" = 1'-0"

EX-A102



NO.	DATE	REVISION
2	7/15/04	100% SUBMISSION
1	1/30/02	50% PROGRESS SET

SEAL

KEY PLAN

PERKINS EASTMAN ARCHITECTS PC
422 SUMMER STREET
STAMFORD CONNECTICUT
06901-2413
203 251 7400
FAX 251 7474

LZA Associates

PROJECT TITLE:

ROGER MAGNET ELEMENTARY

SCHEMATIC DESIGN REPORT -- 2002

85 LOCKWOOD AVENUE
STAMFORD, CT 06901

PROJECT NO.: 15260

DRAWING TITLE:

EXISTING ROOF PLAN

SCALE: 1/16" = 1'-0"

EX-A103

APPENDIX C:
SUPPORTING DOCUMENTATION

Cost Comparison Between JMOA Capital Plan and EMG Replacement Reserves						
Rogers Magnet Elementary						
Client - Project Name	**Client Cost**	**EMG Cost**	**EMG Shortage**	**Out of Scope?**	**Is work completed?**	**EMG Cost Comments**
Reconstruct pavement for north lot, Improve drainage	$132,400	$100,800	$31,600	No	Yes	**Complete with exception of Drainage issue**
Reconstruct pavement for south lot	$58,350	$0	$58,350	No	Yes	**Complete**
Replace retaining wall and fencing at perimeter	$294,709	$338,168	-$43,459	No	No	
Repair selected roofs	$65,836	$512,594	-$446,758	No	No	Repair/Replacements (4 items)
Repair selected areas of façade	$250,250	$53,298	$196,952	No	No	Stucco Repair/Paint (2 items)
Replace all doors (exterior)	$46,680	$50,662	-$3,982	No	No	Door Replacement (3 items)
Refurbish remaining wall system	$223,642	$330,177	-$106,535	No	No	Stucco Repair, Storefront
Replace sky lights at gym/auditorium wing	$38,617	$39,902	-$1,285	No	No	
Repair decorative edge below parapet	$40,178	$66,780	-$26,602	No	No	Parapet repairs
Replace doors (interior)	$427,224	$294,462	$132,762	No	No	Costs seems high
Renovate classrooms and corridors	$5,606,084	$1,405,744	$4,200,340	No	No	JMOA Scope Not Defined. EMG cost includes all interior finish and lighting upgrade
Replace cafeteria partition	$58,302	$60,102	-$1,800	No	No	
Reconfigure kitchen, upgrade equipment	$208,785	$0	$208,785	Yes	No	JMOA Scope Not Defined
Renovate instrumental room	$46,786	$0	$46,786	Yes	No	JMOA Scope Not Defined
Renovate dish washer area for storage	$16,583	$0	$16,583	Yes	No	JMOA Scope Not Defined
Renovate art area	$224,128	$0	$224,128	Yes	No	JMOA Scope Not Defined
Renovate stairwell for A/B wing	$32,136	$0	$32,136	Yes	No	JMOA Scope Not Defined
Provide renovations for ADA	$819,545	$576,030	$243,515	No	No	Study+18 items
Increase CST space	$47,153	$0	$47,153	Yes	No	JMOA Scope Not Defined
Increase health space	$47,153	$0	$47,153	Yes	No	JMOA Scope Not Defined
Abate ACBM and lead material	$280,675	$280,647	$28	No	No	Includes Lead Allowance
Replace water distribution and drainage piping	$212,190	$183,248	$28,942	No	No	

Upgrade fixtures and compartments	$233,409	$111,084	$122,325	No	No	Plumbing fixtures (4 items) Cost seems high
Install air conditioning for computer room	$43,709	$0	$43,709	No	Yes	**Complete**
Install ventillation for computer server rooms (2)	$13,155	$0	$13,155	No	No	**Complete**
Replace auditorium stage lights	$55,167	$44,150	$11,017	No	No	
Upgrade computer data system	$224,571	$252,000	-$27,429	Yes	No	Added
Upgrade service and distribution	$159,199	$386,713	-$227,514	No	No	
Install fire pump, fire suppression in kitchen, bfp and replace service	$140,338	$157,500	-$17,162	No		Added
Complete selected Code Compliance projects	$2,304,911	$0	$2,304,911	No		JMOA Scope Not Defined

	JMOA Cost	**EMG Cost**	**Shortage**
	$12,351,865	$7,057,954	$5,293,911
less completed items	$12,205,051		
Soft Costs (30%)		$2,117,386	
Location factor(11%)		$776,375	
Totals(Unescalated)		$9,951,715	$2,253,336

Rogers 1 Rec

The 2006 reinspection was performed in accordance with the same regulations, and the guidance document published by the EPA, by:

Stanley Szelag - Accreditation #000493

Please see copies of the State of Connecticut Accreditations and current refresher training certificates.

