



Arlington  
Public  
Schools



Swanson  
MIDDLE SCHOOL

# Swanson Middle School Feasibility Study

9/23/2025

## Abbreviated Version



Arlington Public Schools - Swanson Middle School Long Term Study

Crabtree, Rohrbaugh & Associates - Architects



Coversheet

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# INTRODUCTION

## Swanson Middle Schools - Long Term Study

1. The goal of this long term study is to provide Arlington Public Schools with an analysis of the existing conditions at Swanson Middle School and options for the future utilization of the building and site. The options developed provide options for comprehensive renovations and additions to maximize the short and long term utilization. This study is considered to be a benchmark report, developed to provide the School Board and Administration with the information and resources to be able to implement an improvement plan and guide facility maintenance, upgrades, renovations and additions into the future.

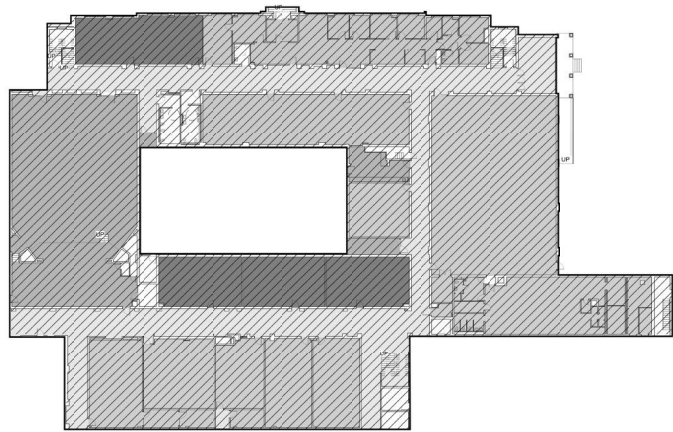
### 2. The Long Term Study Team

- Architect - Crabtree, Rohrbaugh & Associates, Charlottesville, VA
- Civil Engineer - Timmons Group, Ashburn, VA
- Structural Engineer - Onyx Design, Reston, VA
- Mechanical, Electrical, Plumbing Engineer - CMTA, Richmond, VA
- Cost Estimator - Forella Group, Chantilly, VA

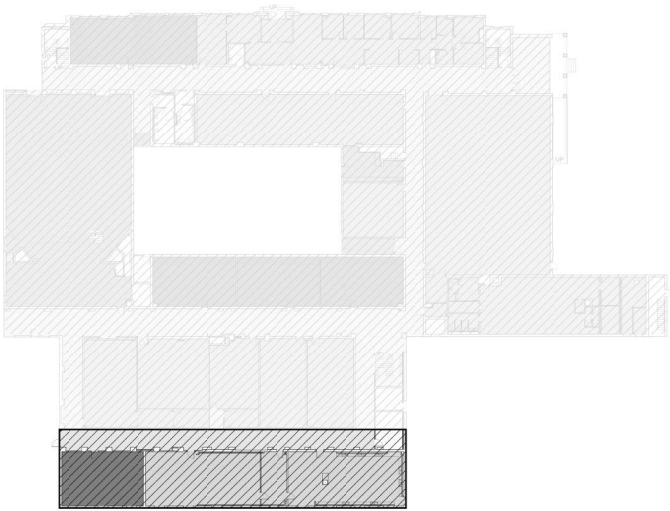




HISTORY OF CONSTRUCTION  
Swanson Middle Schools - Long Term Study



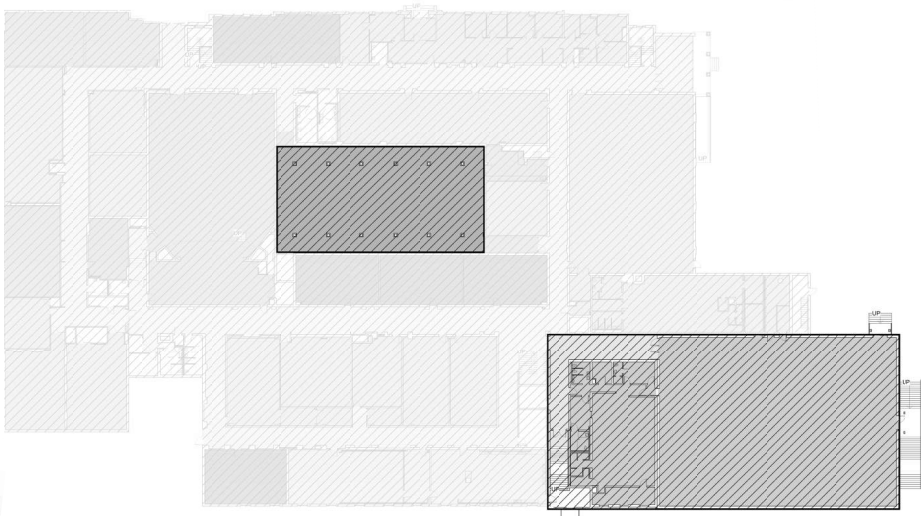
1939 ORIGINAL BUILDING



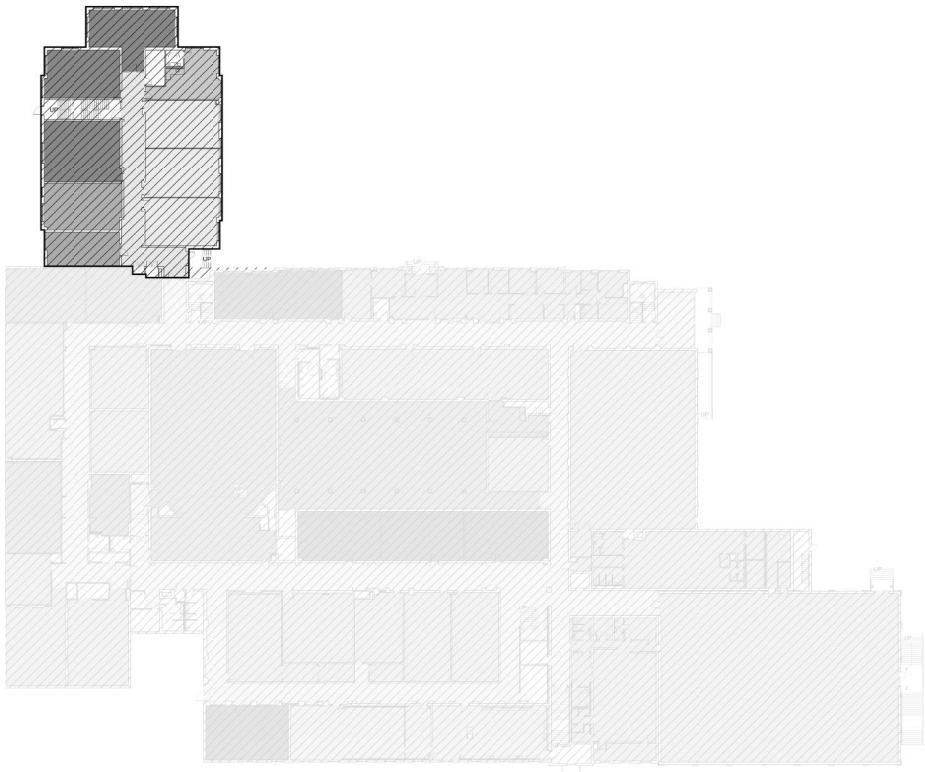
1942 ADDITION



1955 ADDITION



1968 ADDITIONS



2003 ADDITION

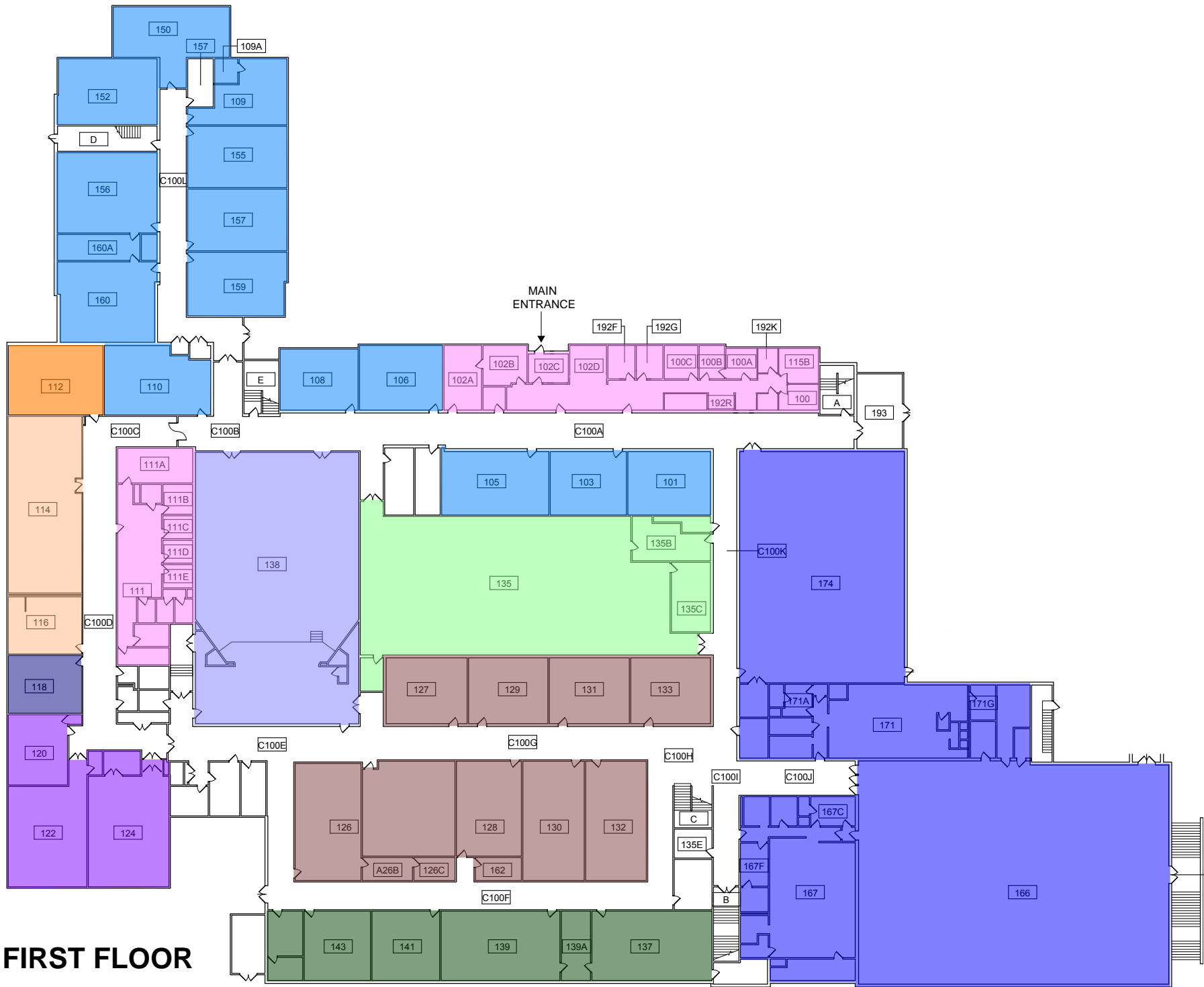


ADDITION AREA



# ANALYSIS OF EXISTING BUILDING UTILIZATION

## Swanson Middle Schools - Long Term Study



ANALYSIS OF EXISTING BUILDING UTILIZATION  
Swanson Middle Schools - Long Term Study



# ANALYSIS OF EXISTING BUILDING UTILIZATION

## Swanson Middle Schools - Long Term Study

Arlington Public Schools  
Educational Program - VDOE v Swanson Middle School

Educational Space	Swanson MS	Capacity/Clsrcm	Total Capacity	VDOE (900 STUDENTS)	Recommended SF	APS Program	Capacity/Clsrcm	Total Capacity
6th Grade Core	13	25	325	10	700sf	18	25	450
7th Grade Core	14	25	350	10	700sf	18	25	450
8th Grade Core	10	25	250	10	700sf	18	25	450
	37	Subtotal	925			54	Subtotal	1350
	50	Subtotal plus 10+	1018				Subtotal plus 10+	1485

Core Classrooms: Spec Ed Classroom,  
Language Arts, Literacy, Social Studies,  
Math, Science, Resource

Non-Capacity Educational Space								
Learning Cottages (World Language)	6			8	700sf			
Health Classroom	0			2	800sf			
Art Lab	1			1	1200sf			
Darkroom	0			1	340sf			
Vocal Classroom	1			1	1200sf			
Instrument Band Classroom	1			1	1200sf			
Technology Education	2			2	1600sf			
Business Information Technology	0			2	1200sf			
Agricultural Science	0			2	1600sf			
Family & Consumer Science	1			2	1600sf			
Self Contained Spec Ed	5			3	750sf			
Resource Room	0			6	400sf			
Gymnasium	1			1	10,000sf			
Auxiliary Gymnasium	1			1	500sf			
Locker/Shower/Dressing	2			2	3000sf			
Stage	1			1	1200sf			
Auditorium	1			1	10,000sf			
Dining Room and Kitchen	1			1	5,700sf			

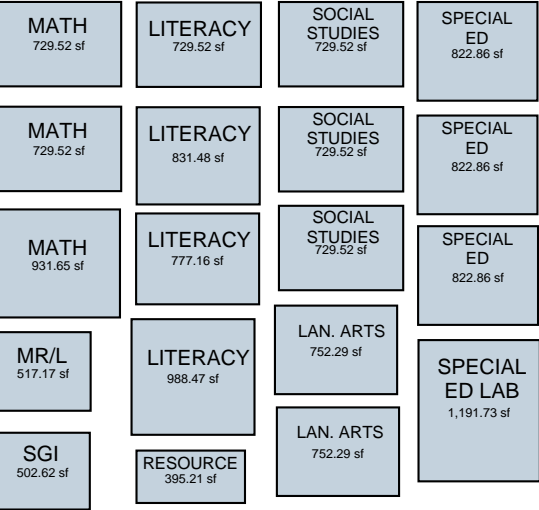


# ANALYSIS OF EXISTING BUILDING UTILIZATION

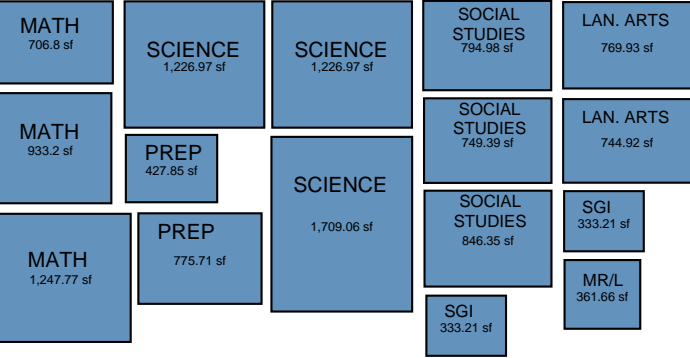
## Swanson Middle Schools - Long Term Study

