The High School Project

INSPIRING A FUTURE FOR ALEXANDRIA

Preliminary Analysis and Test Fits
Informational Package

January 21, 2021

EXECUTIVE SUMMARY

CO-LOCATED COMMUNITY PROGRAMS

The following information was compiled from ACPS provided documents and requires meeting with the Alexandria Health Department and Department of Community and Human Services to determine the programs that will be co-located at the Minnie Howard Campus, including the types, quantity, and sizes of spaces required.

Proposed school design includes approximately 5,665 sf of co-located programs.

ALEXANDRIA HEALTH DEPARTMENT:

The Teen Wellness Center is programmed at 2,200 sf minimum per the Health Department's request. Programs include:

- *Teen Wellness Center:*

  Goal is for the same types of clinical and support services offered at King Street to be offered at Minnie Howard.

DEPARTMENT OF COMMUNITY AND HUMAN SERVICES (DCHS):

Our assumption for DCHS's size is 3,465 sf (5,665 sf - 2,200 sf). Possible programs include:

- *Outreach for Benefits Program (BP):*

  Description: Outreach activities in schools where households who are eligible for SNAP receive benefits.

- *Workforce Development in Schools:*

  Description: To work with youth population ages 14 to 21. To provide various employment services and engage students year-round so that youths can obtain employment in the job market. Recruit students for summer youth employment program to provide them several job readiness workshops, soft skill trainings, and direct work experiences at the work sites of public and private organizations.

- *Youth Development (YD)*

- *Children and Youth Master Plan (CYMP):*

  Description: Establishes long-term, community-wide priorities for youth and the specific action steps necessary to realize those priorities through the coordination, alignment and delivery of effective services to all Alexandrian children and youth from birth to 21 years-old and their families.

- *Early Childhood (ECS):*

  Description: Early learning center to include space for Head Start Classrooms and offices for program administrators and social workers. Space: classrooms, admin space, playground. If each classroom has 1 teach and 1 assistant teacher, this equals 17 Head Start classrooms, which exceeds the 3,465 sf.

- *Domestic Violence/Sexual Assault (DVP):*

  Description: The Rape Prevention Education position would provide prevention education on sexual and domestic violence to the community, including youth. Minnie Howard and King Street serve roughly 500 students per year.

- *Child and Family Behavioral Health Services (CFBHS):*

  Description: Provide assessment, early intervention, individual and family therapy, case management & referral, and consultation. Clients are students who are referred by self, parent, or school staff.

ZONING ANALYSIS FOR THE TEST FITS

The existing Minnie Howard Campus sits on a 12-acre site along the north side of Braddock Rd. The school and its associated parking at the west end of the lot is in an R-12 zone of approximately 6.6 acres. The play fields on the east end of the site are zoned as public open space (POS) on approximately 5.4 acres.

To develop the new high school buidling, we will need to build on the east end of the site, allowing the existing building to continue in operation until the new building is occupiable. City of Alexandria's Department of Planning and Zoning proposes to move the POS zone and its associated square footage to the west end of the lot to permit construction for the new high school.

The existing buildable R-12 zone has a floor area ration (FAR) of .3. With the 6.6-acre lot, a building with a total gross square footage to be 86,500 square feet may be constructed. The proposed, new high school has a space program of approximately 300,000 square feet. The lot will need to be rezoned to accommodate the new high school building.

An OCM(50) zone with an FAR of 1.5 will permit 430,000 square feet of development. This zone would accommodate the proposed new high school building, considering a future addition and a co-located function, such as residential housing. Depending upon the concept selected, the parking structure may also contribute to the square footage on the site.

A residential use on the site will require associated usable open space. This space may be located on a roof or on an above ground plaza. Given the requirements for bus and passenger vehicle drop off and parking, and the ground floor area of the school, the development proposal may request a modification of the open space requirement, noting the reduction may be justified given the POS zone adjacent to the housing. A part of the SUP process, the development may request a height greater than the 50 feet allowed by right.

HOUSING PROGRAMMING

CO-LOCATED AFFORDABLE HOUSING PROGRAM

Developing and preserving affordable housing in Alexandria is a top priority for city government as the number of Alexandrians who are housing cost burdened continues to rise. The City's commitment to addressing the important challenge of housing affordability is reflected in the creative planning approach to mixed-use development with other city facilities, including schools. The development of mixed-use projects has inherent challenges but there are also incredible opportunities to leverage synergies between the various uses and deliver a project where all of the elements are better together than if they were developed independently.

Initial programming for the co-located affordable housing on the site reflects early discussions with housing and school stakeholders to define the scope and scale of affordable housing options that could potentially be developed. A meeting with Planning and Zoning officials was also held to review various approaches to re-zoning the site in order to permit the mix of uses to be developed under the current Zoning Ordinance of the City of Alexandria. One of the key takeaways from our initial meetings with city stakeholders and potential development partners is that there is broad range of housing development scenarios that are viable on the site.

This flexibility of the affordable housing program is critical toward allowing the current and projected future space needs of the educational programming to be prioritized on the site while the housing development can adapt based on specific site configurations. Our initial test fits of the site consider the location of housing in various positions across the site and consider the potential for housing to be located above the other co-located community uses on the site. The stacking of housing above other uses can open the door to creative financing opportunities for those other uses once a development partner is identified. The stacked programming can also facilitate the sharing of on-site energy generating resources, taking advantage of synergies in peak demands between the different uses. The test fits reflect principles of separation of school and housing entrances, parking access, safety, security, and holistic wellness.

PROGRAMMING ASSUMPTIONS

- 30-100+ units may be viable for development
  - 60-80 units is a challenging range to develop, but still viable
- Housing will be designed for Net Zero Energy
- Re-zoning of property to OCM(50) requires 40% designated open space based on the full area of the lot.
  - Project will request a reduction in required open space based on adjacent 5+ acre POS zone.
- Preliminary unit mix for study
  - 20% 1BR (Target unit size to be confirmed)
  - 80% 2BR / 3BR (% split between 2BR & 3BR and target unit sizes to be confirmed)
- Parking requirements for affordable housing will be based on percentage of affordable units and level of affordability.
  - Project may request permission to develop shared parking on the site with school and community uses.

