EDUCATION CENTER REUSE

ARLINGTON PUBLIC SCHOOLS

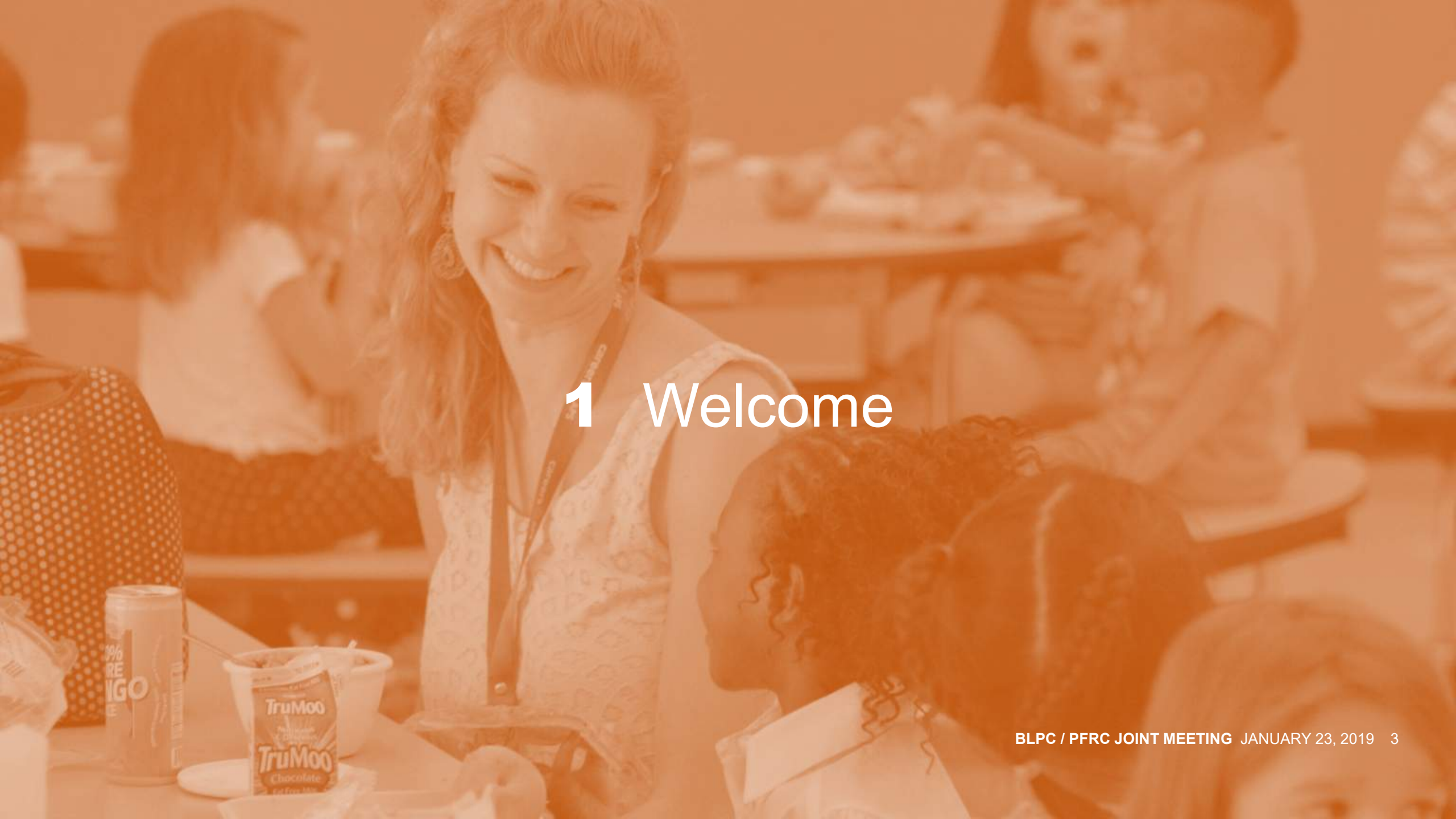
1426 N QUINCY ST

STUDIOTWENTYSEVENARCHITECTURE

JOINT MEETING 5: AGENDA

BUILDING LEVEL PLANNING COMMITTEE
PUBLIC FACILITIES REVIEW COMMITTEE

1. Welcome
2. Project Parameters
3. Updates
    a. Schedule and Interior Demolition Phase
    b. Educational Specifications
    c. Transportation Commission Meeting Debrief
    d. Draft Multimodal Transportation Assessment
    e. Use Permit Process and BLPC Next Steps
4. Proposed Site and Building Schematic Design
5. Committee discussion
6. Proposed Off-site Transportation Improvements
7. Committee discussion
8. Public Comment
9. Next Septs and Adjourn
    a. BLPC/PFRC Schematic Design Letters
    b. School Board Schematic Design and Approval
    c. Use Permit



1 Welcome

Building Level Planning Committee - BLPC

1. Based on Policy Implementation Procedure F-5.7 PIP-2

2. School Board approved BLPC Charge found at: https://www.apsva.us/wp-content/uploads/2018/09/C-4-Education-Center-BLPC-Charge-083018-SB-approved.pdf

3. Primary role is to serve as the principal communication liaison with community stakeholders

4. Solicit comments from constituency groups and share with the BLPC for consideration

5. Assist APS Staff during schematic design phase by reviewing:
   a. Site amenities
   b. Adjacencies between interior spaces and site amenities
   c. Community use of the building and site
   d. Impact of project on surrounding community

Public Facilities Review Committee - PFRC

1. PFRC Charge (June 18, 2014) found at: https://arlingtonva.s3.amazonaws.com/wp-content/uploads/sites/5/2014/06/PFRC_Charge_June2014.pdf

2. Mission: to ensure that the highest quality of land use planning, design, transportation planning, and other important community aspects are incorporated into civic projects as assigned to the Committee by the Arlington County Board.

3. Key responsibilities:
   a. Provide a forum for advisory commission and committee input
   b. Ensure highest quality of land use planning and design
   c. Promote compliance with County Comprehensive Plan and other County planning policies
   d. Provide means for broad-based public participation
   e. Provide advice to County Board and County Manager

2 Project Parameters

Project Parameters

- Project included in the FY2019-28 Capital Improvement Plan (CIP)
- Renovate the Education Center to both increase the capacity of Washington-Lee initially, and later to adapt to possible future instructional and grade level changes
- Support APS Strategic Plan Goals, specifically for Healthy, Safe, and Supported Students
- Address capacity by providing 500-600 high school seats
- Open by start of school 2021
- Spend a maximum project cost of $37 million, using every effort to spend less

3 Updates

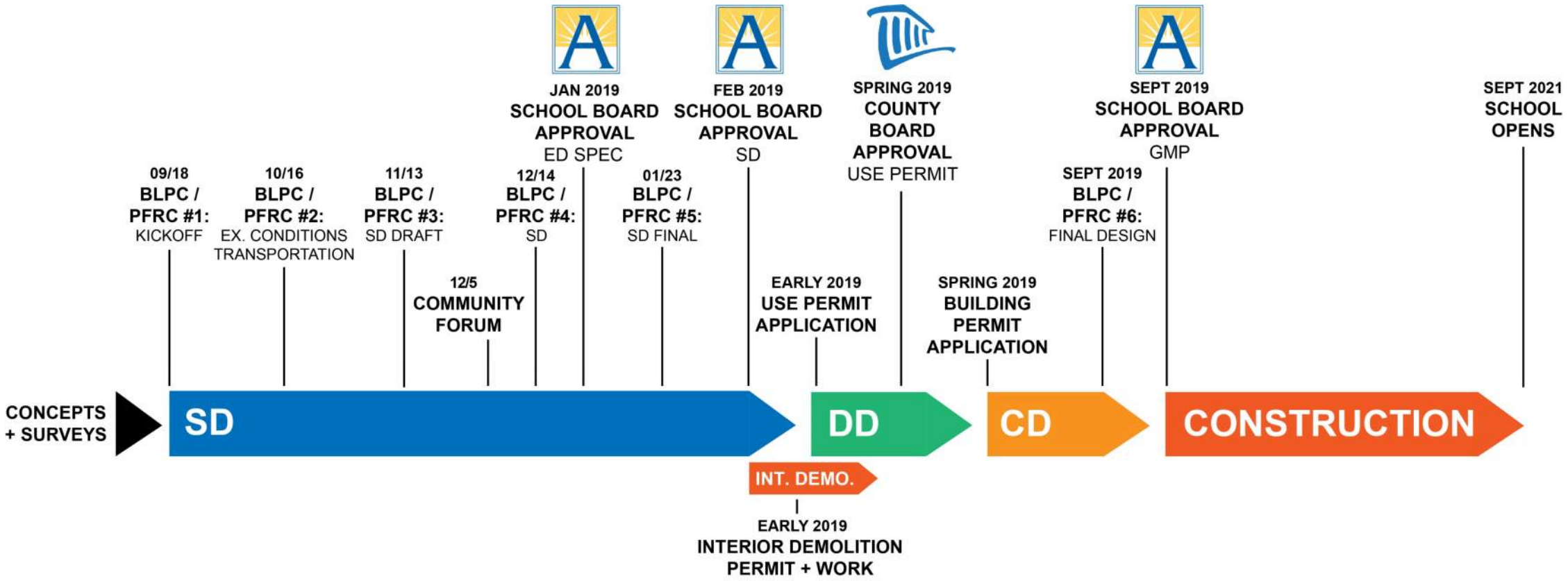
Take Note of New APS Project Manager

1. The APS Project Manager is:
   Robin Hodges
   (703) 872-9175
   robin.hodges@apsva.us

2. Public meeting dates and past presentations are posted on the APS project website:
   https://www.apsva.us/education-center-reuse/

3. To provide feedback and/or comments to APS use: engage@apsva.us

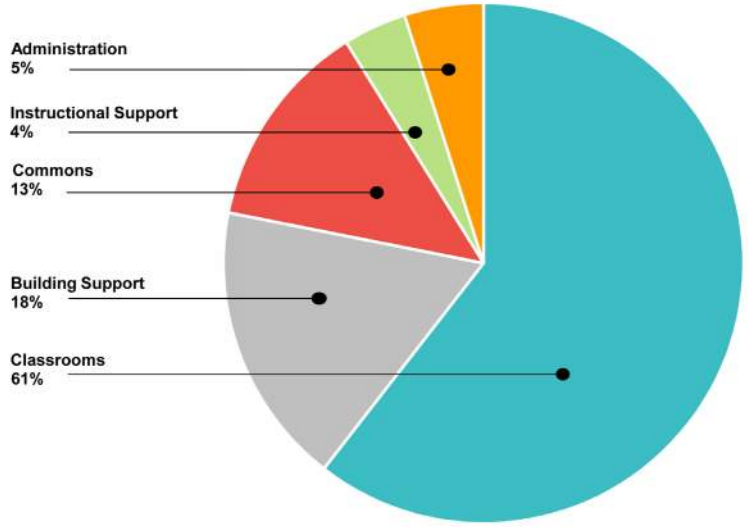
Schedule and Interior Demolition Phase



UPDATES

Educational Specifications + Space Program

- School Board Approval on January 10th 2019
- Presentation: https://www.boarddocs.com/vsba/arlington/Board.nsf/files/B7FR6Q697DFB/$file/E-4%20Ed%20Center%20Reuse-Ed%20Spec%20Presentation.pdf
- Education Specifications document: https://www.boarddocs.com/vsba/arlington/Board.nsf/files/B7FR6N697DCF/$file/E-4%20ED%20Center%20Reuse%20-%20Ed%20Specifications.pdf