VII. SUMMARY OF EXISTING ASBESTOS CONTAINING MATERIALS

Following is a listing of the locations and type of asbestos containing materials that were found during the original and subsequent inspections and remain as of the date of this reinspection.

Location	Asbestos Containing Material
Ground Floor Equipment Room, hall outside Equipment Room, Gym, Storage Rooms 3, 4, and 6	Pipe Fitting Insulation
Crawl Space Accessed from Second Floor Stairwell	Air Cell Insulation
Stage	Electrical Insulation
Gymnasium	Roof Drains
Storage 8 and 9 and the Mechanical/AC Room	Flex Duct Connector
Storage 8	Vibration Isolation Cloth
Art Rooms 1 and 2, Hall outside Art Rooms 1 and 2, Cafeteria, Stair 3, Staff Room, P.S. 1 and 2, Hall outside P.S. 1 and 2, Hall outside Auditorium, Rooms G23, B7, Music 2, Classrooms A1-A5, slop sink area in A1, Classrooms B1-B5, C1-C5, D1-D6, Janitors Closet 5, Hall between D and C wings, Main Office Toilet room, SS2, Dark Room (under carpet), Storage Room 12, Hall outside Media Center, Classrooms E1-E5, F1-F5 and Classrooms G1-G5	12x12 Floor Tile and Mastic
Behind radiators in Rooms G23, B7, C1-C5, D1-D6, E1-E4 and F1-F4	Transite Board

School System Stamford Public Schools School Name Rogers Elementary School Date of Reinspection December 21, 2006

Asbestos Containing Materials Remaining		Condition of Asbestos Containing Materials as of this Reinspection				
LOCATION	**MATERIALS**	FRIABILITY	ASSESSMENT CATEGORY (1-7)	CATEGORY	CONDITION	MANAGEMENT PLANNER RECOMMENDATIONS AND SCHEDULE
Classroom G2	12x12 light blue floor tile & mastic	NF	5	Misc	Intact	Operations and Maintenance Program
Classroom G3	12x12 light blue floor tile & mastic	NF	5	Misc	Intact	Operations and Maintenance Program
Classroom G4	12x12 light blue floor tile & mastic	NF	5	Misc	Intact	Operations and Maintenance Program
Classroom G5	12x12 light blue floor tile & mastic	NF	5	Misc	Intact	Operations and Maintenance Program
Crawl space area accessed from wall panel in the 2nd Fl Stairwell`	Air cell insulation	F	2	TSI	Damaged	Repair damaged air cell insulation

APPENDIX D:
EMG ABBREVIATED ACCESSIBILITY CHECKLIST

Property Name: Rogers Elementary School
Date: February 19 & 20, 2009
Project Number: 88166.09R-007.017

EMG Abbreviated Accessibility Checklist					
	Building History	**Yes**	**No**	**N/A**	**Comments**
1.	Has the management previously completed an ADA review?	✓			
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?		✓		
	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?			✓	
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?	✓			
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?		✓		

EMG Abbreviated Accessibility Checklist					
	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?		✓		
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?		✓		

EMG Abbreviated Accessibility Checklist					
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?		✓		
	Restrooms	**Yes**	**No**	**N/A**	**Comments**
1.	Are common area public restrooms located on an accessible route?	✓			
2.	Are pull handles push/pull or lever type?	✓			
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)?	✓			

EMG Abbreviated Accessibility Checklist					
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:	**Rogers Elementary School**	**Project Number:**	**88166.09R-007.017**
Person completing form:	**Anne Downey**	**Date:**	**February 19 & 20, 2009**
Association with Project:	**Assistant Principal**	**Phone Number:**	**203.977.4564**
Years associated w/Proj.:	**1.5**	**Fax Number:**	
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?					
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		✓			

Unk = Unknown, NA = Not Applicable

	Yes	No	Unk	NA	Comments
21. Do the utilities (electric, gas, sewer, water) provide adequate service?	✓				
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. Do tenants contract for 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?	Negative				
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. Do Residential units have a min. of 60-Amp service or Commercial units have a min. 200-Amp service?				✓	
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?		✓			Local alarm only
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?		✓			
45. Are there any emergency electrical generators?		✓			
46. Are the generators maintained on a regular basis?				✓	

Unk = Unknown, NA = Not Applicable

	Yes	No	Unk	NA	Comments
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?					
50. Is there anything else that EMG should know about when assessing this property? If so, what?					
51.					

