

NEW ELEMENTARY SCHOOL

REED SITE, ARLINGTON PUBLIC SCHOOLS
USE PERMIT / ENVIRONMENT AND ENERGY CONSERVATION COMMISSION

OCTOBER 22 2018



VMDO



E2C2 COMMISSION MEETING

ENVIRONMENT AND ENERGY CONSERVATION COMMISSION
COMMITTEE

- 1. Welcome/Opening Remarks**
- 2. Process & Schedule**
- 3. Proposed Design and Use Permit Application / Drawings**
- 4. Construction Schedule**
- 5. Ongoing Community Discussions**
- 6. Questions**

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October 22, 2018



Process & Schedule

ENVIRONMENT AND ENERGY CONSERVATION COMMISSION
COMMITTEE

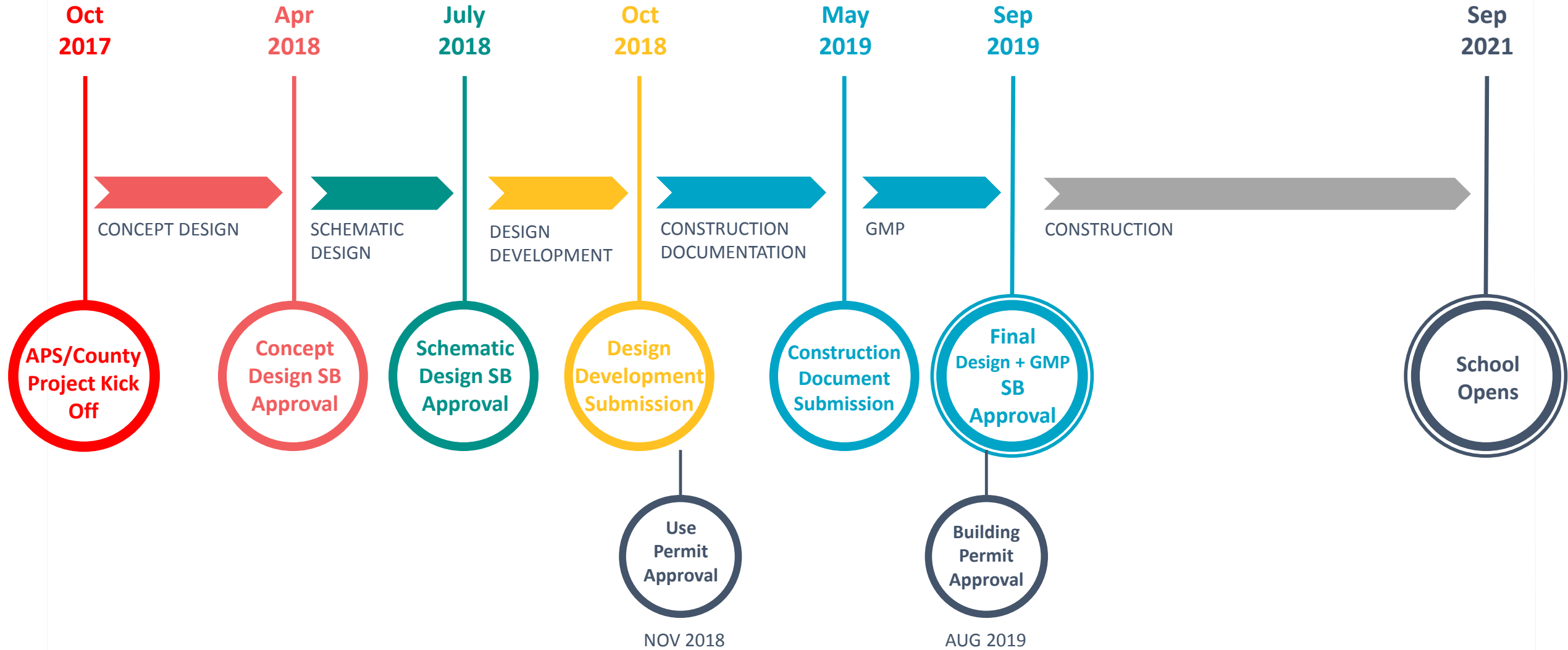
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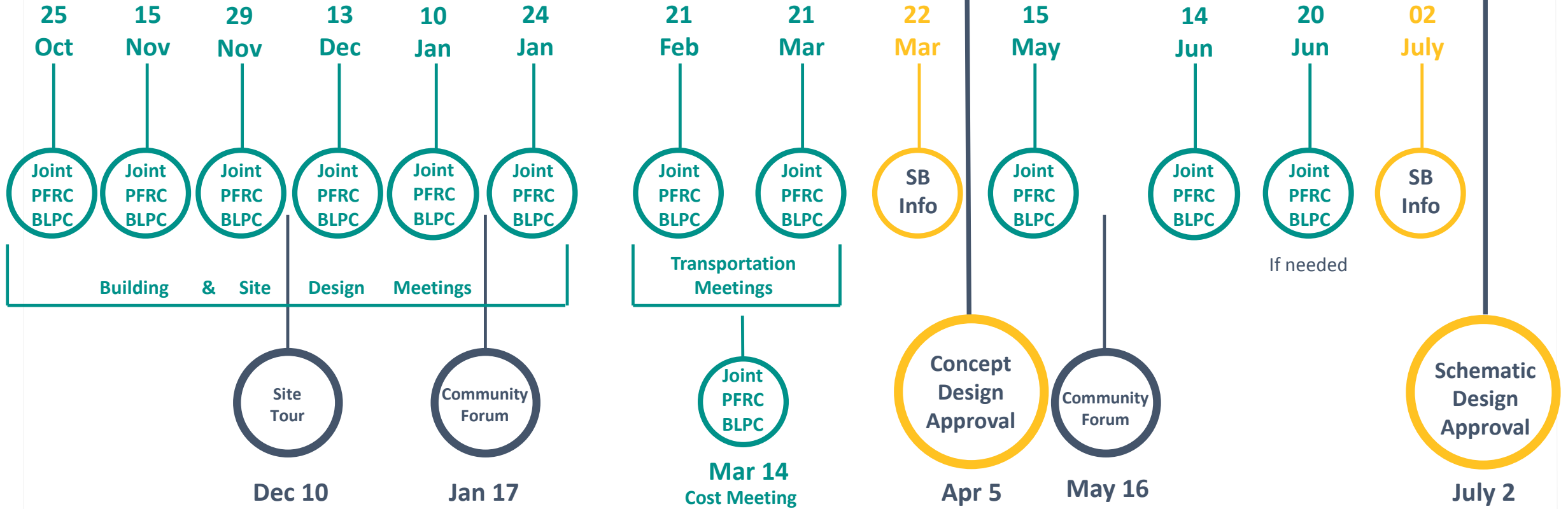
PROJECT PARAMETERS

1. Create a **new neighborhood elementary school** with an attendance zone
2. Support APS Strategic Plan Goals, specifically **Goal #4 – Provide Optimal Learning Environments**
3. Address capacity by providing at least **725 seats**
4. Open by start of school **2021**
5. Spend a maximum project cost of **\$55 million, with strong direction to find opportunities to reduce costs.**



CONCEPT DESIGN

SCHEMATIC DESIGN



PATH TO USE PERMIT APPROVAL

October 22, 2018: Environment & Energy Conservation Commission (E2C2)

October 23, 2018: Park & Rec Commission

October 25, 2018: Urban Forestry Commission

November 1, 2018: Transportation Commission

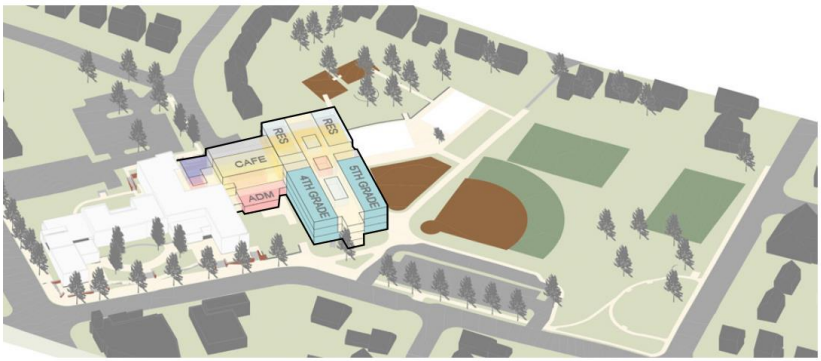
November 5 or 7: Planning Commission

November 17 or 27: County Board

APS, its design team and County Staff are continually and collaboratively working together to meet the Use Permit Schedule noted above

APS USE PERMIT CONDITIONS UPDATE

- County staff has utilized a baseline set of conditions for APS Use Permit projects since approximately 2007. These have evolved over time as processes have changed.
- The recent set of conditions included **64 individual conditions**, which tracks closely with conditions used for private development / 4.1 site plan projects.
- The recent set of conditions no longer accurately address the construction schedules for these types of facilities and have caused numerous conflicts resulting in construction delays and cost overruns.
- County staff and APS staff began a review of these baseline conditions in order to provide the appropriate mitigation for these projects, but also to accurately reflect construction schedules and processes for these facilities.
- County and APS staff are in the process of finalizing these revisions to the baseline set of APS Use Permit conditions, which will be utilized for the Reed project that is anticipated to be heard by the Planning Commission and County Board in November.