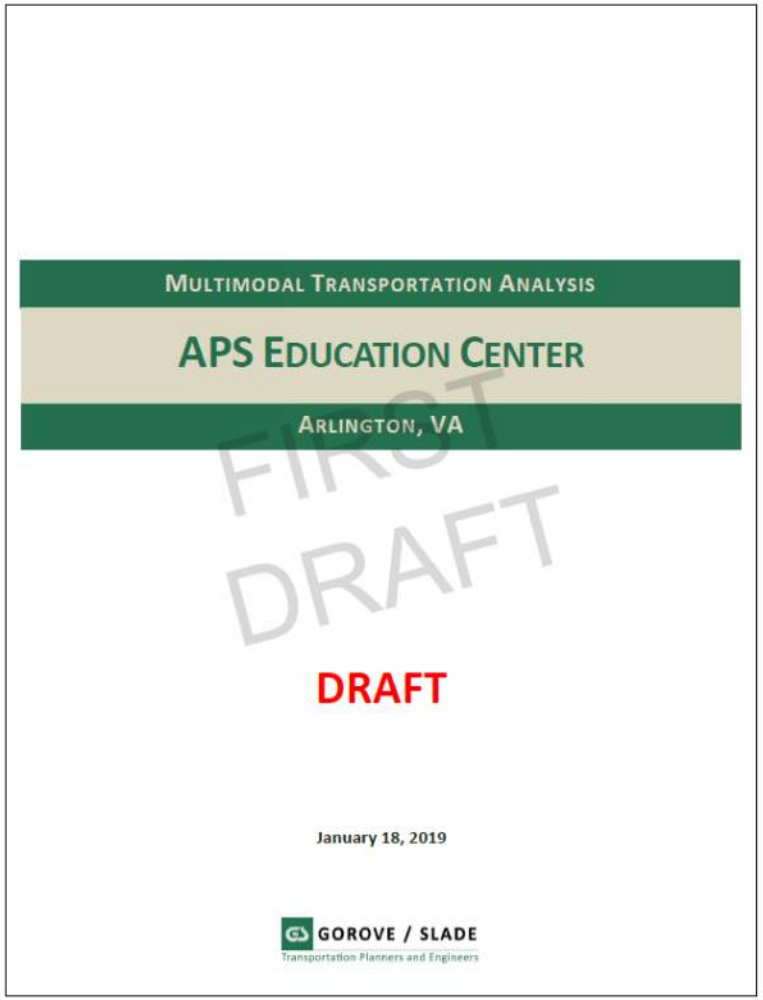
UPDATES

Transportation Commission Meeting Debrief

- Typically the Transportation Commission hears APS Use Permit items twice; once for information and once for action
- APS and design team presented the project at the January 10, 2019 meeting as an information item, presentation found here: https://www.apsva.us/wp-content/uploads/2019/01/190110-Transportation-Commission-Meeting.pdf
- Purpose of the meeting was to provide a project overview and transportation related recommendations, which was consistent with materials already presented to BLPC/PFRC
- Comment from Commissioners appreciating the that project is repurposing existing resources and is relatively straightforward compared with other APS projects
- Concern from Commissioners about colocation of bicycle lanes and the proposed pick-up/drop-off area on N. Quincy St.

Draft Multimodal Transportation Analysis (MMTA)

- Draft available for review and comment: *https://www.apsva.us/wp-content/uploads/2019/01/190118-Education-Center-DRAFT-MMTA.pdf*
- Recommendations are consistent with past presentations to BLPC/PFRC
- Provides detailed analysis and justification for all recommendations, including alternatives considered
- What's next?
  - Detailed review by County staff
  - Revise and finalized MMTA during Use Permit process



UPDATES

Use Permit Process and BLPC Next Steps

- What's next for the BLPC/PFRC?
  - BLPC/PFRC Chairs will write letters documenting committee discussion on the schematic design
  - Committee members are welcome to provide comments during School Board information and action items
  - BLPC/PFRC may meet prior to Use Permit hearing (spring 2019)
  - BLPC/PFRC will meet prior to School Board approval of final design (fall 2019)
- APS will provide regular updates via email to the BLPC/PFRC regarding School Board items, other public meetings, and monthly construction progress

UPDATES

Use Permit Process and BLPC Next Steps

- Following School Board approval of the schematic design APS will begin the Use Permit process, which includes these steps:
  - APS submits application and accompanying drawings to County
  - Multiple revisions typically occur responding to County staff/commission review
  - APS will present the project to County commissions which at a minimum will include Transportation Commission and Planning Commission
  - BLPC/PFRC may convene to discus the Use Permit materials, particularly if there have been substantive revisions since schematic design
  - County Board hearing which has an opportunity for public comment

4 Proposed Schematic Design

Arlington County Principles of Civic Design

- Intended to inform the design of civic facilities
- Ensure facilities meet community goals and are attractive, durable, & functional
- Supplement existing County planning documents & policies
- Each project reviewed individually- certain principles may be stressed over others

Civic Values

- Context
- Bold Architecture
- Sustainable Design
- Universal Design
- Adaptive Reuse
- Open Space
- Mixed Use

Siting & Orientation

- Building Entrances
- Emphasize Pedestrians, Bicycles, Mass Transit
- Circulation
- Outdoor Spaces

Building Form

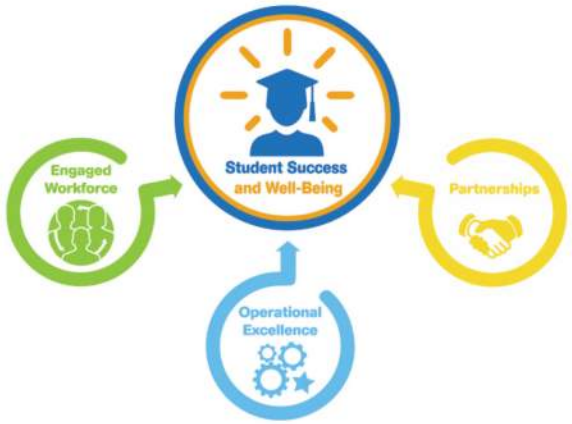
- Massing
- Scale
- Hierarchy

Building Details & Materials

- Pedestrian Scale
- Public art & Architecture
- Durable Materials
- Consistency
- Sense of Place

SCHEMATIC DESIGN

APS Strategic Plan - Design Principles



APS STRATEGIC PLAN 2018-2024 GOALS

Student Success: Multiple Pathways To Student Success

Student Well-Being: Healthy, Safe, And Supported Students

Engaged Workforce

Operational Excellence

Partnerships: Strong And Mutually Supportive Partnerships

DESIGN PRINCIPLES

Safety + Security

Maintain safe, secure spaces while creating environments which enrich learning and emphasize transparency and community

Short-Term Agility + Long-Term Adaptability

Create spaces which are agile in their day to day use, while being adaptable to future changes in program and learning methods

High-Performance Learning Environments

Spaces are to perform at the highest levels for the following:

- Thermal comfort
- Indoor air quality
- Acoustics
- Daylight + views
- Transparency
- Technology
- Community use
- Active schools

Universal Design

Spaces should be designed and composed so they are accessible, understood and useful for all

Adherence To Budget

Building elements should be assessed for meeting the required design function through economical means

Sustainability

To the greatest extent possible the final design should minimize the impact on the environment through thoughtful site design, carefully managed water use, innovative energy and exterior envelope solutions, selective material use and a holistic approach to the interior design.

SCHEMATIC DESIGN

BLPC / PFRC Committee Discussion Points for Schematic Design

General
- Adherence to Arlington County principles of civic design

Site Layout
- General character and location of amenities
- Pedestrian circulation
- Quantity and location of vehicle and bicycle parking
- Bus pick-up and drop-off area
- Vehicular pick-up and drop-off area
- Traffic operations improvements

Building Appearance
- Character and strategy for glazing replacement

Building Layout
- Location of entrance(s)
- Location of major public space(s)

Site Design

SCHEMATIC DESIGN

Existing Campus

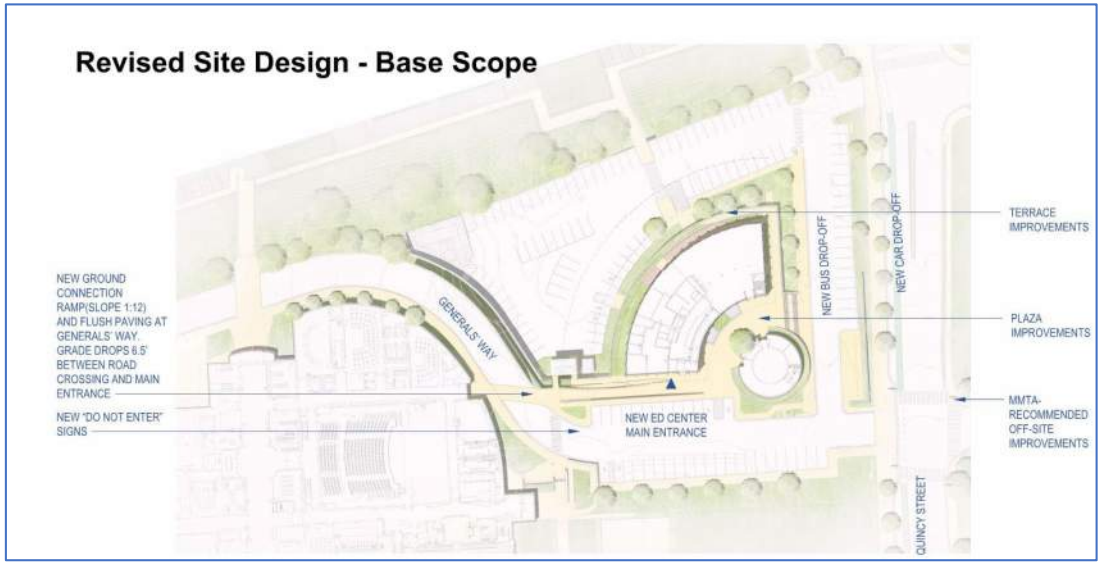
SCHEMATIC DESIGN

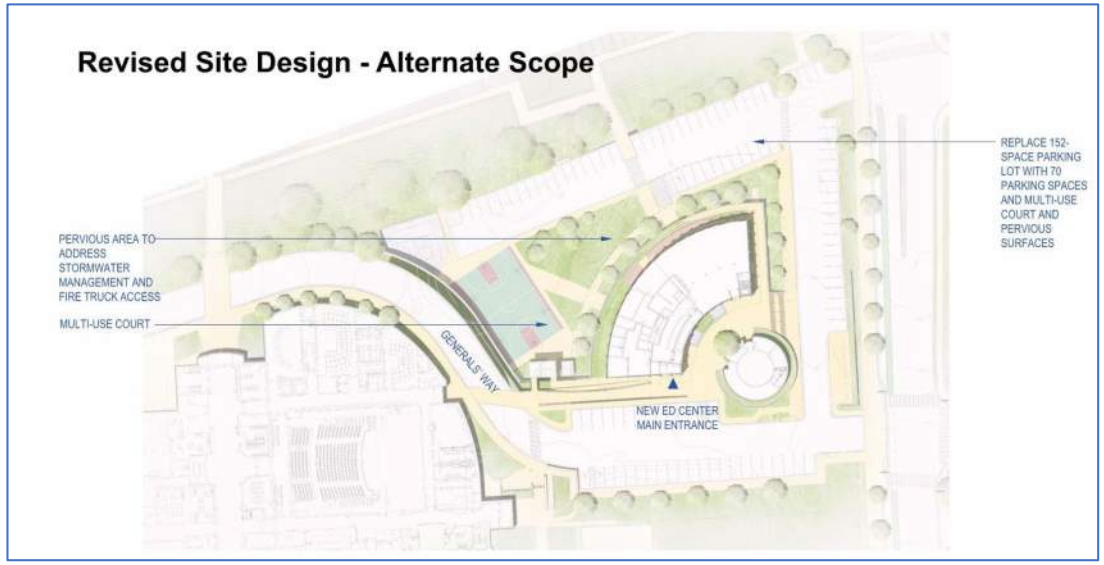
Existing Site Circulation

SCHEMATIC DESIGN

Site design – what we showed last meeting

- Base and Alternate Scopes that were based on BLPC-PFRC Meeting 3 and preliminary cost feedback
- Both provide the same pedestrian improvements, including the ramp and stair between W-L and Ed Center
- Both provide the same bicycle improvements, including the new bicycle parking at North Quincy
- The difference was in whether the parking lot is redeveloped as a multiuse court