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.	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.
2. A site plan, preferably 8 1/2" X 11", which depicts the arrangement of buildings, roads, parking stalls, and other site features.	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.
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).	10. Records of system & material ages (roof, MEP, paving, finishes, furnishings).
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.	11. Any brochures or marketing information.
5. For hotel or nursing home properties, provide a summary of the room types and room type quantities.	12. Appraisal, either current or previously prepared.
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.	13. Current occupancy percentage and typical turnover rate records (for commercial and apartment properties).
7. The names of the local utility companies which serve the property, including the water, sewer, electric, gas, and phone companies.	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
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

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

MICHAEL A. YOUNG

Senior Engineering Consultant

Education

- BS, Agricultural Engineering, The University of Georgia, Athens, Georgia

Project Experience

- ***Hospitality, Nationwide –*** Mr. Young served as the technical lead on a Property Condition Evaluation portfolio. A number of additional studies were required during the completion of this portfolio that were critical to the client in determining property needs.
- ***Healthcare - Skilled Nursing and Assisted Living, Nationwide -*** Mr. Young was the technical lead for a 183 site portfolio of SNF/ALF properties. He reviewed reports, participated in kick-off and progress meetings and provided summaries and follow-on studies/issues matrices to the client. All projects were completed on schedule and delivered on time to the client.
- ***Retail/Office – Bank, Nationwide –*** Mr. Young served as the technical lead for a 75 property portfolio of bank properties. The objective of the portfolio was to provide Property Condition Assessment reports addressing any property needs required and anticipated during the evaluation period.
- ***Multi-Family, Nationwide -*** Mr. Young was the technical lead for a Property Condition Assessment portfolio of approximately 43 Multi-Family Residential properties. Many of the properties in this portfolio required or were currently experiencing major renovation work. Other properties were under construction. Accurate state of renovation/construction and costs for any remaining work were significant to the client to make an effective business decision.
- ***Industrial - Packaging, Southern U.S. –*** Mr. Young was the technical lead for a Property Condition Assessment portfolio of approximately 34 industrial properties. The objective of the portfolio was to provide initial preliminary field reports and cost tables for each property and ultimately a full Property Condition Assessment report, including immediate repairs and reserve replacements.
- Michael has completed in excess of 150 Property Condition Assessments (debt reports) and Property Condition Evaluations (equity reports) while at EMG.
- Michael has reviewed or been technically involved in excess of 1,000 Property Condition Assessments (debt reports), Property Condition Evaluations (equity reports), and other due diligence related reports while at EMG.

Industry Tenure

- A/E: 1996
- EMG: 2004

Related Experience

- Healthcare/Senior Housing Portfolios
- Industrial/Warehouse Portfolios
- National Hotel Chain Portfolios
- Multifamily Housing Portfolios
- Manufactured Home Community Portfolios
- Retail Portfolios

Industry Experience

- Healthcare/Senior Living Housing
- Hospitality
- Retail
- Multifamily Housing
- Affordable Housing/HUD
- Office
- Industrial/Warehouse Facilities
- Manufactured Home Communities

Regional Location

- Atlanta, GA

JILL E. ORLOV

Technical Report Reviewer

Education

- Masters of Architecture, University of Pennsylvania, Philadelphia, PA
- BS, Architecture, University of Virginia, Charlottesville, VA

Project Experience

- ***Hotel Property, Pittsburgh, PA –*** As Project Manager, Ms. Orlov performed a property condition assessment of this 132 unit, six-story hotel property. She reviewed the condition of the building structure and systems and developed a thorough report. Her work helped EMG complete this project on time and on budget.
- ***Nursing Home, Charleston, SC –*** Ms. Orlov completed a property condition assessment of this 89,900 square feet building consisting of 148 units. During her evaluation of the facility, she conducted interviews with the property manager and maintenance staff. Her findings included information on existing building conditions, site improvements, mechanical and electrical systems and code accessibility information.
- ***Office Building, Richmond, VA –*** Ms. Orlov completed a property condition assessment on this 31,000 square feet, two and three story office building located in Richmond. She conducted interviews with the property manager and maintenance staff. Findings included information on existing building conditions, site improvements, mechanical and electrical systems and code and accessibility information.
- ***Higher Education Stadium, Fairfax, VA –*** Ms. Orlov completed a property condition assessment on this 162,221 square feet, three story sports arena building located in Fairfax. She conducted interviews with the property manager and maintenance staff. Findings included information on existing building conditions, site improvements, mechanical and electrical systems and code and accessibility information. The client found her structural and roof observations critical to their final business decision. This project was a part of a large portfolio of projects EMG completed for our client.

Industry Tenure

- A/E: 1991 - 2004
- EMG: July, 2004 to present

Industry Experience

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

Active Licenses/Registration

- Architectural, MD

Special Skills & Training

- AUTOCAD, 2000

Regional Location

- Baltimore, MD

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.
- **Detroit Public Housing, Detroit, MI –** Project Manager. Completed Physical Needs Assessments for six large-scale public housing developments in the Detroit area. Input costs to a modernization budget using software developed by EMG and the Detroit Housing Commission.
- **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: August, 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