

Building Information Report

Report for Location: Randolph Elementary School

Date Printed: Friday, March 10, 2006

Project: Arlington Public Schools

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Building Name: Randolph Elementary School
Building Type: Elementary
Address: 1306 Quincy Street
Arlington VA 22204

Contact Name: Renee Bostick
Contact Phone: (703) 228-5830
Contact Position: Principal
Year Construction: 1947, '50,'62,'75,'93

Occupant Response: Interview
Individual Interviewed: Renee Bostick
Ind. Interviewed Position: Principal

Drawing Availability: Fire Escape, Orig Plans
Grade Levels: Preschool, K-5
'05-'06 Enrollment: 363 Students
Building Area: 70,880 SF
Number Floors: 2, crawlspace
Sprinklers?: No
Replacement Cost: \$200.00 per SF
Total Replace. Cost: \$14,176,000
No.Of Relocatables: 0

Assessment Costs by Priority:

Immediate	\$4,962
High	\$1,229,156
Medium	\$3,521,759
Low	\$1,855,365
Total Assessed Cost:	\$6,611,241
FCI:	0.47

Descriptive Comments

The facility is a single building of 70,880 square feet. It is located on a site of 7.3 acres and serves primarily as a local, walking school. The site is adjacent to parkland under the jurisdiction of the Arlington County Parks and Recreation Department; however, the parkland is steep wooded terrain.

The building was constructed in phases with the original two story portion completed in 1947. Single story additions in 1950, 1962 and 1975 expanded the original building and a recent wing was added to provide a gymnasium.

The buildings are constructed primarily of brick faced masonry exterior bearing walls. The upper portions of the two story masonry walls are enclosed with a metal panel system. Interior framing is supported on masonry bearing walls and on steel columns. Floors are typically slab on grade reinforced concrete and cast in place concrete over crawl spaces, and the second floor areas are reinforced concrete slab. Roof decks are supported on open web steel joists, structural steel framing or reinforced concrete. Roofing systems are typically built-up asphalt membrane with aggregate surfacing except for a metal roofing system at stairs from the second floor. Masonry parapet walls have preformed metal caps.

Exterior doors are painted hollow metal doors and frames. Exterior windows are aluminum framed with insulated glass or single glazed fixed sash in steel frames. The majority of the aluminum framed units are topped by wood or rigid panel material on framing to reduce the original glass area of the building.

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The electrical service is 2,500 amps, 120/208 volt, three phase, four wire, alternating current. There is a 25 kVA diesel powered emergency generator located in the boiler room. The generator provides power for fire protection systems, emergency lighting and security systems. Interior lighting is provided by hanging or flush mounted fluorescent fixtures.

Domestic hot water is provided by a gas-fired water heater.

Heating is provided by a two-pipe HW system serving roof-top air handling units and unit ventilators. Two gas-fired boilers were installed in 1992. Air conditioning is provided by DX cooling coils in each unit. Additionally, there are several split system remote condensers located on the roof, which serve unit ventilators. Also, several packaged unit ventilators have condensing units to take place of the original condenser.

Requested Space Considerations

Construct new Computer Lab space. Recommended 500 SF of additional space at an estimated cost of \$86,650. Request by school reviewed and in agreement with Space Analysis.

Reconfigure Administrative Space. Recommended reconfiguration of 500 SF at an estimated cost of \$106,840. Request by school subject to review by APS.

Construct new Counseling / Therapy Space. Recommended 500 SF of additional space at an estimated cost of \$98,600. Request by school subject to review by APS.

