



Welcome

Frederick Douglass Tunnel Program

Ventilation Facility Discussion

May 6, 2024: Virtual Meeting

May 8, 2024: In-Person Meeting



Meeting Protocol

The meeting facilitator is responsible for ensuring the meeting:

- Runs efficiently, respectfully, and effectively
- Focuses on the published agenda
- Provides appropriate opportunities for all members to participate

To support a successful meeting, we ask that attendees:

- Try to remain focused on the topic
- Please respect the opinions of others
- Allow others to speak without interruption
- Hold questions until the end of the presentation
- Allow the facilitator to direct questions to the appropriate party
- Limit themselves to one follow up/clarifying question

Using Slido / Submitting Questions

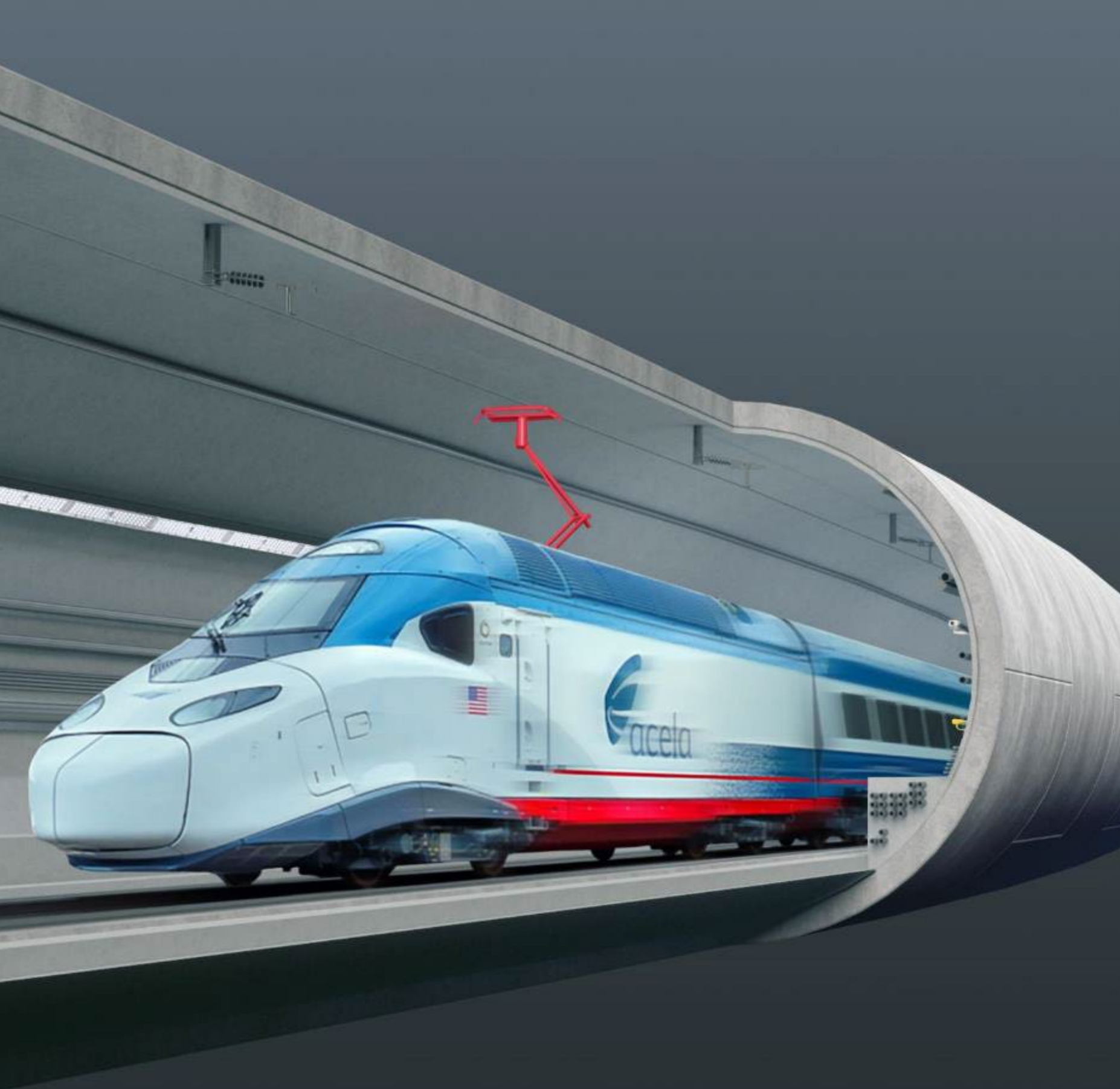
During the meeting, we ask that individuals use the Slido tool to provide feedback on design options.