### IDEALIZED PROGRAM

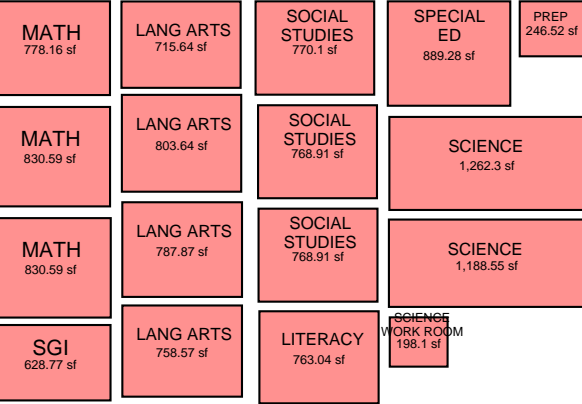
#### 6TH GRADE



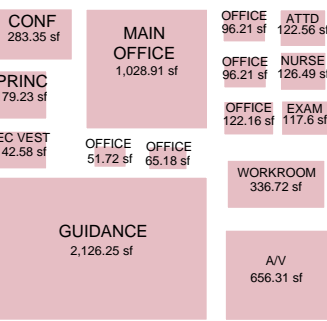
#### 7TH GRADE



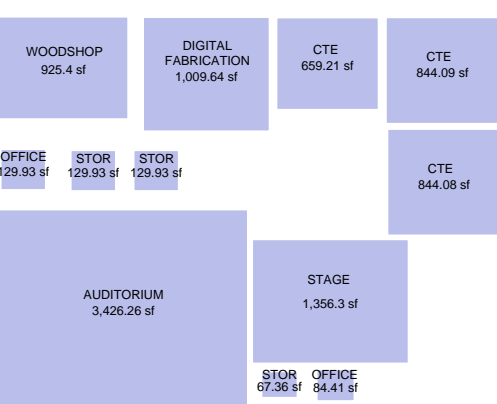
#### 8TH GRADE



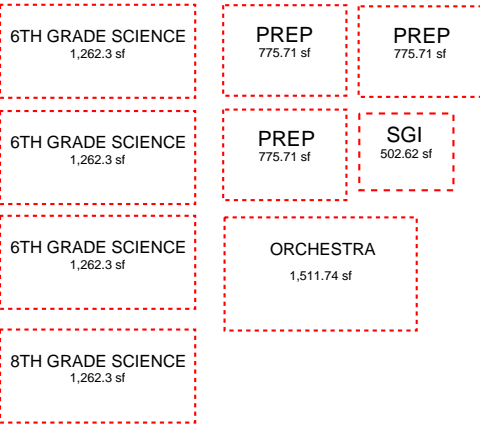
#### ADMIN



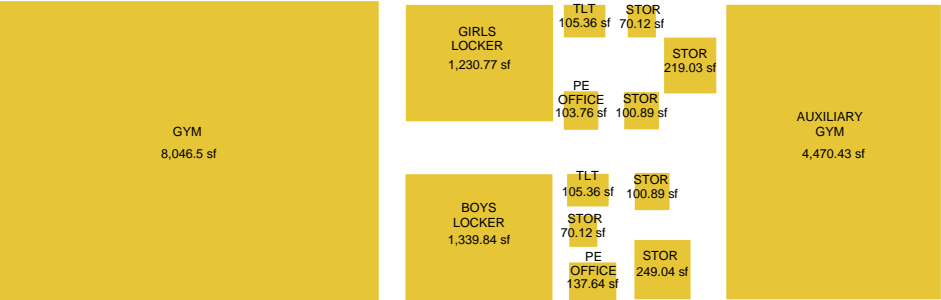
#### GROUP INSTRUCTION



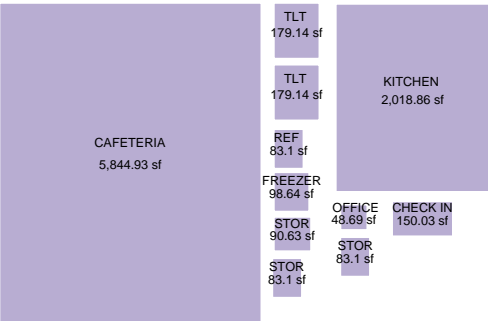
#### MISSING PROGRAM



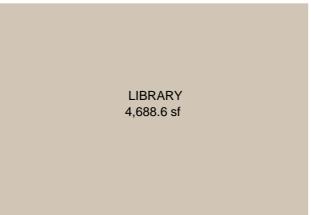
#### PHYSICAL EDUCATION DEPARTMENT



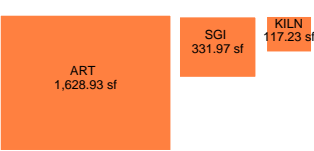
#### FOOD SERVICES



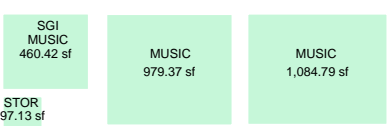
#### MEDIA CENTER



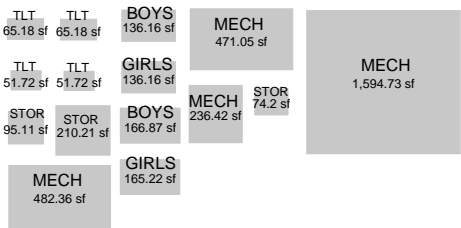
#### ART DEPARTMENT



#### MUSIC DEPARTMENT



#### BUILDING SUPPORT

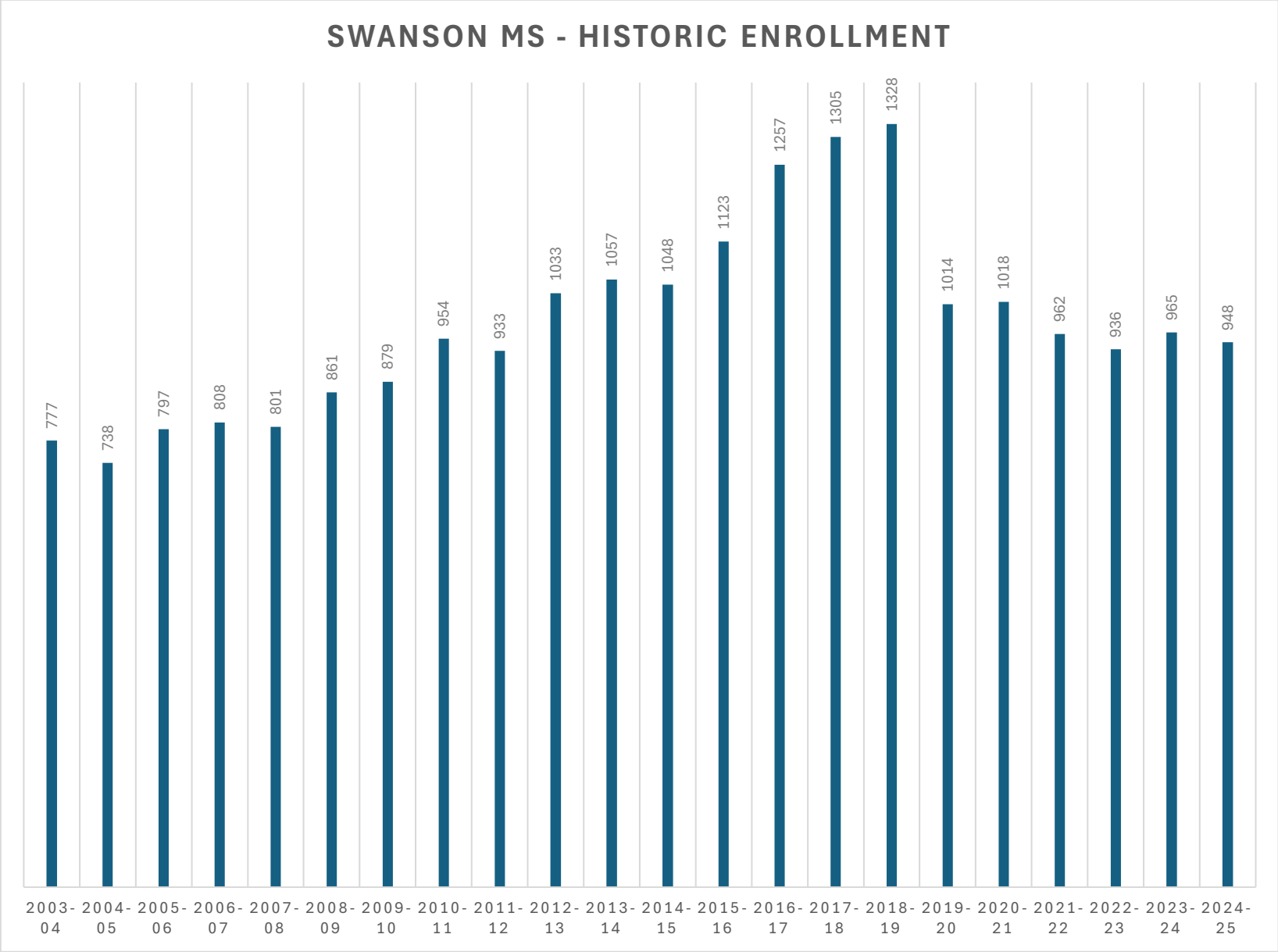


# ANALYSIS OF EXISTING BUILDING UTILIZATION

## Swanson Middle Schools - Long Term Study

Arlington Public Schools - Swanson Middle School  
Fall Enrollment

Year	6th Grade	7th Grade	8th Grade	Total
2003-04	254	245	278	777
2004-05	244	249	245	738
2005-06	287	257	253	797
2006-07	264	278	266	808
2007-08	260	260	281	801
2008-09	320	263	278	861
2009-10	293	318	268	879
2010-11	318	304	332	954
2011-12	312	314	307	933
2012-13	392	325	316	1033
2013-14	329	396	332	1057
2014-15	315	326	407	1048
2015-16	464	330	329	1123
2016-17	471	465	321	1257
2017-18	377	462	466	1305
2018-19	472	392	464	1328
2019-20	364	348	302	1014
2020-21	346	331	341	1018
2021-22	297	345	320	962
2022-23	309	289	338	936
2023-24	337	318	310	965
2024-25	334	346	314	948



# ANALYSIS OF EXISTING BUILDING UTILIZATION

## Swanson Middle Schools - Long Term Study

Swanson Middle School - - Virginia DOE Guidelines Metric  
Middle School Site

	VDOE Guidelines	Swanson MS
Number of Students	600 +	948
Acreage	24 acres	6.69 acres
Hard Surface	(2) 100ft x 120ft	0ft
Outdoor Fitness Area	100ft x 180ft	0ft
Track	200ft x 590ft	0ft
Field Game Areas	200ft x 400ft	229ft x 380ft
Tennis Courts	60ft x 120ft	0ft

10-037-054
5800 WASHINGTON BLVD ARLINGTON VA 22205

Owner
COUNTY SCHOOL BOARD OF ARLINGTON

Mailing Address

Year Built
1955

Property Class Code
215-Gen Comm - other

Neighborhood#
970000

Site Plan
N/A

Legal Description
SWANSON J H SCHOOL 291,691 SQ FT

Trade Name
SWANSON JR. HIGH SCHOOL

GFA
116076

Zoning
S-3A

Map Book/Page
051-11

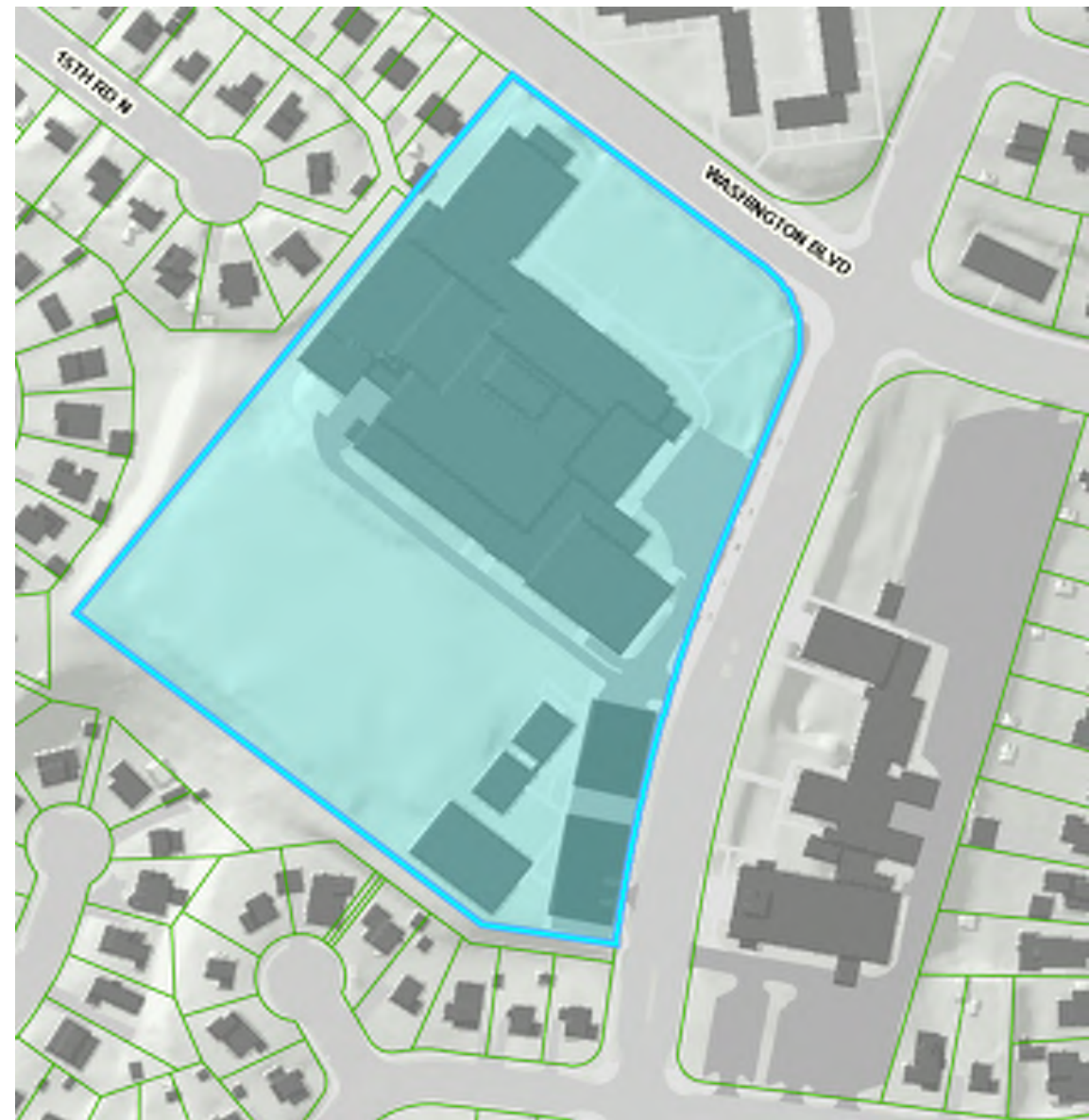
Rezoning
N/A

EU#
N/A

Lot Size
291691

Polygon
10037054

Tax Exempt
Yes





# ANALYSIS OF EXISTING BUILDING UTILIZATION

## Swanson Middle Schools - Long Term Study

### EXISTING CONDITIONS NARRATIVE

Existing building area: 138,751 sqft.

The original building was constructed in 1939 consisting of four wings enclosing a central courtyard. This building contained 12 classrooms, a library, an auditorium, a gymnasium, and a small cafeteria. Since then additions and renovations have taken place in 1942, 1955, 1968, and 2003.

#### Exterior Envelope

Modular Brick Veneer  
Aluminum Storefront Windows w/ double pane glazing  
EIFS (1955 addition)  
Painted wood cornice / fascia  
Roof - slate shingles / built-up rubber w/ ballast - insulation above decking

#### Structure

Concrete foundations  
Steel and masonry bearing  
Exterior walls are multi-wythe masonry  
Roof structure is steel joists/beams and metal deck  
Floors are cast in place concrete

#### Interior Finishes / Partitions

Masonry and metal stud partitions  
Glazed block, painted plaster, painted gypsum board, and painted CMU walls  
Flooring - vinyl composition tile, athletic wood flooring, carpet, ceramic tile, quarry tile, and sealed concrete

#### Building Condition / Recommendations

Swanson Middle School is generally in good to fair condition throughout the original building and additions. Overall the building has been well maintained, but is showing signs of wear as materials near the end of their usable life. If the building does not experience a comprehensive renovation project, the team recommends creating a capital improvement plan to address items that are near or beyond their usable life.

Program space concerns include: 18 classrooms w/out or limited daylight  
11 classrooms under 700sf - minimum area per APS guidelines.  
Additional program spaces needed (3) 6th grade science labs, (1) 8th grade science lab

Building Capacity with current space utilization is 925 students.

#### Safety/Security

Swanson Elementary has a functioning secure vestibule with direct access to the Administration suite. We will not place specific security concerns in this document. The building, in general, practices positive security procedures to keep the students and staff staff within the building.



# ANALYSIS OF EXISTING BUILDING UTILIZATION

## Swanson Middle Schools - Long Term Study

### EXISTING CONDITIONS NARRATIVE

#### Mechanical / Plumbing

Existing Conditions:

•The existing mechanical system at the middle school consists of a 4-pipe chilled water and heating hot water system serving a mix of unit ventilators, fan coil units, and rooftop air handling units. The original building dates to 1939 with multiple additions and renovations, the most significant being in 2003, which included new air-cooled chillers, air handling units, pumps, and fan coils. Boilers were last replaced in 1986 with burner upgrades in 1997. Given the age of the equipment and piping, and with the last major renovation over 20 years ago, all major components—including chillers, boilers, pumps, and hydronic accessories—have exceeded ASHRAE’s median life expectancy. Complete demolition and replacement of the mechanical systems is recommended.