Assessment Report

Randolph Elementary School

B20 Exterior Enclosure

CorrectionName	Subsystem Name	AreaName	Correction Notes	Reason	Priority	Category	UnitCost	Quantity	UOM	Cost
B2010-00-10C Correct 1000 SF Bldg or Less Deteriorated Exterior Walls by Selective Demo and Repair	B2010 Exterior Walls		Prep and refinish exposed structural steel at roof edge of cafeteria wing	Damage/Wear	High	Def Maint	\$2.76	500	SQFT	\$1,379
B2010-00-1C Correct Deteriorated Exterior Wall Masonry Construction by Selective Demo & Repair (Low)	B2010 Exterior Walls		Water infiltration causing mold in some rooms of oldest section of building	Damage/Wear	High	Def Maint	\$0.49	57000	BLDG SF	\$27,930
B2010-00-5C Correct Deteriorated Exterior Wall Wood Construction by Selective Demo & Replace (Median)	B2010 Exterior Walls		Infill above existing windows, area where upper sash removed, is deteriorated.	Damage/Wear	Medium	Def Maint	\$0.84	25000	BLDG SF	\$21,000
B2030-00-1C Correct Deteriorated Exterior Hollow Metal/Wood/Plastic Laminate/Fiberglass Door by Selective Demo & Repair (Low)	B2030 Exterior Doors			Damage/Wear	Medium	Def Maint	\$1.09	60000	BLDG SF	\$65,520

Total Cost for B20 Exterior Enclosure \$115,829

B30 Roofing

CorrectionName	Subsystem Name	AreaName	Correction Notes	Reason	Priority	Category	UnitCost	Quantity	UOM	Cost
B3010-00-3C Correct Deteriorated BUR or Shingle Roof by Demo & Replace (High)	B3010 Roof Coverings		Many levels and a large quantity of rooftop HVAC equipment	Damage/Wear	Medium	Def Maint	\$3.89	65000	BLDG SF	\$252,980
B3053-00-1C Correct Deteriorated Wood Fascia and Soffit by Repair and Wrap with Metal Coll Stock	B3053 Roof Drip Edge			Damage/Wear	Medium	Def Maint	\$19.36	320	LNFT	\$6,196

Total Cost for B30 Roofing \$259,176

C10 Interior Construction

CorrectionName	Subsystem Name	AreaName	Correction Notes	Reason	Priority	Category	UnitCost	Quantity	UOM	Cost
C1020-00-1C Correct Deteriorated Interior Doors by Selective Demo & Repair (Low)	C1020 Interior Door		Install correct hardware	ADA	Low	Def Maint	\$0.71	65000	BLDG SF	\$46,410
C1030-00-1C Correct Non Compliant Hand Rails by Demo and Replace	C1030 Fittings			ADA	Low	Def Maint	\$1.99	14000	BLDG SF	\$27,832

Priority Definitions:
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ADA Low Def Maint \$0.35 70000 BLDG SF \$24,500

Total Cost for C10 Interior Construction \$98,742

C30 Interior Finishes

CorrectionName	Subsystem Name	AreaName	Correction Notes	Reason	Priority	Category	UnitCost	Quantity	UOM	Cost
C1030-00-2C Correct Deteriorated or Inadequate Interior Signage by Demo and Replace	C1030 Fittings			Damage/Wear	Medium	Def Maint	\$3.23	60000	BLDG SF	\$194,040

Total Cost for C30 Interior Finishes \$194,040

D20 Plumbing

CorrectionName	Subsystem Name	AreaName	Correction Notes	Reason	Priority	Category	UnitCost	Quantity	UOM	Cost
D2010-00-1C Correct Deteriorated Plumbing Fixtures and Trim by Demo & Replace	D2010 Plumbing Fixtures			Damage/Wear	Low	Def Maint	\$3.83	70886	BLDG SF	\$271,493
D2020-00-1C Correct Deteriorated Domestic Cold Water Distribution System by Demo & Replace	D2020 Domestic Water Distribution			Damage/Wear	Medium	Def Maint	\$5.27	70886	BLDG SF	\$373,559
D2020-00-2C Correct Deteriorated Domestic Hot Water Dist System by Demo & Replace	D2020 Domestic Water Distribution			Damage/Wear	Medium	Def Maint	\$6.90	70886	BLDG SF	\$489,113
D2020-00-3C Correct Deteriorated Thermal Insulation by Demo & Replace	D2020 Domestic Water Distribution			Damage/Wear	Medium	Def Maint	\$2.81	70886	BLDG SF	\$199,473
D2030-00-1C Correct Deteriorated Interior Sanitary Waste System by Demo & Replace	D2030 Sanitary Waste			Damage/Wear	Medium	Def Maint	\$2.27	70886	BLDG SF	\$160,759
D2040-00-1C Correct Deteriorated Interior Rain Water Drainage System by Demo & Replace	D2040 Rain Water Drainage			Damage/Wear	Medium	Def Maint	\$4.68	70886	BLDG SF	\$331,453