EXISTING CONDITIONS

SITE KEY

- Existing School & Parking
- Existing Trees
- Existing Geothermal
- Steep Topography

EXISTING SITE AREA & ELEMENTS

R12 Parcel (Left Parcel)	288,484 sq ft (6.62 Acres)
POS Parcel (Right Parcel)	234,350 sq ft (5.38 Acres)
Total Existing Site Area	522,834 sq ft (12.00 Acres)
Parking	57 Spaces
Fields	5.38 Acres
Geothermal	+/- 60 Wells

0 250 500 ft

POTENTIAL DEVELOPMENT AREA ANALYSIS

SITE KEY

- Existing School & Parking
- Existing Trees
- Existing Geothermal
- Steep Topography
- Proposed Setbacks
- Proposed School Area (For Scale Only, Final Location TBD)
- Proposed Additional Development Area (For Scale Only, Final Location TBD)

EXISTING SITE AREA & ELEMENTS

R12 Parcel (Left Parcel)	288,484 sq ft (6.62 Acres)
POS Parcel (Right Parcel)	234,350 sq ft (5.38 Acres)
Total Existing Site Area	522,834 sq ft (12.00 Acres)
Parking	57 Spaces
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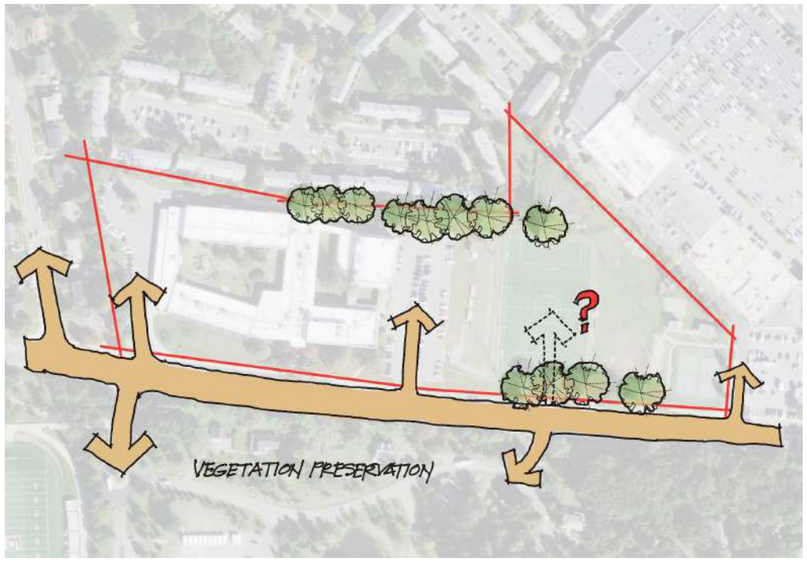
PROPOSED SITE PROGRAM SURFACE AREA & ELEMENTS

Approx. School Area	85,000 sq ft (1.95 Acres)
Approx. Add. Develop. Area	20,000 sq ft (0.46 Acres)
Approx. Total Program Area	105,000 sq ft (2.41 Acres)
Parking	200 Spaces
Fields	5.38 Acres
Geothermal	+/- 300 Wells

0 250 500 ft

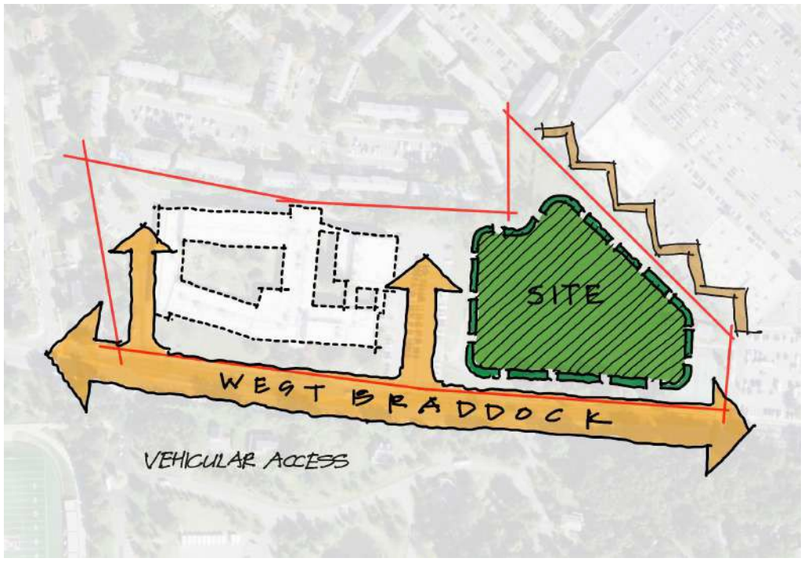
EARLY SITE ANALYSIS

VEGETATION PREPARATION



The existing site has several prominent trees that could be retained in the new design. Those on the north will serve as buffers while those on the south along Braddock Road could enhance the arrival experience for pedestrians.

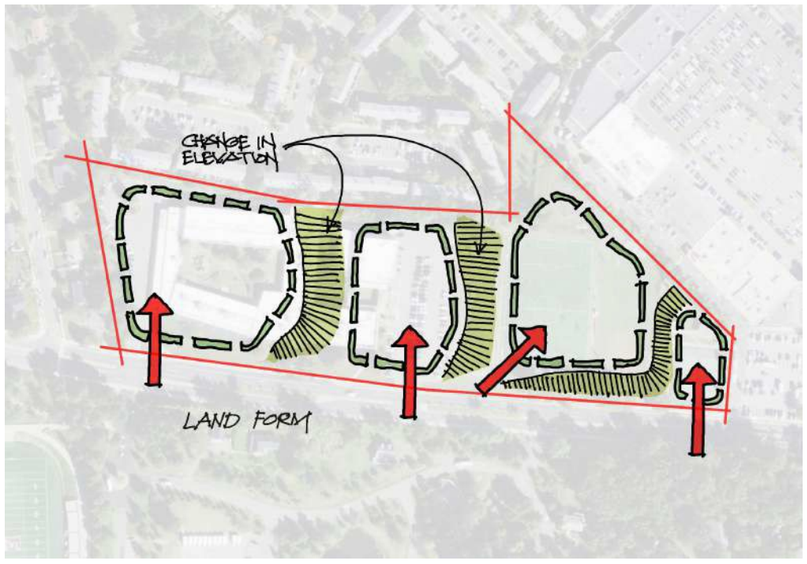
VEHICULAR ACCESS



Currently the Minnie Howard campus has two points of access from West Braddock Road. Since they address different elevations in the campus' topography, these two points may continue to serve the renewed campus.