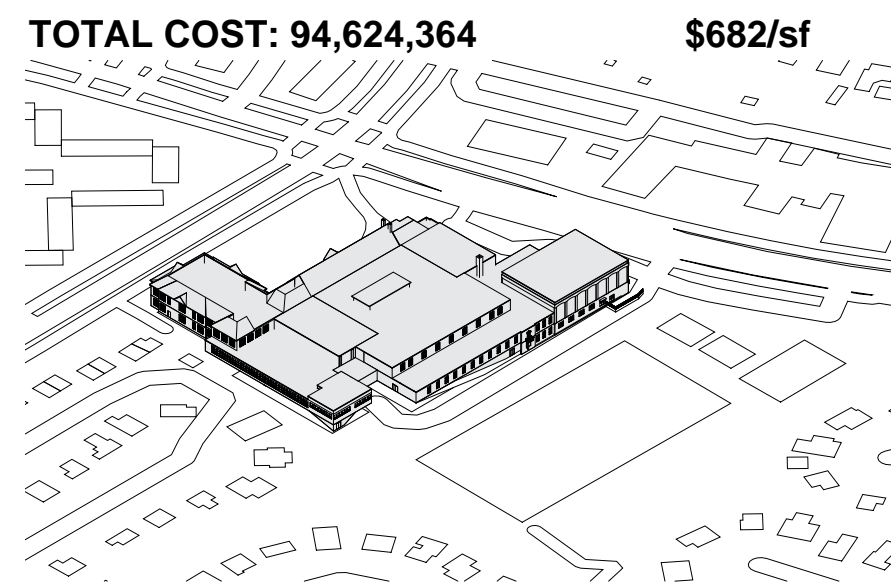
#### Electrical

Existing Conditions:

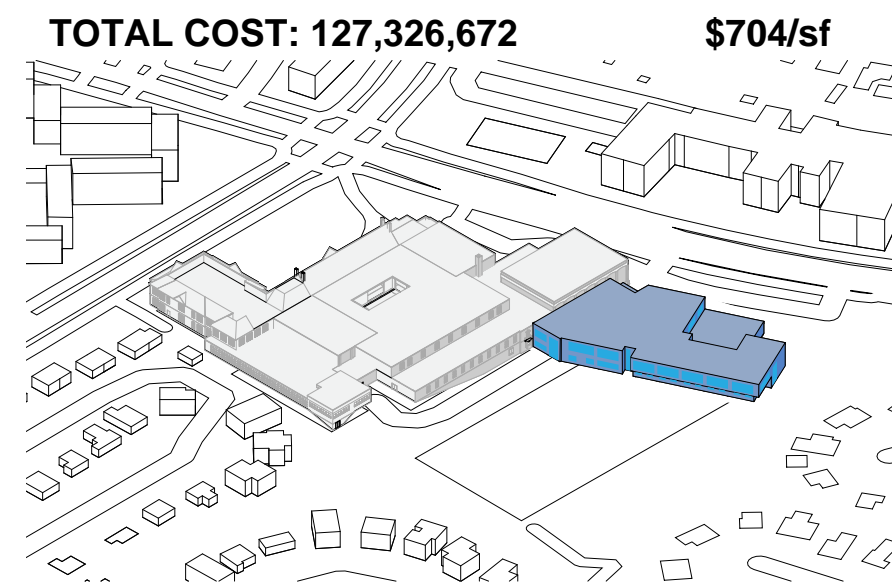
•The building’s electrical infrastructure is served by two switchboards—SWBD-1 (3000A, 480/277V) and SWBD-2 (1600A, 208/120V)—both SquareD and in good condition, intended to be reused in future renovations. However, many distribution panels date back over 40 years and should be replaced, along with feeders and branch wiring. The emergency generator and ATS are over 30 years old and beyond their service life, requiring replacement. Lighting systems consist mainly of outdated fluorescent fixtures, with gym spaces upgraded to LED. The fire alarm system (Simplex) is in fair condition but aging, with most devices exceeding their expected lifespan. Classroom technology is inconsistent, with outdated coax, AV connections, and a mix of sensors and display systems. The intercom, paging, and clock systems are aging or obsolete, while security and surveillance systems are a mix of newer and abandoned equipment, with inconsistent camera and access coverage. The existing IT closets are scattered throughout the building and, where accessible, often appear abandoned or inaccessible, indicating a lack of centralized or well-maintained network infrastructure



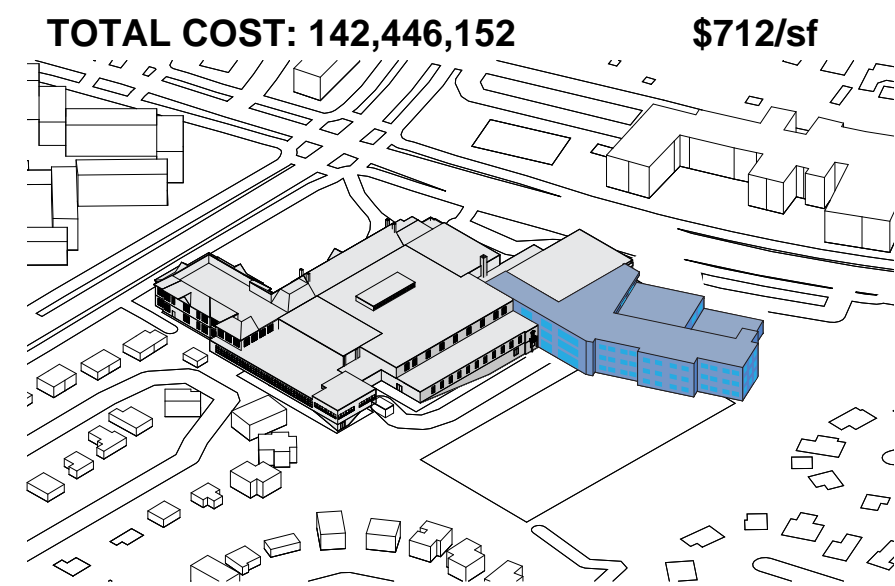
OPTIONS OVERVIEW  
Swanson Middle Schools - Long Term Study  
CONCEPT OVERVIEW



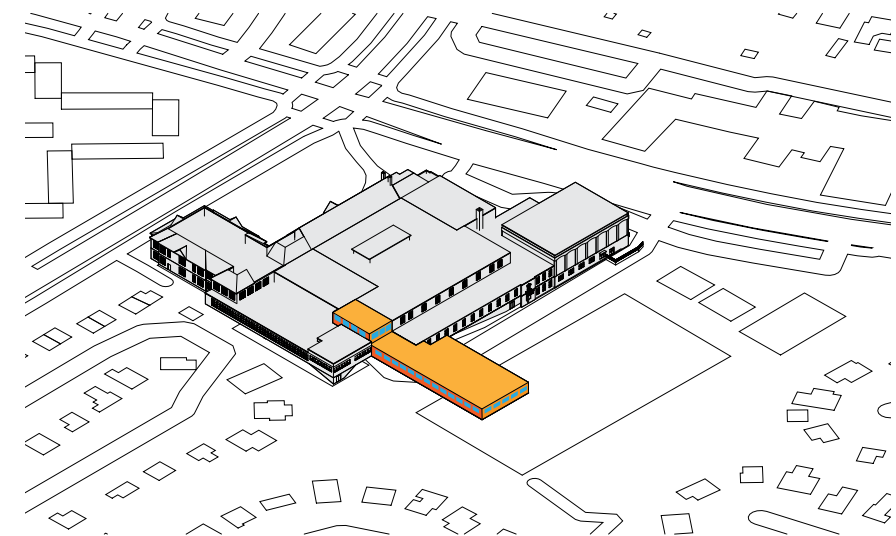
OPTION 1 | RENOVATION ONLY



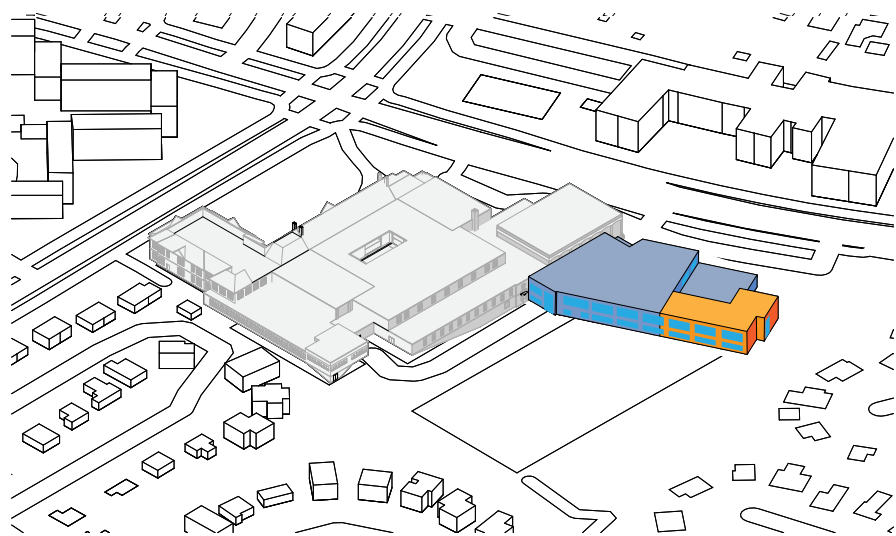
OPTION 2.1 | RENOVATION +  
NEW ADDITION



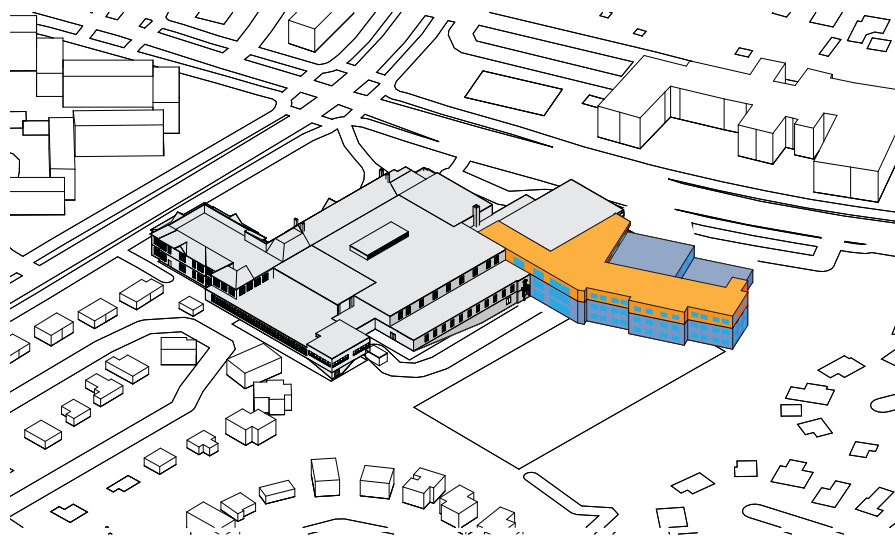
OPTION 2.2 | RENOVATION +  
NEW ADDITION



OPTION 1A | RENOVATION +  
10% CAPACITY INCREASE  
TOTAL COST: 103,315,516      \$692/sf



OPTION 2.1A | RENOVATION +  
NEW ADDITION +  
10% CAPACITY INCREASE  
TOTAL COST: 133,469,926      \$697/sf



OPTION 2.2A | RENOVATION +  
NEW ADDITION +  
10% CAPACITY INCREASE  
TOTAL COST: 148,036,977      \$703/sf

All costs are in 2025 dollars with no escalation.

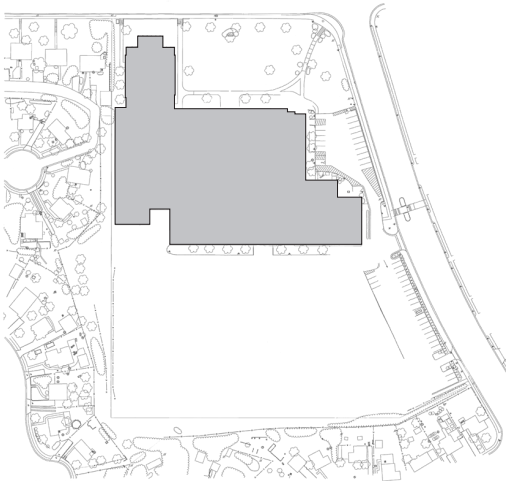


OPTIONS OVERVIEW

Swanson Middle Schools - Long Term Study

COST SUMMARY & COMPARISON

Design capacity	Classrooms per Grade	Renovation:	138,571 GSF
900	2/3	Addition:	0 GSF
		Building Total:	138,571 GSF



OPTION 1 | RENOVATION ONLY

Total project costs - \$94,624,364

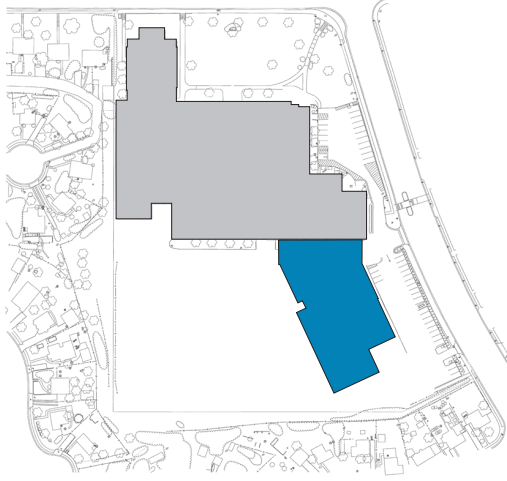
Design capacity	Classrooms per Grade	Renovation:	138,571 GSF
990	3/3	Addition:	10,480 GSF
		Building Total:	149,051 GSF



OPTION 1 | RENOVATION ONLY +  
10% FUTURE CAPACITY INCREASE

Total project costs - \$103,315,516

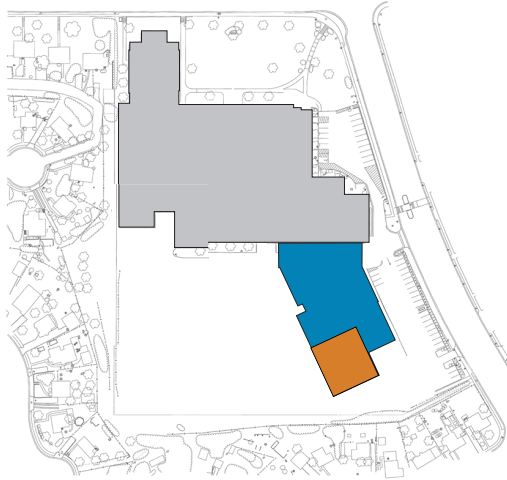
Design capacity	Classrooms per Grade	Renovation:	138,571 GSF
950	2/3	Addition:	42,225 GSF
		Building Total:	180,796 GSF



OPTION 2.1 | RENOVATION AND ADDITION  
(2 STORY)

Total project costs - \$127,326,672

Design capacity	Classrooms per Grade	Renovation:	138,571 GSF
1045	3/3	Addition:	52,705 GSF
		Building Total:	191,276 GSF



OPTION 2.1A | RENOVATION AND ADDITION  
+ 10% FUTURE CAPACITY INCREASE

Total project costs - \$133,469,926

Design capacity	Classrooms per Grade	Renovation:	138,571 GSF
950	2/3	Addition:	61,494 GSF
		Building Total:	200,065 GSF



OPTION 2.2 | RENOVATION AND ADDITION  
(3 STORY)

Total project costs - \$142,446,152

Design capacity	Classrooms per Grade	Renovation:	138,571 GSF
1045	3/3	Addition:	71,974 GSF
		Building Total:	210,545 GSF



OPTION 2.2A | RENOVATION AND ADDITION  
+ 10% FUTURE CAPACITY INCREASE

Total project costs - \$148,036,977



# ANALYSIS OF EXISTING BUILDING UTILIZATION

## Swanson Middle Schools - Long Term Study

### OPTION #1 NARRATIVE

This option is a comprehensive renovation of the existing building without an addition. This option replaces aged items on the building envelope, interior finishes, and mechanical, electrical and plumbing systems.

**Area / space analysis**

This option modifies all existing educational spaces to APS standards. This includes minimum floor area and ceiling heights. This option provides natural daylight to all but 18 classrooms. This option does not increase the existing building area of 138,751sf

**Program**

This option provides (3) classrooms per core subject less: 6th Grade - (1) Language Arts Classroom and (3) Science Labs and 8th Grade - (2) Literacy Classrooms and (1) Science Lab. This options would reduce the building capacity of 950 students to 900 students.

Educational Space	Swanson MS	Capacity/Clstrm	Total Capacity
6th Grade Core	12	25	300
7th Grade Core	12	25	300
8th Grade Core	12	25	300
	<b>36</b>	<b>Subtotal</b>	<b>900</b>

**Pros**

This option is the least expensive of the options  
This option replaces/repairs all aged items near or at the end of their usable life

**Cons**

This option reduces the student capacity of the building by making all spaces sized to meet APS guidelines  
18 Classrooms have little or no natural daylight

**Safety / Security**

Swanson Elementary has a functioning secure vestibule with direct access to the Administration suite. We will not place specific security concerns in this document. The building, in general, practices positive security procedures to keep the students and staff staff within the building. This option does not make any significant improvements in sightlines to parking areas or interior views for staff.

# ANALYSIS OF EXISTING BUILDING UTILIZATION

## Swanson Middle Schools - Long Term Study

### OPTION #1 NARRATIVE

**Mechanical - Option 1 Comprehensive Reno:**

•The proposed mechanical system will replace the existing infrastructure with a geothermal-based solution featuring a borefield of approximately 139 vertical bores (500 ft deep) depending on final design. A decoupled hydronic system will separate the geothermal loop from the building loop via a central header and pump system located in the existing boiler room or an exterior vault. The building will be conditioned using 60–100 water source heat pumps (WSHPs) installed in classrooms, supported by one to three dedicated outdoor air units (DOAUs) with energy recovery, hydronic coils, and filtration for ventilation. The geothermal loop will operate seasonally between 45–80°F, transferring heat to and from the ground for heating and cooling. New HDPE geothermal piping, copper branch runouts for WSHPs, and insulated ductwork per SMACNA standards will be installed, along with four base-mounted pumps (two per loop) for redundancy for the building’s hydronic loop.

**Electrical - Option 1 Comprehensive Reno:**

•Option 1 proposes modernizing the facility to support a Net Zero Energy (NZE) all-electric school with a highly efficient HVAC system, including a geothermal or water-source heat pump design. While the existing electrical service size is adequate, the 50+ year-old utility transformer will need to be replaced, with updates to associated infrastructure. New electrical distribution panels and transformers will be installed to reduce branch circuit lengths, and temporary 1200A service will support mobile classrooms during renovation. A new 150kW diesel generator will serve both life safety and standby systems through dedicated branches and transfer switches. A rooftop-mounted 650kWDC solar photovoltaic system will support energy goals, and sub-metering will monitor major building loads. LED lighting, daylight sensors, dimming controls, and decorative exterior lighting will meet IECC 2021 standards. New fire alarm, AV, security, access control, IT, and PA systems will be fully integrated, with emergency responder radio coverage and digital signage included. Classrooms will be upgraded with consistent power, data, AV connectivity, and dimming switching.