Total Cost for D20 Plumbing \$1,825,882

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D30 HVAC

CorrectionName	Subsystem Name	AreaName	Correction Notes	Reason	Priority	Category	UnitCost	Quantity	UOM	Cost
D3010-00-1C Correct Deteriorated or Inadequate Energy Supply System by Demo & Replace	D3010 Energy Supply			Damage/Wear	Low	Def Maint	\$0.56	70886	BLDG SF	\$39,696
D3020-00-2C Correct Deteriorated Heat Generating System by Demo & Replace (Median)	D3020 Heat Generation			Damage/Wear	Low	Def Maint	\$1.48	70886	BLDG SF	\$105,195
D3030-00-2C Correct Deteriorated Cooling Generating System by Demo & Replace (Median)	D3030 Refrigeration		School currently is cooled by all DX units.	Damage/Wear	High	Def Maint	\$2.11	70886	BLDG SF	\$149,653
D3040-00-2C Correct Deteriorated HVAC Distribution System by Demo & Replace (Median)	D3040 HVAC Distribution			Damage/Wear	High	Def Maint	\$3.92	70886	BLDG SF	\$277,873
D3040-00-5C Correct Deteriorated HVAC Exhaust System by Demo & Replace (Median)	D3040 HVAC Distribution			Damage/Wear	Medium	Def Maint	\$1.37	70886	BLDG SF	\$97,256
D3050-00-2C Correct Deteriorated Terminal & Package Units by Demo & Replace (Median)	D3050 Terminal & Packaged Units			Damage/Wear	Low	Def Maint	\$2.48	35443	BLDG SF	\$87,828
D3050-00-2C Correct Deteriorated Terminal & Package Units by Demo & Replace (Median)	D3050 Terminal & Packaged Units		Replace DX Uvs.	Damage/Wear	High	Def Maint	\$2.48	35443	BLDG SF	\$87,828
D3060-00-2C Correct Deteriorated Controls & Instrumentation System by Demo & Replace (Median)	D3060 HVAC Instrumentation & Controls			Functionality	High	Def Maint	\$6.08	70886	BLDG SF	\$430,703
D3070-00-1C Correct Out of Balance HVAC System by Balance System	D3070 Testing Adjusting & Balancing			Functionality	High	Def Maint	\$0.31	70886	BLDG SF	\$21,893
Total Cost for D30 HVAC										\$1,298,064

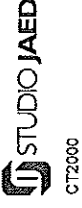
D40 Fire Protection

CorrectionName	Subsystem Name	AreaName	Correction Notes	Reason	Priority	Category	UnitCost	Quantity	UOM	Cost
D4010-00-1C Correct Deteriorated or Inadequate Sprinkler System by Demo & Replace	D4010 Sprinklers			Damage/Wear	Low	Def Maint	\$4.73	23392	BLDG SF	\$110,691
D4010-00-2C Correct Non Existing Sprinkler System by New Installation	D4010 Sprinklers			Life Safety	Medium	Def Maint	\$8.96	47253	BLDG SF	\$423,387

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Total Cost for D40 Fire Protection