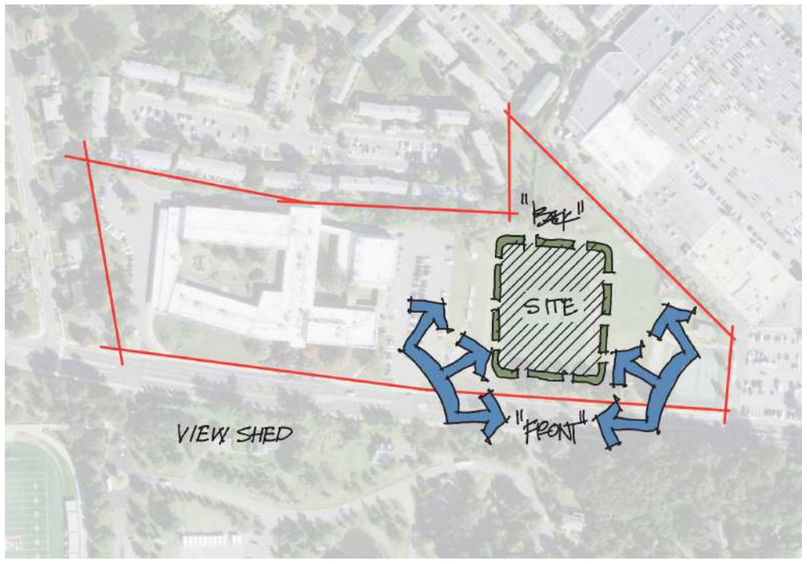
Maintaining operations of the existing building would be best enabled by phasing the new school facilities on the existing field.

TOPOGRAPHY LAND FORMS



One of the site's most prominent features is its topography. Four distinct plateaus help define the current activities and use of space on campus. Our approach to the site should address and take advantage of these elevation changes.

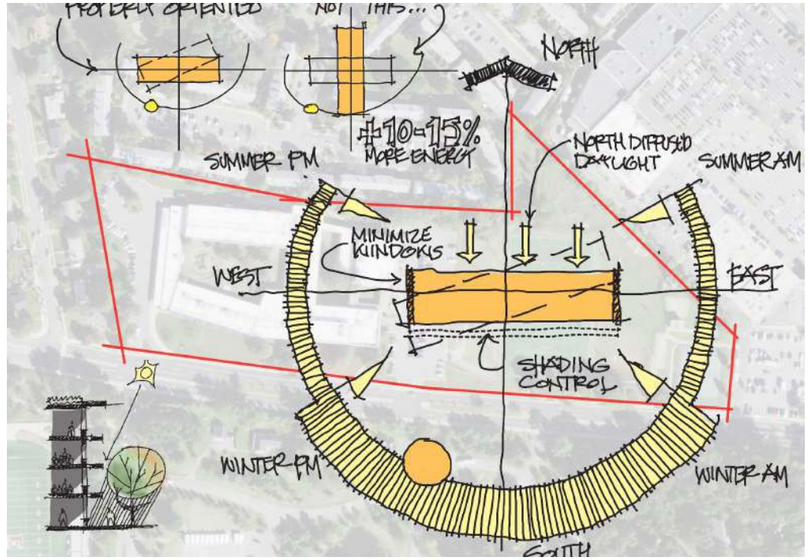
VIEW SHEDS



Building the new building on the field side of the campus would establish a prominent "civic presence" for the new school building. This will help bind the two campuses together and visually establish ACPS's forward-looking vision in the community.

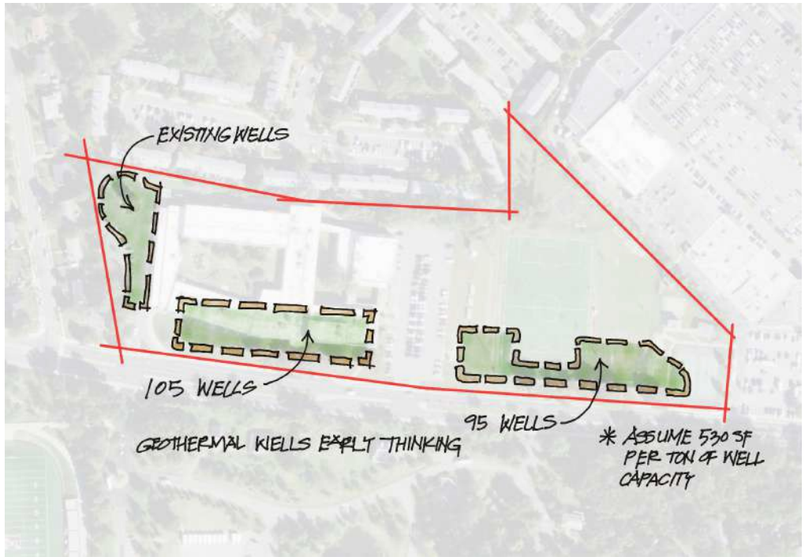
EARLY SITE ANALYSIS

SOLAR ORIENTATION



One of the most important, and no cost, first steps in creating a Net Zero Energy building is to get the solar orientation correct. Proper orientation will reduce heat gain on the building, and enhance education by allowing for great daylighting in the interior. Fortunately, the site's long east-west axis will help us properly orient the instructional spaces to achieve not only Net Zero Energy, but "Net Positive Education."

GEOTHERMAL OPPORTUNITIES

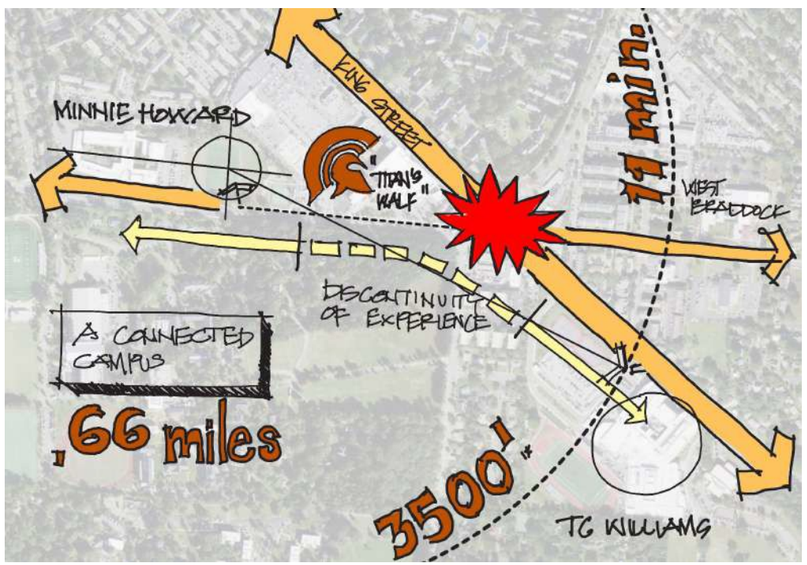


Another system that can help us achieve Net Zero Energy is "geothermal" an approach that pre-heats and pre-cools the building using the constant temperature of the earth. The existing building already has such a system that we can build-on, and enhance.