**Fire Protection and Plumbing Comprehensive Reno:**

- Existing fire protection and plumbing are assumed to be completely renovated. Connections to city water to be evaluated for reuse. Existing fire protection control zones to be evaluated under new designed floor plans. Standpipes to be evaluated for reuse.
- The school will receive a new domestic hot water system consisting of two water-source heat pumps connected to the geothermal central plant, an ASME-rated thermal expansion tank, in-line circulating pumps, and an ASSE 1017 compliant thermostatic mixing valve. The system will supply 140°F water with a 120°F return temperature at peak demand.

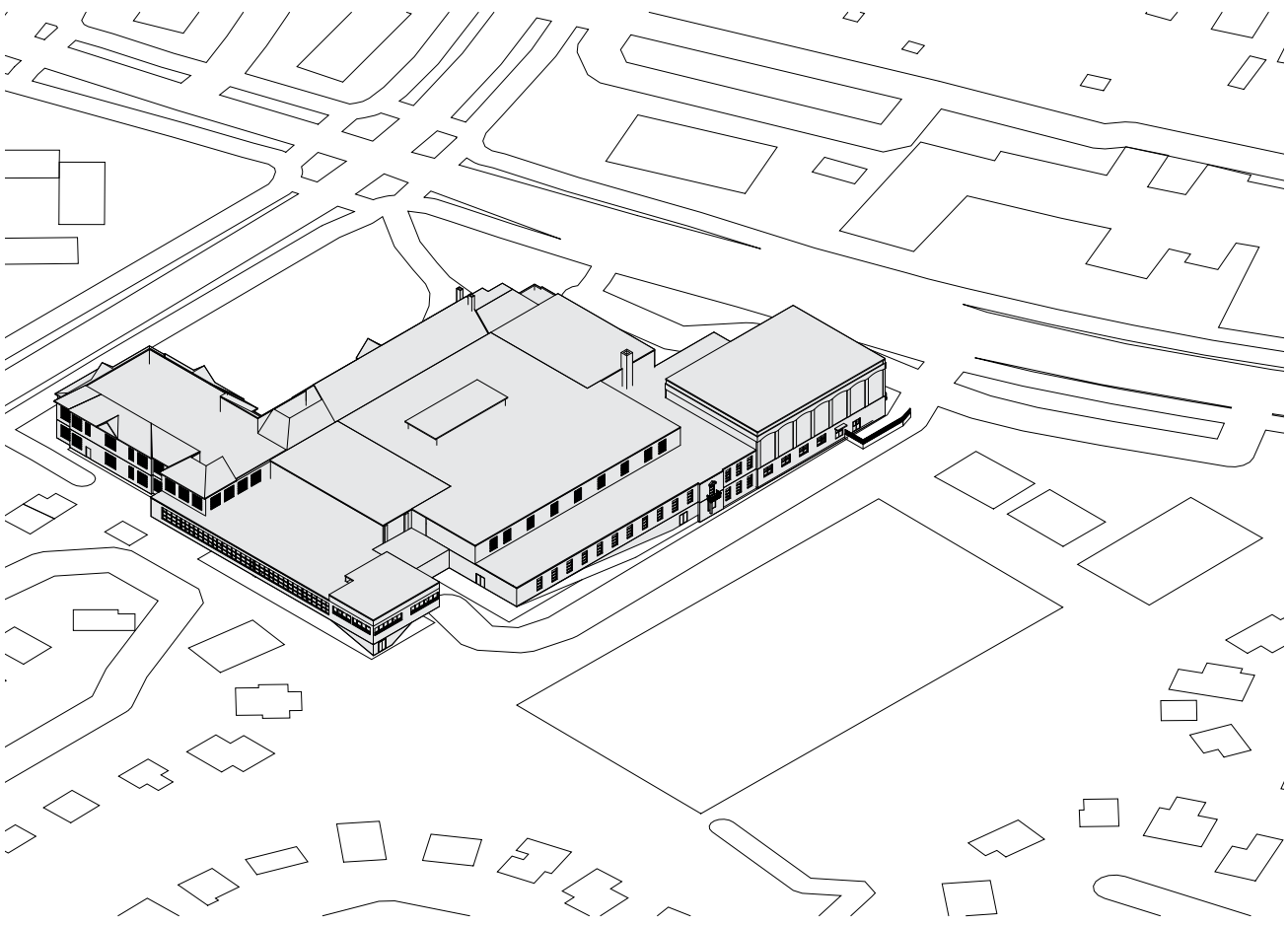




OPTION #1  
Swanson Middle Schools - Long Term Study



SITE PLAN



MASSING

# OPTION #1

## Swanson Middle Schools - Long Term Study

EXISTING SQFT

GROUND FLOOR PLAN: 16,074 SQFT

FIRST FLOOR PLAN: 82,074 SQFT

SECOND FLOOR PLAN: 40,603 SQFT

**TOTAL: 138,751 SQFT**

CORE EDUCATIONAL PROGRAM NOT INCLUDED IN RENOVATION DESIGN

6TH GRADE

(1) LANGUAGE ARTS

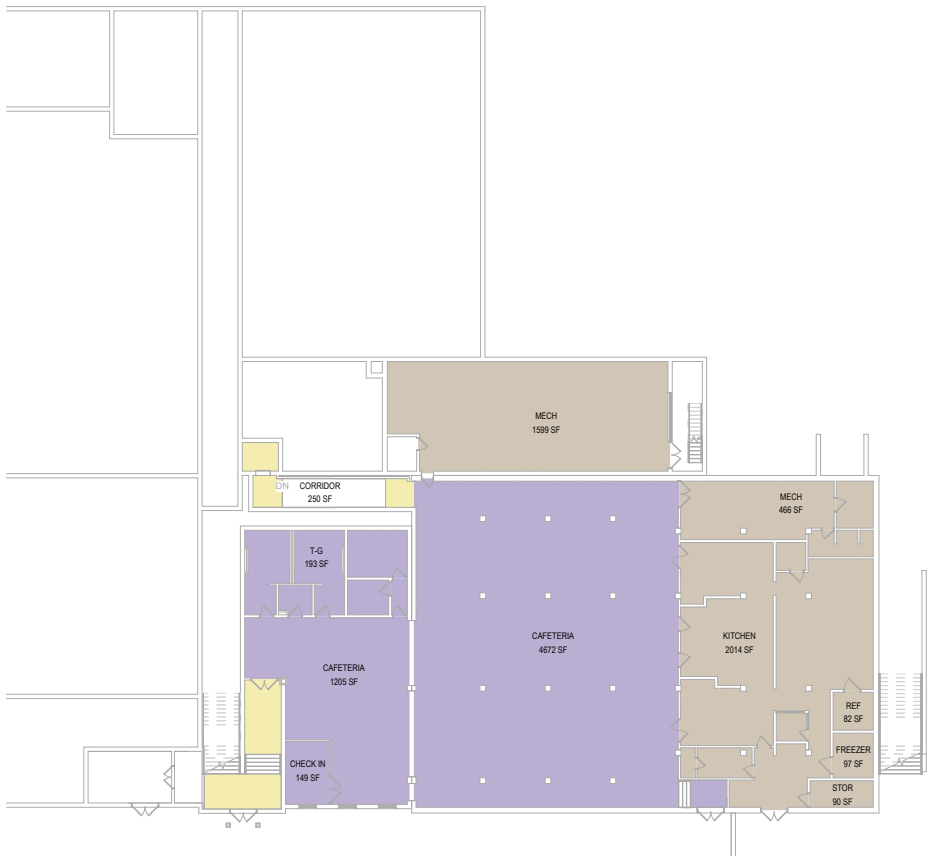
(3) SCIENCE LABS

8TH GRADE

(1) SCIENCE LAB

**LEGEND**

- ADMIN
- ASSEMBLY
- ELECTIVES / GYM
- MATH
- LITERACY
- SGI
- SPECIAL EDUCATION
- SCIENCE
- SOCIAL STUDIES
- STORAGE / UTILITY
- 10% CLASSROOM ADDITION
- WORLD LANGUAGE



GROUND FLOOR PLAN

# OPTION #1

## Swanson Middle Schools - Long Term Study





# OPTION #1

## Swanson Middle Schools - Long Term Study





OPTION #1  
Swanson Middle Schools - Long Term Study

Arlington Public Schools FY 2027-36 Capital Improvement Plan (CIP)

Project **APS Swanson Middle Renovation OPTION 1**  
A/E **Crabtree**  
Estimator **Turner & Townsend Heery & Forella**  
Date **7/23/2025**

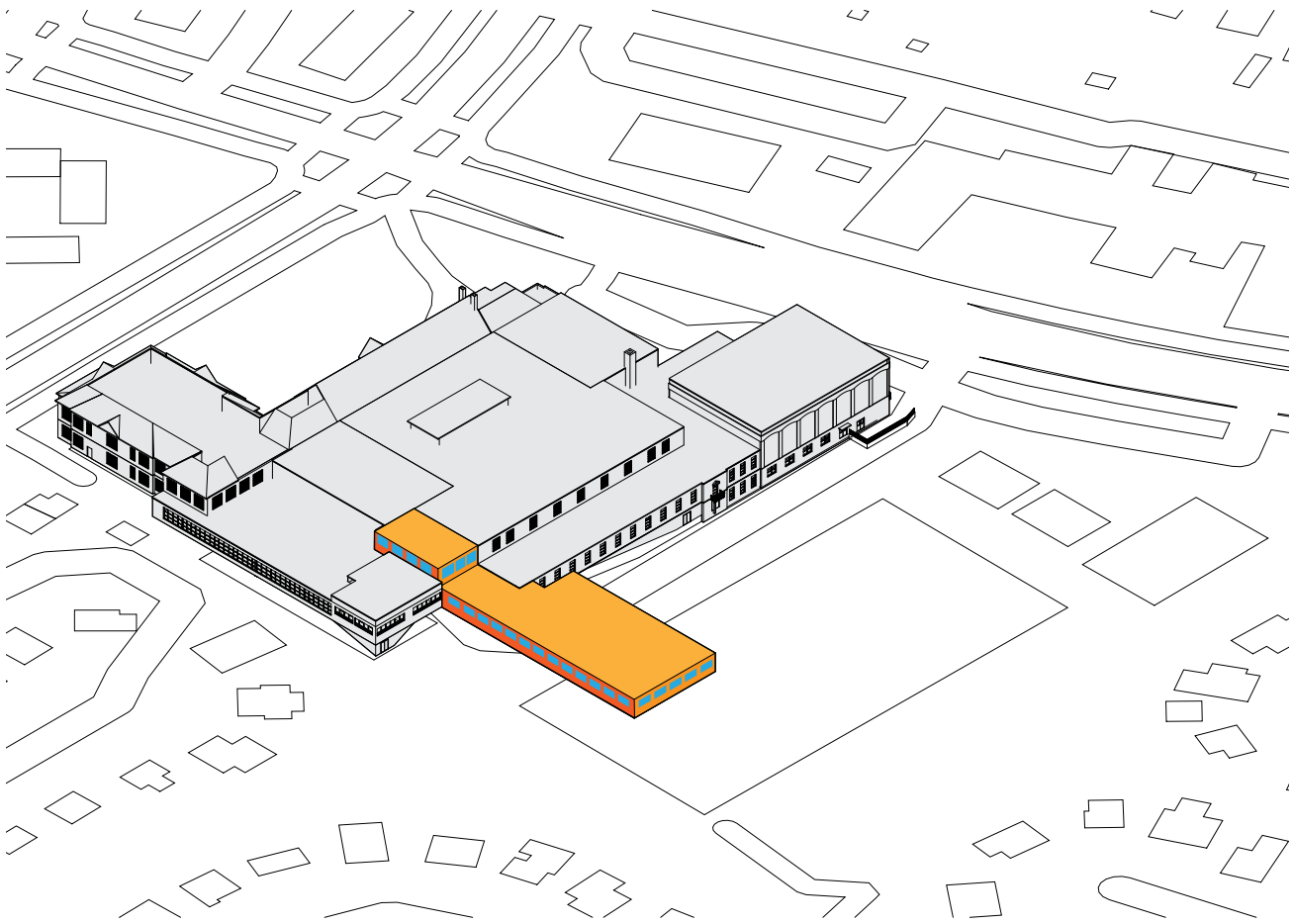


	Description	%	Value
A	<b>Subtotal - Direct Work</b>		<b>\$52,669,412</b>
B	Gen Conditions: Labor Costs only = A x %	6.0%	\$3,160,165
C	General Requirements Materials & Labor = A x %	5.0%	\$2,791,479
D	Bonds & Insurance = (A+B+C) x %	5.0%	\$2,931,053
E	<b>Subtotal - Cost of the Work</b>		<b>\$61,552,108</b>
F	GC Profit (Fee) = E x %	5.0%	\$3,077,605
G	<b>Subtotal</b>		<b>\$64,629,714</b>
H	Design Contingency = G x %	10.0%	\$6,462,971
I	<b>Subtotal - Hard Cost Construction GC Cost</b>		<b>\$71,092,685</b>
J	Owner Hard Cost Construction Contingency = I x %	10.0%	\$7,109,269
K	<b>Subtotal - Total Hard Cost of Construction (J + I)</b>		<b>\$78,201,954</b>
L	<b>Subtotal - Total Owner Soft Costs = K * %</b>	<b>21.0%</b>	<b>\$16,422,410</b>
M	<b>2025 Completion - Total Project Cost = K + L</b>		<b>\$94,624,364</b>

	Description	%	Value
	Escalation Year 1	4.25%	\$4,021,535
2026	<b>Completion - Total Project Cost</b>		<b>\$98,645,899</b>
	Escalation Year 2	4.0%	\$3,945,836
2027	<b>Completion - Total Project Cost</b>		<b>\$102,591,735</b>
	Escalation Year 3	4.0%	\$4,103,669
2028	<b>Completion - Total Project Cost</b>		<b>\$106,695,405</b>
	Escalation Year 4	4.0%	\$4,267,816
2029	<b>Completion - Total Project Cost</b>		<b>\$110,963,221</b>
	Escalation Year 5	4.0%	\$4,438,529
2030	<b>Completion - Total Project Cost</b>		<b>\$115,401,750</b>
	Escalation Year 6	3.5%	\$4,039,061
2031	<b>Completion - Total Project Cost</b>		<b>\$119,440,811</b>
	Escalation Year 7	3.5%	\$4,180,428
2032	<b>Completion - Total Project Cost</b>		<b>\$123,621,239</b>
	Escalation Year 8	3.5%	\$4,326,743
2033	<b>Completion - Total Project Cost</b>		<b>\$127,947,983</b>
	Escalation Year 9	3.5%	\$4,478,179
2034	<b>Completion - Total Project Cost</b>		<b>\$132,426,162</b>
	Escalation Year 10	3.5%	\$4,634,916
2035	<b>Completion - Total Project Cost</b>		<b>\$137,061,078</b>
	Escalation Year 11	3.5%	\$4,797,138
2036	<b>Completion - Total Project Cost</b>		<b>\$141,858,216</b>
	Escalation Year 12	3.5%	\$4,965,038
2037	<b>Completion - Total Project Cost</b>		<b>\$146,823,253</b>
	Escalation Year 13	3.5%	\$5,138,814
2038	<b>Completion - Total Project Cost</b>		<b>\$151,962,067</b>
	Escalation Year 14	3.5%	\$5,318,672
2039	<b>Completion - Total Project Cost</b>		<b>\$157,280,739</b>



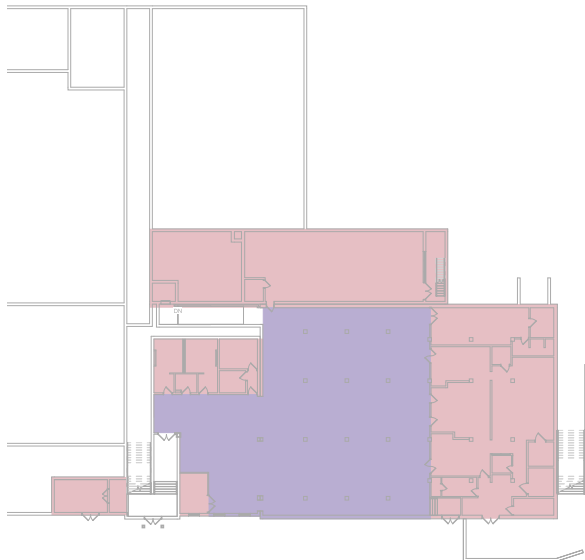
OPTION #1A  
Swanson Middle Schools - Long Term Study