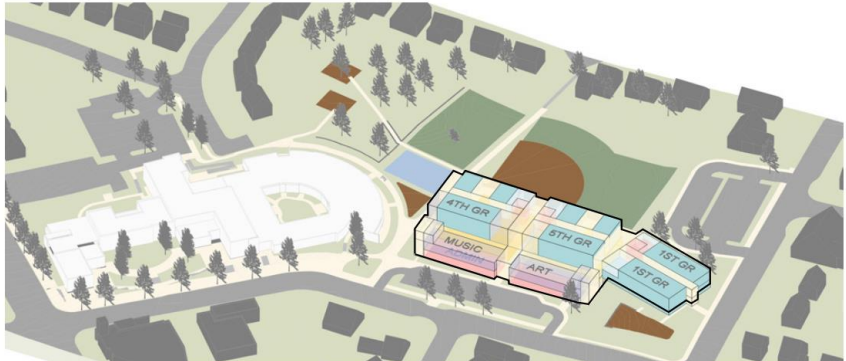
Integrated

BLPC rank PFRC rank

CMR price:
\$55.1 M

1 **1**

4 story option
3 story: \$54.5

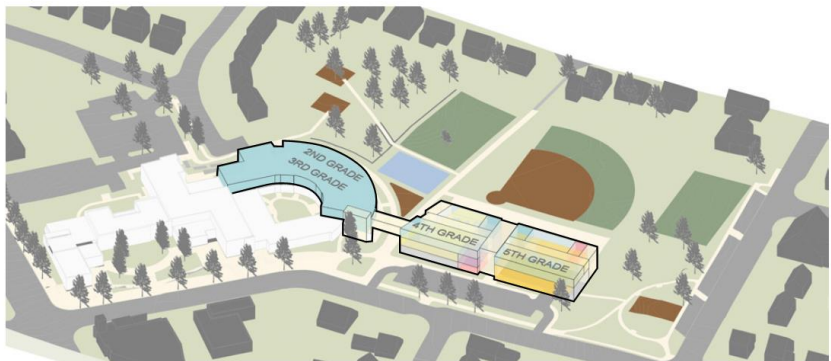


Standalone

BLPC rank PFRC rank

CMR price:
\$55.6 M

4 **4**



Bridge

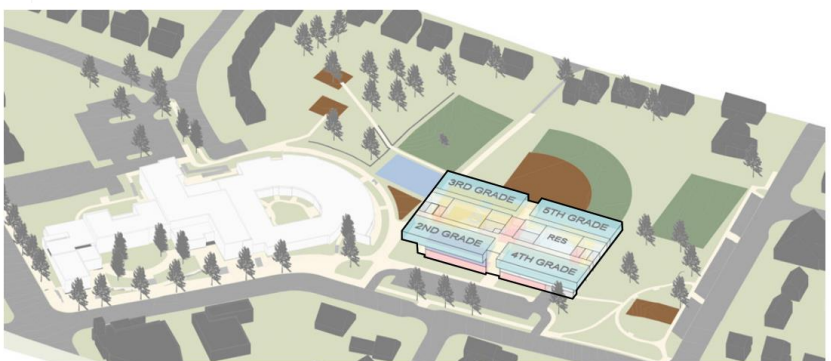
CMR price:
\$50.1 M

2 **2**



East

5 **6**



Upper / Lower

CMR price:
\$49.3 M

3 **3**



North

6 **5**

Proposed Design

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Site

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October 22, 2018







Impervious Areas (sf)

Existing

Building:	52,744
Play Courts:	16,272
Other Paving:	46,741
Parking:	26,476
<hr/> Total:	<hr/> 142,233
% of site:	39%

Proposed Design

Building:	58,875
Play Courts:	8,574
Other Paving:	50,165
Parking:	46,982
<hr/> Total:	<hr/> 164,596
% of site:	45%



PROPOSED DESIGN

On-site parking:
133 spaces (9 over min)

Space for 7 buses to
load/unload at suggested
location

Space for a total of 30
cars to queue on-site in
two rows

Interior Class 1 bike
storage with 2 showers

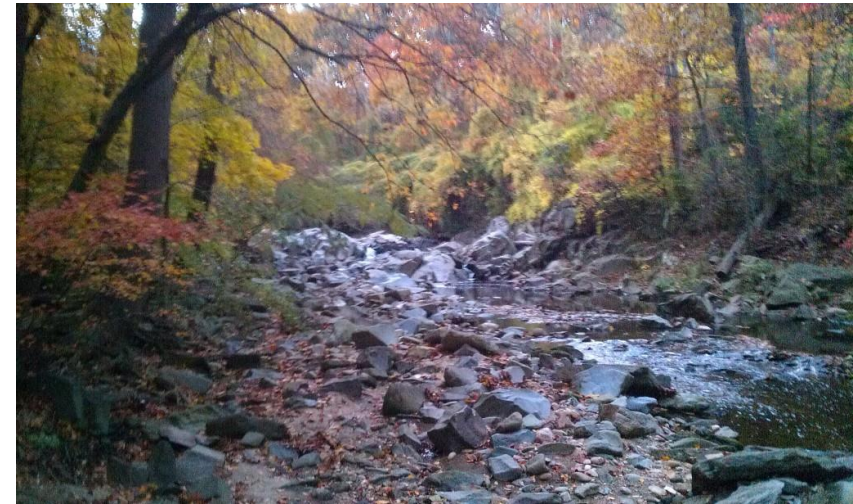
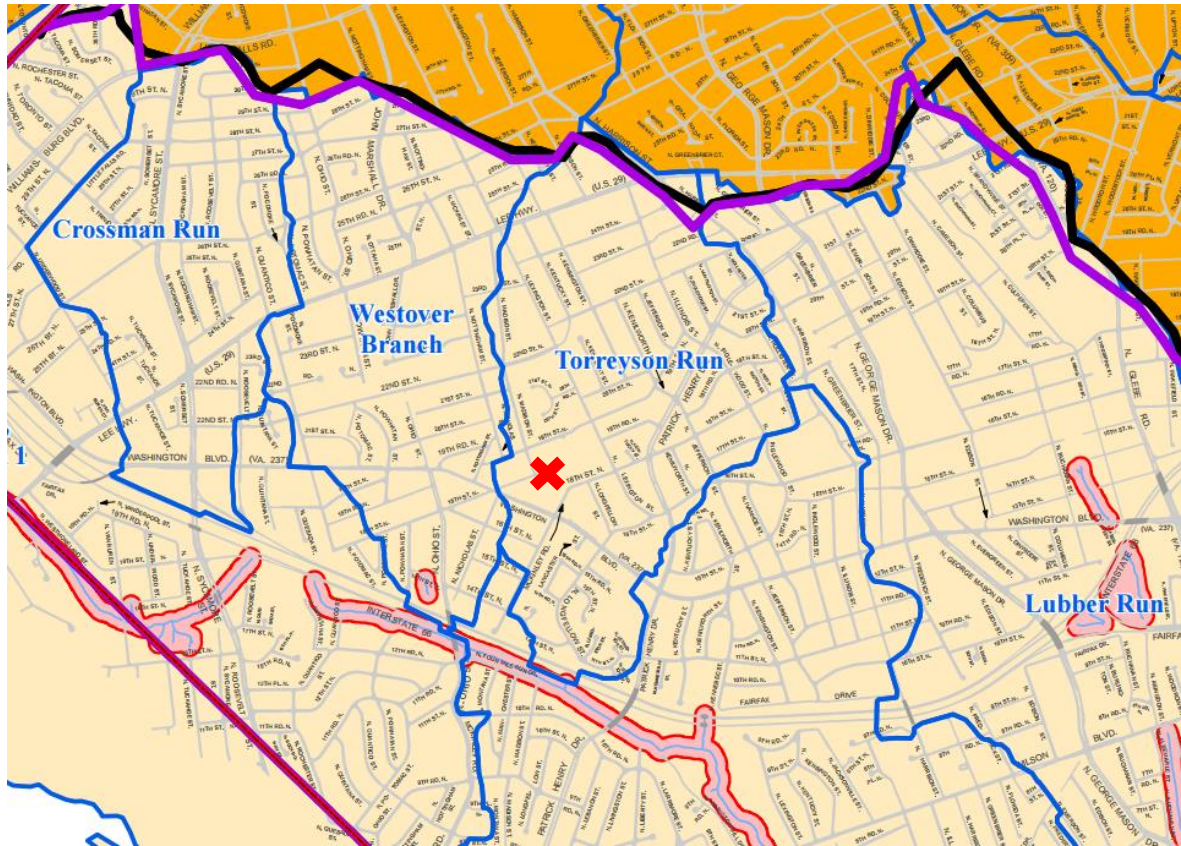
Exterior bike racks



STORMWATER MANAGEMENT

- **Preservation of Existing Hydrology**

- Protect Four Mile Run Watershed (Torreyson Run)
- Maintain On-Site Drainage Patterns
- Prevent degradation of downstream storm conveyance system



STORMWATER MANAGEMENT

- **Quality**

- Virginia Runoff Reduction Method – Re-Development Criteria
- Low-Cost & Low-Maintenance Preference
- Recommended Compliance Strategy:
 - Bio-retention/Raingardens (Figure 1)
 - Grass Channel / Dry Swale (Figure 2)
 - Manufactured Treatment Devices (MTD)

- **Quantity**

- Stormwater discharges will meet the County requirements for channel and flood protection (i.e. Energy-Balance)