SOLAR PANEL AREA REQUIRED

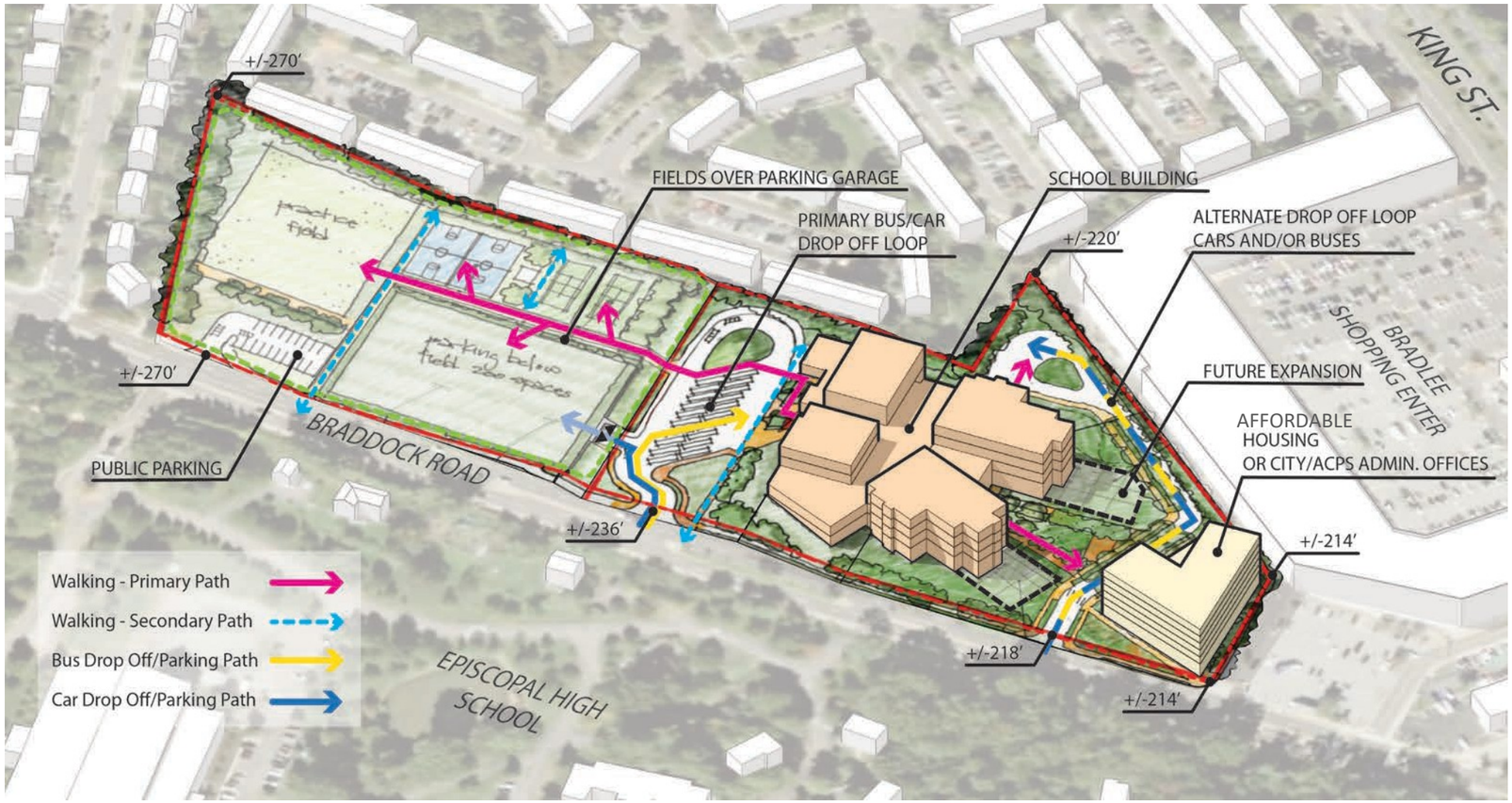
Once we orient the building properly and reduce demand for energy through other smart and highly efficient design strategies, we will add photo-voltaics to provide the remaining energy needed to operate the building through the year. The more efficient we can make the building the smaller the PV system needed. We can also consider connecting power generation across campuses.

CREATING A CONNECTED CAMPUS



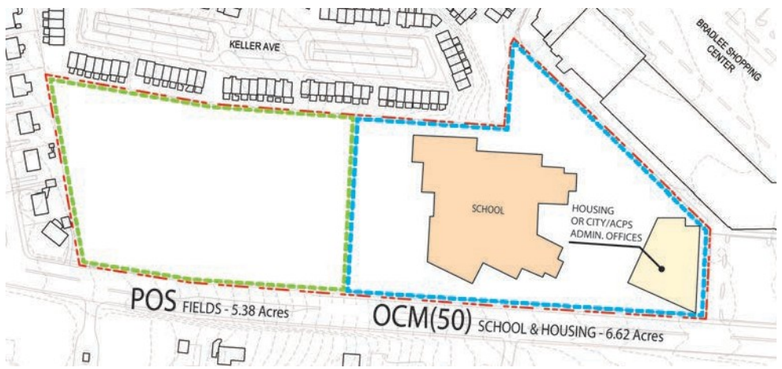
Beyond the boundaries of the Minnie Howard site, the project can enhance the "connectedness" for the two campuses. The currently disjointed experience of traveling between campuses could be significantly enhanced through pedestrian-friendly streetscape designs including graphics, signage, bike lanes, crosswalks, and better sidewalks. We imagine this enhanced connection as new "Titan's Walk" that will create a notable identity for this new educational and recreational "district" for ACPS and the community.

TEST FIT 1 - SCHOOL WITH BELOW GRADE PARKING & AFFORDABLE HOUSING TO THE EAST



SITE MASSING & CIRCULATION

EXISTING SITE



PROPOSED ZONING

HIGH SCHOOL

- Central entry point for cars and buses
  - Reduce traffic impact on Braddock Rd.
  - Possible on site back up for arrival and dismissal.
  - Pedestrians cross bus lanes to access garage and fields
  - Possible development of bus drop off on east side of building (similar to Test Fit Two)
- Structured parking for students and teachers is located below field
  - Maximize open space onsite.
  - Minimize visual impact of on grade parking.
  - Additional costs for structured parking.
- Building
  - Eastward expansion possible. Southeast wing points towards T.C. Williams main campus.