We are also offering two methods to submit questions or comments at the end of the presentation:

1. Submit your question/comment during the presentation using Slido.
 - Go to Slido.com or scan the QR code with your smartphone.
 - Use the Q&A function to submit a question.
2. Go to the microphone to speak during the Q&A portion of the meeting.

Agenda

1. Program Background & Overview
2. Outreach & Design Status
3. North Ventilation Facility (NVF)
4. South Ventilation Facility (SVF)
5. Intermediate Ventilation Facility (IVF)
6. Q&A



Rendering is for illustrative purposes only

Program Background

**Existing tunnel is over 150 Years old...
Nearly as old as Druid Hill Park!**

Carries 9 million MARC & Amtrak passengers per year on the Northeast Corridor (NEC)
(MARC's Penn Line)

Top Issues:

- Aging structure
- Trains frequently delayed traveling through the tunnel with speeds limited to 30 mph maximum
- High maintenance (frequent outages)
- No redundancy & resiliency
- Biggest rail bottleneck between Washington DC and New Jersey

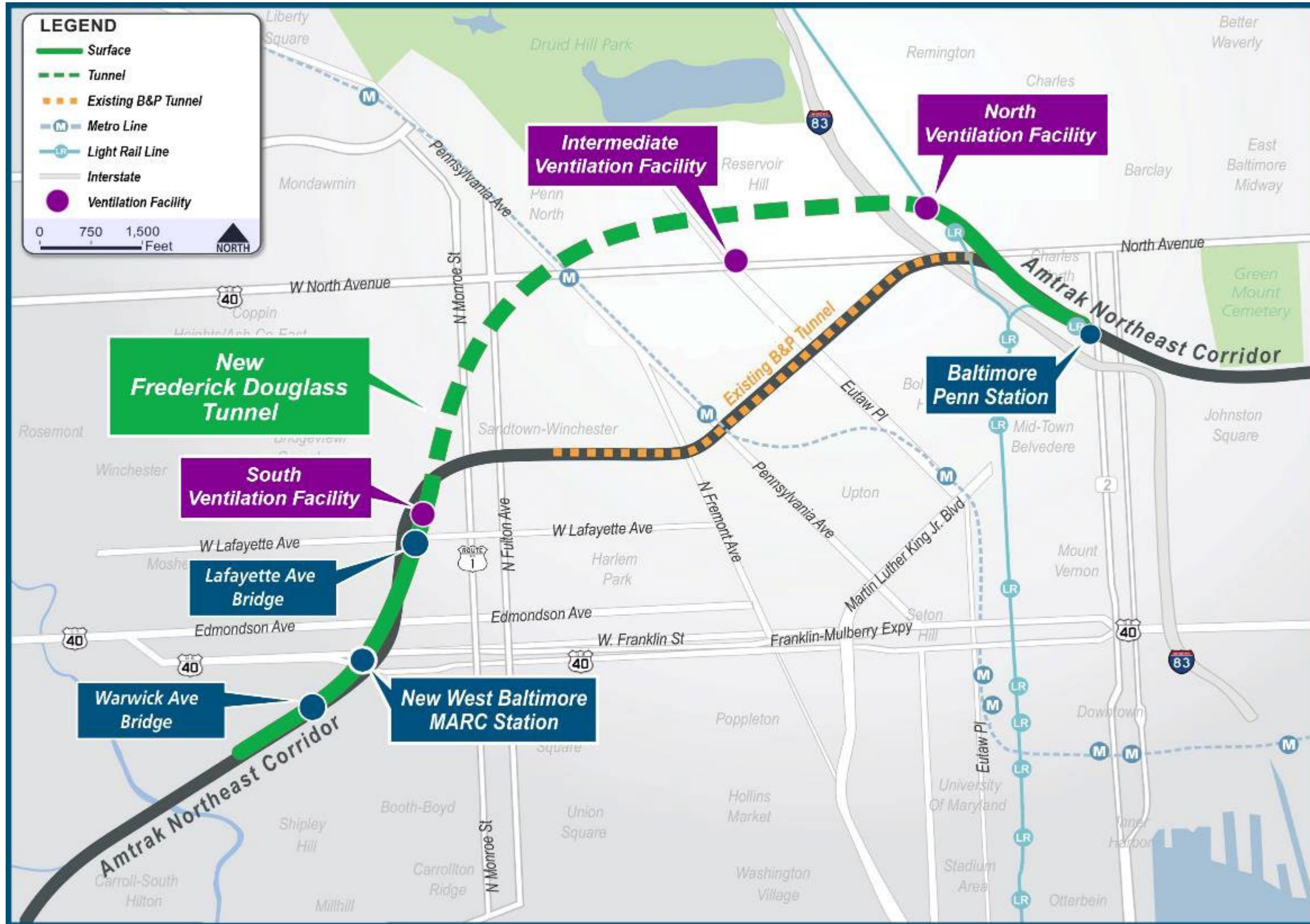


Program Overview

The Frederick Douglass Tunnel Program will modernize a key section of the Northeast Corridor (NEC)

- 10 miles of rail improvements along the NEC
- ~2 miles of new tunnel per bore in West Baltimore (two tunnel bores)
- New and improved railroad infrastructure
- New ADA-accessible West Baltimore MARC Station
- State-of-the-art modern fire/life safety systems
- 5 Bridge replacements in Baltimore City (2 roadway, 3 railroad bridges)
- 11 Baltimore City roadway modifications
- Noise barriers in Midtown Edmondson and Greater Rosemont communities

Program Overview Map



Program Benefits



\$50 million for
COMMUNITY INVESTMENTS