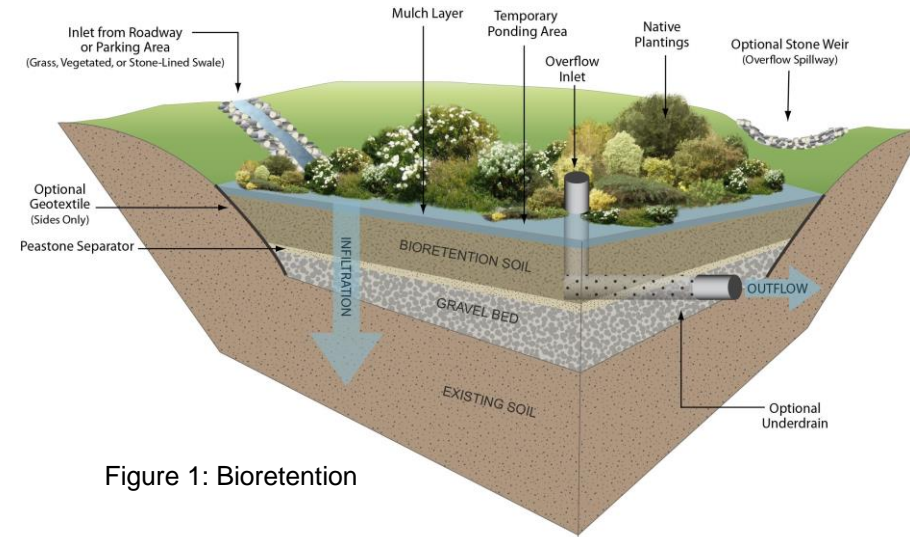


Figure 1: Bioretention

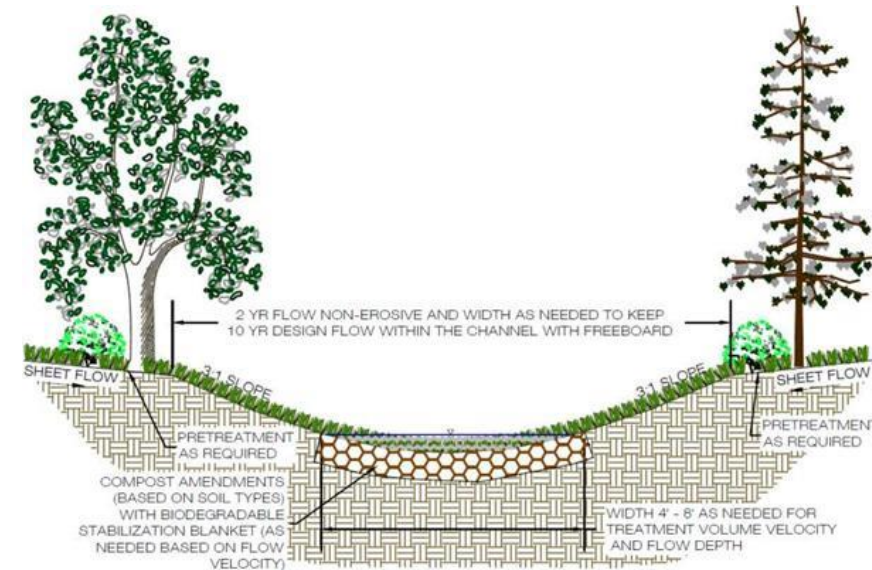
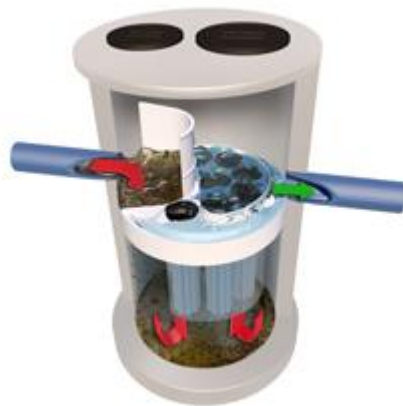
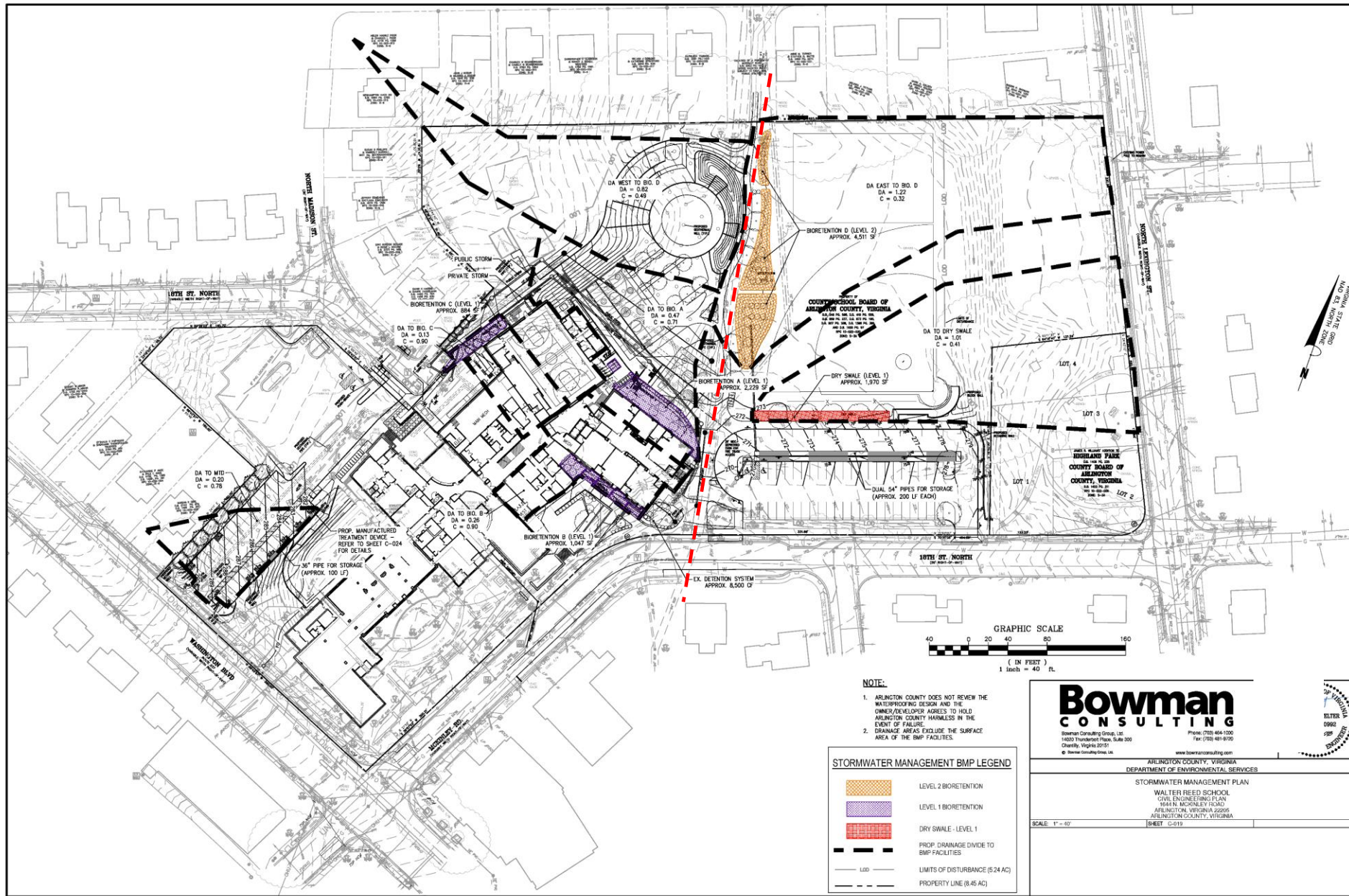


Figure 2: Grass Channel / Dry Swale

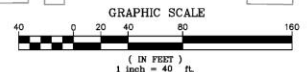


NOTE:

1. ARLINGTON COUNTY DOES NOT REVIEW THE WATERPROOFING DESIGN AND THE OWNER/DEVELOPER AGREES TO HOLD ARLINGTON COUNTY HARMLESS IN THE EVENT OF FAILURE.
2. DRAINAGE AREAS EXCLUDE THE SURFACE AREA OF THE BMP FACILITIES.

STORMWATER MANAGEMENT BMP LEGEND

	LEVEL 2 BIORETENTION
	LEVEL 1 BIORETENTION
	DRY SWALE - LEVEL 1
	PROP. DRAINAGE DIVIDE TO BMP FACILITIES
	LIMITS OF DISTURBANCE (6.24 AC)
	PROPERTY LINE (8.46 AC)



Bowman CONSULTING
 Bowman Consulting Group, Ltd.
 14300 Transford Plaza, Suite 300
 Chantilly, Virginia 20151
 © Bowman Consulting Group, Ltd.
 www.bowmanconsulting.com
 Phone: (703) 464-1000
 Fax: (703) 461-9100

ARLINGTON COUNTY, VIRGINIA
 DEPARTMENT OF ENVIRONMENTAL SERVICES
 STORMWATER MANAGEMENT PLAN
 WALTER REED SCHOOL
 CIVIL ENGINEERING PLAN
 1634 N. MCKONLEY ROAD
 ARLINGTON, VIRGINIA 22205
 ARLINGTON COUNTY, VIRGINIA

SCALE: 1" = 40'

(SHEET C-019)

The School will be Net Zero Energy ready. APS plans to add the school to the PPA agreements currently being negotiated by APS for other APS sites. Other high performance building targets and parameters:

- Integrate learning, design, sustainable design, and environmental stewardship so that it supports and enhances student learning and student success
- Deliver a balanced design that achieves Zero Energy status as defined by the United States Department of Energy
- **Maximum Energy Use Intensity (EUI): 21**
- On-site renewable energy generation that exceeds the EUI via a solar photovoltaic array (separate project)
- Overall minimum insulation R-values: 30-roof, 25- wall b
- Thermally broken windows with insulated glass
- Glazing percentage: 35-40%
- Airtightness: 0.15 cfm/sf
- HVAC System: ground source heat pump with dedicated outdoor air system
- Lighting System: all LED
- Provide building systems that are durable, straightforward to operate/control, and are easily maintained
- Consider Indoor Air Quality, Thermal / Acoustic / Visual Comfort, and Universal Design standards beyond the minimums required by building code



Y ? ? N

1					Credit	Integrative Process	1	
4	5	2	20	16	Location and Transportation		15	
1					Credit	LEED for Neighborhood Development Location	15	
					Credit	Sensitive Land Protection	1	
					Credit	High Priority Site	2	
2		2		1	Credit	Surrounding Density and Diverse Uses	5	
	3			1	Credit	Access to Quality Transit	4	RP
1					Credit	Bicycle Facilities	1	RP
	1				Credit	Reduced Parking Footprint	1	RP
	1				Credit	Green Vehicles	1	
3	9	0	0	0	Sustainable Sites		12	
Y					Prereq	Construction Activity Pollution Prevention		Required
Y					Prereq	Environmental Site Assessment		Required
1					Credit	Site Assessment	1	
1	1				Credit	Site Development - Protect or Restore Habitat	2	
1					Credit	Open Space	1	
	3				Credit	Rainwater Management	3	
	2				Credit	Heat Island Reduction	2	
	1				Credit	Light Pollution Reduction	1	
	1				Credit	Site Master Plan	1	
	1				Credit	Joint Use of Facilities	1	
5	3	2	2	2	Water Efficiency		12	
Y					Prereq	Outdoor Water Use Reduction		Required
Y					Prereq	Indoor Water Use Reduction		Required
Y					Prereq	Building-Level Water Metering		Required
2					Credit	Outdoor Water Use Reduction	2	RP
2	3			2	Credit	Indoor Water Use Reduction	7	
					Credit	Cooling Tower Water Use	2	
1					Credit	Water Metering	1	
19	6	3	3	3	Energy and Atmosphere		31	
Y					Prereq	Fundamental Commissioning and Verification		Required
Y					Prereq	Minimum Energy Performance		Required
Y					Prereq	Building-Level Energy Metering		Required
Y					Prereq	Fundamental Refrigerant Management		Required
5	1				Credit	Enhanced Commissioning	6	
13	3				Credit	Optimize Energy Performance	16	RP
1					Credit	Advanced Energy Metering	1	
	1	1			Credit	Demand Response	2	
					Credit	Renewable Energy Production	3	RP
	1				Credit	Enhanced Refrigerant Management	1	
		2			Credit	Green Power and Carbon Offsets	2	
4	1	6	2	2	Materials and Resources		13	
Y					Prereq	Storage and Collection of Recyclables		Required
Y					Prereq	Construction and Demolition Waste Management Planning		Required
		5			Credit	Building Life-Cycle Impact Reduction	5	
1				1	Credit	Building Product Disclosure and Optimization - Environmental Product Declarations	2	
1				1	Credit	Building Product Disclosure and Optimization - Sourcing of Raw Materials	2	
1				1	Credit	Building Product Disclosure and Optimization - Material Ingredients	2	
1	1				Credit	Construction and Demolition Waste Management	2	