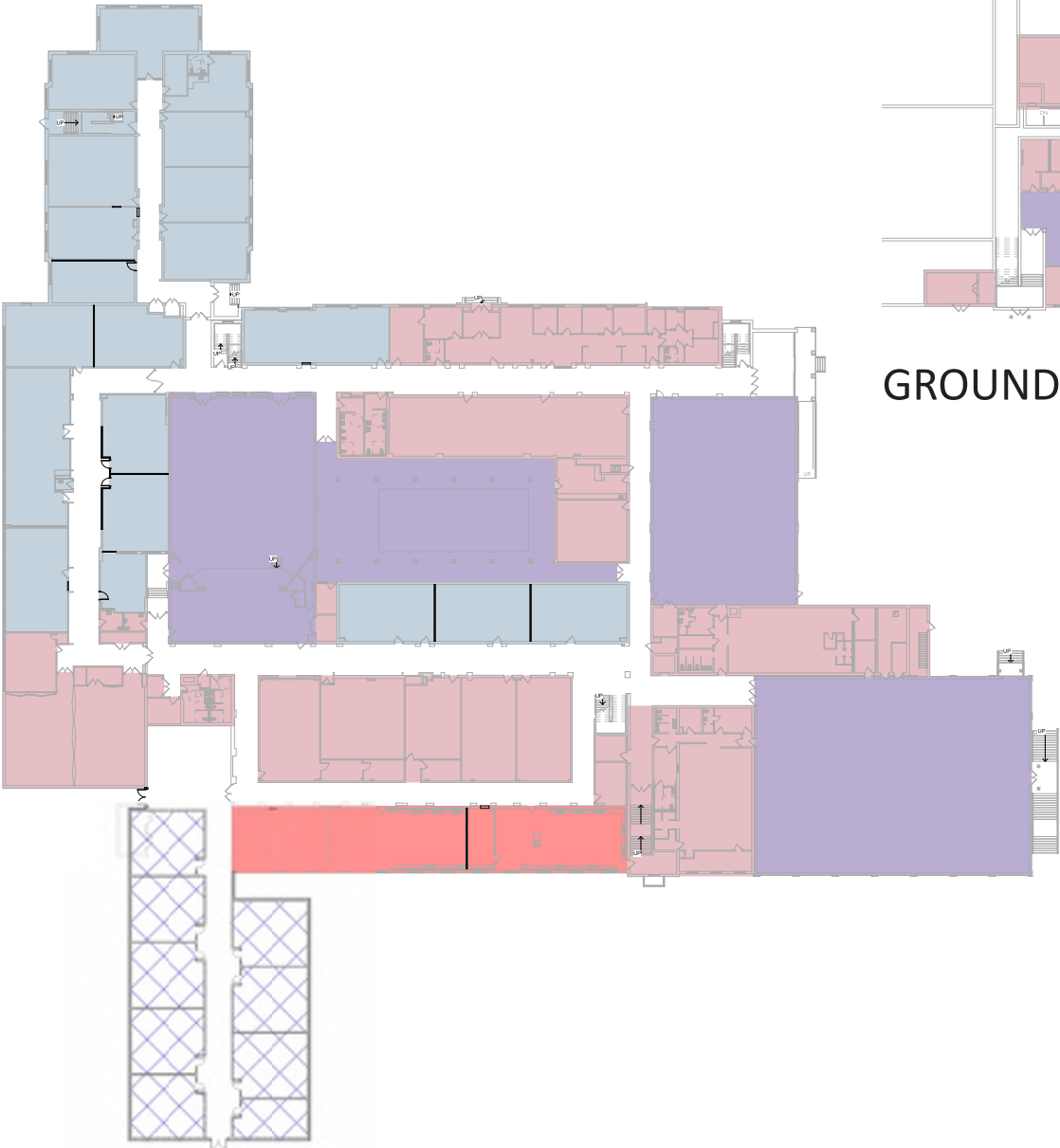


OPTION #1A  
Swanson Middle Schools - Long Term Study

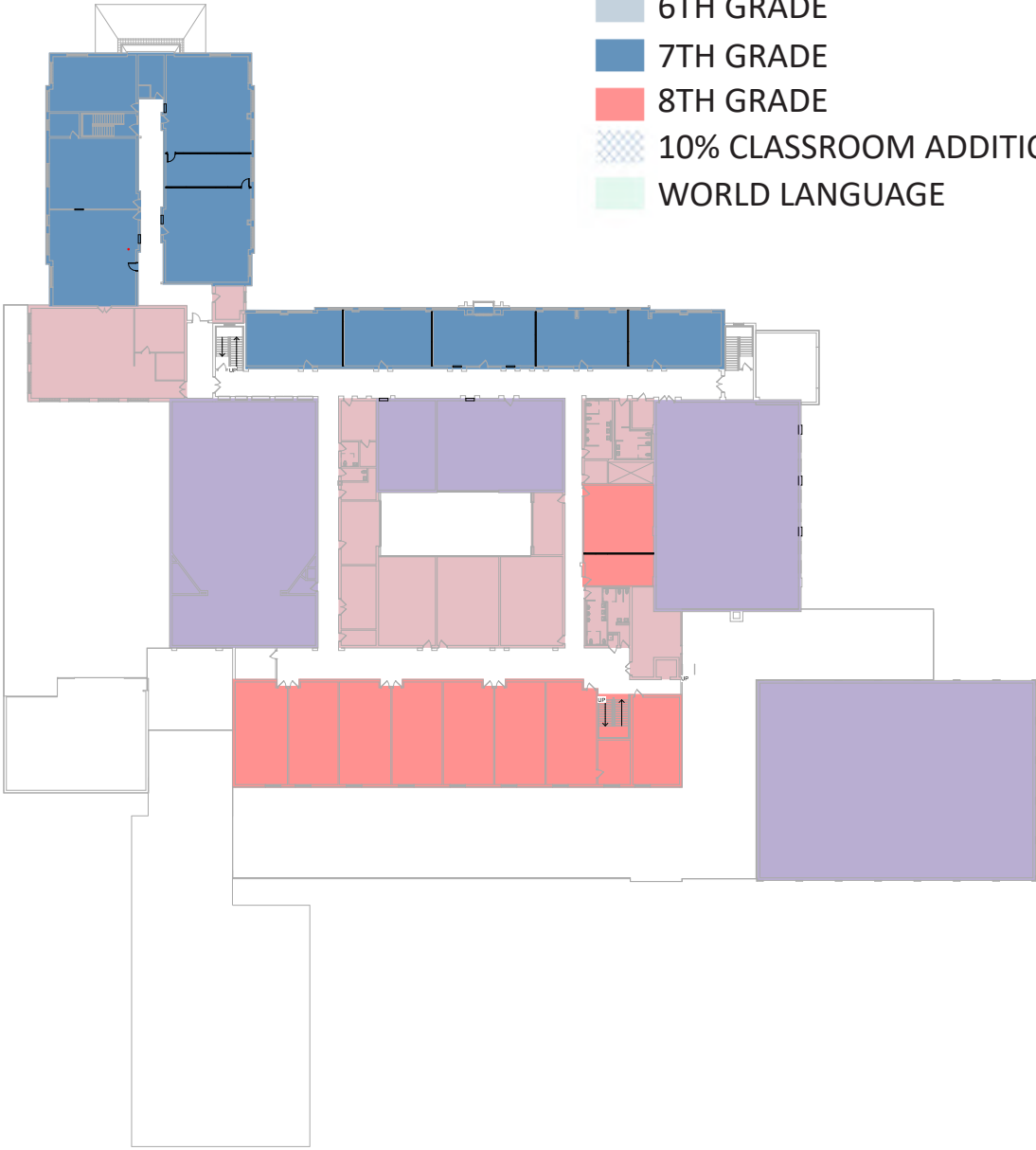
- LEGEND
- SUPPORT / SHARED SPACES
  - ASSEMBLY
  - 6TH GRADE
  - 7TH GRADE
  - 8TH GRADE
  - 10% CLASSROOM ADDITION
  - WORLD LANGUAGE



GROUND FLOOR PLAN



FIRST FLOOR PLAN



SECOND FLOOR PLAN

OPTION #1A  
Swanson Middle Schools - Long Term Study

Arlington Public Schools FY 2027-36 Capital Improvement Plan (CIP)

Project **APS Swanson Middle Renovation OPTION 1A**  
A/E **Crabtree**  
Estimator **Turner & Townsend Heery & Forella**  
Date **7/23/2025**



	Description	%	Value
A	<b>Subtotal - Direct Work</b>		<b>\$57,507,044</b>
B	Gen Conditions: Labor Costs only = A x %	6.0%	\$3,450,423
C	General Requirements Materials & Labor = A x %	5.0%	\$3,047,873
D	Bonds & Insurance = (A+B+C) x %	5.0%	\$3,200,267
E	<b>Subtotal - Cost of the Work</b>		<b>\$67,205,607</b>
F	GC Profit (Fee) = E x %	5.0%	\$3,360,280
G	<b>Subtotal</b>		<b>\$70,565,887</b>
H	Design Contingency = G x %	10.0%	\$7,056,589
I	<b>Subtotal - Hard Cost Construction GC Cost</b>		<b>\$77,622,476</b>
J	Owner Hard Cost Construction Contingency = I x %	10.0%	\$7,762,248
K	<b>Subtotal - Total Hard Cost of Construction (J + I)</b>		<b>\$85,384,724</b>
L	<b>Subtotal - Total Owner Soft Costs = K * %</b>	<b>21.0%</b>	<b>\$17,930,792</b>
M	<b>2025 Completion - Total Project Cost = K + L</b>		<b>\$103,315,516</b>

	Description	%	Value
	Escalation Year 1	4.25%	\$4,390,909
2026	<b>Completion - Total Project Cost</b>		<b>\$107,706,425</b>
	Escalation Year 2	4.0%	\$4,308,257
2027	<b>Completion - Total Project Cost</b>		<b>\$112,014,682</b>
	Escalation Year 3	4.0%	\$4,480,587
2028	<b>Completion - Total Project Cost</b>		<b>\$116,495,269</b>
	Escalation Year 4	4.0%	\$4,659,811
2029	<b>Completion - Total Project Cost</b>		<b>\$121,155,080</b>
	Escalation Year 5	4.0%	\$4,846,203
2030	<b>Completion - Total Project Cost</b>		<b>\$126,001,283</b>
	Escalation Year 6	3.5%	\$4,410,045
2031	<b>Completion - Total Project Cost</b>		<b>\$130,411,328</b>
	Escalation Year 7	3.5%	\$4,564,396
2032	<b>Completion - Total Project Cost</b>		<b>\$134,975,725</b>
	Escalation Year 8	3.5%	\$4,724,150
2033	<b>Completion - Total Project Cost</b>		<b>\$139,699,875</b>
	Escalation Year 9	3.5%	\$4,889,496
2034	<b>Completion - Total Project Cost</b>		<b>\$144,589,371</b>
	Escalation Year 10	3.5%	\$5,060,628
2035	<b>Completion - Total Project Cost</b>		<b>\$149,649,999</b>
	Escalation Year 11	3.5%	\$5,237,750
2036	<b>Completion - Total Project Cost</b>		<b>\$154,887,749</b>
	Escalation Year 12	3.5%	<b>\$5,421,071</b>
2037	<b>Completion - Total Project Cost</b>		<b>\$160,308,820</b>
	Escalation Year 13	3.5%	\$5,610,809
2038	<b>Completion - Total Project Cost</b>		<b>\$165,919,629</b>
	Escalation Year 14	3.5%	\$5,807,187
2039	<b>Completion - Total Project Cost</b>		<b>\$171,726,816</b>





# OPTION #2.1

## Swanson Middle Schools - Long Term Study

### Comprehensive Renovations and Addition

This option is a comprehensive renovation of the existing building and a two story addition. This option replaces aged items on the building envelope, interior finishes, and mechanical, electrical and plumbing systems.

**Area / space analysis**

This option modifies all existing educational spaces to APS standards. This includes minimum floor area and ceiling heights. An addition of 42,225 GSF would be constructed to at the location of the existing modular classrooms.

**Program**

This option provides (2/3) classrooms per core subject to match the classroom count per the current Swanson Middle School Program. This option provides a core classroom capacity of 950 students.

**Option 2.1**

Educational Space	Swanson MS	Capacity/Clstrm	Total Capacity
6th Grade Core	13	25	325
7th Grade Core	13	25	325
8th Grade Core	12	25	300
	<b>38</b>	<b>Subtotal</b>	<b>950</b>
	<b>50</b>	<b>Subtotal plus 10+</b>	<b>1045</b>

**Pros**

This option:

- provides the same number of classrooms per grade as existing, but increases areas and ceiling heights to meet APS program.
- replaces/repairs all aged items near or at the end of their usable life
- permits greater phasing with new classrooms in the addition to permit renovations of interior spaces during the semester
- relocates the dining room and kitchen, increasing the area and height, creating an improved dining experience
- creates a new entrance for students during school hours and for public after hours
- creates new collaboration areas for education, a gymnasium lobby and a new media center

**Cons**

This option will have an impact on a small portion of the outdoor field area for phys ed and athletics

18 Classrooms have little or no natural daylight

**Safety / Security**

Swanson Elementary has a functioning secure vestibule with direct access to the Administration suite. We will not place specific security concerns in this document. The building, in general, practices positive security procedures to keep the students and staff staff within the building. This option does not make any significant improvements in sightlines to parking areas or interior views for staff.

# OPTION #2.1

## Swanson Middle Schools - Long Term Study

### Comprehensive Renovations and Addition

**Mechanical - Option 2.1 Comprehensive Reno – 2 story addition:**

The proposed mechanical system will replace the existing infrastructure with a geothermal-based solution featuring a borefield of approximately 160 vertical bores (500 ft deep) depending on final design. A decoupled hydronic system will separate the geothermal loop from the building loop via a central header and pump system located in the existing boiler room or an exterior vault. The building will be conditioned using 80 water source heat pumps (WSHPs) installed in classrooms, supported by three dedicated outdoor air units (DOAUs) with energy recovery, hydronic coils, and filtration for ventilation. The geothermal loop will operate seasonally between 45–80°F, transferring heat to and from the ground for heating and cooling. New HDPE geothermal piping, copper branch runouts for WSHPs, and insulated ductwork per SMACNA standards will be installed, along with four base-mounted pumps (two per loop) for redundancy for the building’s hydronic loop.

**Electrical - Option 2.1 Comprehensive Reno – 2 story addition:**

Option 2 supports a Net Zero Energy (NZE) all-electric school, maintaining the existing electrical service but replacing the outdated utility transformer, and includes a two-story addition. New distribution panels and transformers will be installed throughout both the existing building and a proposed addition to optimize circuit lengths. Temporary classrooms will be supported by a new 1200A service and necessary low-voltage connections. The existing modular classrooms will need to be relocated or demolished due to their conflict with the new layout. A new 150kW diesel generator will support life safety and standby loads, while a rooftop 650kWDC solar PV system will be installed, with metering for various building systems. LED lighting will be fully upgraded to meet IECC 2021 with occupancy sensors, dimming, daylighting where applicable, and decorative lighting at entrances. Systems upgrades include a fully addressable fire alarm with voice evacuation, modern AV systems, integrated access control and surveillance, emergency responder DAS, digital signage, and a full IT overhaul with new CAT6/6A infrastructure. Classrooms will feature consistent power/data layouts, dimmable lighting, paging systems, and WAPs, aligning with modern educational standards.

**Fire Protection and Plumbing - Option 2.1 Comprehensive Reno – 2 story addition:**

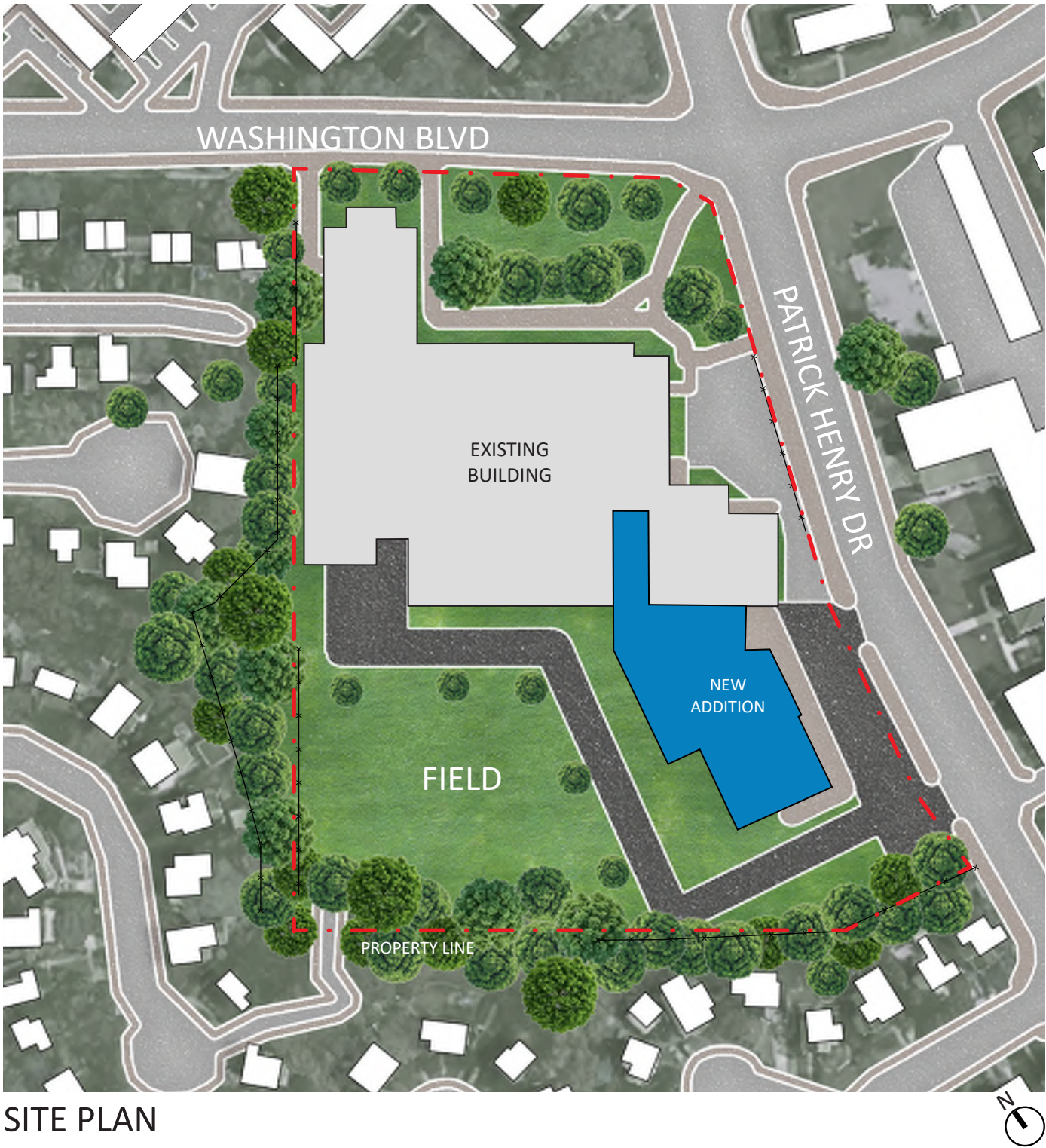
Existing fire protection and plumbing are assumed to be completely renovated. Connections to city water to be evaluated for reuse. Existing fire protection control zones to be evaluated under new designed floor plans. Standpipes to be evaluated for reuse.