AFFORDABLE HOUSING

- Podium Level 1: Parking, Lobby, Amenity, other co-located uses, potential retail
- (5) Residential Levels: 12-16 Units / Floor, 60-80 total units
- Option: Additional residential podium level could add 12-16 units

PUBLIC OPEN SPACE

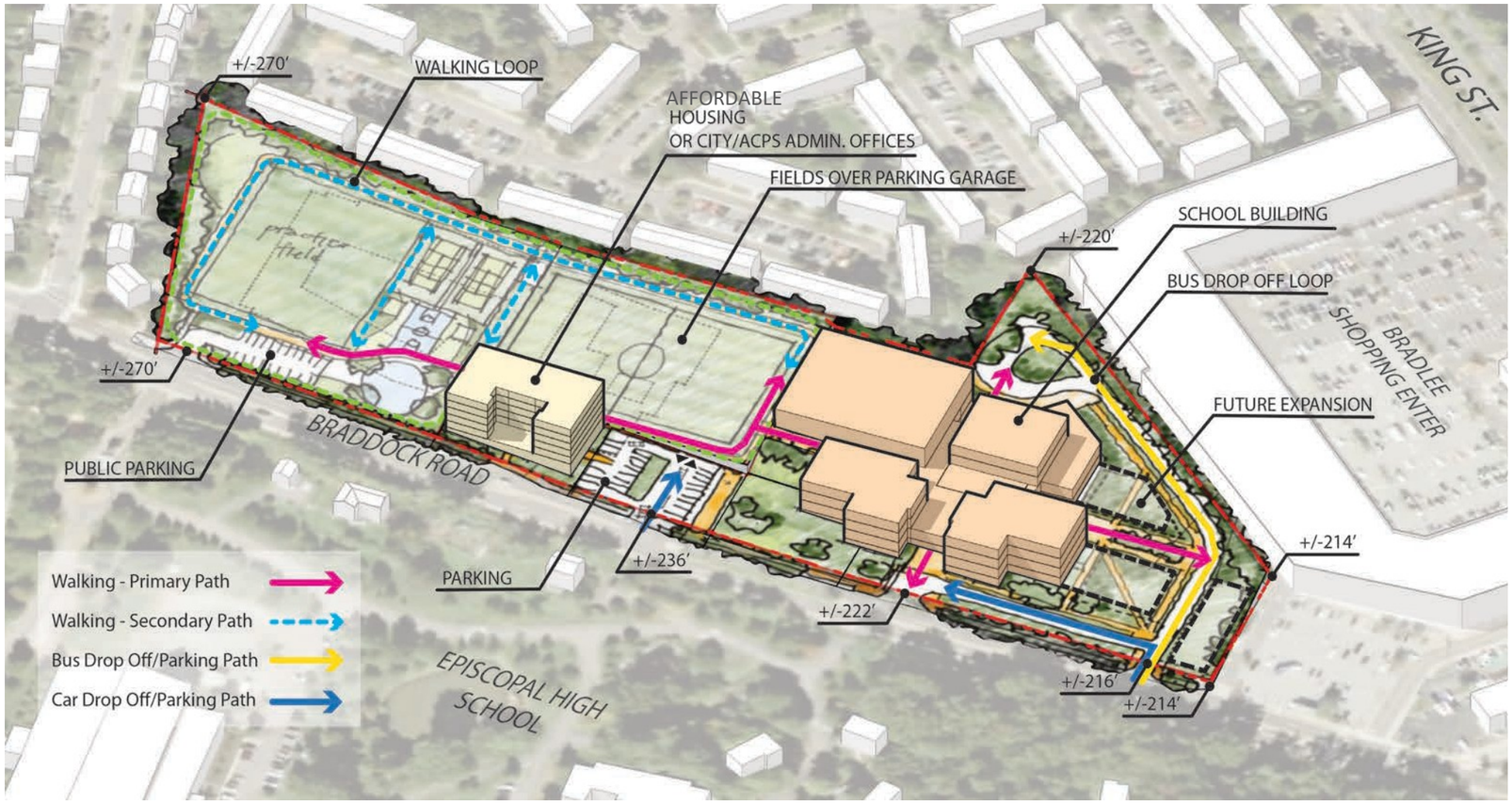
- POS located on linear parcel optimizing geometry of athletic field organization.
- Surface parking available to public near POS fields.
- Lit field located along Braddock Rd. Courts located adjacent to residential property line.

PROJECTED AREAS

LEVEL	School (GSF)*	Housing (GSF)
GF	99,000	20,100
L1	81,000	15,500
L2	59,000	15,500
L3	46,000	15,500
L4		15,500
L5		15,500
TOTAL	285,000	97,600

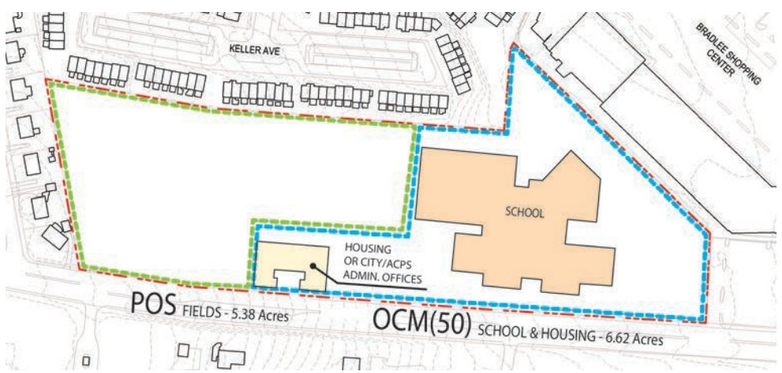
*School GSF includes pool & co-located 5,600 sq ft of city services

TEST FIT 2 - SCHOOL WITH BELOW GRADE PARKING & AFFORDABLE HOUSING MID-SITE



SITE MASSING & CIRCULATION

EXISTING SITE



PROPOSED ZONING

HIGH SCHOOL

- Separation of cars and buses
  - Additional curb cuts along Braddock Rd
  - Access for cars is shared with housing and high school.
- Structured parking for students and teachers is located below field
  - Maximize open space onsite.
  - Minimize visual impact of on grade parking.
  - Additional costs for structured parking.
- Building
  - Direct access to fields
  - Eastward expansion possible. Building has a civic presence along Braddock Road

AFFORDABLE HOUSING

- Podium Level 1: Parking, Lobby, Amenity, other co-located uses, potential retail
- (5) Residential Levels: 10-13 Units / Floor, 50-65 total units
- Option 1: Additional residential podium level could add 10-13 units.
- Option 2: Additional “wrap” townhouse or loft types units at ground level podium could add 10-12 units