\$534,078

D50 Electrical

CorrectionName	Subsystem Name	AreaName	Correction Notes	Reason	Priority	Category	UnitCost	Quantity	UOM	Cost
D5010-00-2C Correct Deteriorated or Inadequate Building Electrical System by Demo & Replace (Median)	D5010 Electrical Service & Distribution			Damage/Wear	Medium	Def Maint	\$8.65	70886	BLDG SF	\$613,306
D5010-00-5C Correct Deteriorated or Inadequate Distribution System by Demo & Replace (Median)	D5010 Electrical Service & Distribution			Damage/Wear	Medium	Def Maint	\$3.54	70886	BLDG SF	\$251,078
D5010-00-8C Correct Inadequate Power Outlets by Add New (Median)	D5010 Electrical Service & Distribution		Add an additional 4-6 outlets per classroom.	Functionality	High	Def Maint	\$0.48	70886	BLDG SF	\$33,742
D5020-00-2C Correct Deteriorated or Inadequate Interior Lighting by Demo & Replace (Median)	D5020 Lighting & Branch Wiring			Damage/Wear	High	Def Maint	\$2.27	17722	BLDG SF	\$40,193
D5020-00-2C Correct Deteriorated or Inadequate Interior Lighting by Demo & Replace (Median)	D5020 Lighting & Branch Wiring			Damage/Wear	Low	Def Maint	\$2.27	53165	BLDG SF	\$120,578
D5020-00-5C Correct Deteriorated or Inadequate Exterior Lighting by Demo & Replace (Median)	D5020 Lighting & Branch Wiring			Damage/Wear	Low	Def Maint	\$0.21	35443	BLDG SF	\$7,443
D5020-00-5C Correct Deteriorated or Inadequate Exterior Lighting by Demo & Replace (Median)	D5020 Lighting & Branch Wiring		Path from S. Quincy to Gym needs lighting.	Life Safety	High	Def Maint	\$0.21	35443	BLDG SF	\$7,443
D5020-00-7C Correct Deteriorated or Inadequate Emerg Lighting System by Demo & Replace (Median)	D5020 Lighting & Branch Wiring			Damage/Wear	Low	Def Maint	\$6.65	70886	BLDG SF	\$471,392
D5030-00-2C Correct Deteriorated or Inadequate Fire Alarm System by Demo & Replace (Median)	D5030 Fire Alarm System			Damage/Wear	Low	Def Maint	\$4.82	70886	BLDG SF	\$341,387
D5031-00-2C Correct Deteriorated or Inadequate Security System by Demo & Replace (Median)	D5031 Security Access & Surveillance		The second floor does not have motion sensors. The roof top is easily accessible, which has resulted in several break-ins.	Functionality	Immediate	Def Maint	\$0.28	17722	BLDG SF	\$4,962
D5031-00-2C Correct Deteriorated or Inadequate Security System by Demo & Replace (Median)	D5031 Security Access & Surveillance			Damage/Wear	Medium	Def Maint	\$0.28	53165	BLDG SF	\$14,866

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Correction Name	Subsystem Name	Area Name	Correction Notes	Reason	Priority	Category	Unit Cost	Quantity	UOM	Cost
D5032-00-2C Correct Deteriorated or Inadequate Clock System by Demo & Replace (Median)	D5032 Clock & Program Systems		No master clock system exists.	Functionality	High	Def Maint	\$0.91	70886	BLDG SF	\$64,506
D5033-00-2C Correct Deteriorated or Inadequate Intercom System by Demo & Replace (Median)	D5033 Intercom Systems			Damage/Wear	High	Def Maint	\$0.29	70886	BLDG SF	\$20,840
D5034-00-1C Correct Deteriorated or Inadequate Cable TV System by Demo & Replace (Median)	D5034 Television Systems			Damage/Wear	Low	Def Maint	\$0.71	70886	BLDG SF	\$50,613
D5035-00-2C Correct Deteriorated or Inadequate Telephone System by Demo & Replace (Median)	D5035 Telephone System			Damage/Wear	Low	Def Maint	\$0.32	70886	BLDG SF	\$22,825
D5036-00-2C Correct Deteriorated or Inadequate Technology System by Demo & Replace (Median)	D5036 Technology System			Damage/Wear	Low	Def Maint	\$0.70	53165	BLDG SF	\$37,216
D5036-00-2C Correct Deteriorated or Inadequate Technology System by Demo & Replace (Median)	D5036 Technology System			Functionality	High	Def Maint	\$0.70	17722	BLDG SF	\$12,405