- The school will receive a new domestic hot water system consisting of two water-source heat pumps connected to the geothermal central plant, an ASME-rated thermal expansion tank, in-line circulating pumps, and an ASSE 1017 compliant thermostatic mixing valve. The system will supply 140°F water with a 120°F return temperature at peak demand.

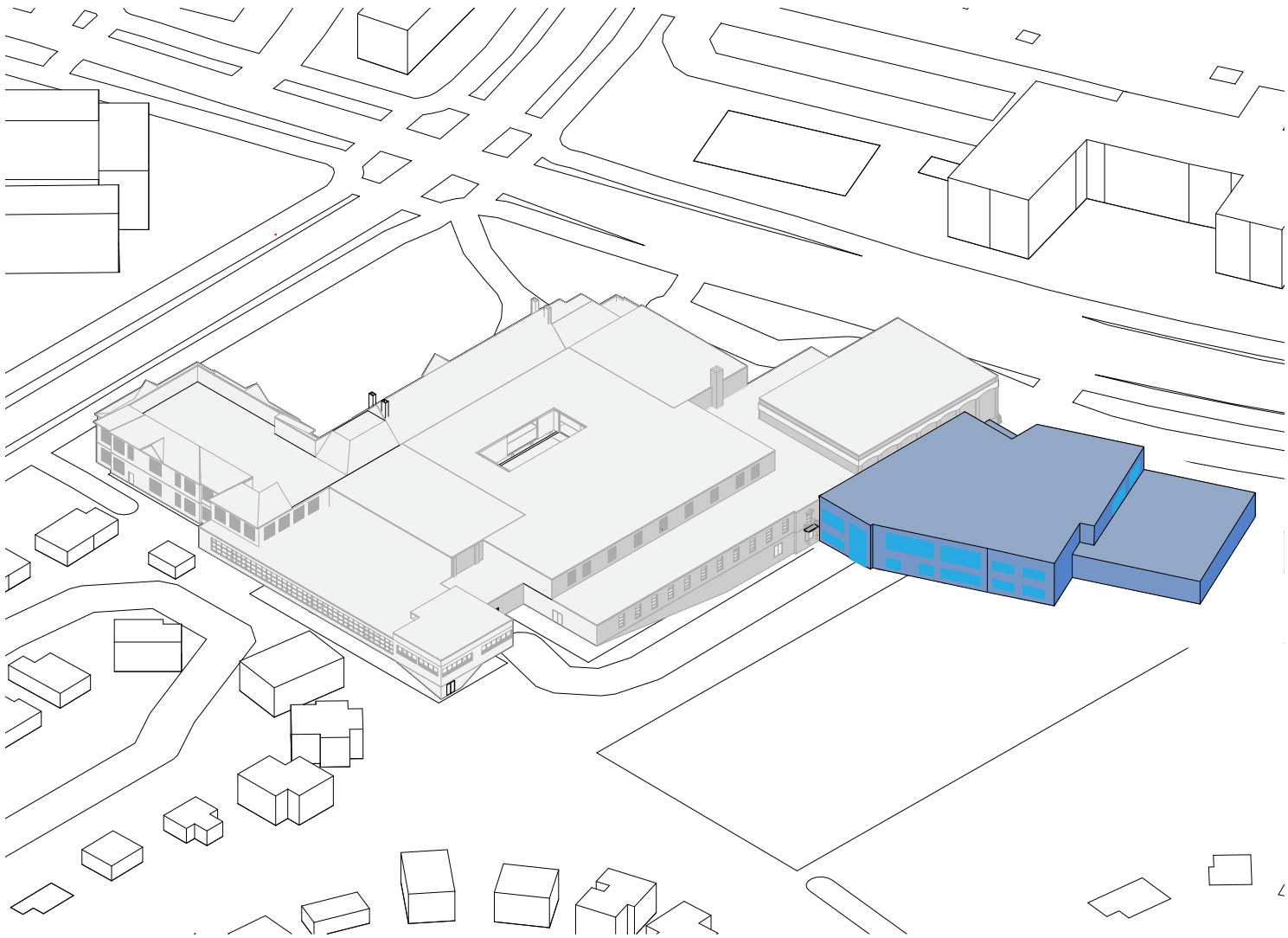




OPTION #2.1  
Swanson Middle Schools - Long Term Study



SITE PLAN





OPTION #2.1  
Swanson Middle Schools - Long Term Study



SITE PLAN



# OPTION #2.1 Swanson Middle Schools - Long Term Study

- LEGEND

ADMIN

ASSEMBLY

ELECTIVES / GYM

MATH

LITERACY

SGI

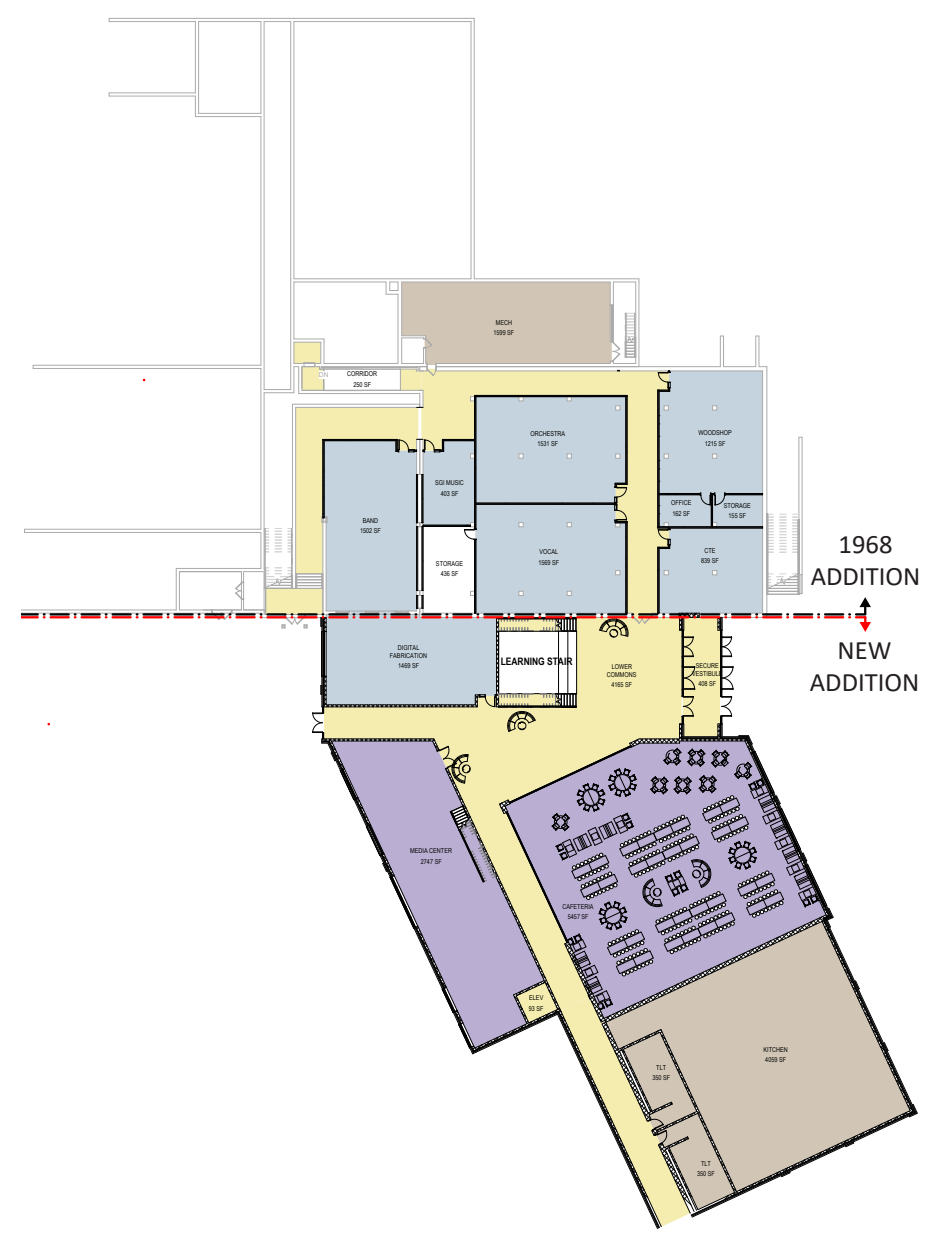
SPECIAL EDUCATION

SCIENCE

SOCIAL STUDIES

STORAGE / UTILITY

10% CLASSROOM ADDITION



GROUND FLOOR PLAN

# Swanson Middle Schools - Long Term Study



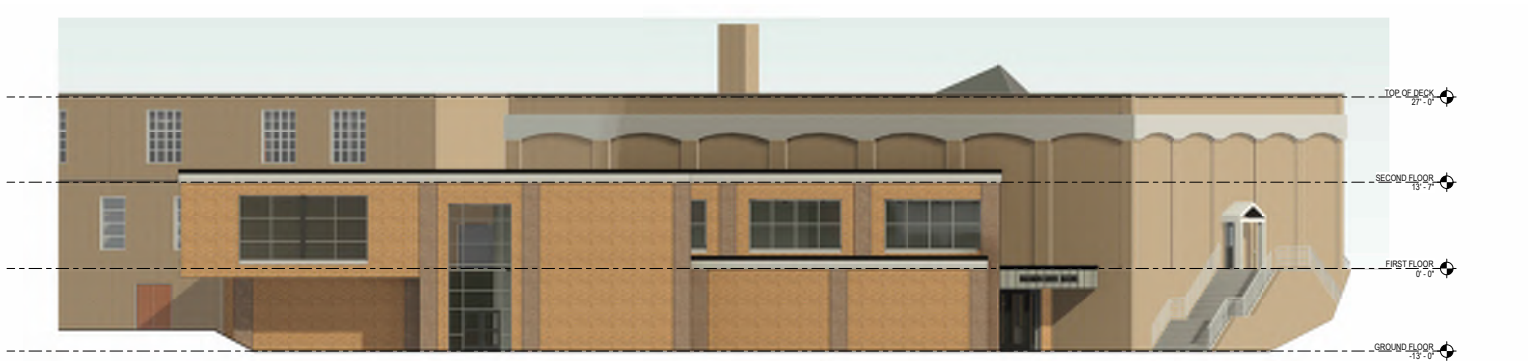
# OPTION #2.1 Swanson Middle Schools - Long Term Study



OPTION #2.1  
Swanson Middle Schools - Long Term Study



East Elevation



South Elevation



West Elevation



OPTION #2.1  
Swanson Middle Schools - Long Term Study



# OPTION #2.1 Swanson Middle Schools - Long Term Study


**Arlington Public Schools FY 2027-36 Capital Improvement Plan (CIP)**

Project **APS Swanson Middle Renovation OPTION 2.1**

A/E **Crabtree**

Estimator **Turner & Townsend Heery & Forella**

Date **7/23/2025**



	Description	%	Value
A	<b>Subtotal - Direct Work</b>		<b>\$70,872,032</b>
B	Gen Conditions: Labor Costs only = A x %	6.0%	\$4,252,322
C	General Requirements Materials & Labor = A x %	5.0%	\$3,756,218
D	Bonds & Insurance = (A+B+C) x %	5.0%	\$3,944,029
E	<b>Subtotal - Cost of the Work</b>		<b>\$82,824,600</b>
F	GC Profit (Fee) = E x %	5.0%	\$4,141,230
G	<b>Subtotal</b>		<b>\$86,965,830</b>
H	Design Contingency = G x %	10.0%	\$8,696,583
I	<b>Subtotal - Hard Cost Construction GC Cost</b>		<b>\$95,662,413</b>
J	Owner Hard Cost Construction Contingency = I x %	10.0%	<b>\$9,566,241</b>
K	<b>Subtotal - Total Hard Cost of Construction (J + I)</b>		<b>\$105,228,655</b>
L	<b>Subtotal - Total Owner Soft Costs = K * %</b>	<b>21.0%</b>	<b>\$22,098,017</b>
M	<b>2025 Total Project Cost = K + L</b>		<b>\$127,326,672</b>

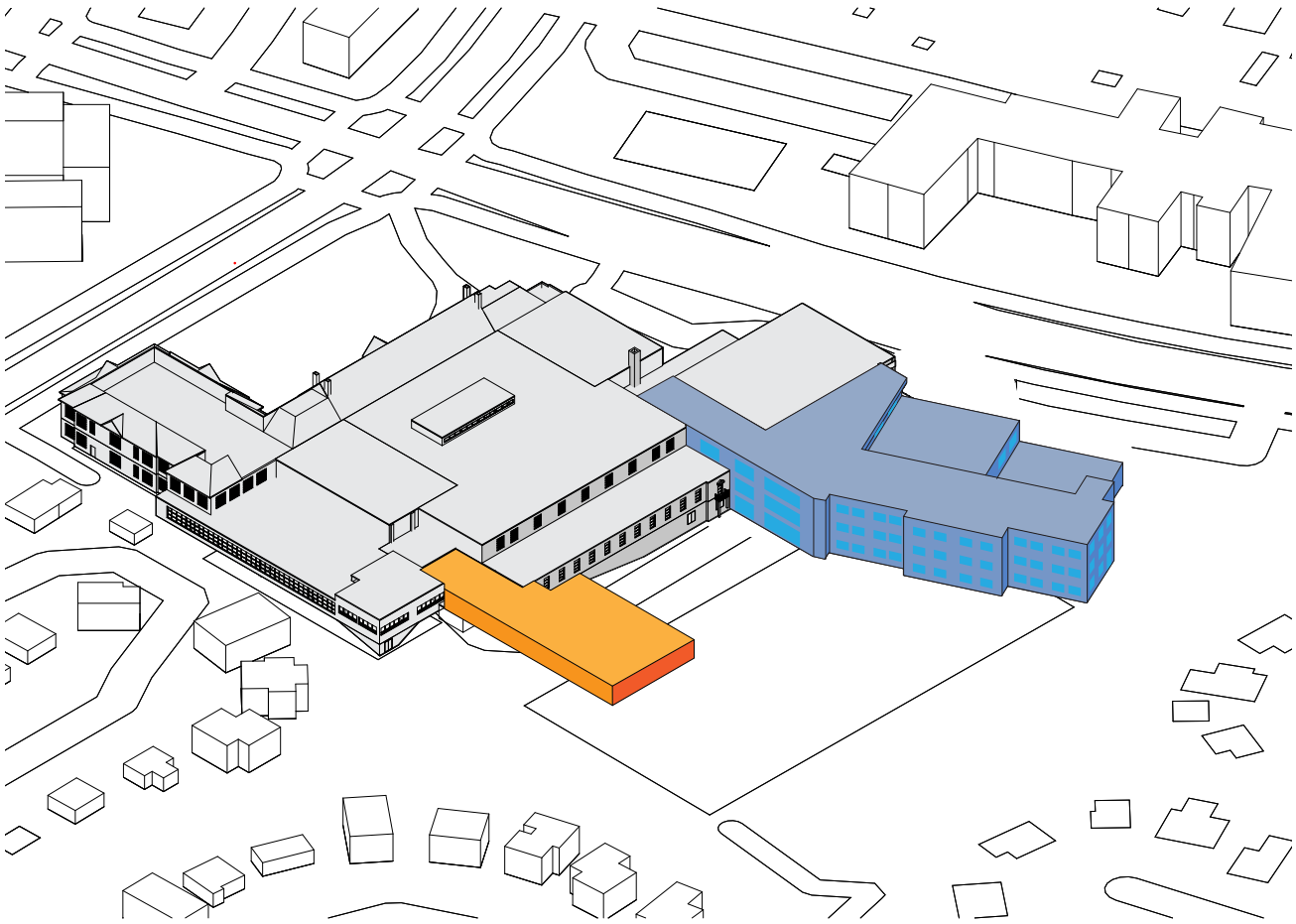
	Escalation Year 1	4.25%	\$5,411,384
2026	Completion - Total Project Cost		<b>\$132,738,056</b>
	Escalation Year 2	4.0%	\$5,309,522
2027	Completion - Total Project Cost		<b>\$138,047,578</b>
	Escalation Year 3	4.0%	\$5,521,903
2028	Completion - Total Project Cost		<b>\$143,569,481</b>
	Escalation Year 4	4.0%	\$5,742,779
2029	Completion - Total Project Cost		<b>\$149,312,260</b>
	Escalation Year 5	4.0%	\$5,972,490
2030	Completion - Total Project Cost		<b>\$155,284,751</b>
	Escalation Year 6	3.5%	\$5,434,966
2031	Completion - Total Project Cost		<b>\$160,719,717</b>
	Escalation Year 7	3.5%	\$5,625,190
2032	Completion - Total Project Cost		<b>\$166,344,907</b>
	Escalation Year 8	3.5%	\$5,822,072
2033	Completion - Total Project Cost		<b>\$172,166,979</b>
	Escalation Year 9	3.5%	\$6,025,844
2034	Completion - Total Project Cost		<b>\$178,192,823</b>
	Escalation Year 10	3.5%	\$6,236,749
2035	Completion - Total Project Cost		<b>\$184,429,572</b>
	Escalation Year 11	3.5%	\$6,455,035
2036	Completion - Total Project Cost		<b>\$190,884,607</b>
	Escalation Year 12	3.5%	\$6,680,961
2037	Completion - Total Project Cost		<b>\$197,565,568</b>
	Escalation Year 13	3.5%	\$6,914,795
2038	Completion - Total Project Cost		<b>\$204,480,363</b>
	Escalation Year 14	3.5%	\$7,156,813
2039	Completion - Total Project Cost		<b>\$211,637,176</b>