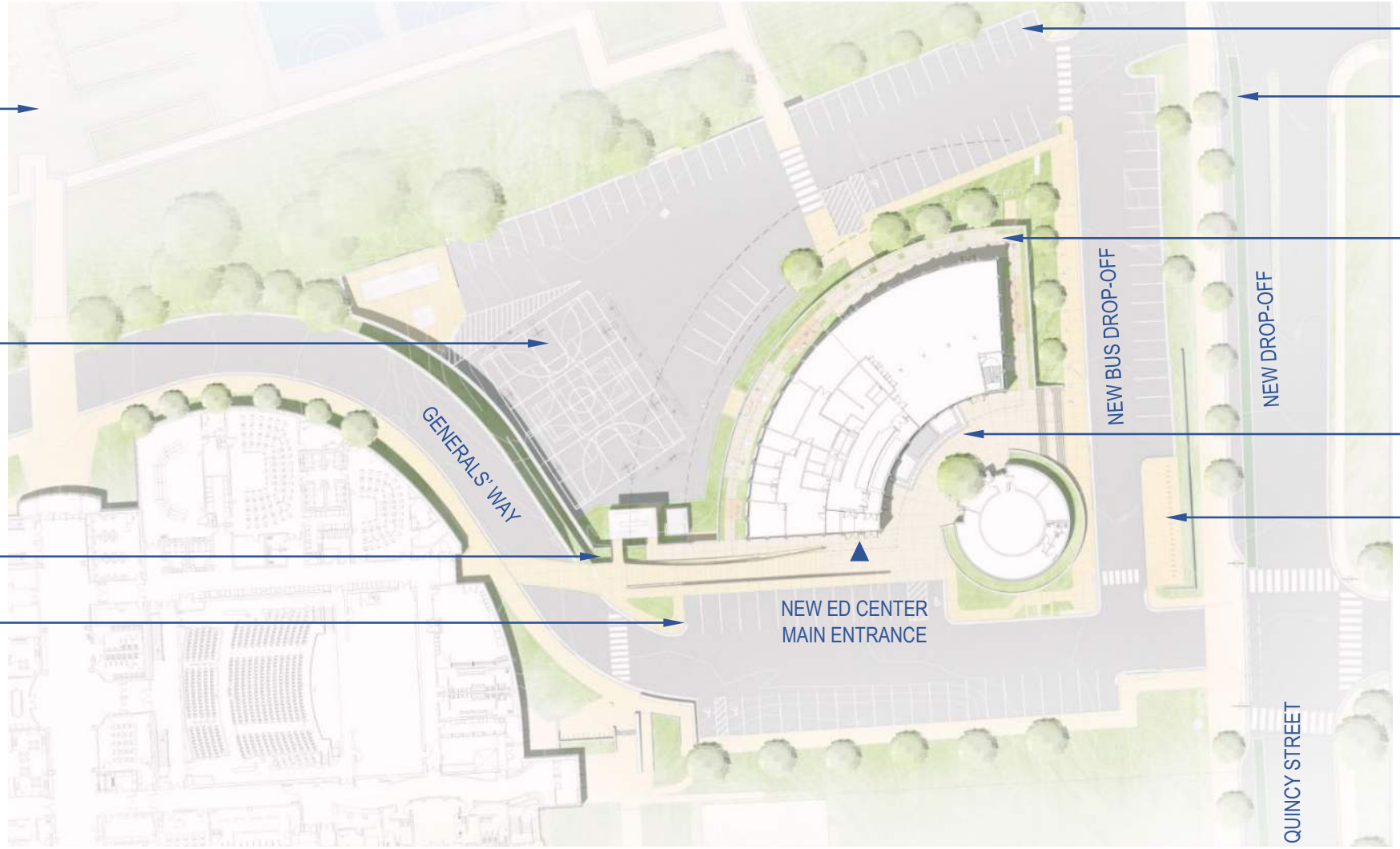
SCHEMATIC DESIGN

What we heard about site design last meeting and subsequently

- Transportation Commission concern that the proposed bike lane treatment is the best option
- Both base and alternate should have some sort of multiuse court, even if it's only paint
- Previous feedback should be incorporated in further revisions.

SCHEMATIC DESIGN

Revised Site Design - Base Scope



POSSIBLE COVERED BICYCLE PARKING IN EXISTING GARAGE, ~40 BIKE CAPACITY

NEW MULTI-USE COURT DIMENSIONS PAINTED ON EXISTING ASPHALT

NEW GROUND CONNECTION RAMP(SLOPE 1:12) AND FLUSH PAVING AT GENERALS' WAY. GRADE DROPS 6.5' BETWEEN ROAD CROSSING AND MAIN ENTRANCE

NEW "DO NOT ENTER" SIGNS

SITE PLAN INCORPORATES ALL RECOMMENDATIONS FROM THE MMTA

76 PARKING SPACES

MMTA-RECOMMENDED OFF-SITE IMPROVEMENTS (OPTION A)

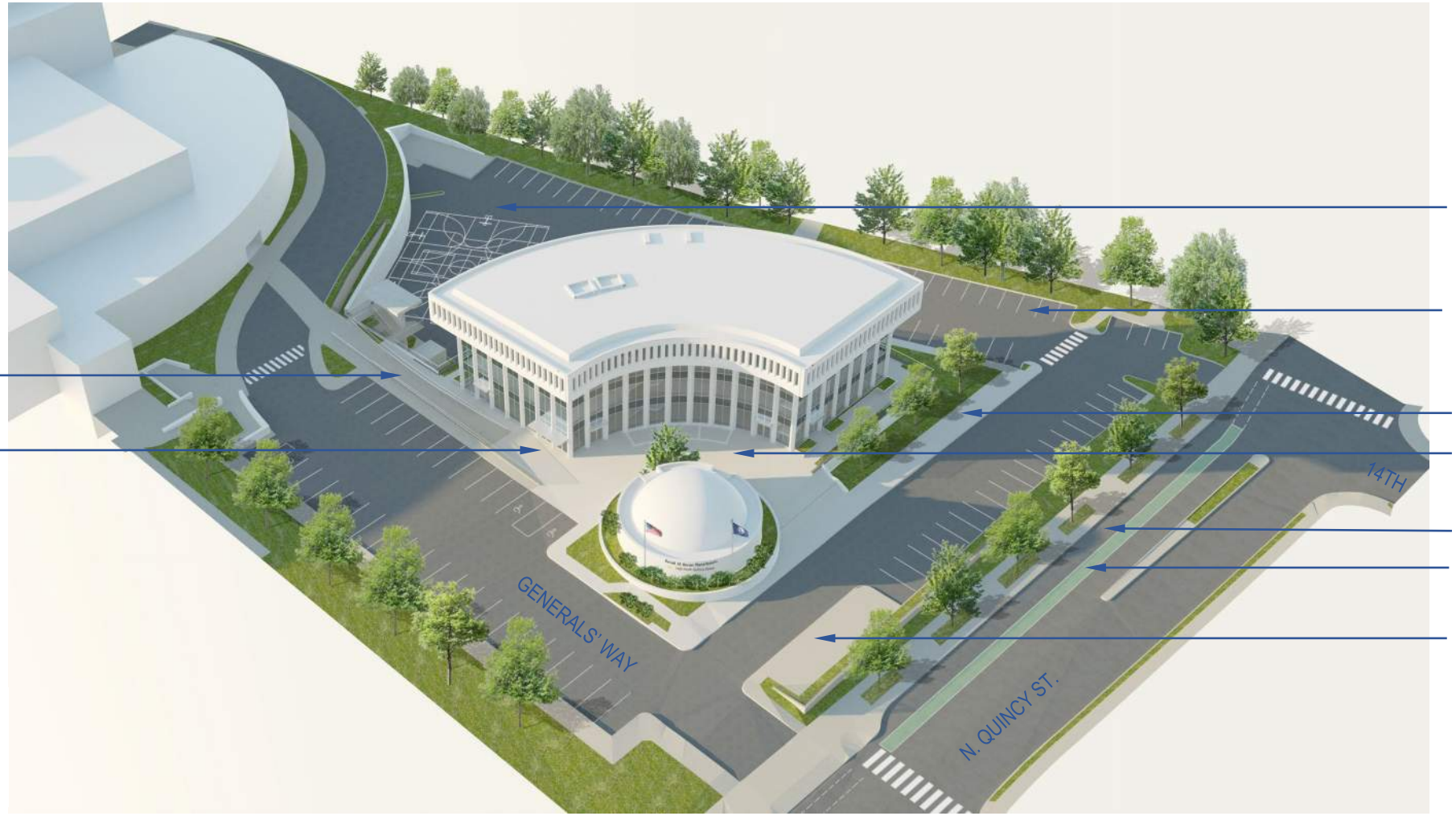
TERRACE IMPROVEMENTS

PLAZA IMPROVEMENTS

NEW BICYCLE PARKING, 30 BIKE CAPACITY

SCHEMATIC DESIGN

Revised Site Design - Base Scope



NEW GROUND CONNECTION RAMP(SLOPE 1:12) AND FLUSH PAVING AT GENERALS' WAY. GRADE DROPS 6.5' BETWEEN ROAD CROSSING AND MAIN ENTRANCE

NEW ED CENTER MAIN ENTRANCE

SITE PLAN INCORPORATES ALL RECOMMENDATIONS FROM THE MMTA

COURT STRIPING ON EXISTING ASPHALT

76 PARKING SPACES

BUS DROP-OFF

PLAZA IMPROVEMENTS

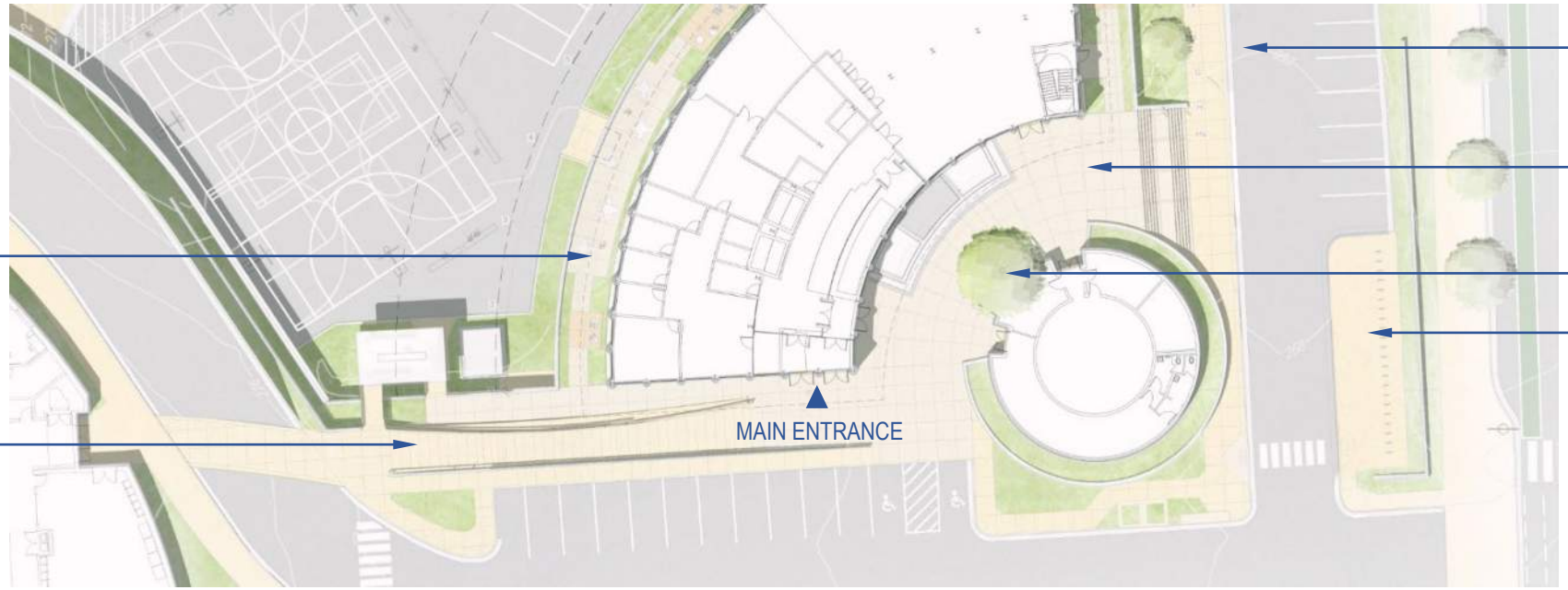
CAR DROP-OFF

OFF-SITE IMPROVEMENTS

NEW BICYCLE PARKING, 30 BIKE CAPACITY. POSSIBLE COVERED BICYCLE PARKING IN EXISTING GARAGE, ~40 BIKE CAPACITY

SCHEMATIC DESIGN

Proposed Main Entry Area



SCHEMATIC DESIGN

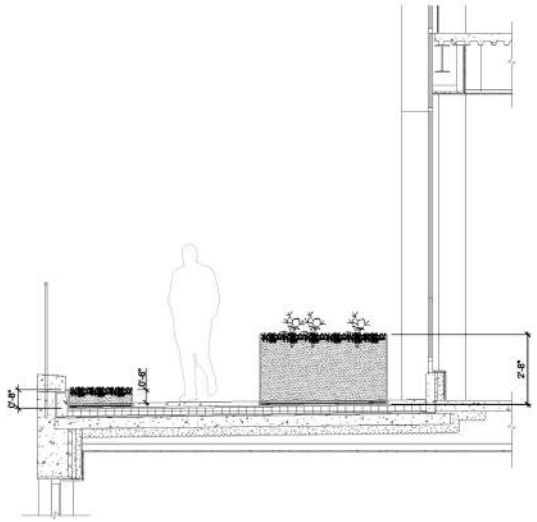
Proposed Main Entry Area

- Both ramp and stair are provided.
- Ramp 9’ wide at narrowest point, similar to a high school corridor