PUBLIC OPEN SPACE

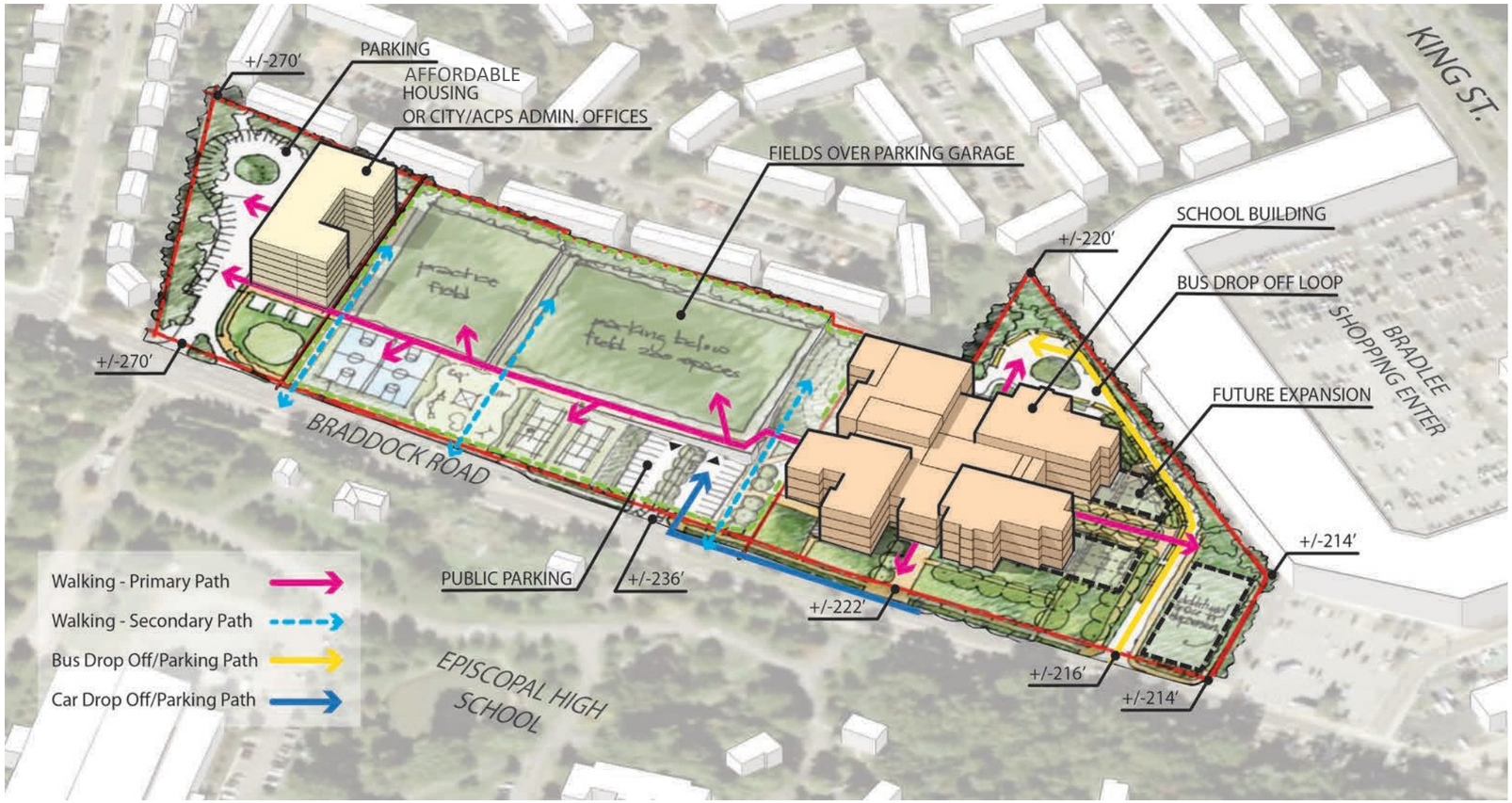
- POS located on an ‘L’ shaped parcel.
- Surface parking available to public near POS fields.

PROJECTED AREAS

LEVEL	School (GSF)*	Housing (GSF)
GF	91,000	14,700
L1	87,000	12,700
L2	69,000	12,700
L3	38,000	12,700
L4		12,700
L5		12,700
TOTAL	285,000	78,200

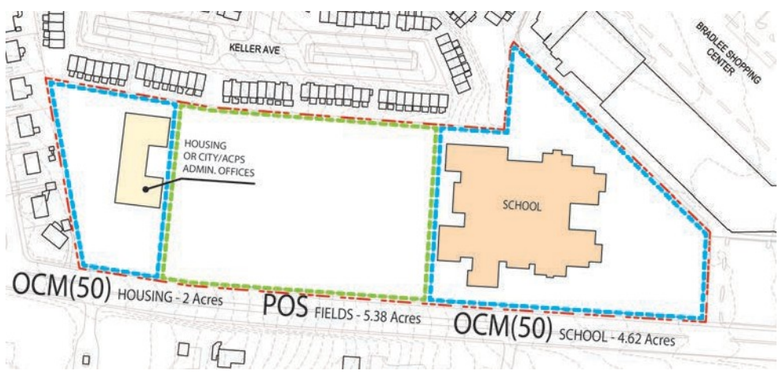
*School GSF includes pool & co-located 5,600 sq ft of city services

TEST FIT 3 - SCHOOL WITH BELOW GRADE PARKING & AFFORDABLE HOUSING TO THE WEST



SITE MASSING & CIRCULATION

EXISTING SITE



PROPOSED ZONING

HIGH SCHOOL

- Separation of cars and buses
  - Additional curb cuts along Braddock Rd
  - Dedicated access for both housing and high school.
- Structured parking for students and teachers is located below field
  - Maximize open space onsite.
  - Minimize visual impact of on grade parking.
  - Additional costs for structured parking.
- Building
  - Direct access to fields
  - Eastward expansion possible. Building has a civic presence along Braddock Road

AFFORDABLE HOUSING

- Podium Level 1: Parking, Lobby, Amenity, other co-located uses, potential retail
- (5) Residential Levels: 12-16 Units / Floor, 60-80 total units
- Option 1: Additional residential podium level could add 12-16 units
- Option 2: Additional "wrap" townhouse or loft types units at ground level podium could add 10-12 units