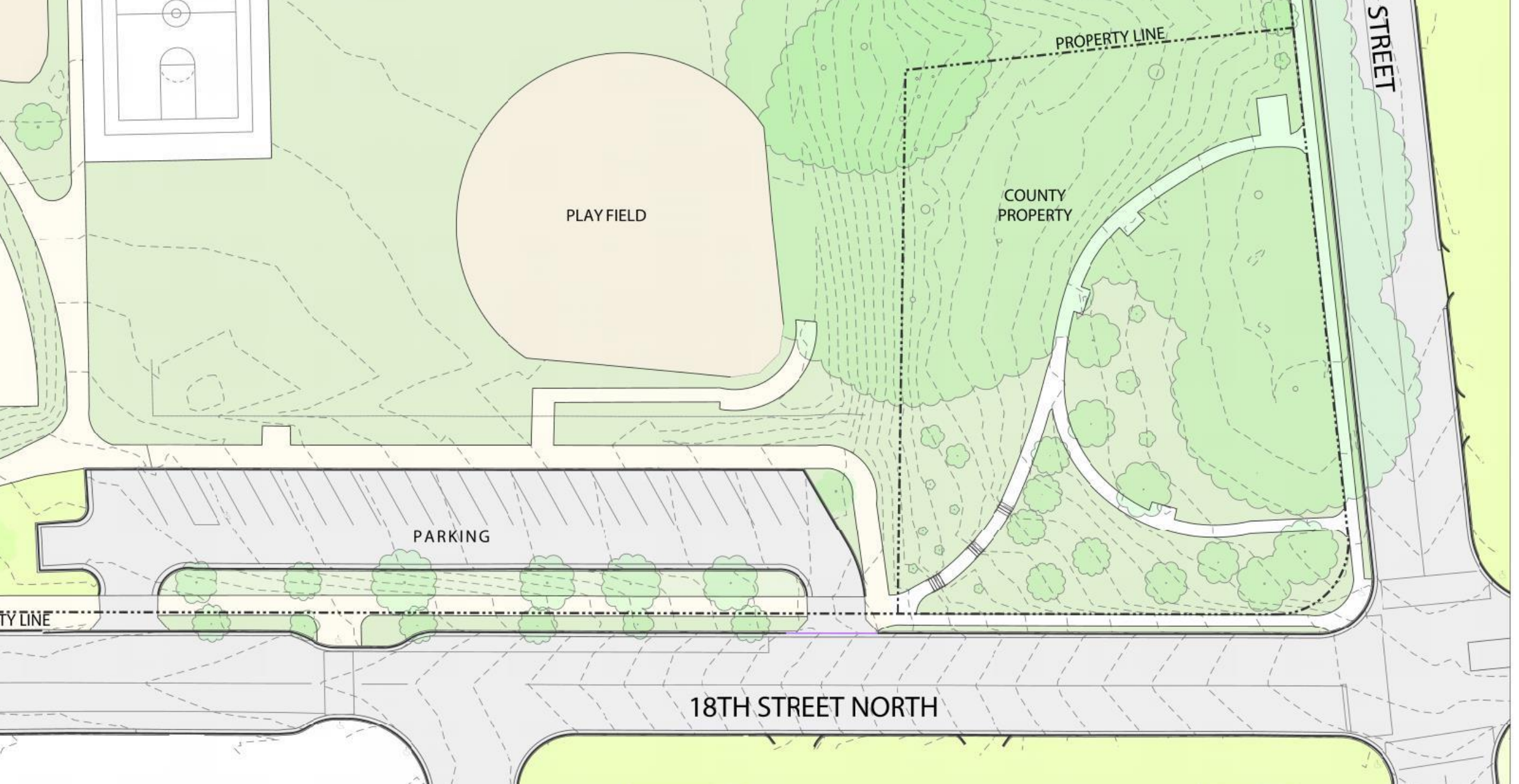
4	10	2	0	0	Indoor Environmental Quality		16	
Y					Prereq	Minimum Indoor Air Quality Performance		Required
Y					Prereq	Environmental Tobacco Smoke Control		Required
Y					Prereq	Minimum Acoustic Performance		Required
1	1				Credit	Enhanced Indoor Air Quality Strategies	2	
	3				Credit	Low-Emitting Materials	3	
1					Credit	Construction Indoor Air Quality Management Plan	1	
	1	1			Credit	Indoor Air Quality Assessment	2	
1					Credit	Thermal Comfort	1	
1	1				Credit	Interior Lighting	2	
	3				Credit	Daylight	3	
		1			Credit	Quality Views	1	
	1				Credit	Acoustic Performance	1	

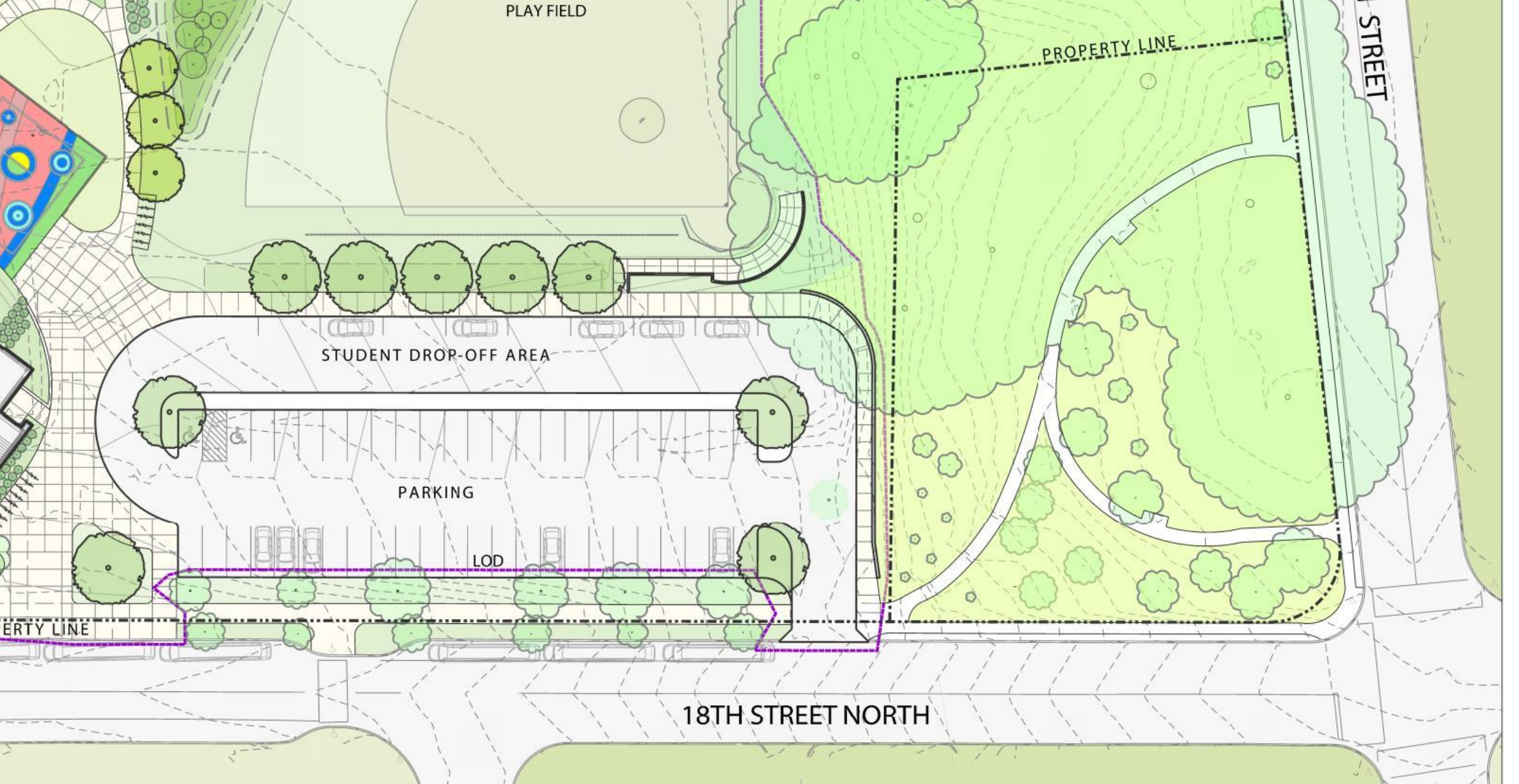
4	2	0	0	0	Innovation		6	
1					Credit	EP: BPDO MR EPD 40 products from 5 manufacturers	5	
1					Credit	EP: BPDO MR Material Ingredients 40 products from 5 manufacturers	5	
	1				Credit	Innovation: Building as a Teaching Tool	5	
	1				Credit	MRpc103: Integrative Analysis of Building Materials	5	
1					Credit	IPpc90: Social Equity, Option 2 (20% of Design Team)	5	
1					Credit	LEED Accredited Professional	1	

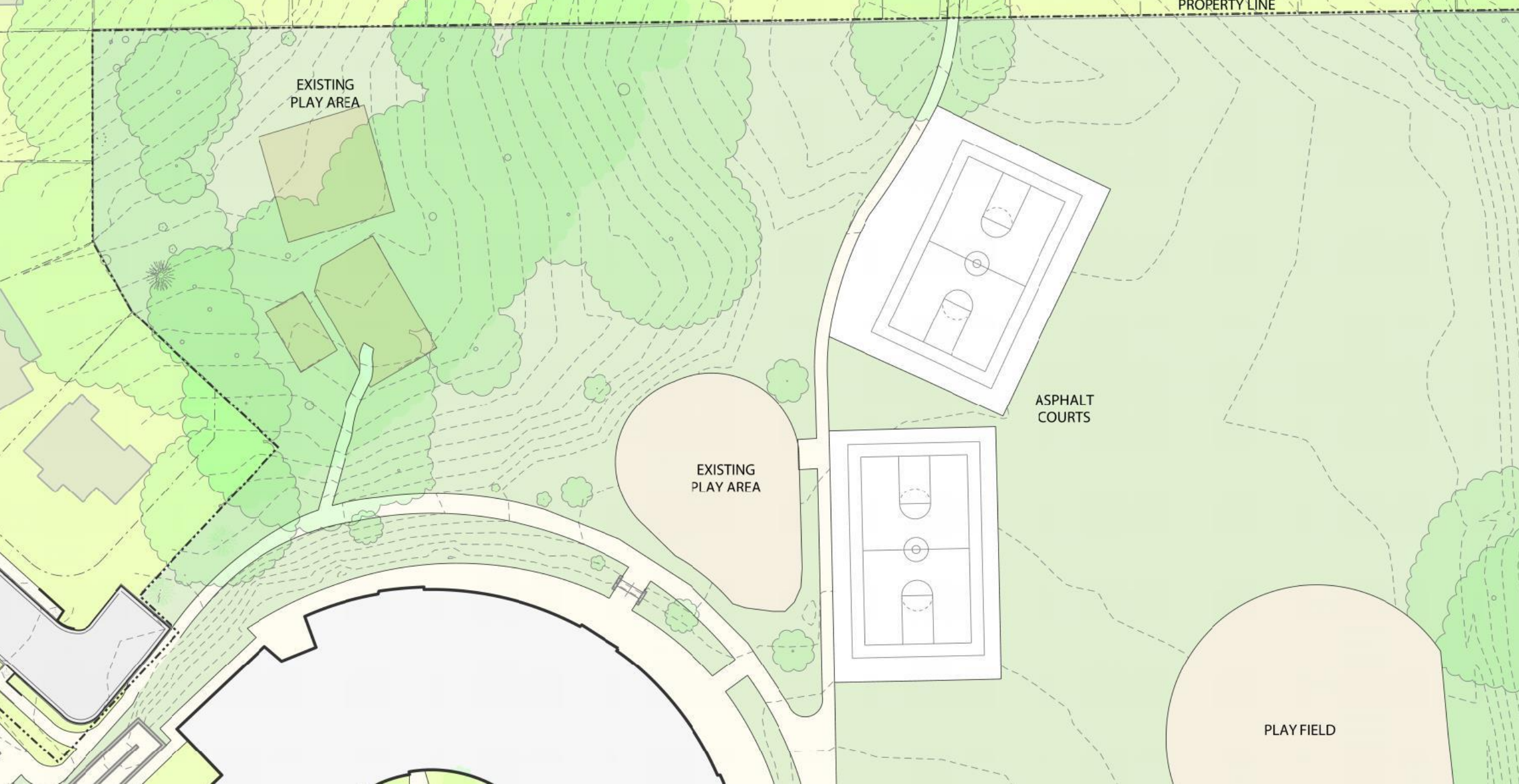
4	0	0	0	0	Regional Priority		4	
1					Credit	Optimize Energy Performance	1	
1					Credit	Reduced Parking Footprint	1	
1					Credit	Outdoor Water Use Reduction	1	
1					Credit	Access to Quality Transit	1	