SCHEMATIC DESIGN

Proposed Roof Terrace

- Existing roof assembly replaced with inverted roof membrane assembly, including paving and planting at top layer of the roof assembly
- Planting is a regional sedum mix that does not require irrigation and thrives when it receives water
- Provides a variety of opportunities for collaboration and learning

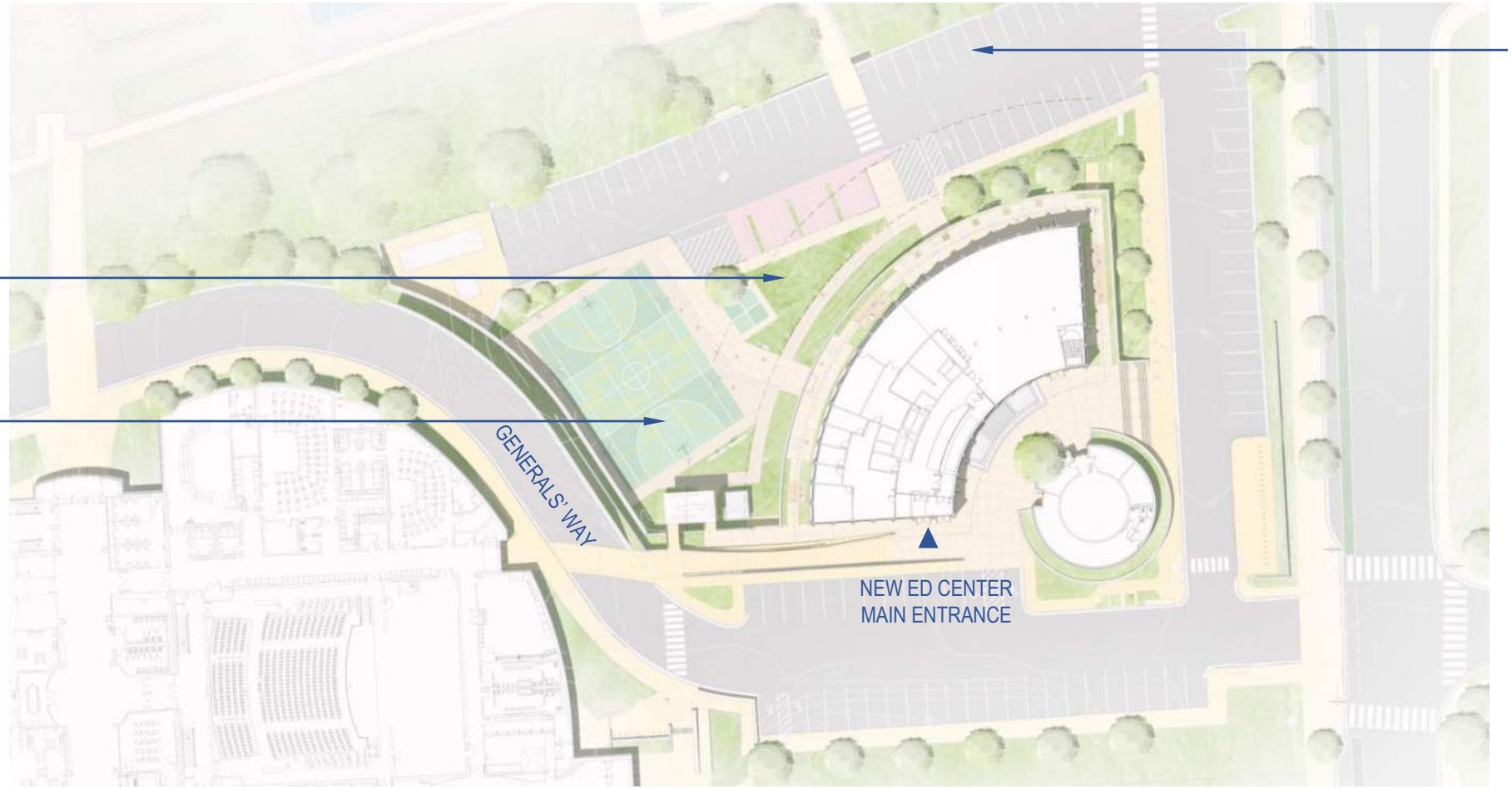


SCHEMATIC DESIGN

Proposed Roof Terrace

SCHEMATIC DESIGN

Revised Site Design - Alternate Scope



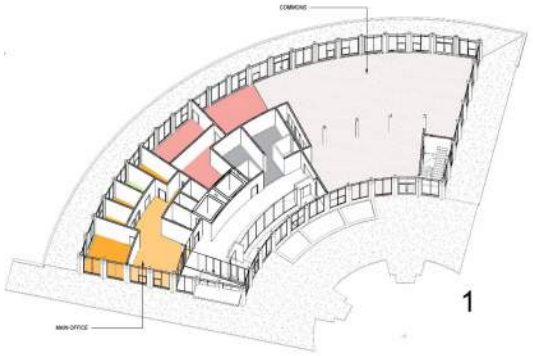
SCHEMATIC DESIGN

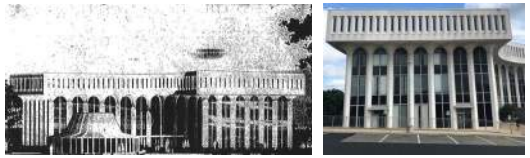
Building Design

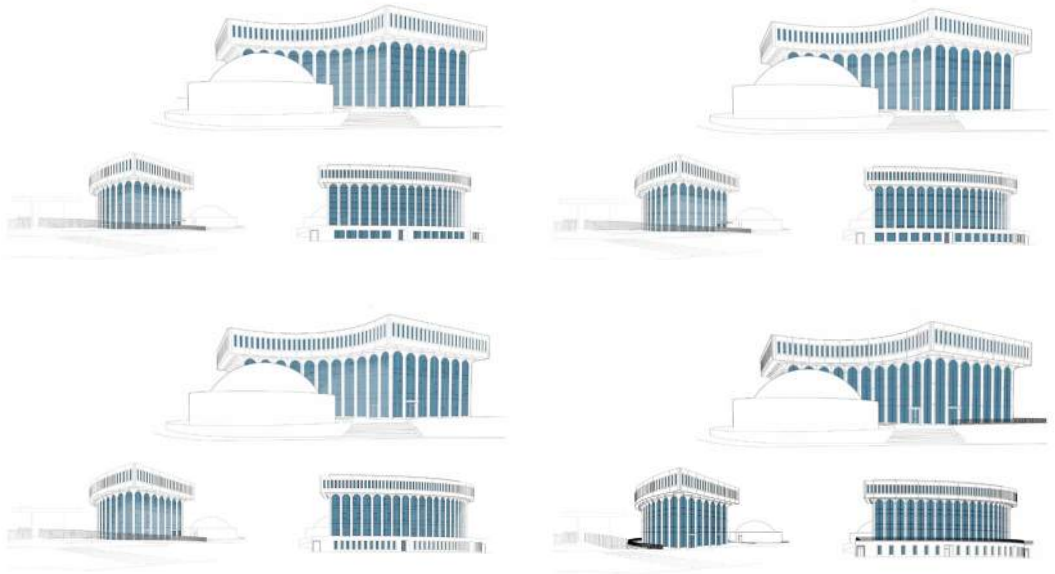
SCHEMATIC DESIGN

Building design – what we showed last meeting

- Proposed community uses on first floor
- Architectural Image: Original Renderings vs. Current Condition
- High Performance Learning Environments include daylight and views with clear glass and minimal glare
- Elevation Design Options A, B, C responding to these issues with variations of details. All options included fritted glass and a variety of approaches to operable windows and enlarged ground floor openings
- Bridge concepts held as a conceptual alternate and not developed further until School Board review.







SCHEMATIC DESIGN

What we heard about building design last meeting and subsequently

- Proposed community uses on first floor are generally appropriate
- Difficult for the committee to understand the difference between Options A, B, C at the level of detail presented. Photorealistic renderings would be helpful
- The new openings at the base should not compete with the top floor. Option B is not desirable
- Informal Committee poll initiated by Chairs indicated interest in Options A and C, not Option B

Revised Building Design

- Overall exterior
  - Two refined options A and B (based on previous A and C presented at Meeting 4)
  - Option A has operable windows consistent across the façade in the same rhythm as the existing mullion pattern
  - Option B has operable windows in a different pattern
  - Both options incorporate the glass frits
    - Responding to High Performance Learning Environments and energy use needs
    - **Visually blending with the constantly changing environmental reflections in the glass such that the pattern is only visible up close**
  - Both options anticipate providing interior shades to mitigate the most intense solar exposures
  - This presentation includes 1 birds-eye view and 5 at-grade exterior views of 2 options
- Refined new stair to improve the size and relationships of collaboration spaces
- Maintains bridge as a conceptual alternate pending School Board direction

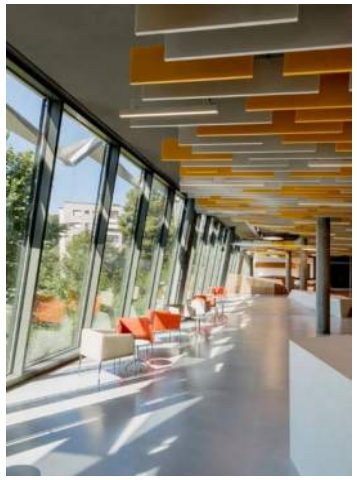
High Performance Learning Environments

Spaces are to perform at the highest levels for the following:

- Thermal comfort
- Indoor air quality
- Acoustics
- Daylight and views
- Transparency
- Technology
- Community use
- Active schools

- Daylight and views boost learning capacity, but not all daylight and views are the same.
  - The benefits of daylight and views are related to the perception of time of day
  - Natural daylight shifts color over the course of a day from cool to warm. The body and brain sense this.

- To realize high performance daylight and views:
  - The color of glass should be as clear as possible for good color rendering
  - Glare, and the need for blinds obscuring the daylight and views, should be minimized





SCHEMATIC DESIGN

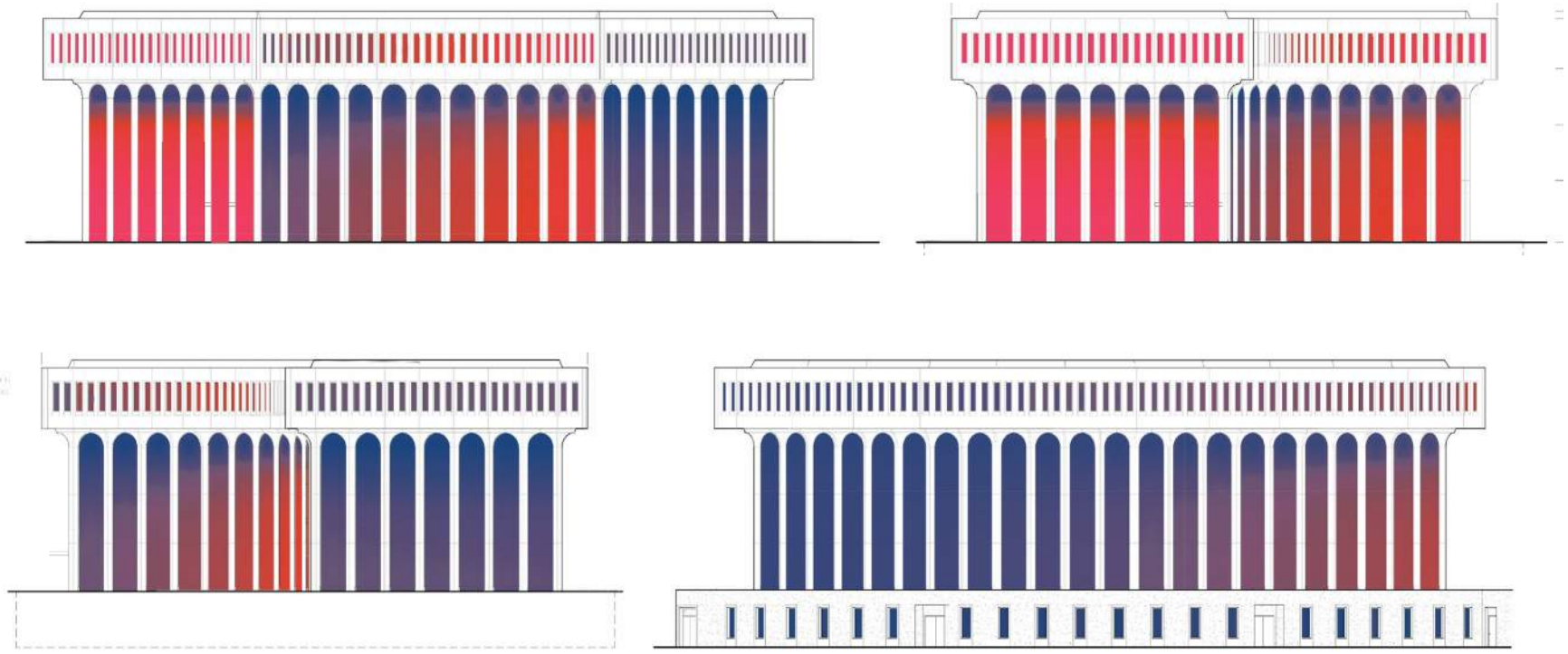
Current Glass Painted Black

- Some of the original single-pane glazing has black paint covering the interior glass surface
- Example locations are first floor restrooms and the stairs
- The black paint acts as a heat sink, radiating heat to the interior