Local jobs centers to
train the **WORKFORCE**



Increased **ACCESS TO REGIONAL JOBS**
for Baltimore City
residents



Approximately
20,000 JOBS GENERATED over the
course of construction



Construction of a new
ADA-ACCESSIBLE
West Baltimore
MARC STATION



IMPROVEMENTS to
roadway and bridge
INFRASTRUCTURE



ENVIRONMENTAL SUSTAINABILITY
addition of electrified
trains and solar powered
facilities and stations



ACCESS TO SALVAGE MATERIALS for residents
of Midtown Edmondson
and Edmondson Avenue
Historic Districts



RELIABILITY, REDUNDANCY and
RESILIENCY for MARC
and Amtrak trains



Construction of a
NEW TUNNEL, named
in honor of Frederick
Douglass



IMPROVED TRIP TIME. Travel from
Baltimore to
Washington in under
30 minutes



Complete
MODERNIZATION of
Amtrak's **NORTHEAST CORRIDOR** in West
Baltimore

Frederick Douglass Tunnel
B&P TUNNEL REPLACEMENT



Purpose of Today's Meeting

The new Frederick Douglass Tunnel will include three ventilation facilities as part of the Program. The Record of Decision associated with the environmental document for the Program requires include a mechanism for public comment in the design and landscaping of Project facilities such as portals, ventilation facilities, and other visible Project structures.

The purpose of these meetings is to:

- Share the historic influences used to help guide the design and landscaping of the south and intermediate ventilation facilities which will be located within historic districts.
- Discuss the design and landscaping of the north ventilation facility.
- Share comments received to date on the ventilation facilities and proposed modifications to the design.
- Solicit feedback on the revised design of the ventilation facilities.