51 46 17 27 TOTALS Possible Points: **110**

Certified: 40 to 49 points, Silver: 50 to 59 points, Gold: 60 to 79 points, Platinum: 80 to 110







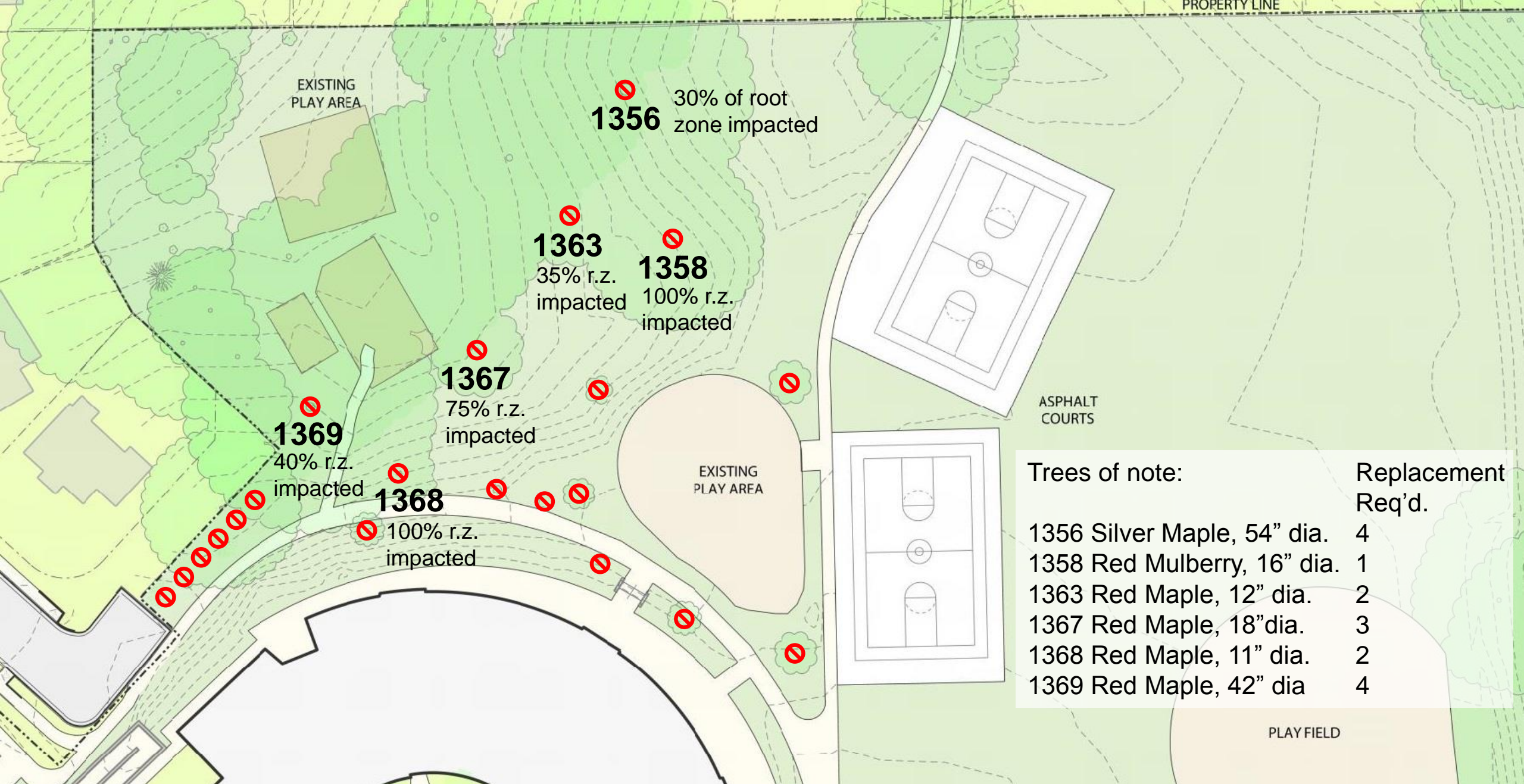
EXISTING
PLAY AREA

EXISTING
PLAY AREA

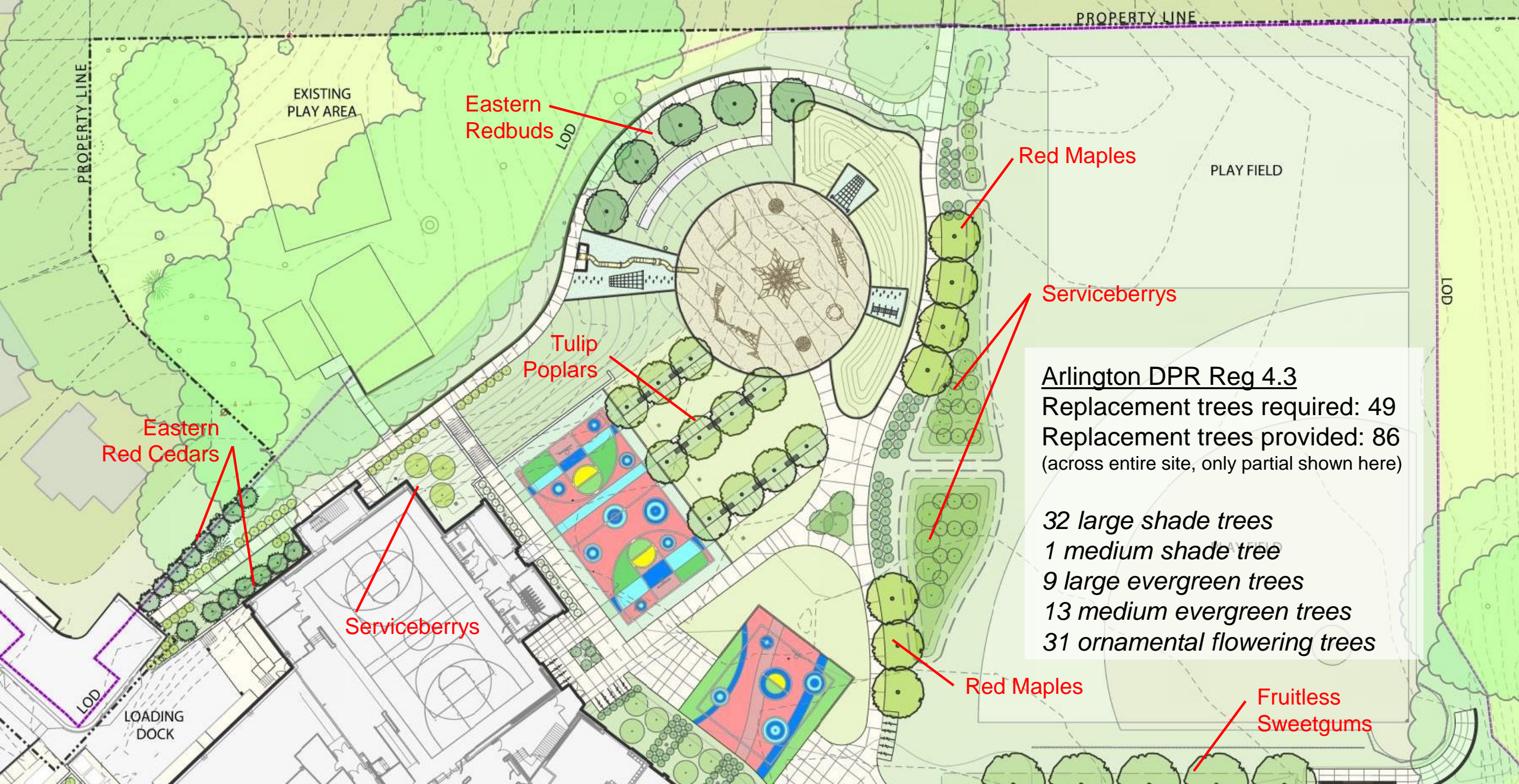
ASPHALT
COURTS

PLAY FIELD



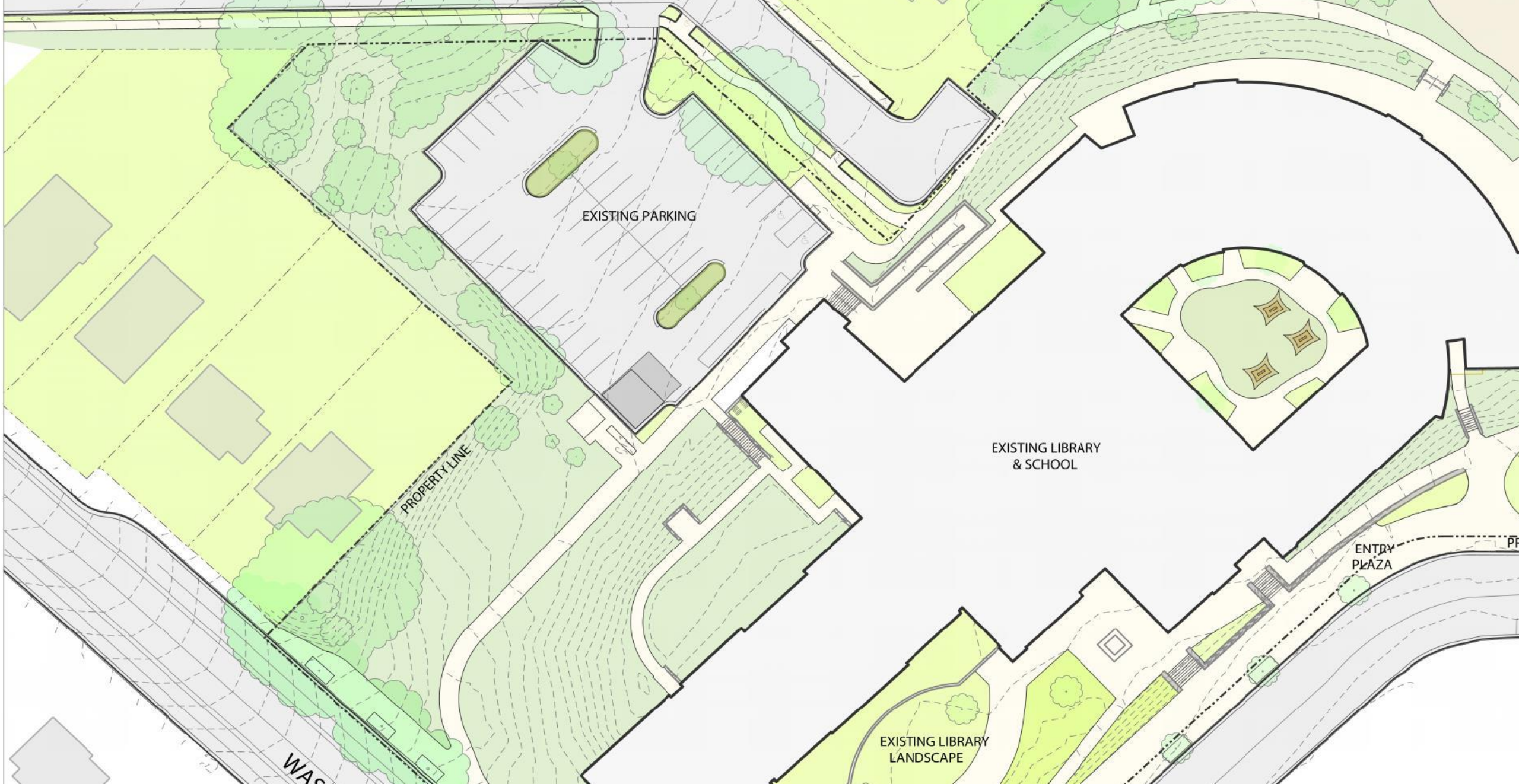


Trees of note:	Replacement Req'd.
1356 Silver Maple, 54" dia.	4
1358 Red Mulberry, 16" dia.	1
1363 Red Maple, 12" dia.	2
1367 Red Maple, 18" dia.	3
1368 Red Maple, 11" dia.	2
1369 Red Maple, 42" dia	4