SCHEMATIC DESIGN

Solar Insolation

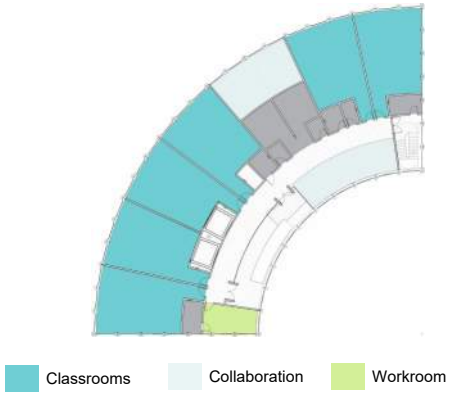
- This diagram shows the cumulative annual sun exposure on each façade
- Impacts Energy Use Intensity through heat gain
- Impacts Daylight and Views through glare

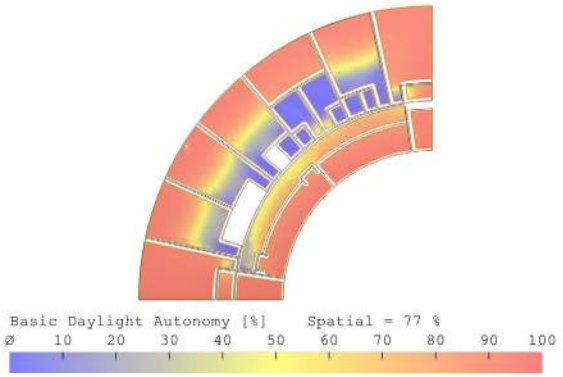


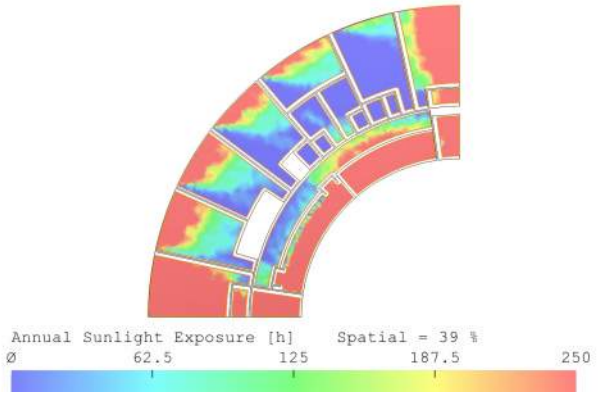
SCHEMATIC DESIGN

Daylight and Views

- Spatial Daylight Autonomy (sDA)
  - sDA correlates to getting sufficient daylight for the space
  - sDA is what % of the floor receives 300 lux (27.87 foot-candles) of daylight for at least 50% of the time between occupied hours (8AM-6PM) for the entire year.
- Annual Sunlight Exposure (ASE)
  - ASE represents glare or too much daylight.
  - ASE is what % of floor area received 1000 lux (92.9 foot-candles) or more for at least 250 occupied hours.
- The preferred balance is higher sDA with lower ASE
- These diagrams show preliminary modeling of sDA and ASE in the 2nd floor spaces







SCHEMATIC DESIGN

Options to mitigate energy use and glare while providing daylight and views

- Frit patterns have the potential to reduce Energy Use Intensity (EUI) by mitigating solar heat gain while providing daylight and views (D+V).
- Shades are helpful with glare but not with EUI

Included in Options A and B

Change size/ shape/ quantity/ orientation	Solid Panel Infills	Exterior Louvers/ Shading Devices	Electro-chromic glass	Interior automated shades	Frit Pattern on insulated low-e glass	Interior manual shades
Will disrupt the architectural image			Expensive and complicated to use and maintain	• Recent developments have made these less complex and more reliable	• Provides D+V • Reduces glare • Reduces EUI • Low maintenance • Relatively low cost	• Can reduce glare but at the cost of deleting D+V • Does not reduce EUI

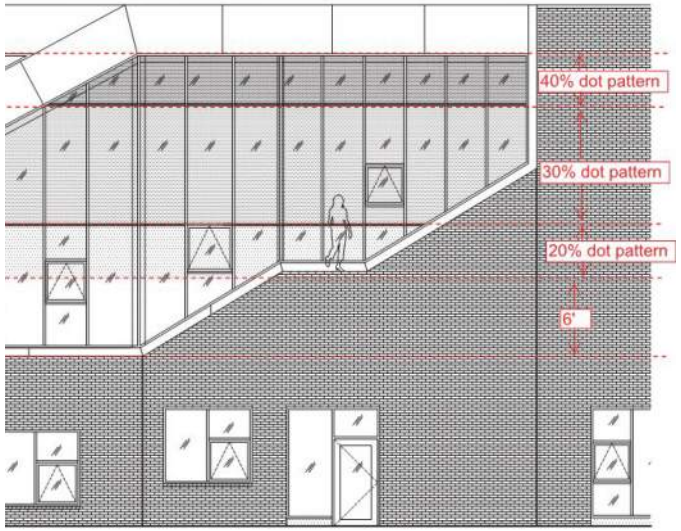
SCHEMATIC DESIGN

Frit Pattern Example

- Achievement Prep Middle School in the District with frit on the south-facing glass
  - Located at 908 Wahler Place SE, Washington DC
- The frit is subtly visible as it shifts in a gradient from 40% to 0%
- Frits allow for relatively clear glass while mitigating solar heat gain

DAY VIEW

NIGHT VIEW



GRADIENT DIAGRAM

SCHEMATIC DESIGN

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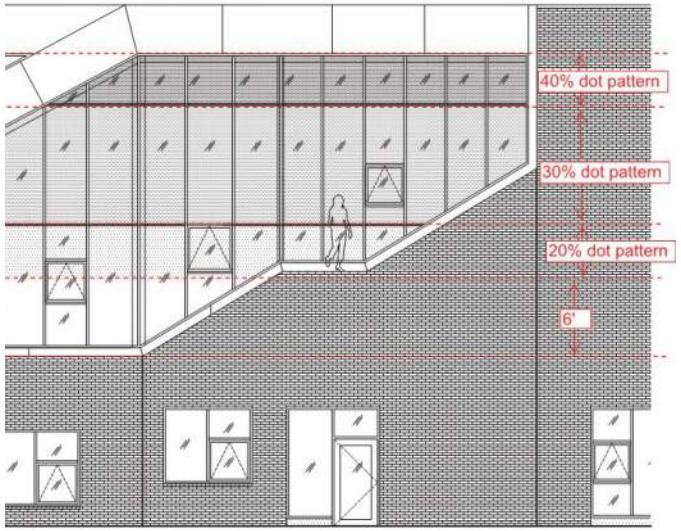
INTERIOR VIEWS



GRADIENT DIAGRAM

SCHEMATIC DESIGN

Frit Pattern Example

- Arlington Office Building with frit on the entrance canopy glass
  - Located at 1010 North Glebe Street, Arlington, VA
  - Used as a subtle shading device that still provides visual transparency
- The frit is 40% solid pattern

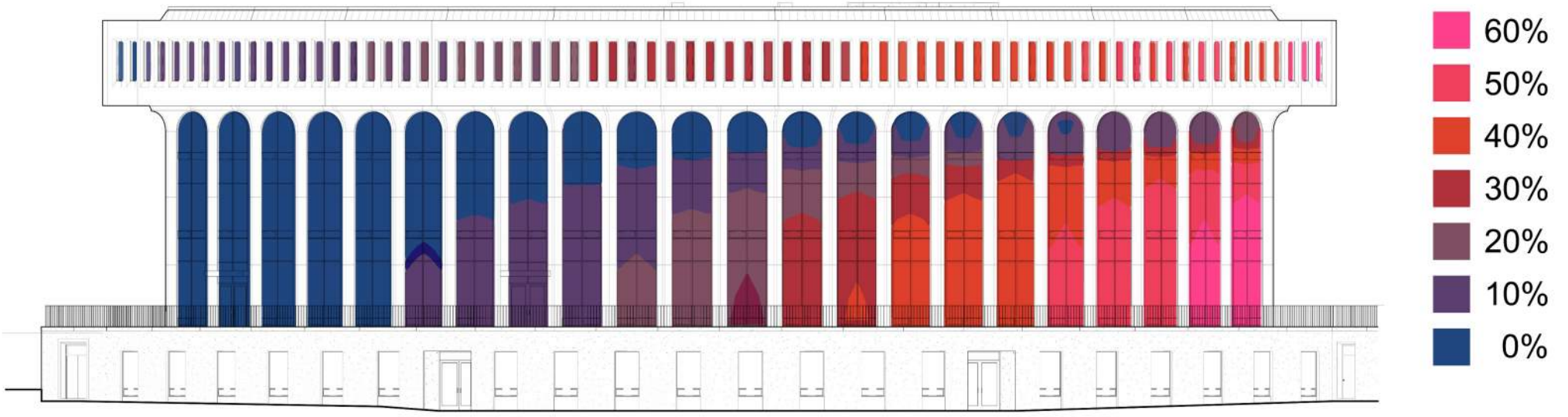
VIEW OF CANOPY

GLASS SAMPLE

SCHEMATIC DESIGN

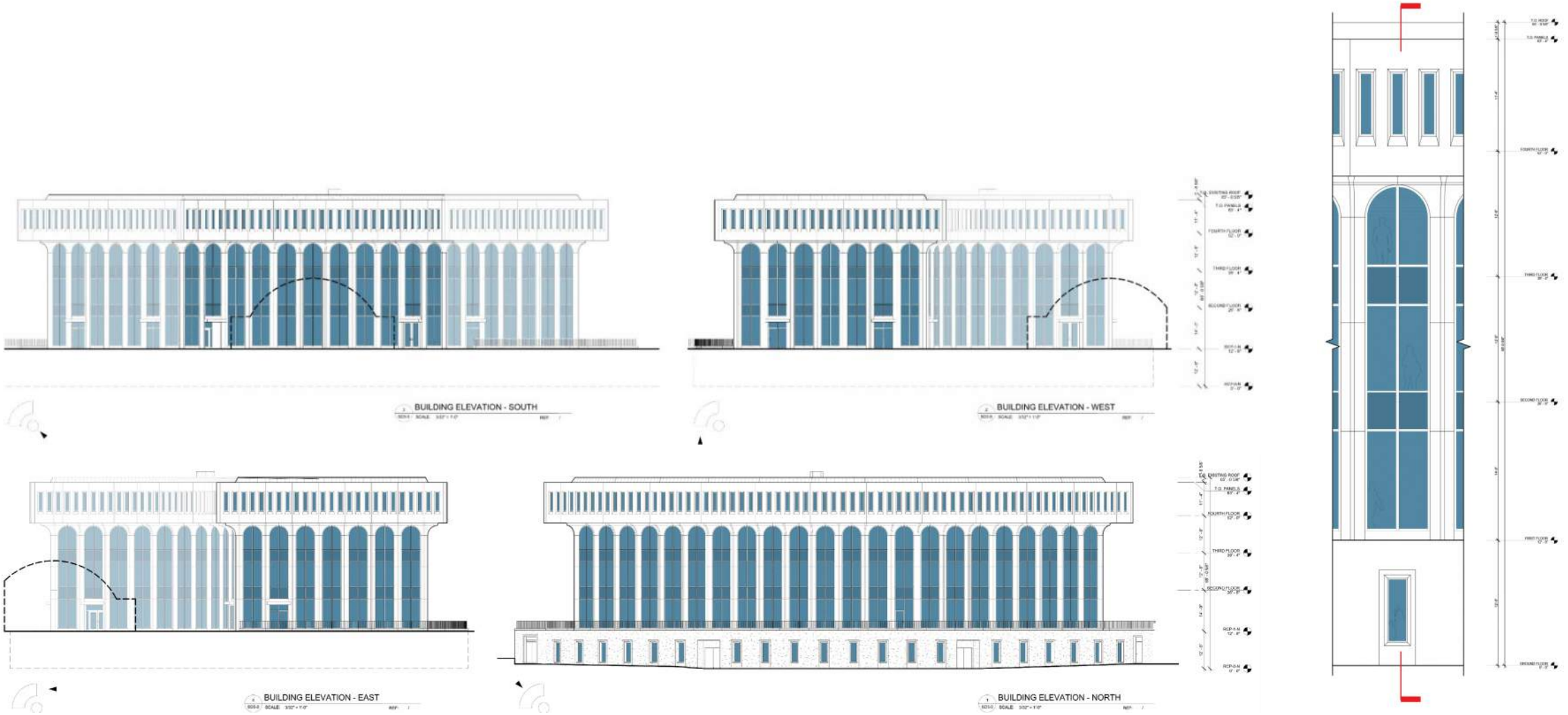
Frit Pattern Approach

- Frit will only be visible up close.
- Frit will not impact the view from within the classrooms to the outdoors
- Frit will help avoid overuse of shades which would have greater visual perception and impact to views.
- The frit density varies in response to solar exposure at each facade: each color in the diagram below represents a different frit density. This diagram is not an illustration of the actual visual condition; it is a quantitative documentation of the variations of the frit density.
- The subtle pattern provides a learning opportunity for students.