Ventilation Facilities

Ventilation facilities are an important feature of the tunnel system. They house essential fire and life safety systems and ventilation equipment. In the unlikely event of an incident in the tunnel, ventilation facilities provide an evacuation route out of the tunnel for passengers and crew and access into the tunnel for Baltimore City emergency service personnel in compliance with National Fire Protection Association (NFPA) 130 standards.

Key features of the ventilation facilities include:

- Fans and equipment to provide fresh air into the tunnel and extract smoke, in the event of fire or smoke emergency in the tunnel
- Mechanical, electrical, and communications rooms and equipment
- Emergency egress (via an egress passageway and stairs)
- Fire standpipe (fire hydrant connection)
- Electrical equipment to support emergency lighting and other emergency systems

Outreach & Design Status

▪ North Ventilation Facility

- Public Outreach (exterior design) - 9/26/23, 9/28/23

▪ South Ventilation Facility

- Public Outreach (*exterior design*) - 9/26/23, 9/28/23, and 2/29/24
- Design has been revised to address public comments

▪ Intermediate Ventilation Facility


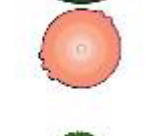
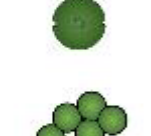
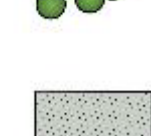




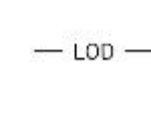


- Public Outreach (*exterior design*) - 9/26/23, 9/28/23, 11/26/23, and 1/11/24
- CHAP Advisory Review - 3/12/24
- Design has been revised to address public comments
- Two conceptual design options to be presented for public input

North Ventilation Facility

North Ventilation Facility - Site



NVF – Landscape Design

-  SHADE TREE
-  FLOWERING TREE
-  EVERGREEN TREE
-  SHRUB
-  TURFGRASS ESTABLISHMENT
-  SHREDDED HARDWOOD BARK MULCH 3 INCH DEPTH (SHBM)
-  GRAVEL
-  CONCRETE SIDEWALK
-  ASPHALT PAVEMENT
-  WROUGHT IRON FENCE (8' H)
-  LIMIT OF DISTURBANCE