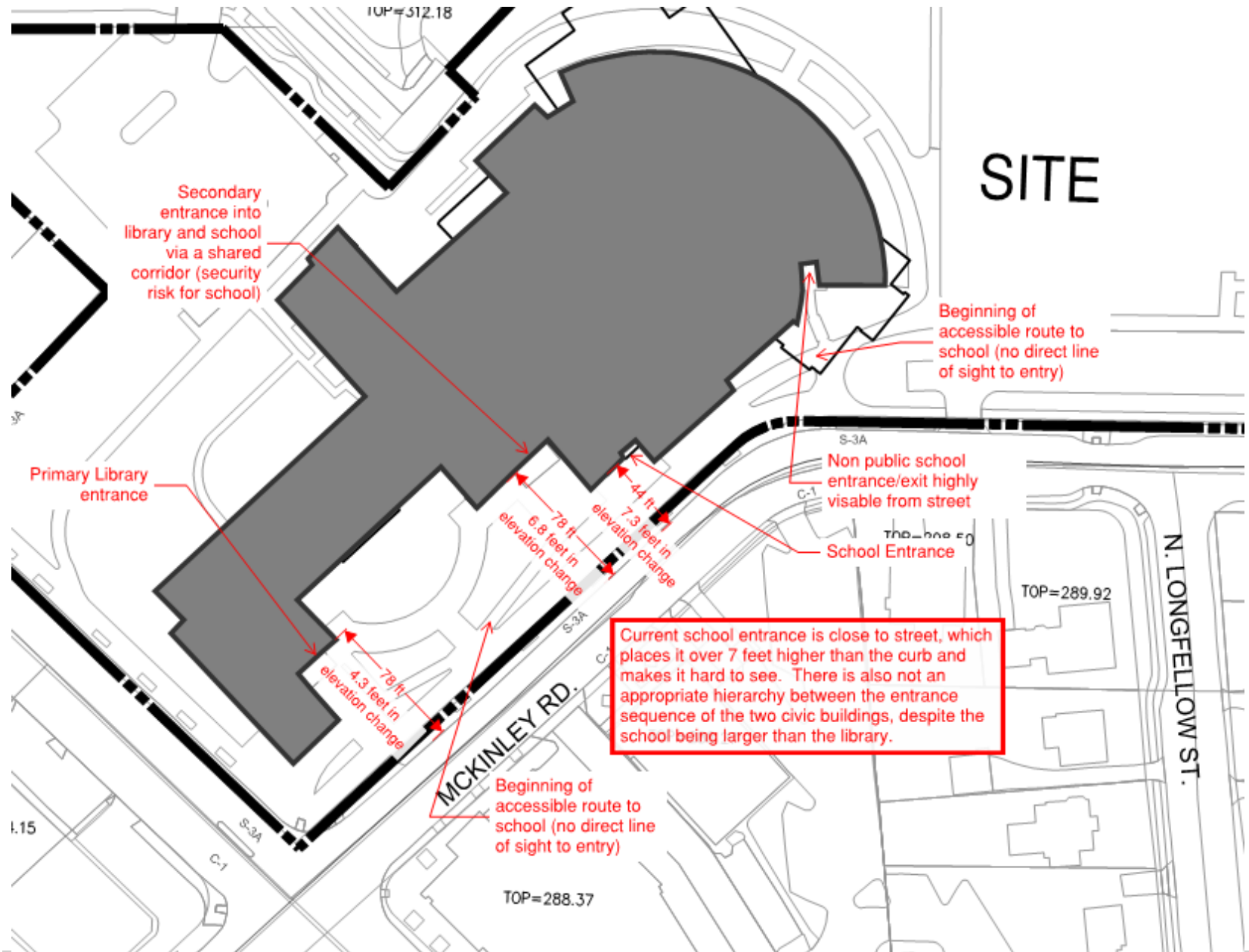
Arlington DPR Reg 4.3
 Replacement trees required: 49
 Replacement trees provided: 86
 (across entire site, only partial shown here)

32 large shade trees
1 medium shade tree
9 large evergreen trees
13 medium evergreen trees
31 ornamental flowering trees

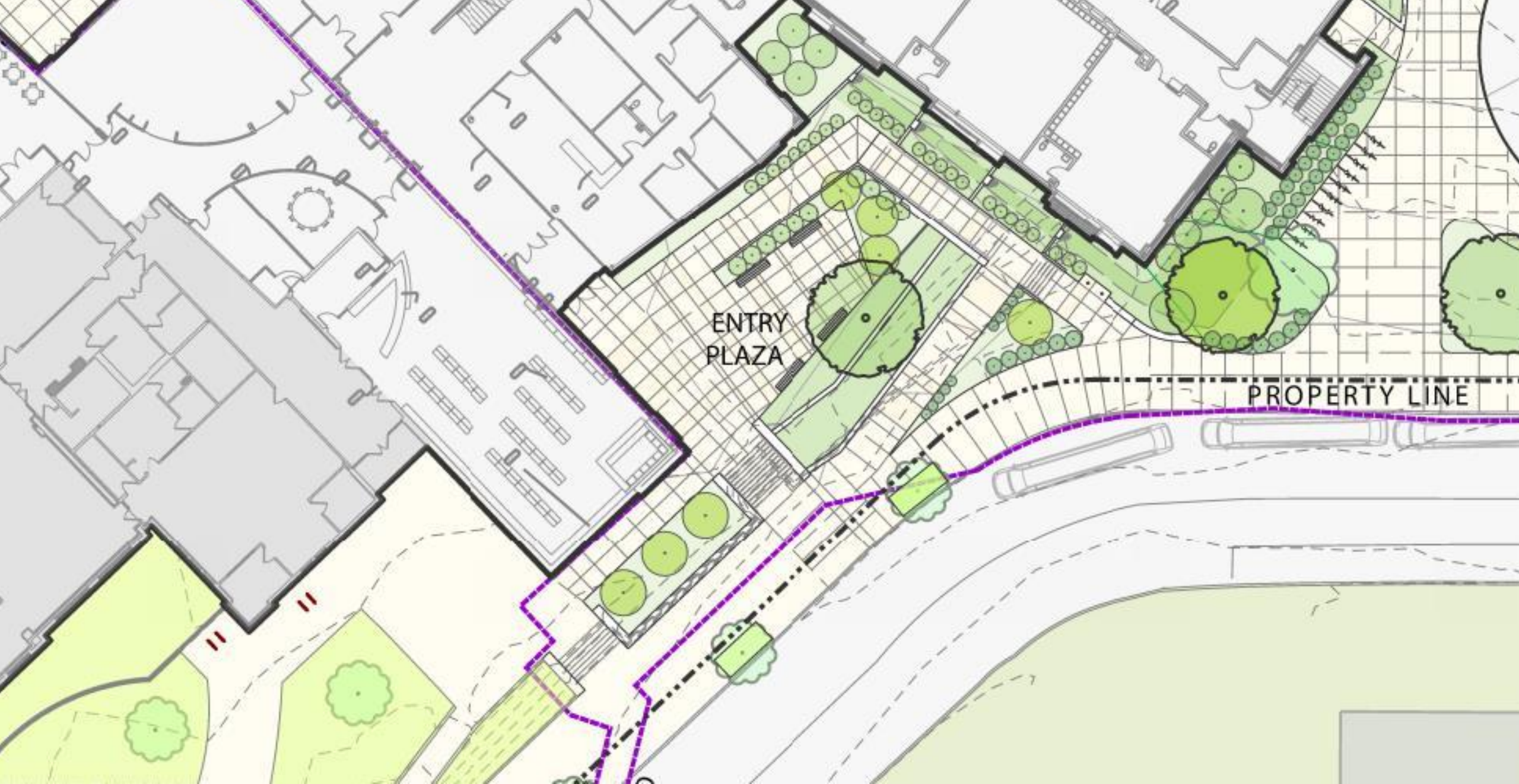












ENTRY
PLAZA

PROPERTY LINE

Building

ENVIRONMENT AND ENERGY CONSERVATION COMMISSION
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October 22, 2018



