SCHEMATIC DESIGN

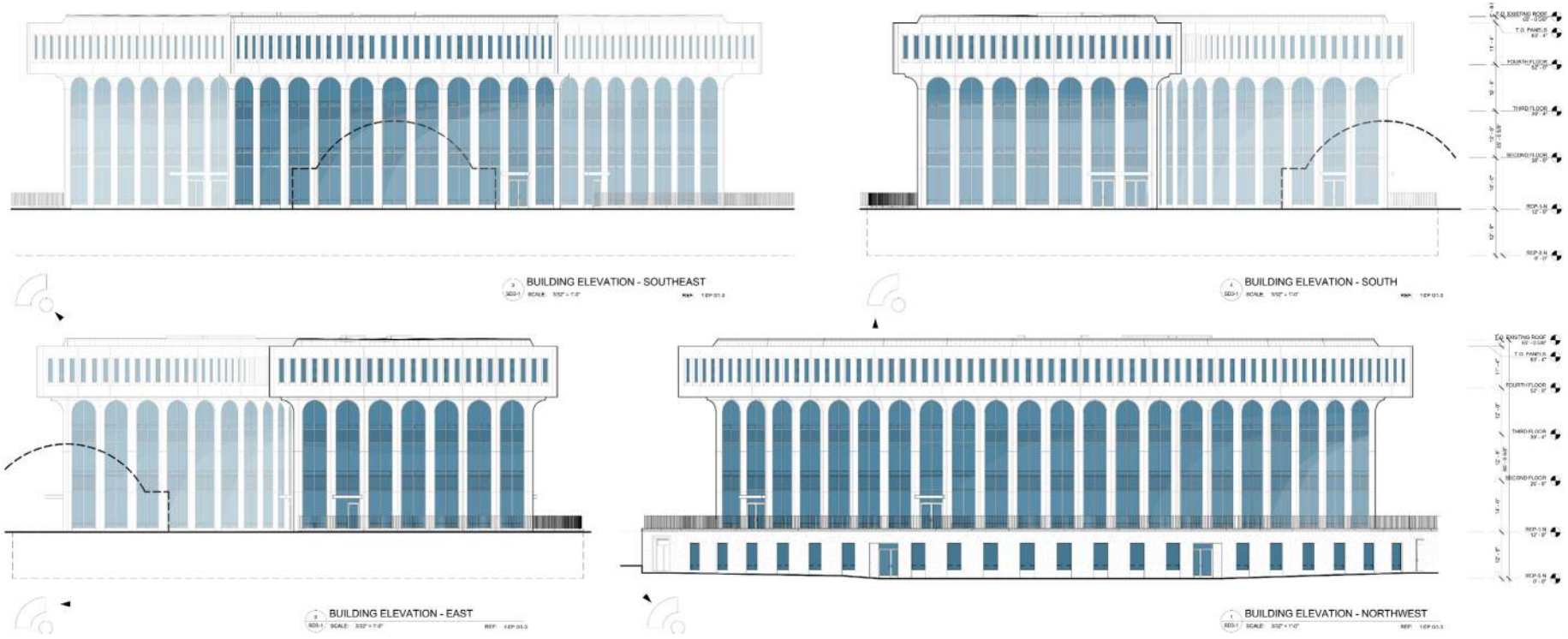
Elevations - Existing

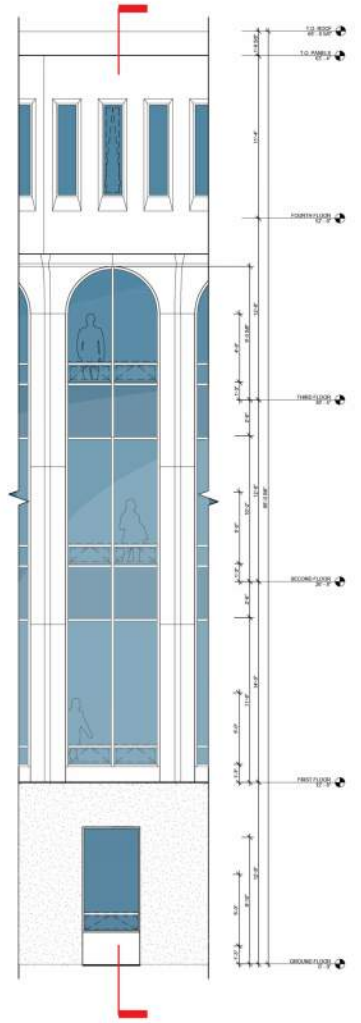


SCHEMATIC DESIGN

Elevations – Option A (APS preferred option)

- Frit will only be visible up close.
- Frit will not impact the view from within the classrooms to the outdoors
- Frit will help avoid overuse of shades which would have greater visual perception and impact to views.

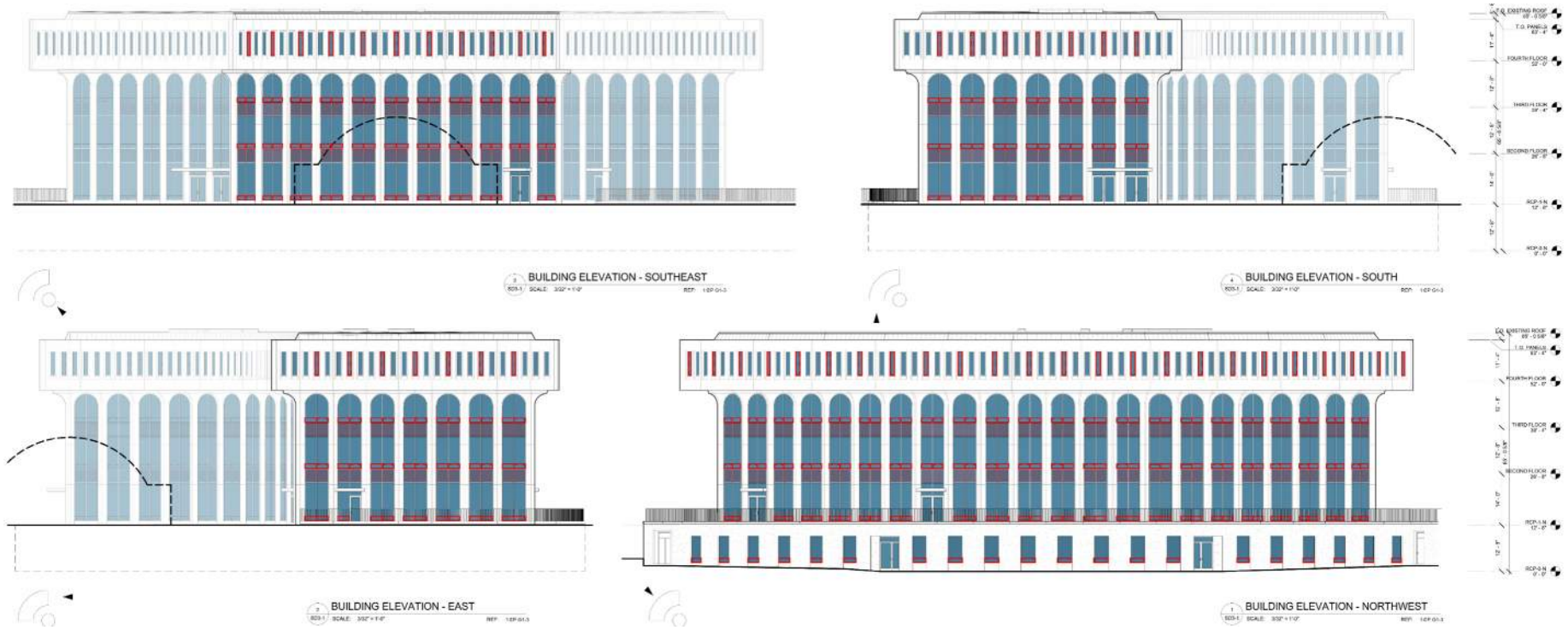


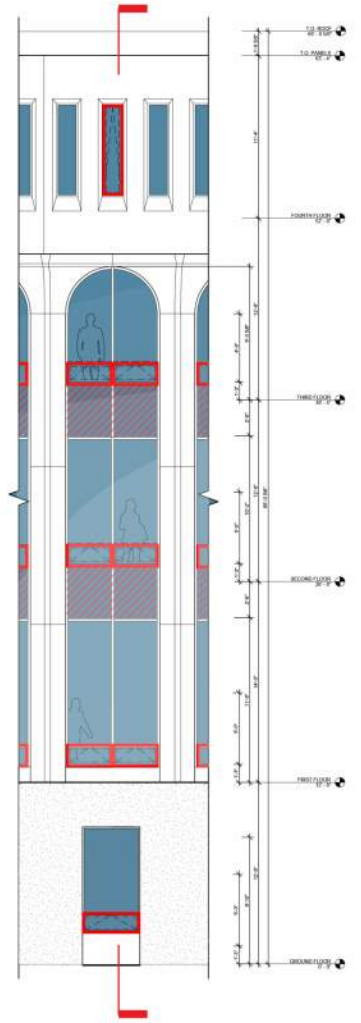


SCHEMATIC DESIGN

Elevations – Option A (APS preferred option)

- Frit will only be visible up close.
- Frit will not impact the view from within the classrooms to the outdoors
- Frit will help avoid overuse of shades which would have greater visual perception and impact to views.
- Red lines and hatches in the diagrams indicate locations of operable windows and spandrel panels