PUBLIC OPEN SPACE

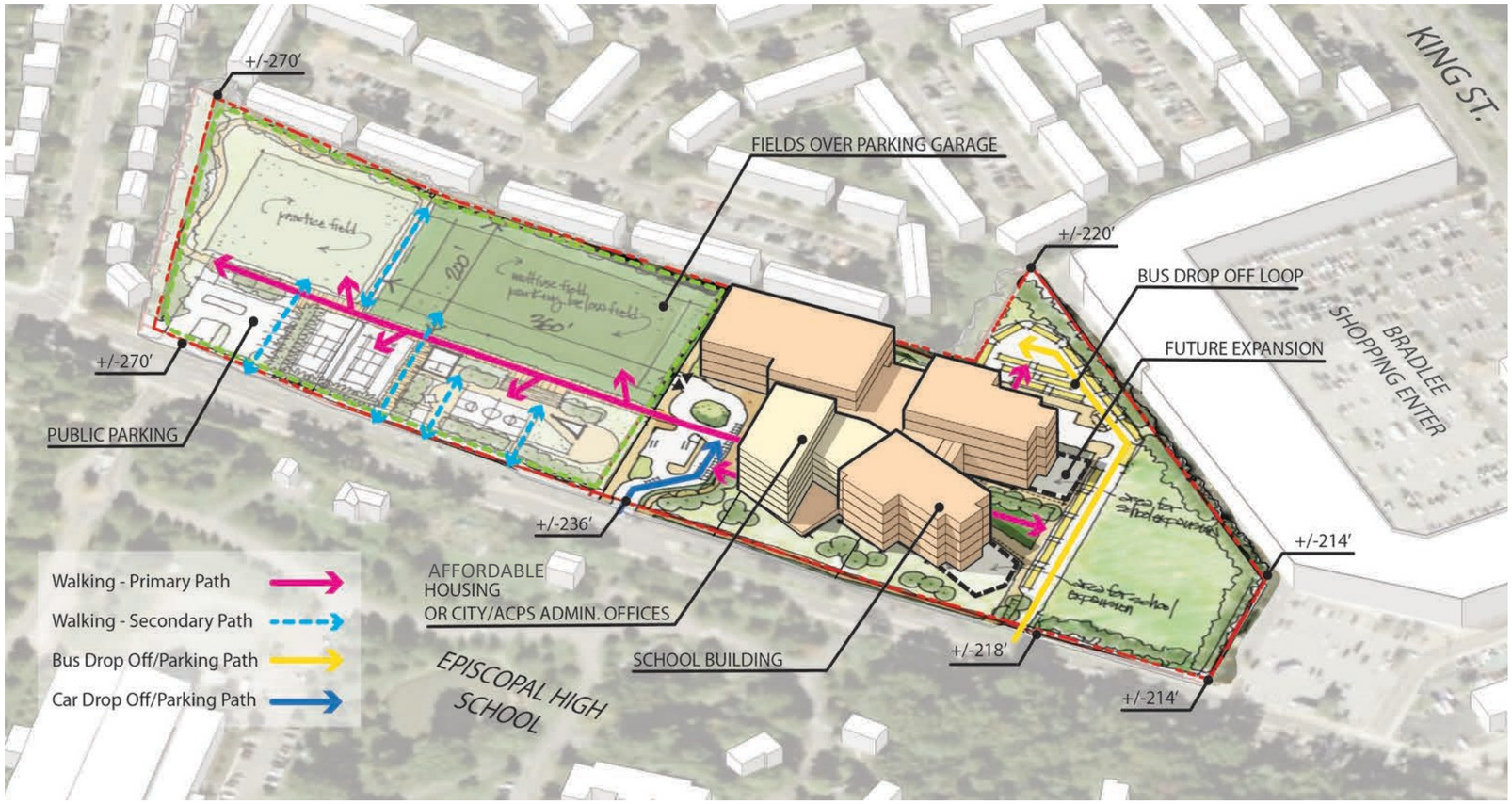
- POS located between high school and housing.
- Surface parking available to public near POS fields.

PROJECTED AREAS

LEVEL	School (GSF)*	Housing (GSF)
GF	87,000	
L1	68,000	18,200
L2	78,000	15,700
L3	52,000	15,700
L4		15,700
L5		15,700
L6		15,700
TOTAL	285,000	96,700

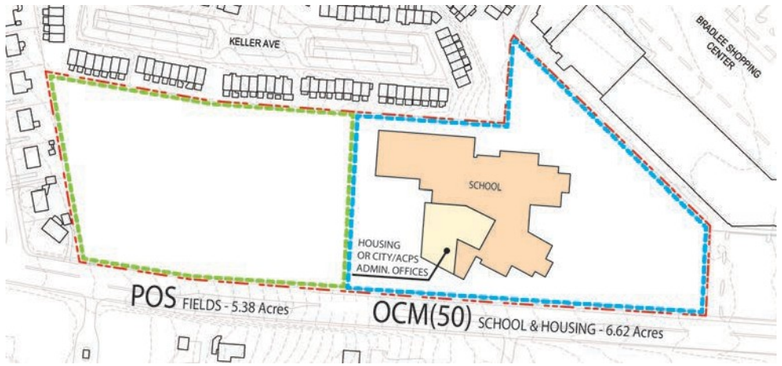
*School GSF includes pool & co-located 5,600 sq ft of city services

TEST FIT 4A - SCHOOL WITH BELOW GRADE PARKING & AFFORDABLE HOUSING NESTED WITH SCHOOL



SITE MASSING & CIRCULATION

EXISTING SITE



PROPOSED ZONING

HIGH SCHOOL

- Separation of cars and buses
  - Additional curb cuts along Braddock Rd
  - Access for cars is shared with housing and high school.
- Structured parking for students and teachers is located below field
  - Maximize open space onsite.
  - Minimize visual impact of on grade parking.
  - Additional costs for structured parking.
- Building
  - Direct access to fields
  - Eastward expansion possible. Southeast wing points towards T.C. Williams main campus.

AFFORDABLE HOUSING

- Parking in shared structure below fields
- Podium Level 1: Residential lobby, small amenity space, additional co-located uses
- Residential Levels 1-4: 12-16 Units / Floor, 48-64 total units
- Residential Levels 5-6: 8-10 Units / Floor, 16-20 total units
- (6) Total Residential Levels: 8-16 Units / Floor, 64-84 total units