OPTION #2.1A  
Swanson Middle Schools - Long Term Study



SITE PLAN



MASSING

# OPTION #2.1A Swanson Middle Schools - Long Term Study

LEGEND

ADMIN

ASSEMBLY

ELECTIVES / GYM

MATH

LITERACY

SGI

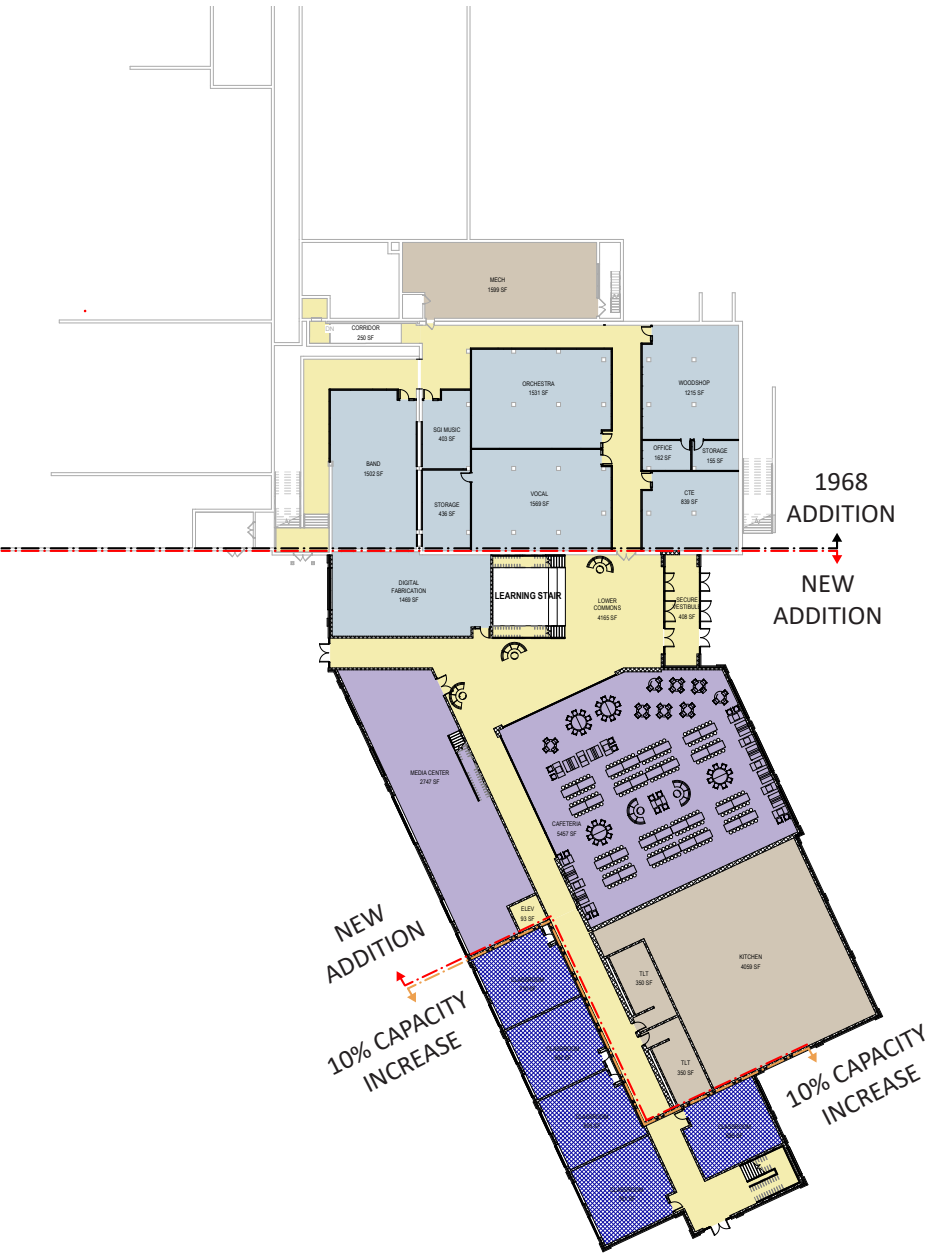
SPECIAL EDUCATION

SCIENCE

SOCIAL STUDIES

STORAGE / UTILITY

10% CLASSROOM ADDITION



GROUND FLOOR PLAN



# Swanson Middle Schools - Long Term Study



# Swanson Middle Schools - Long Term Study



OPTION #2.1A  
Swanson Middle Schools - Long Term Study

Arlington Public Schools FY 2027-36 Capital Improvement Plan (CIP)

Project **APS Swanson Middle Renovation OPTION 2.1A**

A/E **Crabtree**

Estimator **Turner & Townsend Heery & Forella**

Date **7/23/2025**



	Description	%	Value
A	<b>Subtotal - Direct Work</b>		<b>\$74,291,464</b>
B	Gen Conditions: Labor Costs only = A x %	6.0%	\$4,457,488
C	General Requirements Materials & Labor = A x %	5.0%	\$3,937,448
D	Bonds & Insurance = (A+B+C) x %	5.0%	\$4,134,320
E	<b>Subtotal - Cost of the Work</b>		<b>\$86,820,719</b>
F	GC Profit (Fee) = E x %	5.0%	\$4,341,036
G	<b>Subtotal</b>		<b>\$91,161,755</b>
H	Design Contingency = G x %	10.0%	\$9,116,176
I	<b>Subtotal - Hard Cost Construction GC Cost</b>		<b>\$100,277,931</b>
J	Owner Hard Cost Construction Contingency = I x %	10.0%	<b>\$10,027,793</b>
K	<b>Subtotal - Total Hard Cost of Construction (J + I)</b>		<b>\$110,305,724</b>
L	<b>Subtotal - Total Owner Soft Costs = K * %</b>	<b>21.0%</b>	<b>\$23,164,202</b>
M	<b>2025 Total Project Cost = K + L</b>		<b>\$133,469,926</b>

	Escalation Year 1	4.25%	\$5,672,472
2026	Completion - Total Project Cost		<b>\$139,142,398</b>
	Escalation Year 2	4.0%	\$5,565,696
2027	Completion - Total Project Cost		<b>\$144,708,094</b>
	Escalation Year 3	4.0%	\$5,788,324
2028	Completion - Total Project Cost		<b>\$150,496,418</b>
	Escalation Year 4	4.0%	\$6,019,857
2029	Completion - Total Project Cost		<b>\$156,516,274</b>
	Escalation Year 5	4.0%	\$6,260,651
2030	Completion - Total Project Cost		<b>\$162,776,925</b>
	Escalation Year 6	3.5%	\$5,697,192
2031	Completion - Total Project Cost		<b>\$168,474,118</b>
	Escalation Year 7	3.5%	\$5,896,594
2032	Completion - Total Project Cost		<b>\$174,370,712</b>
	Escalation Year 8	3.5%	\$6,102,975
2033	Completion - Total Project Cost		<b>\$180,473,687</b>
	Escalation Year 9	3.5%	\$6,316,579
2034	Completion - Total Project Cost		<b>\$186,790,266</b>
	Escalation Year 10	3.5%	\$6,537,659
2035	Completion - Total Project Cost		<b>\$193,327,925</b>
	Escalation Year 11	3.5%	\$6,766,477
2036	Completion - Total Project Cost		<b>\$200,094,402</b>
	Escalation Year 12	3.5%	\$7,003,304
2037	Completion - Total Project Cost		<b>\$207,097,706</b>
	Escalation Year 13	3.5%	\$7,248,420
2038	Completion - Total Project Cost		<b>\$214,346,126</b>
	Escalation Year 14	3.5%	\$7,502,114
2039	Completion - Total Project Cost		<b>\$221,848,241</b>



# OPTION #2.2

## Swanson Middle Schools - Long Term Study

### Comprehensive Renovations and Addition

This option is a comprehensive renovation of the existing building and a three story addition. This option replaces aged items on the building envelope, interior finishes, and mechanical, electrical and plumbing systems. This option permits access to all three existing floors and increases the distance from the property line.

**Area / space analysis**

This option modifies all existing educational spaces to APS standards. This includes minimum floor area and ceiling heights. The addition is 61,494sf for a total of 200,456sf.

**Program**

This option provides (2/3) classrooms per core subject to match the classroom count per the current Swanson Middle School Program. This option provides a core classroom capacity of 950 students.

**Option 2.2**

Educational Space	Swanson MS	Capacity/Clstrm	Total Capacity
6th Grade Core	13	25	325
7th Grade Core	13	25	325
8th Grade Core	12	25	300
	38	Subtotal	950
	50	Subtotal plus 10+	1045

**Pros**

This option: provides the same number of classrooms per grade as existing, but increases areas and ceiling heights to meet APS program.  
replaces/repairs all aged items near or at the end of their usable life  
permits greater phasing with new classrooms in the addition to permit renovations of interior spaces during the semester  
relocates the dining room and kitchen, increasing the area and height, creating an improved dining experience  
creates a new entrance for students during school hours and for public after hours  
creates new collaboration areas for education, a gymnasium lobby and a new media center

**Cons**

This option will have an impact on a small portion of the outdoor field area for phys ed and athletics  
This option has the highest cost of the proposed options

**Safety / Security**

Swanson Elementary has a functioning secure vestibule with direct access to the Administration suite. We will not place specific security concerns in this document. The building, in general, practices positive security procedures to keep the students and staff staff within the building. This option does not make any significant improvements in sightlines to parking areas or interior views for staff.



# OPTION #2.2

## Swanson Middle Schools - Long Term Study

### Comprehensive Renovations and Addition

#### **Mechanical - Option 2.2 Comprehensive Reno – 3 story addition:**

•The proposed mechanical system will replace the existing infrastructure with a geothermal-based solution featuring a borefield of approximately 211 vertical bores (500 ft deep) depending on final design. A decoupled hydronic system will separate the geothermal loop from the building loop via a central header and pump system located in the existing boiler room or an exterior vault. The building will be conditioned using 100 water source heat pumps (WSHPs) installed in classrooms, supported by three dedicated outdoor air units (DOAUs) with energy recovery, hydronic coils, and filtration for ventilation. The geothermal loop will operate seasonally between 45–80°F, transferring heat to and from the ground for heating and cooling. New HDPE geothermal piping, copper branch runouts for WSHPs, and insulated ductwork per SMACNA standards will be installed, along with four base-mounted pumps (two per loop) for redundancy for the building's hydronic loop.

#### **Electrical - Option 2.2 Comprehensive Reno – 3 story addition:**

•Option 3 supports a Net Zero Energy (NZE) all-electric school, maintaining the existing electrical service but replacing the outdated utility transformer, and includes a three-story addition. New distribution panels and transformers will be installed throughout both the existing building and a proposed addition to optimize circuit lengths. Temporary classrooms will be supported by a new 1200A service and necessary low-voltage connections. The existing modular classrooms will need to be relocated or demolished due to their conflict with the new layout. A new 150kW diesel generator will support life safety and standby loads, while a rooftop 650kWDC solar PV system will be installed, with metering for various building systems. LED lighting will be fully upgraded to meet IECC 2021 with occupancy sensors, dimming, daylighting where applicable, and decorative lighting at entrances. Systems upgrades include a fully addressable fire alarm with voice evacuation, modern AV systems, integrated access control and surveillance, emergency responder DAS, digital signage, and a full IT overhaul with new CAT6/6A infrastructure. Classrooms will feature consistent power/data layouts, dimmable lighting, paging systems, and WAPs, aligning with modern educational standards.

#### **Fire Protection and Plumbing - Option 2.2 Comprehensive Reno – 3 story addition:**

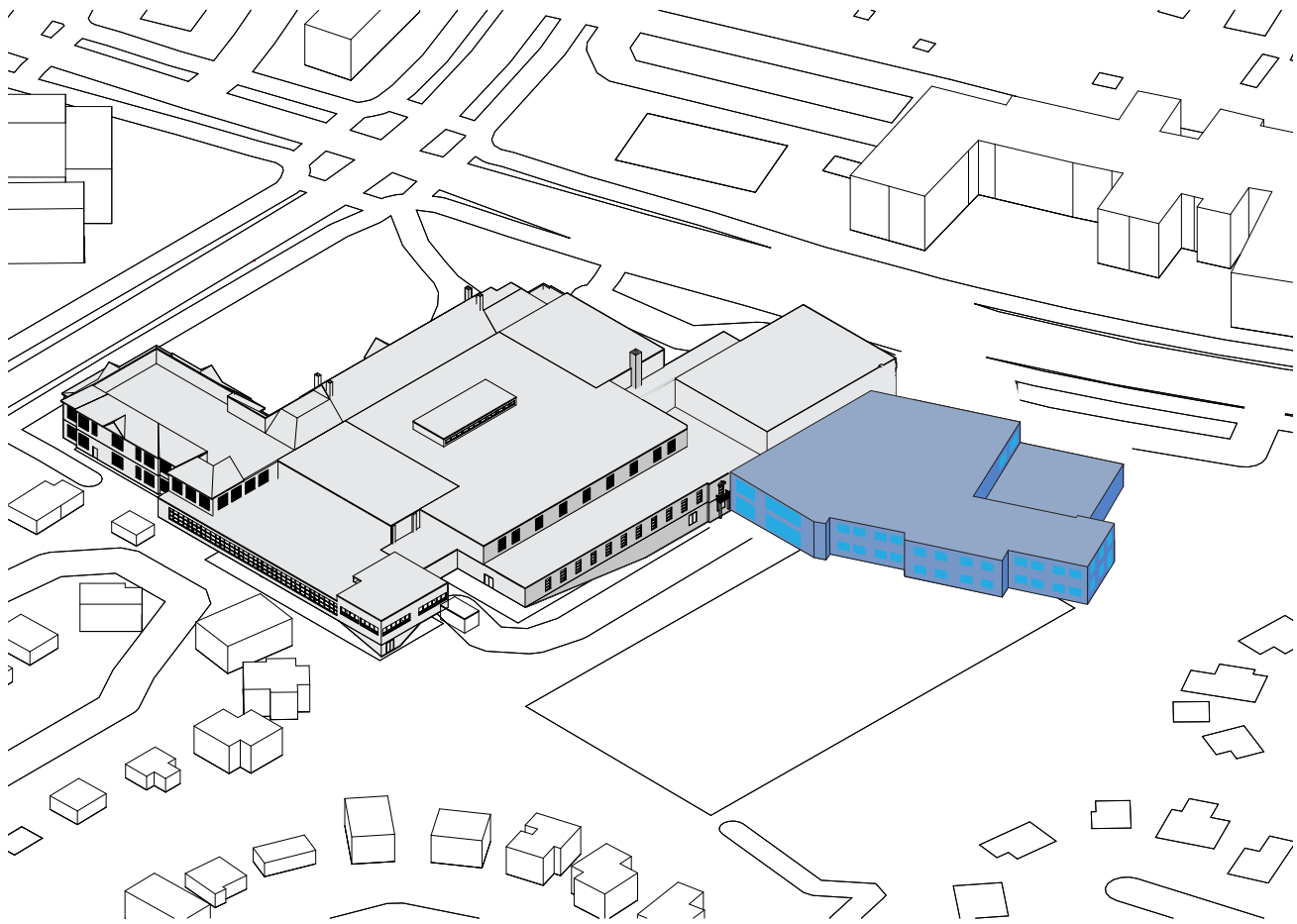
•Existing fire protection and plumbing are assumed to be completely renovated. Connections to city water to be evaluated for reuse. Existing fire protection control zones to be evaluated under new designed floor plans. Standpipes to be evaluated for reuse.