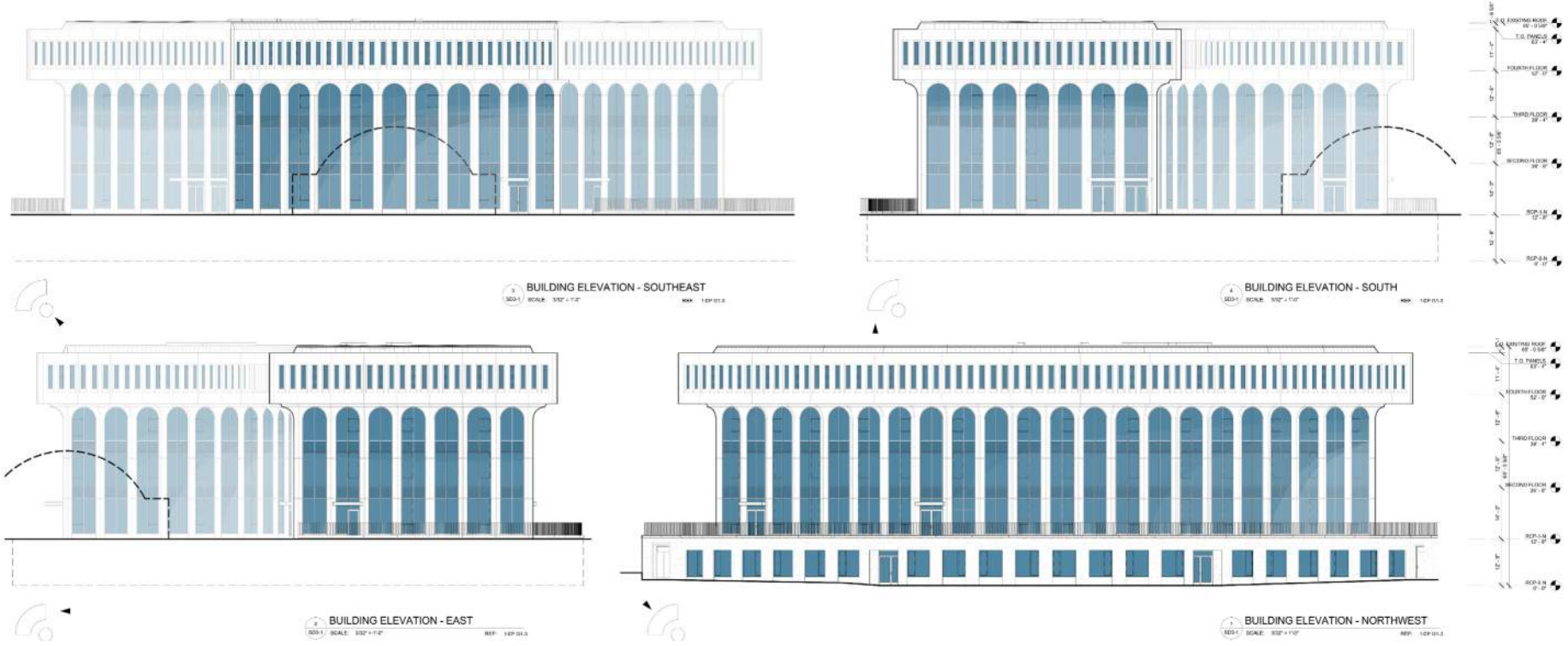


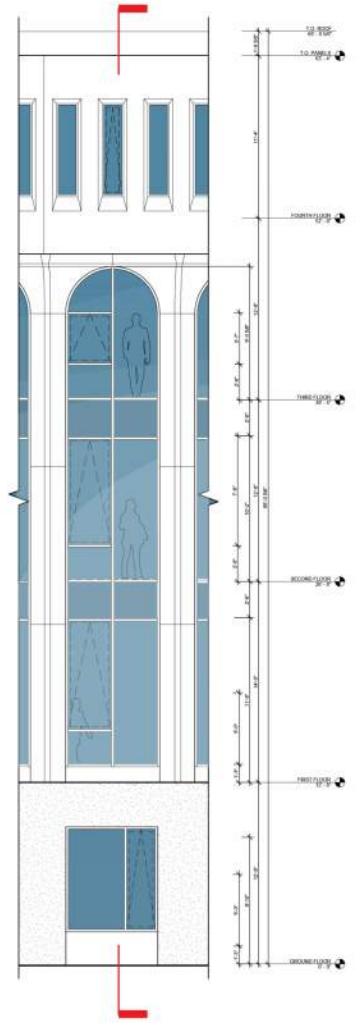


SCHEMATIC DESIGN

Elevations – Option B

- Frit will only be visible up close.
- Frit will not impact the view from within the classrooms to the outdoors
- Frit will help avoid overuse of shades which would have greater visual perception and impact to views.

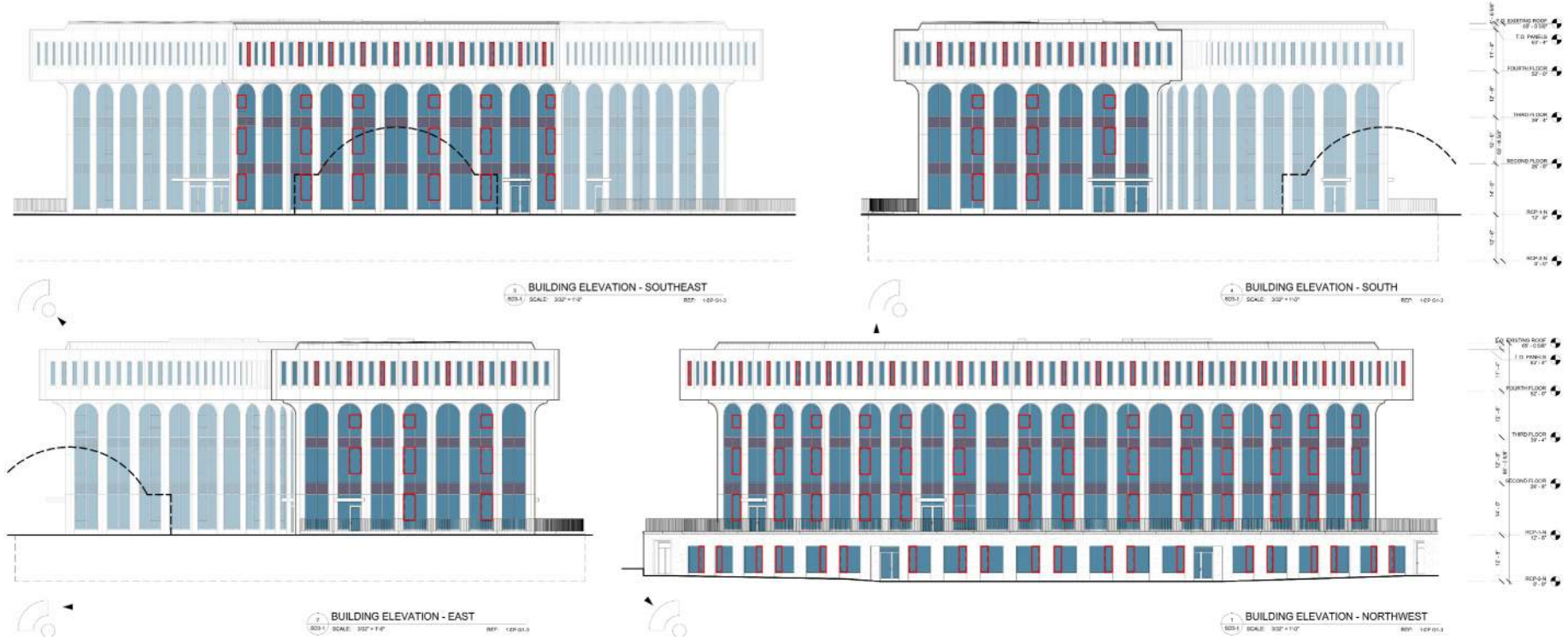


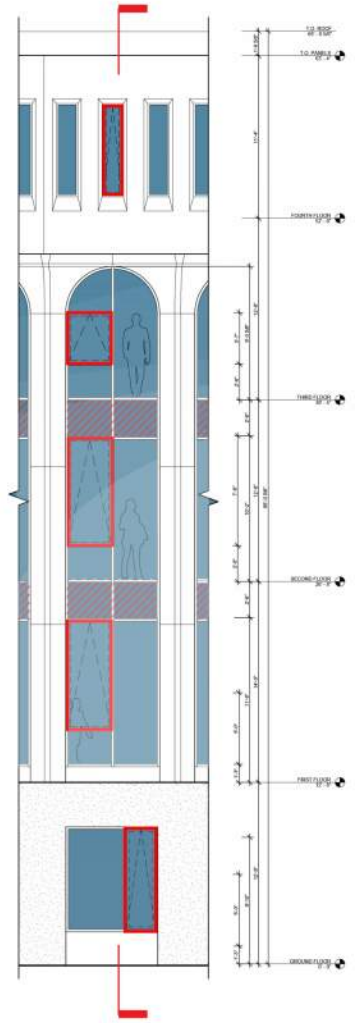


SCHEMATIC DESIGN

Elevations – Option B

- Frit will only be visible up close.
- Frit will not impact the view from within the classrooms to the outdoors
- Frit will help avoid overuse of shades which would have greater visual perception and impact to views.
- Red lines and hatches in the diagrams indicate locations of operable windows and spandrel panels





SCHEMATIC DESIGN

Option A

SCHEMATIC DESIGN

Option A

SCHEMATIC DESIGN

Option A

SCHEMATIC DESIGN

Option A

SCHEMATIC DESIGN

Option A

SCHEMATIC DESIGN

Option B

SCHEMATIC DESIGN

Option B

SCHEMATIC DESIGN

Option B

SCHEMATIC DESIGN

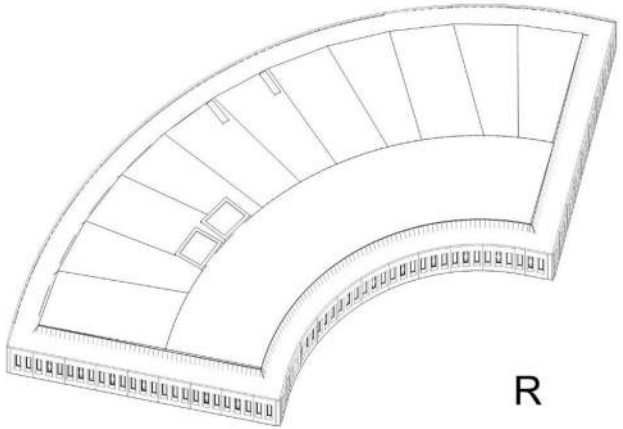
Option B

SCHEMATIC DESIGN

Option B

SCHEMATIC DESIGN

Floor Plans



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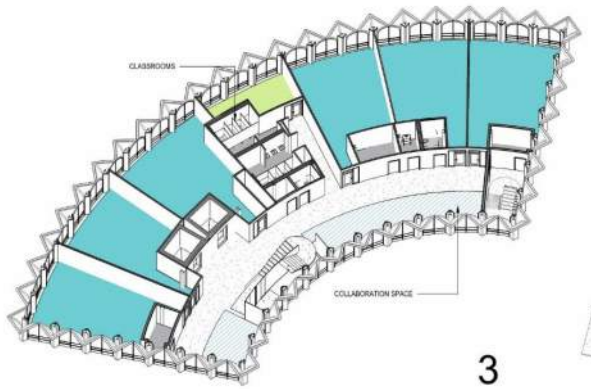

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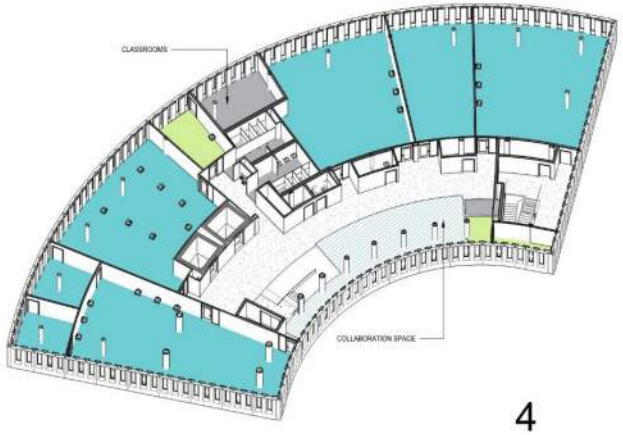

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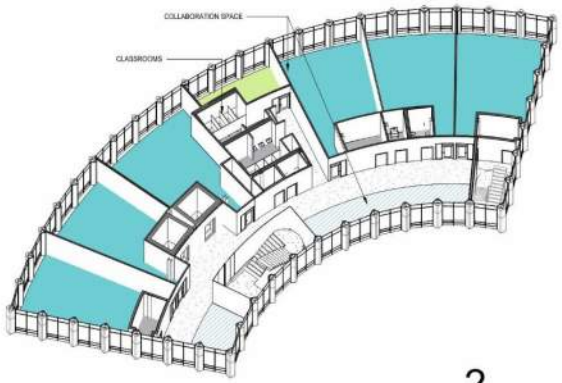