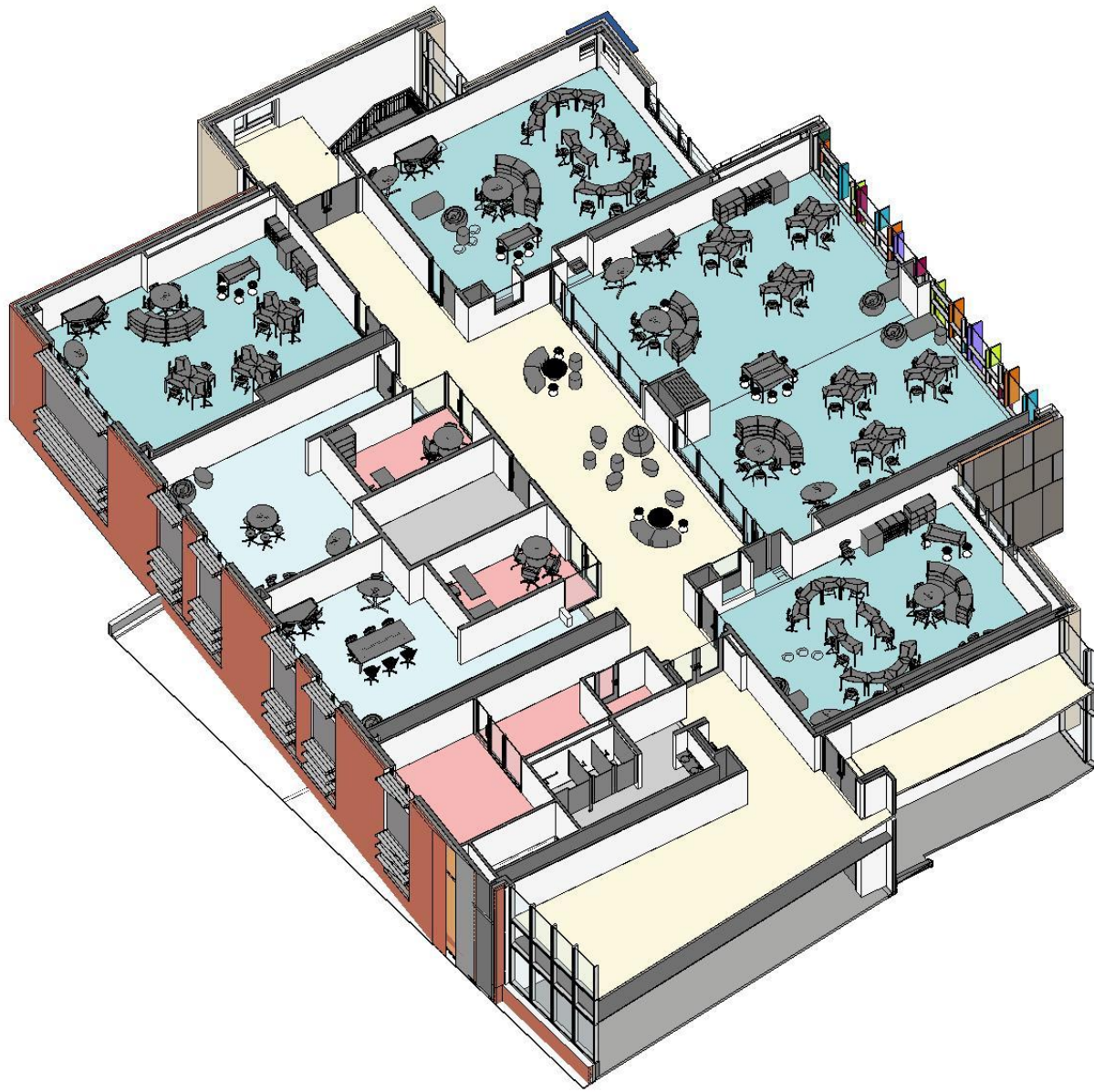
- CLASSROOM
- RESOURCE ROOM
- SHARED/PUBLIC (Dining, Library)
- PHYSICAL EDUCATION
- CORRIDOR / COMMONS
- SUPPORT
- ADMINISTRATION
- ARTS



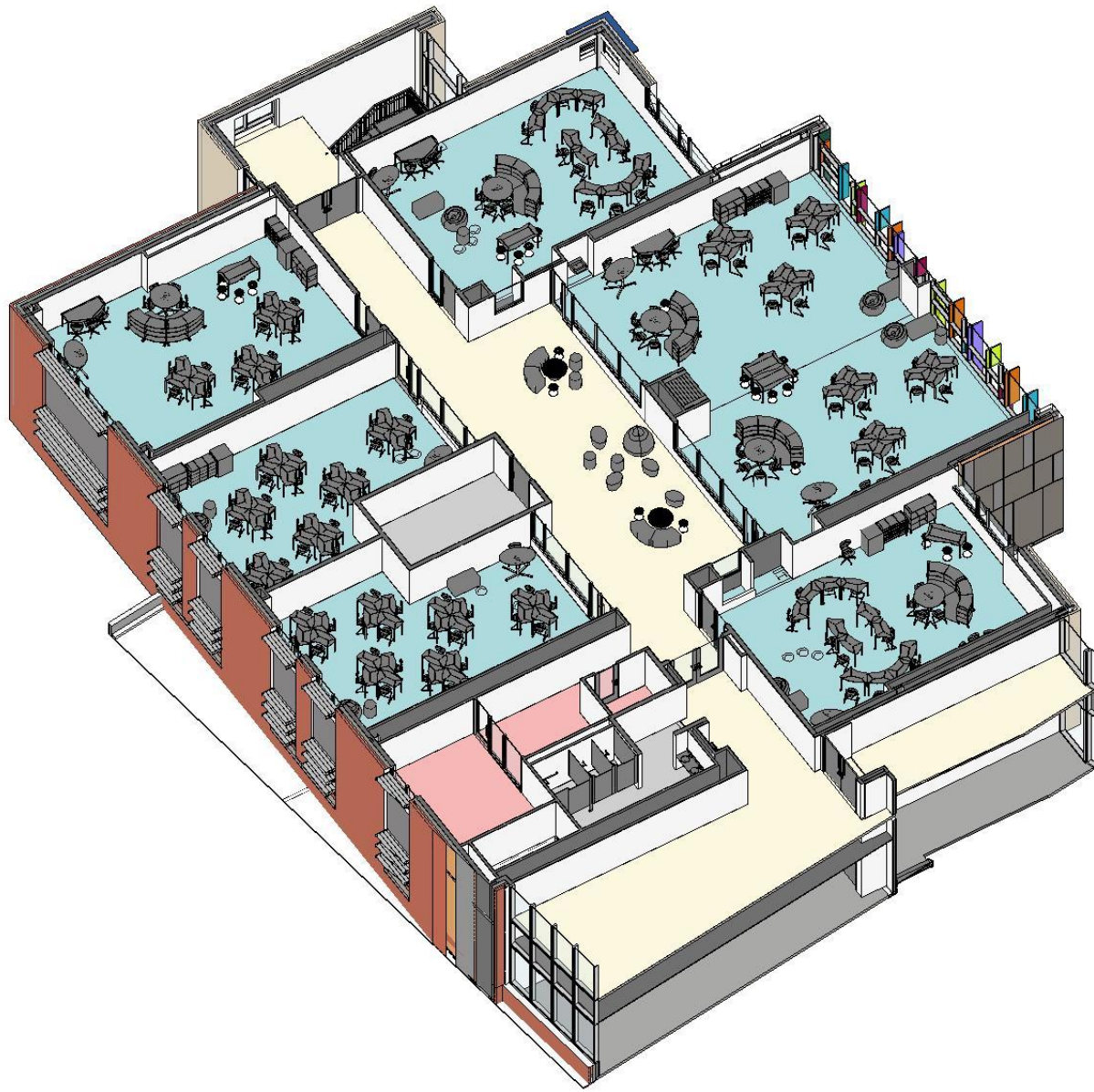
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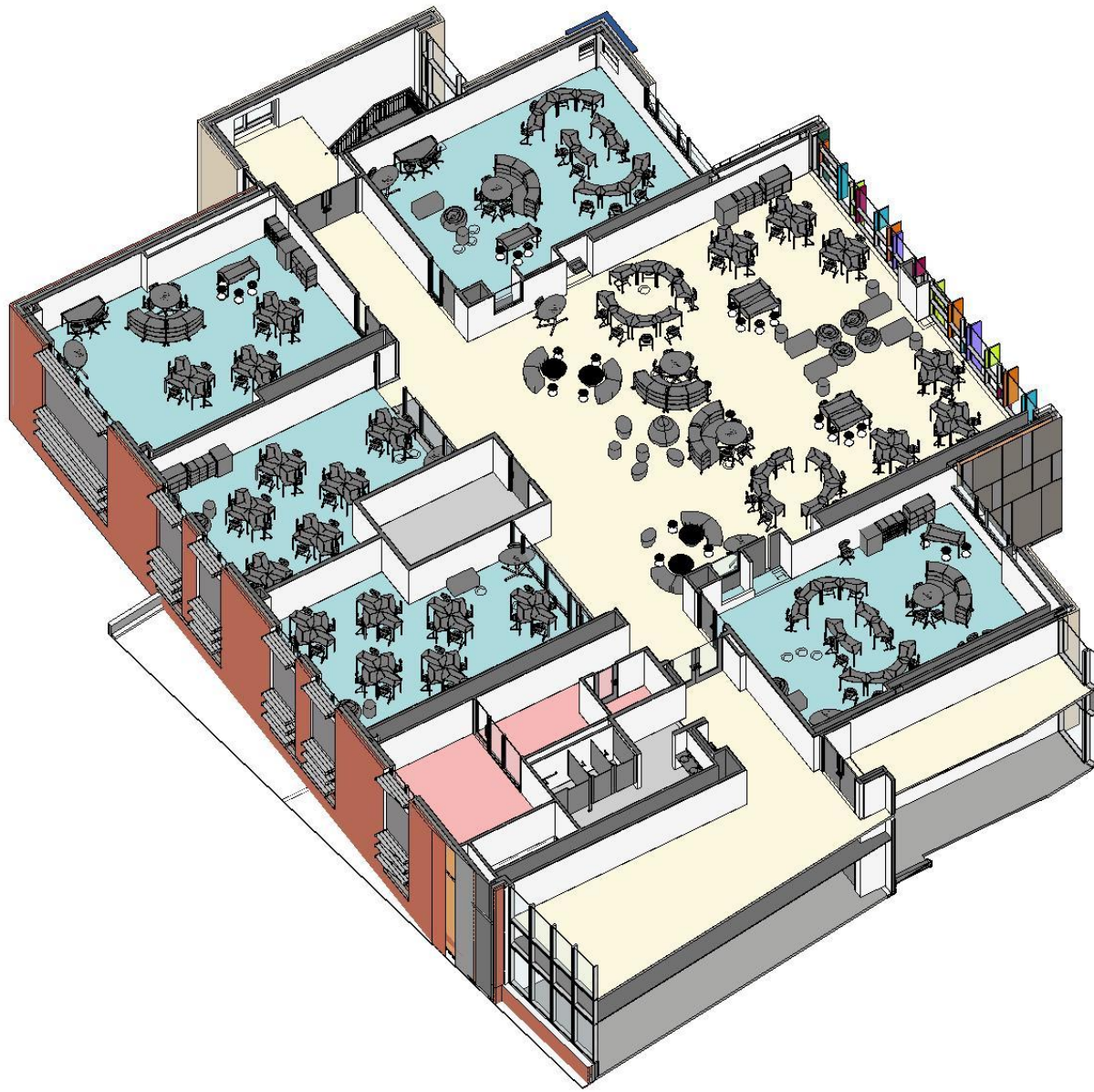
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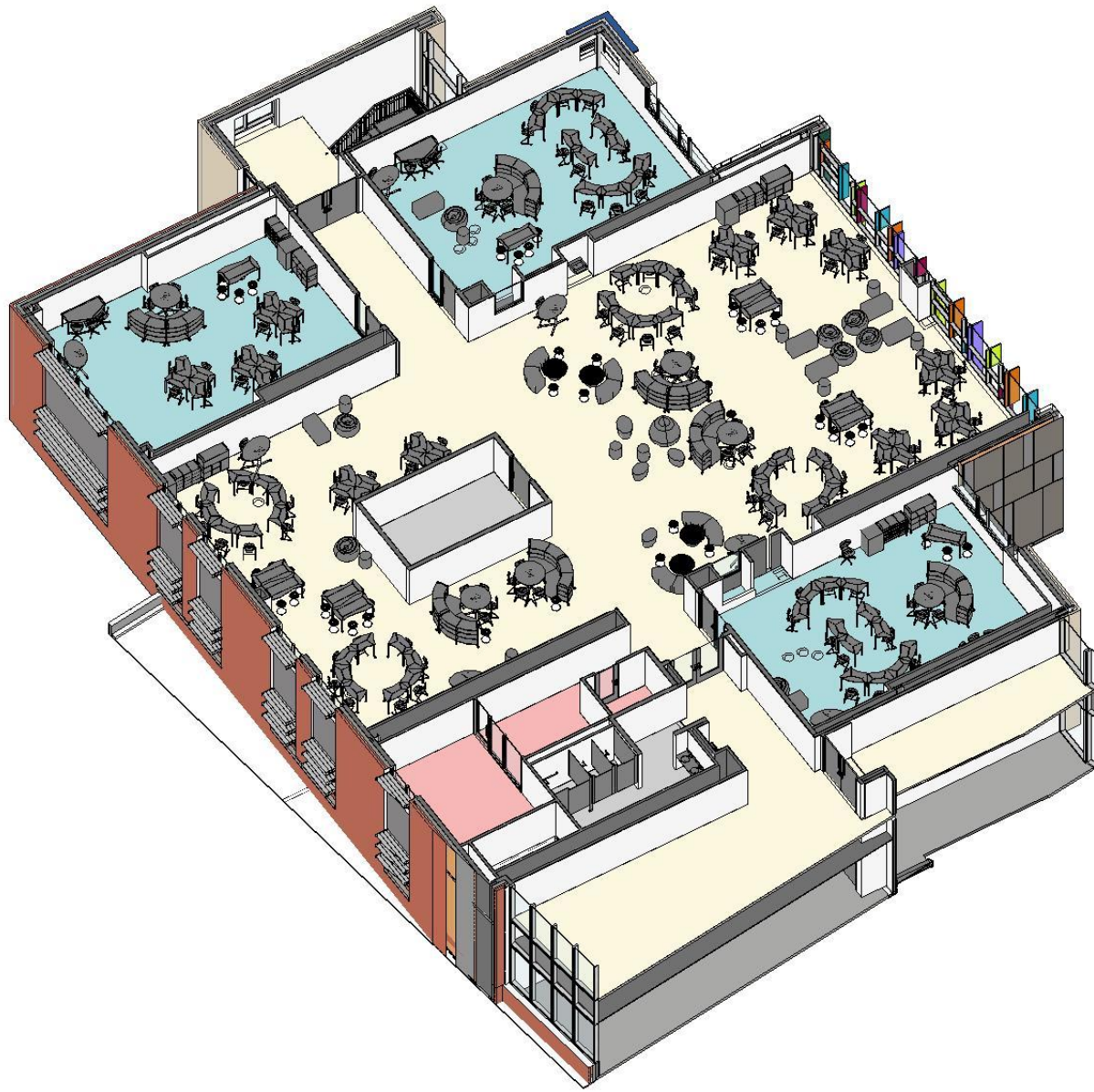
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Construction