•The school will receive a new domestic hot water system consisting of two water-source heat pumps connected to the geothermal central plant, an ASME-rated thermal expansion tank, in-line circulating pumps, and an ASSE 1017 compliant thermostatic mixing valve. The system will supply 140°F water with a 120°F return temperature at peak demand.

OPTION #2.2  
Swanson Middle Schools - Long Term Study



SITE PLAN



MASSING



OPTION #2.2  
Swanson Middle Schools - Long Term Study



SITE PLAN



# OPTION #2.2 Swanson Middle Schools - Long Term Study

- LEGEND

ADMIN

ASSEMBLY

ELECTIVES / GYM

MATH

LITERACY

SGI

SPECIAL EDUCATION

SCIENCE

SOCIAL STUDIES

STORAGE / UTILITY

10% CLASSROOM ADDITION

WORLD LANGUAGE



GROUND FLOOR PLAN

# Swanson Middle Schools - Long Term Study

OPTION #2.2  
Swanson Middle Schools - Long Term Study



OPTION #2.2  
Swanson Middle Schools - Long Term Study





OPTION #2.2  
Swanson Middle Schools - Long Term Study



OPTION #2.2  
Swanson Middle Schools - Long Term Study

Arlington Public Schools FY 2027-36 Capital Improvement Plan (CIP)

Project **APS Swanson Middle School Renovation OPTION 2.2**

A/E **Crabtree**

Estimator **Turner & Townsend Heery & Forella**

Date **7/23/2025**



	Description	%	Value
A	<b>Subtotal - Direct Work</b>		<b>\$79,287,773</b>
B	Gen Conditions: Labor Costs only = A x %	6.0%	\$4,757,266
C	General Requirements Materials & Labor = A x %	5.0%	\$4,202,252
D	Bonds & Insurance = (A+B+C) x %	5.0%	\$4,412,365
E	<b>Subtotal - Cost of the Work</b>		<b>\$92,659,656</b>
F	GC Profit (Fee) = E x %	5.0%	\$4,632,983
G	<b>Subtotal</b>		<b>\$97,292,639</b>
H	Design Contingency = G x %	10.0%	\$9,729,264
I	<b>Subtotal - Hard Cost Construction GC Cost</b>		<b>\$107,021,903</b>
J	Owner Hard Cost Construction Contingency = I x %	10.0%	\$10,702,190
K	<b>Subtotal - Total Hard Cost of Construction (J + I)</b>		<b>\$117,724,093</b>
L	<b>Subtotal - Total Owner Soft Costs = K * %</b>	<b>21.0%</b>	<b>\$24,722,059</b>
M	<b>2025 Total Project Cost = K + L</b>		<b>\$142,446,152</b>

	Escalation Year 1	4.25%	\$6,053,961
2026	Completion - Total Project Cost		<b>\$148,500,114</b>
	Escalation Year 2	4.0%	\$5,940,005
2027	Completion - Total Project Cost		<b>\$154,440,118</b>
	Escalation Year 3	4.0%	\$6,177,605
2028	Completion - Total Project Cost		<b>\$160,617,723</b>
	Escalation Year 4	4.0%	\$6,424,709
2029	Completion - Total Project Cost		<b>\$167,042,432</b>
	Escalation Year 5	4.0%	\$6,681,697
2030	Completion - Total Project Cost		<b>\$173,724,129</b>
	Escalation Year 6	3.5%	\$6,080,345
2031	Completion - Total Project Cost		<b>\$179,804,474</b>
	Escalation Year 7	3.5%	\$6,293,157
2032	Completion - Total Project Cost		<b>\$186,097,630</b>
	Escalation Year 8	3.5%	\$6,513,417
2033	Completion - Total Project Cost		<b>\$192,611,047</b>
	Escalation Year 9	3.5%	\$6,741,387
2034	Completion - Total Project Cost		<b>\$199,352,434</b>
	Escalation Year 10	3.5%	\$6,977,335
2035	Completion - Total Project Cost		<b>\$206,329,769</b>
	Escalation Year 11	3.5%	\$7,221,542
2036	Completion - Total Project Cost		<b>\$213,551,311</b>
	Escalation Year 12	3.5%	\$7,474,296
2037	Completion - Total Project Cost		<b>\$221,025,607</b>
	Escalation Year 13	3.5%	\$7,735,896
2038	Completion - Total Project Cost		<b>\$228,761,503</b>
	Escalation Year 14	3.5%	\$8,006,653
2039	Completion - Total Project Cost		<b>\$236,768,156</b>

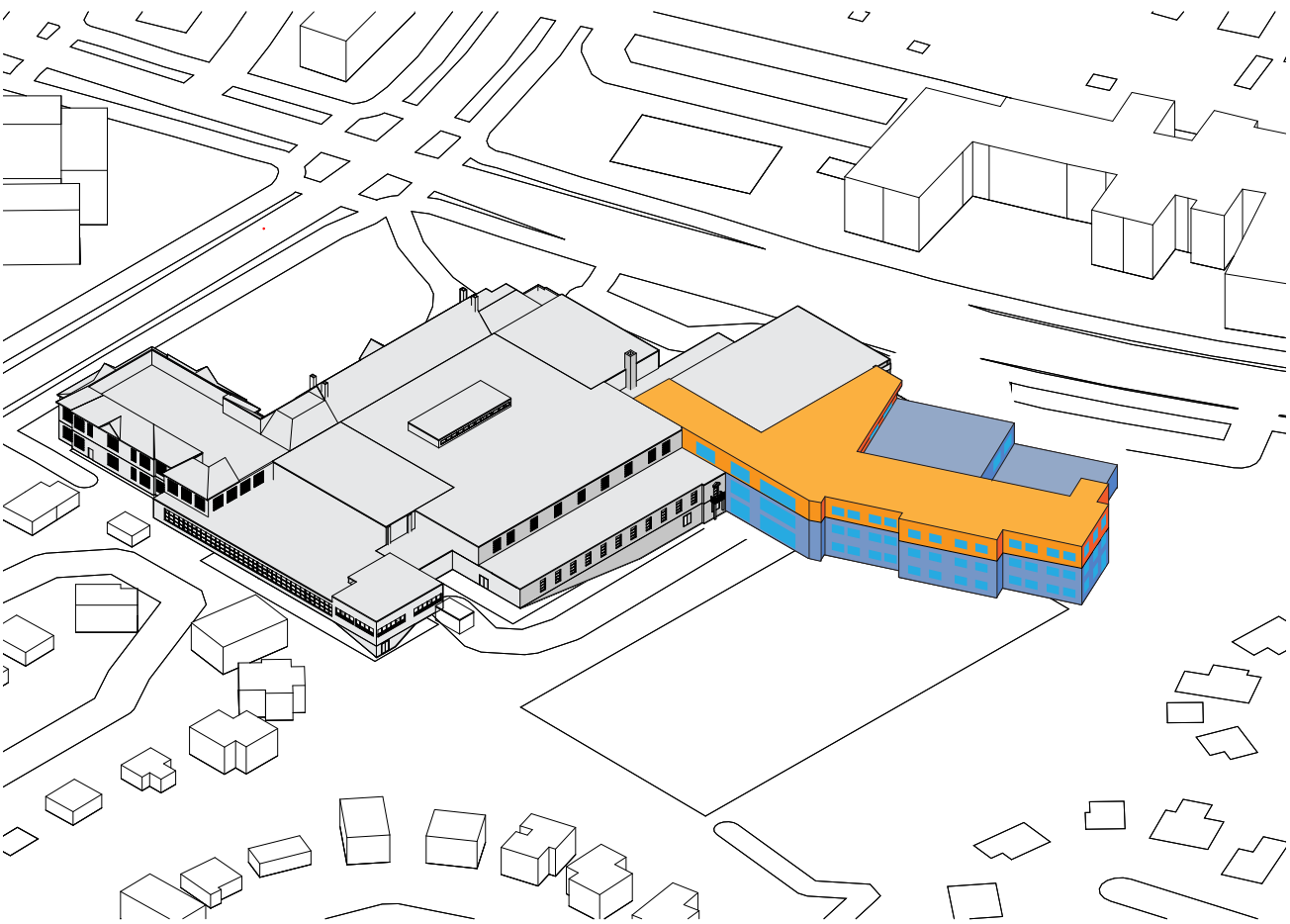




OPTION #2.2A  
Swanson Middle Schools - Long Term Study



SITE PLAN



MASSING

# OPTION #2.2A Swanson Middle Schools - Long Term Study

- LEGEND

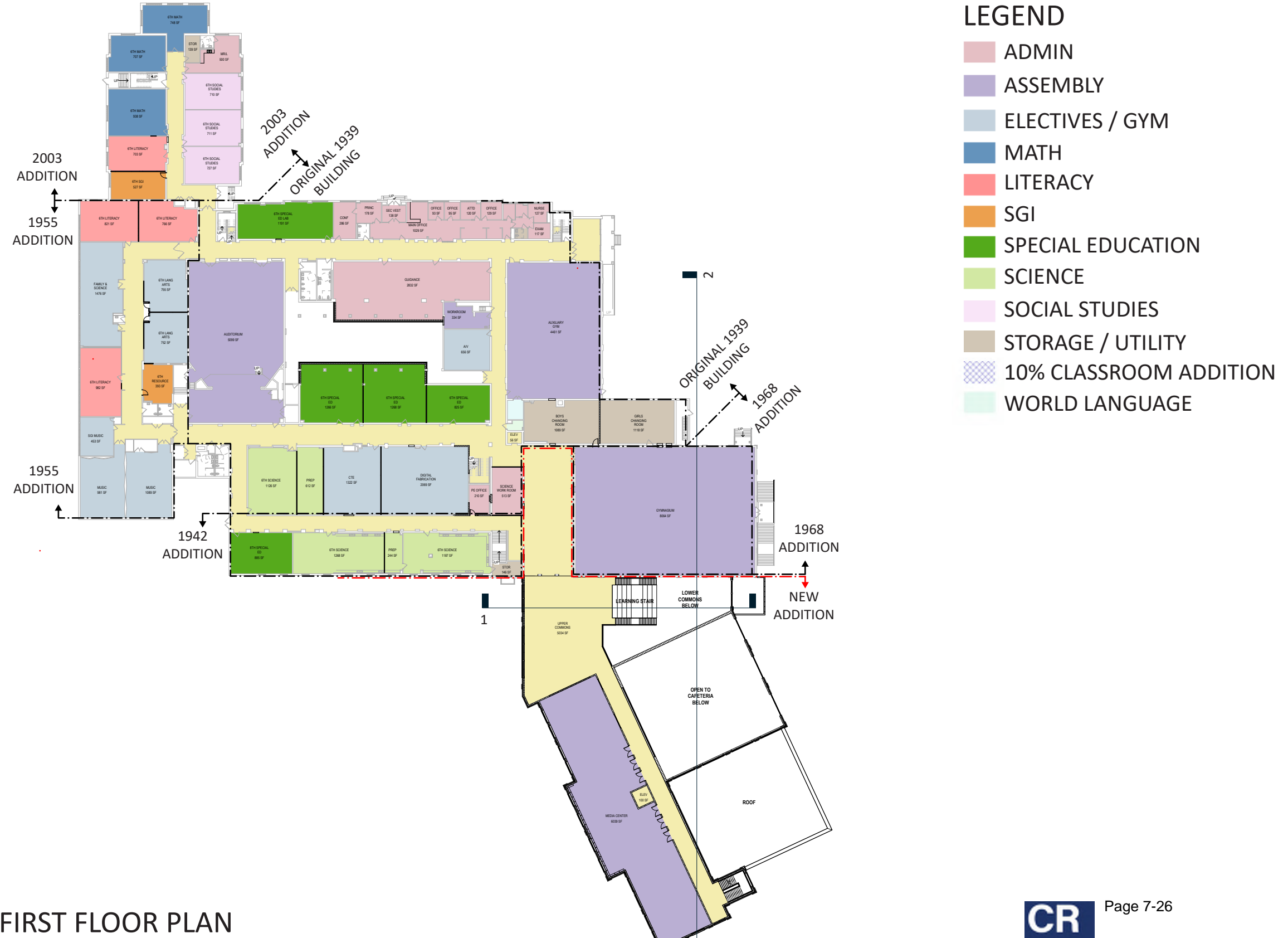
  - ADMIN
  - ASSEMBLY
  - ELECTIVES / GYM
  - MATH
  - LITERACY
  - SGI
  - SPECIAL EDUCATION
  - SCIENCE
  - SOCIAL STUDIES
  - STORAGE / UTILITY
  - 10% CLASSROOM ADDITION
  - WORLD LANGUAGE



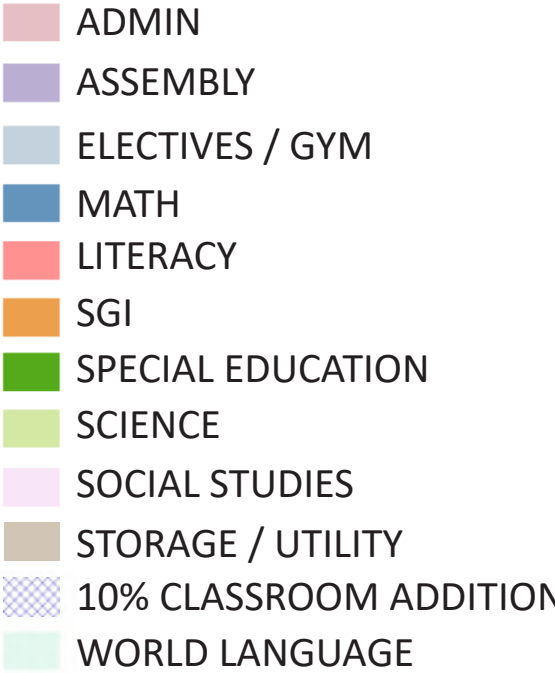
GROUND FLOOR PLAN



# Swanson Middle Schools - Long Term Study



# Swanson Middle Schools - Long Term Study



OPTION #2.2A  
Swanson Middle Schools - Long Term Study

Arlington Public Schools FY 2027-36 Capital Improvement Plan (CIP)

Project **APS Swanson Middle Renovation OPTION 2.2A**  
A/E **Crabtree**  
Estimator **Turner & Townsend Heery & Forella**  
Date **7/23/2025**



	Description	%	Value
A	<b>Subtotal - Direct Work</b>		<b>\$82,399,714</b>
B	Gen Conditions: Labor Costs only = A x %	6.0%	\$4,943,983
C	General Requirements Materials & Labor = A x %	5.0%	\$4,367,185
D	Bonds & Insurance = (A+B+C) x %	5.0%	\$4,585,544
E	<b>Subtotal - Cost of the Work</b>		<b>\$96,296,426</b>
F	GC Profit (Fee) = E x %	5.0%	\$4,814,821
G	<b>Subtotal</b>		<b>\$101,111,247</b>
H	Design Contingency = G x %	10.0%	\$10,111,125
I	<b>Subtotal - Hard Cost Construction GC Cost</b>		<b>\$111,222,372</b>
J	Owner Hard Cost Construction Contingency = I x %	10.0%	\$11,122,237
K	<b>Subtotal - Total Hard Cost of Construction (J + I)</b>		<b>\$122,344,609</b>
L	<b>Subtotal - Total Owner Soft Costs = K * %</b>	<b>21.0%</b>	<b>\$25,692,368</b>
M	<b>2025 Total Project Cost = K + L</b>		<b>\$148,036,977</b>

	Escalation Year 1	4.25%	\$6,291,572
2026	Completion - Total Project Cost		<b>\$154,328,548</b>
	Escalation Year 2	4.0%	\$6,173,142
2027	Completion - Total Project Cost		<b>\$160,501,690</b>
	Escalation Year 3	4.0%	\$6,420,068
2028	Completion - Total Project Cost		<b>\$166,921,758</b>
	Escalation Year 4	4.0%	\$6,676,870
2029	Completion - Total Project Cost		<b>\$173,598,628</b>
	Escalation Year 5	4.0%	\$6,943,945
2030	Completion - Total Project Cost		<b>\$180,542,573</b>
	Escalation Year 6	3.5%	\$6,318,990
2031	Completion - Total Project Cost		<b>\$186,861,563</b>
	Escalation Year 7	3.5%	\$6,540,155
2032	Completion - Total Project Cost		<b>\$193,401,718</b>
	Escalation Year 8	3.5%	\$6,769,060
2033	Completion - Total Project Cost		<b>\$200,170,778</b>
	Escalation Year 9	3.5%	\$7,005,977
2034	Completion - Total Project Cost		<b>\$207,176,755</b>
	Escalation Year 10	3.5%	\$7,251,186
2035	Completion - Total Project Cost		<b>\$214,427,942</b>
	Escalation Year 11	3.5%	\$7,504,978
2036	Completion - Total Project Cost		<b>\$221,932,920</b>
	Escalation Year 12	3.5%	\$7,767,652
2037	Completion - Total Project Cost		<b>\$229,700,572</b>
	Escalation Year 13	3.5%	\$8,039,520
2038	Completion - Total Project Cost		<b>\$237,740,092</b>
	Escalation Year 14	3.5%	\$8,320,903
2039	Completion - Total Project Cost		<b>\$246,060,995</b>