PUBLIC OPEN SPACE

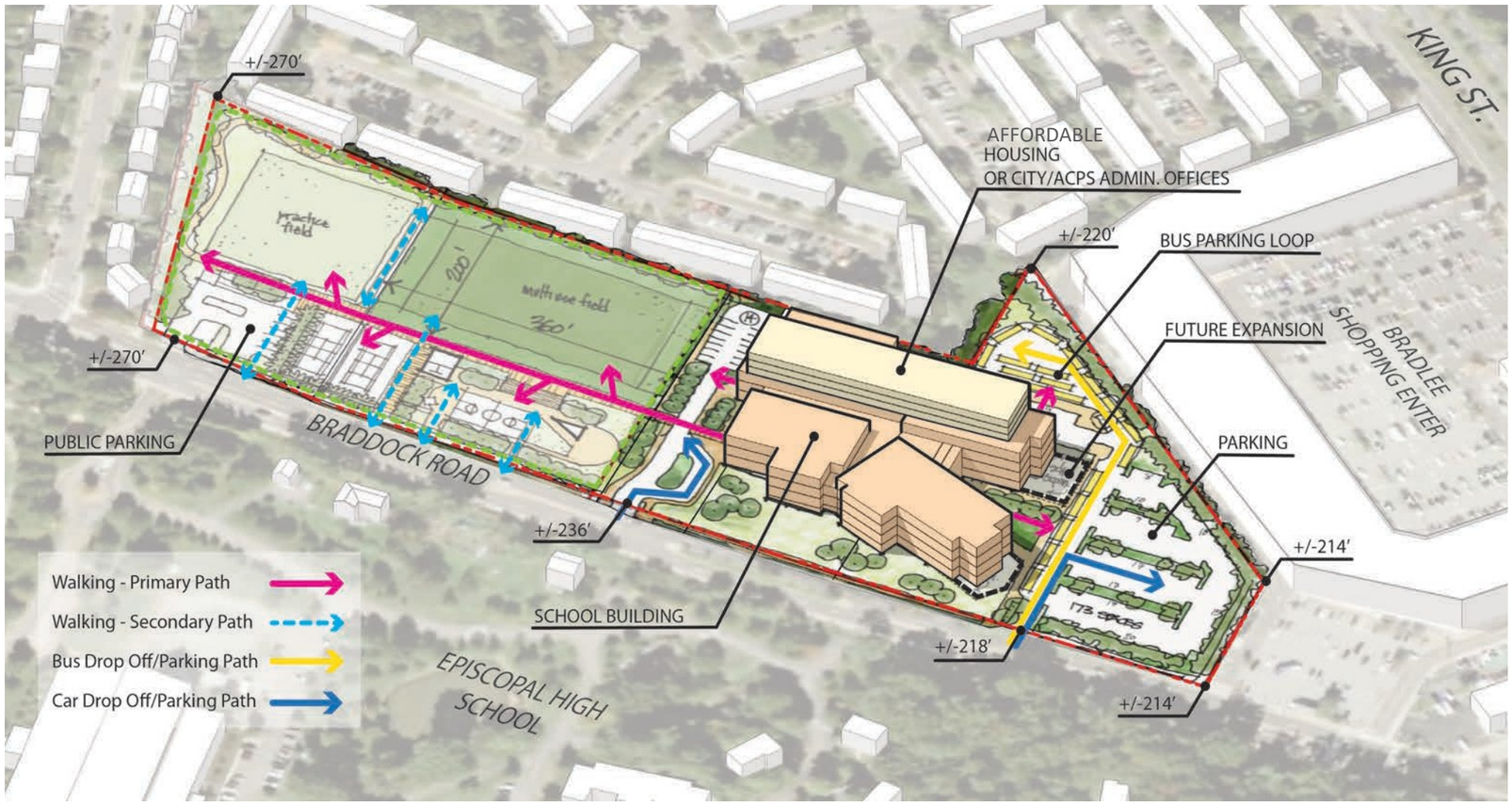
- POS located on linear parcel optimizing geometry of athletic field organization.
- Surface parking available to public near POS fields.

PROJECTED AREAS

LEVEL	School (GSF)*	Housing (GSF)
GF	83,000	
L1	39,000	15,800
L2	61,000	15,800
L3	51,000	15,800
L4	51,000	15,800
L5		10,150
L6		10,150
TOTAL	285,000	83,500

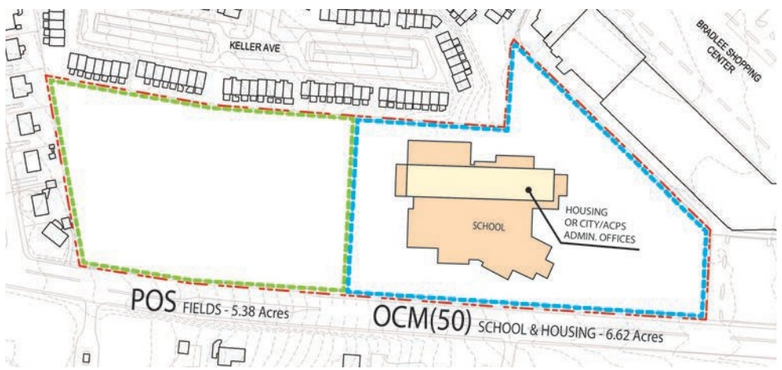
*School GSF includes pool & co-located 5,600 sq ft of city services

TEST FIT 4B - SCHOOL WITH SURFACE PARKING & AFFORDABLE HOUSING STACKED ON SCHOOL



SITE MASSING & CIRCULATION

EXISTING SITE



PROPOSED ZONING

HIGH SCHOOL

- Separation of cars and buses
  - Additional curb cuts along Braddock Rd
  - Access for cars is shared with housing and high school at mid-site drop off.
- Surface parking for students and teachers is located adjacent to school
- Building
  - Direct access to fields
  - Eastward expansion possible. Southeast wing points towards T.C. Williams main campus.

AFFORDABLE HOUSING

- Surface Parking
- Building levels 1-4: Academic uses, non-housing co-located uses
- (3) Residential Levels: 20-24 Units / Floor, 60-72 total units

PUBLIC OPEN SPACE

- POS located on linear parcel optimizing geometry of athletic field organization.
- Surface parking available to public near POS fields.

PROJECTED AREAS

LEVEL	School (GSF)*	Housing (GSF)
GF	78,000	
L1	60,000	2,500
L2	78,000	
L3	69,000	
L4		22,800
L5		22,800
L6		22,800
TOTAL	285,000	70,900

*School GSF includes pool & co-located 5,600 sq ft of city services

TEST FITS TRADE OFFS & CONSIDERATIONS

Financial	One	Two	Three	Four (A)	Four (B)
Cost implications of underground parking	X	X	X	X	X
Cost savings associated with surface versus underground parking with potential additional costs associated with additional stormwater management requirements				X	X
Colocating ACPS/City administrative functions increases initial development costs; may represent long term savings as a part of a lease avoidance strategy	X	X	X	X	X
Security & Operations cost implications of integrating affordable housing with school building	X	X	X	X	X
The development of affordable housing is self funded, no impact on Minnie Howard Campus redevelopment costs	X	X	X	X	X

Effect on School Program	One	Two	Three	Four (A)	Four (B)
Security protocols and operations regarding the integration of colocating affordable housing with school building	X	X	X	X	X
Affordable housing takes away land area that can be used for school programming	X	X	X		
Effect of no colocation of AHD, RPCA, DCHS					

Future Expansion	One	Two	Three	Four (A)	Four (B)
Land used for affordable housing could limit future expansion opportunities in some site planning approaches approximately a minimum of 400 - 500 students	X	X	X	X	X
Land used for City/ACPS administrative spaces could limit future expansion opportunities in some site planning approaches, **however** space could be designed to accommodate conversion to teaching spaces needed in the future	X	X	X	X	X