Total Cost for D50 Electrical \$2,114,816

G20 Site Improvements

Correction Name	Subsystem Name	Area Name	Correction Notes	Reason	Priority	Category	Unit Cost	Quantity	UOM	Cost
G2010-00-1C Correct Deteriorated Roadways by Patch & Repair (Low)	G2010 Roadways			Damage/Wear	Medium	Def Maint	\$10.14	670	SQYD	\$6,791
G2020-00-1C Correct Deteriorated Parking Lot by Patch & Repair (Low)	G2020 Parking Lots			Damage/Wear	Medium	Def Maint	\$10.14	2065	SQYD	\$20,931
G2030-00-7C Correct Deteriorated Pedestrian Paving by Patch & Repair (Low)	G2030 Pedestrian Paving		Paving surfaces at ADA ramp near gym have settled.	Damage/Wear	High	Def Maint	\$0.64	11000	SQFT	\$7,084
G2040-00-1C Correct Deteriorated or Inadequate Fencing by Repair and or Refinish (Low)	G2040 Site Development			Damage/Wear	Low	Def Maint	\$25.07	3600	LNFT	\$90,256
G2040-00-4C Correct Poor Grading by Regrade & Reseed	G2040 Site Development		Landscape mesh exposed in playing area causing tripping hazard and track surface is uneven.	Functionality	High	Def Maint	\$0.35	45000	SQFT	\$15,750
G2040-00-5C Correct Deteriorated Conc Retaining Wall by Demo & Replace including Guardrail	G2040 Site Development		Wall at elevated amphitheater at rear of lot	Damage/Wear	High	Def Maint	\$37.24	800	SQFT	\$29,792

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Total Cost for G20 Site Improvements \$170,614

Total for: Randolph Elementary School \$6,611,241

Total Assessment Cost for Selection: \$6,611,241

Assessment Summary by Priority

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High	\$1,229,156
Medium	\$3,521,759
Low	\$1,855,365

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Ten Year Life Cycle Cost Report by System

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Task Type: Replacement

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
A10 Foundations										
A20 Basement Construction										
B10 Superstructure										
B20 Exterior Enclosure										
B30 Roofing			\$267,106.19							
G10 Interior Construction								\$21,615.15		\$79,176.56
G20 Stairs										
C30 Interior Finishes				\$288,597.89			\$330,039.58			\$7,689.68
D10 Conveying										
D20 Plumbing										\$37,340.66
D30 HVAC			\$559,516.79		\$465,900.19		\$167,198.70			\$362,737.87
D40 Fire Protection	\$159,535.24		\$341,902.90							
D50 Electrical	\$1,241,838.86		\$164,818.90		\$56,368.17			\$87,992.89		
E10 Equipment										
E20 Furnishings				\$108,335.90						\$97,352.44
F10 Special Construction										
F20 Selective Demolition										
G10 Site Preparation										
G20 Site Improvements							\$6,276.05			\$560,764.70
G30 Site Civil Mech Utilities										
G40 Site Electrical Utilities										
G90 Other Site Construction										
H10 Additional Space Requirements										
Z10 General Requirements										
TOTALS	\$1,401,374.10		\$1,333,344.68	\$396,933.79	\$522,268.37		\$503,574.32	\$109,608.04		\$1,145,055.91