ENVIRONMENT AND ENERGY CONSERVATION COMMISSION
COMMITTEE

VMDO

October 22, 2018



CONSTRUCTION

September 2109: Consturction Start

September 2021: Construction Finish

The entire site will be unavailable from the start to the end of construction

Prior to the start of construction APS will have a joint BLPC / PFRC & Community meeting to provide further details on planned construction activities:

- Construction phasing
- Construction worker parking
- Construction hours
- Other construction related issues

The library parking lot will remain open during construction for library patrons and the work in that area will be phased.

Work will be ongoing on the site for an immediate period of time past the construction finish date noted above for all punch list and other construction related items to be addressed.

APS will provide the community with monthly construction updates during construction.

Reed Elementary Preliminary Construction Site Utilization Plan

Provides approximately 75 on-site spaces for construction worker parking to fully meet estimated peak demand.

New parking lot may be able to be phased to allow access for part of the construction period

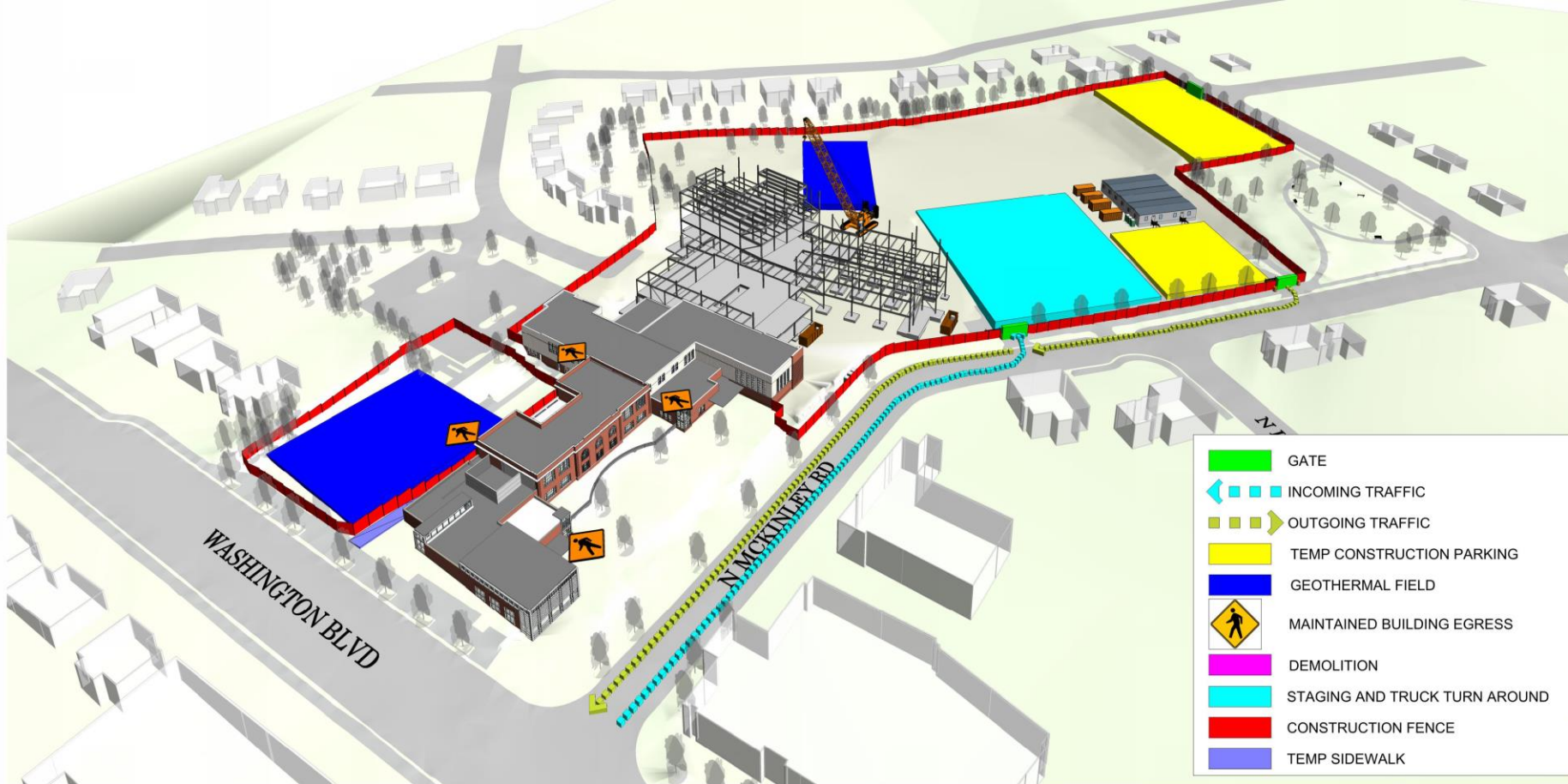
Temporary sidewalk to be constructed for egress from emergency exits during construction.

Egress from Library to be Maintained at All Times (Typ)

Road remains open. Construction activities in this area will be coordinated to accommodate market held every Sunday

Sidewalk access to remain open during construction.





New Construction
November 2019 to August 2020

Geothermal work will begin in the field adjacent to the library in January 2020, with the field behind the school taking place in April 2020. When the geothermal work is completed, these areas will be used for construction staging and/or parking.



ONGOING COMMUNITY DISCUSSIONS

Discussions and revisions to the existing Library agreement

Discussions and revisions to the existing Farmers Market agreement

Discussions with Westover retail owners

18th street residents' concerns

Community / safety improvements beyond the immediate school site

CONTACTS

- Provide feedback to APS via project email: reed.info@apsva.us
- For further information, please contact:

APS Project Manager

Ajibola (Aji) Robinson PMP

703-228-7738

ajibola.robinson@apsva.us

County Project Manager

Nicole Boling

703-228-3945

nboling@arlingtonva.us

- BLPC, PFRC, and Community Meeting dates are scheduled and posted on the APS project website: <https://www.apsva.us/design-and-construction/new-elementary-school-at-reed-building/>
- Provide feedback and comments to Arlington County: <https://commissions.arlingtonva.us/planning-commission/public-facilities-review-committee-pfrc/school-projects/walter-reed/>

Questions?

ENVIRONMENT AND ENERGY CONSERVATION COMMISSION

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