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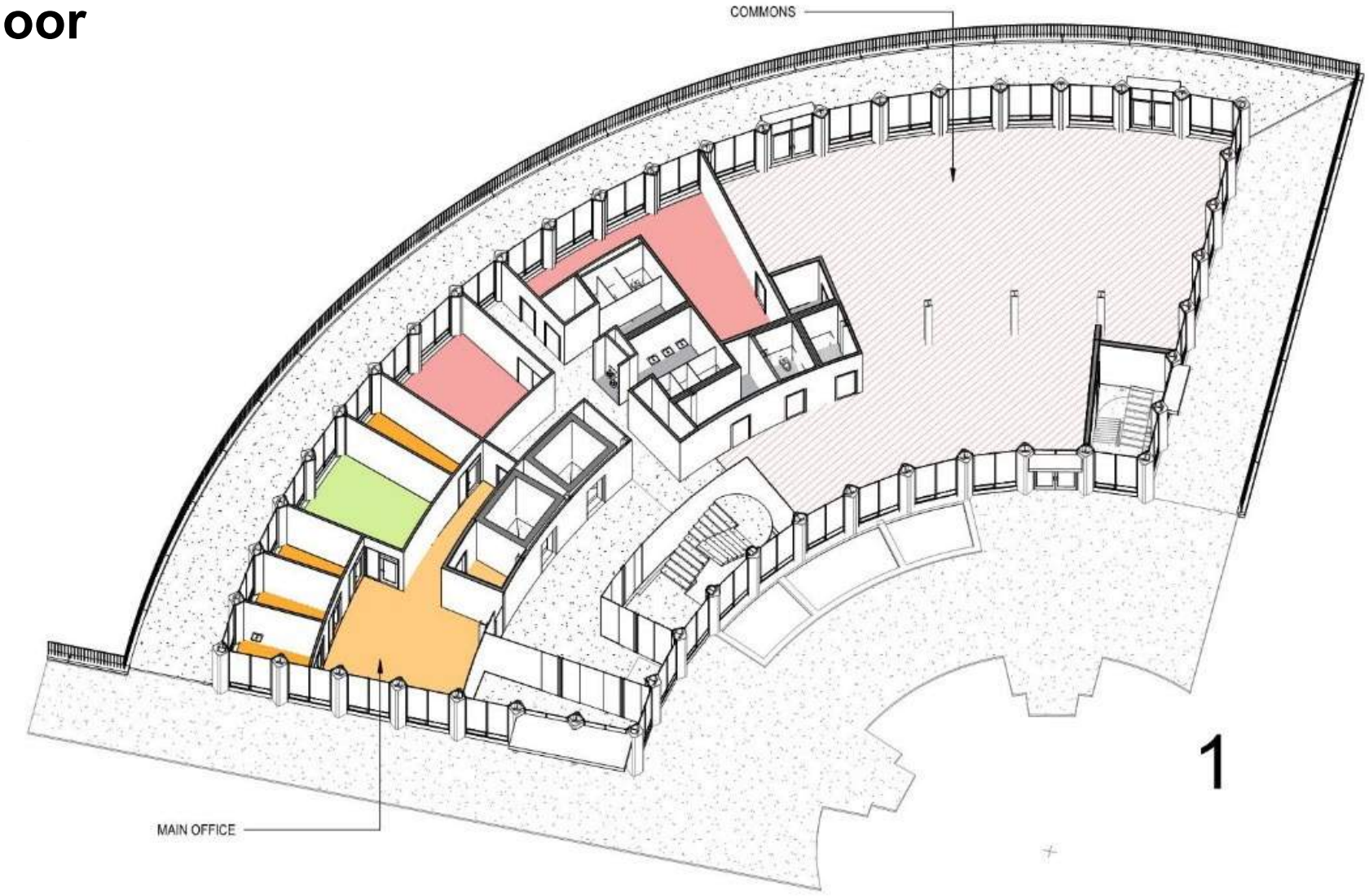
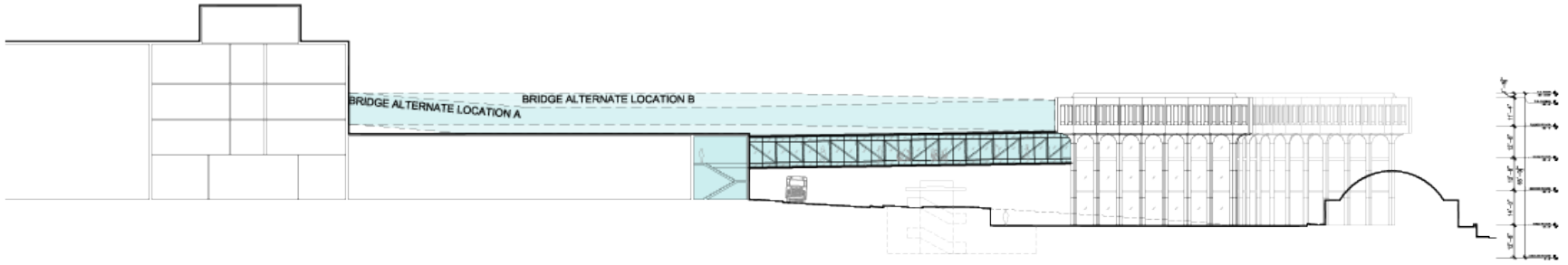
SCHEMATIC DESIGN

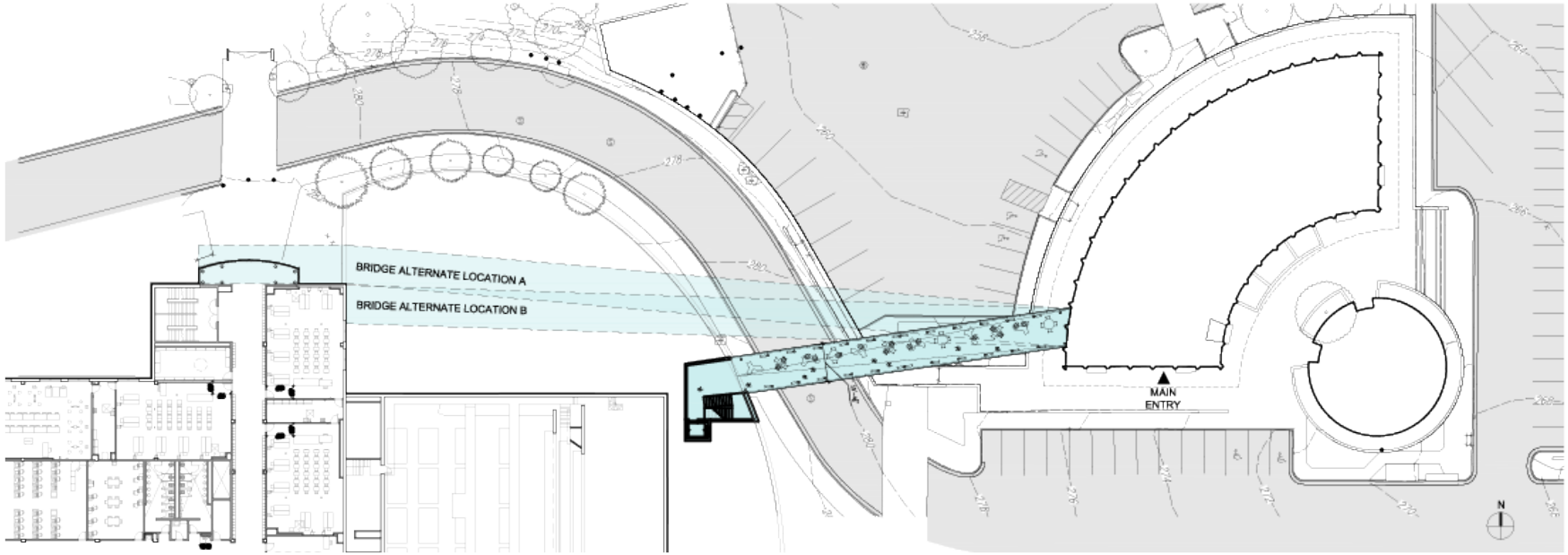
First Floor



SCHEMATIC DESIGN

Alternate Scope: Bridge Concepts





SCHEMATIC DESIGN

5 Committee Discussion

6 Proposed Off-site Transportation Improvements

N Quincy St Recommendations

Potential bike conflicts adjacent to drop-off/pick-up:
- 4 bicycles used SB bike lane during arrival (8 to 8:30 AM)
- 2 bicycle used SB bike lane during dismissal (3 to 3:30 PM)

Recommendation (Option 1): Enhance bicycle lane markings next to pick-up/drop-off areas to reinforce presence of the bicycle lane

Alternative (Option 2): Switch bike lane and parking lane between N Quincy St and 14th Street to reduce conflicts. Option 2 presents potential safety concerns because it requires removing the median on N Quincy St.

MMTA recommends Option 1 be installed and monitored, with additional improvements explored at that time if monitoring shows safety issues remain.

Enhanced Markings (Crystal City)

N Quincy St Recommendations

Enhance bicycle lane markings next to pick-up/drop-off areas to reinforce presence of the bicycle lane

Install Rectangular Rapid Flash Beacon (RRFB) at intersection of N Quinsy St and 14th Street N to enhance pedestrian crossings

Add monitoring of these improvements to the monitoring plan for the school

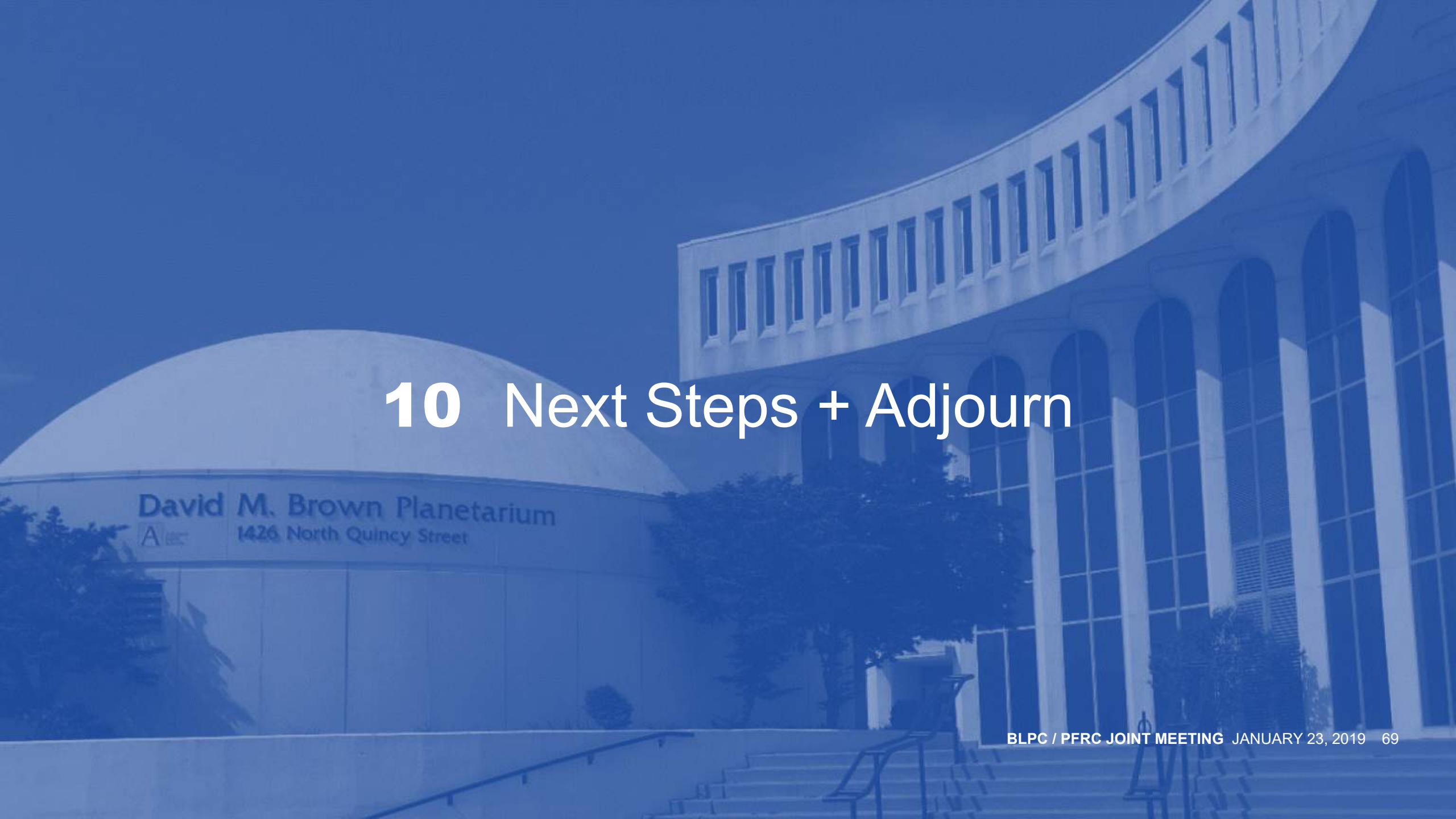
RRFB

Enhanced Markings (Crystal City)

TRANSPORTATION

7 Committee Discussion

9 Public Comments



10 Next Steps + Adjourn

Next Steps

- January 2019 – BLPC/PFRC Chairs complete schematic design phase letters
- January 2019 – Develop Schematic Design Cost Estimates
- February 7, 2019 – Schematic Design School Board Information Item for Schematic Design and Interior Demolition
- February 21, 2019 – Schematic Design School Board Action Item for Schematic Design and Interior Demolition
- March - April 2019 – Interior Demolition
- Spring 2019 – Use Permit Application

Adjourn

1. The APS Project Manager is:
   Robin Hodges
   (703) 872-9175
   robin.hodges@apsva.us

2. Public meeting dates and past presentations are posted on the APS project website:
   https://www.apsva.us/education-center-reuse/

3. To provide feedback and/or comments to APS use: engage@apsva.us