North Ventilation Facility

Design Development

NVF – Materials

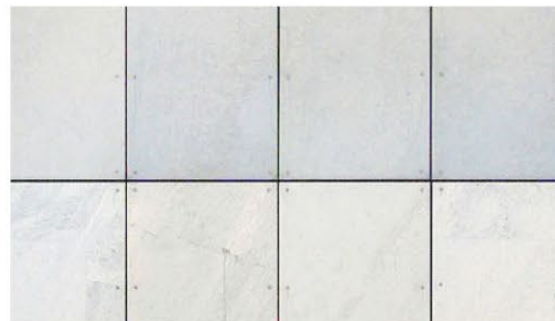
FACADE ELEMENTS



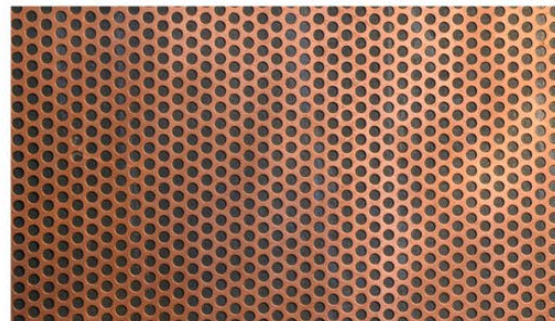
CORRUGATED METAL PANEL



FLAT METAL PANEL, COPPER



FLAT METAL PANEL, WHITE



PERFORATED METAL PANEL

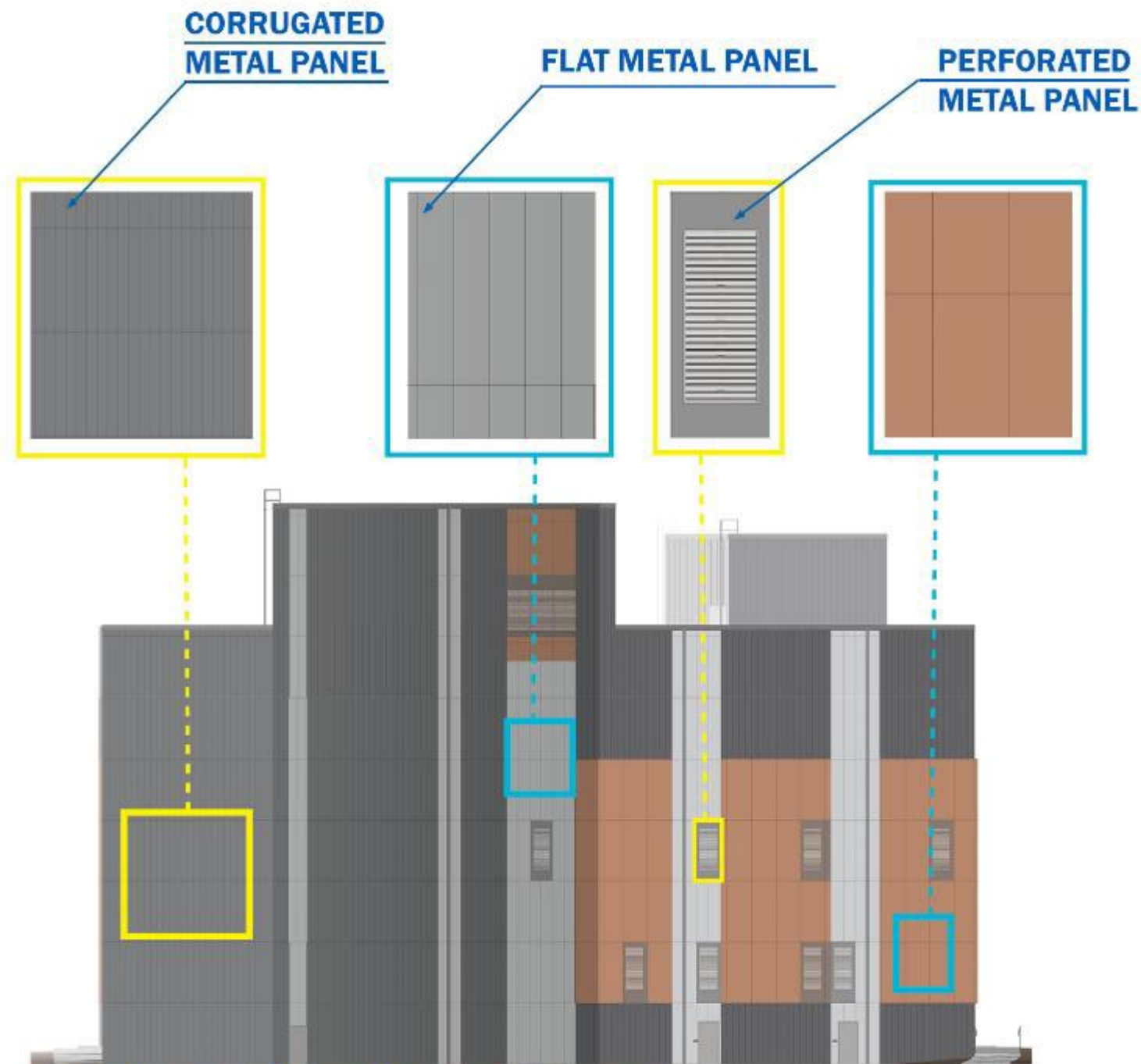


MTA MARYLAND CENTRAL LIGHT RAIL OPERATIONS BUILDINGS



MTA MARYLAND CENTRAL LIGHT RAIL OPERATIONS BUILDINGS

NVF – Façade Design



- Metal panels used to match surrounding context
- Metal panels offer versatility, durability and are low maintenance
- Perforated metal panels allow for ventilation, reducing the need for cooling systems

FINISHES

- Dark Grey Metal Panel
- Light Grey Metal Panel
- Copper Metal Panel
- Light Grey Perforated Metal Panel

NVF – Rendering



Aerial View at Jones Falls Expressway I-83

Frederick Douglass Tunnel
B&P TUNNEL REPLACEMENT

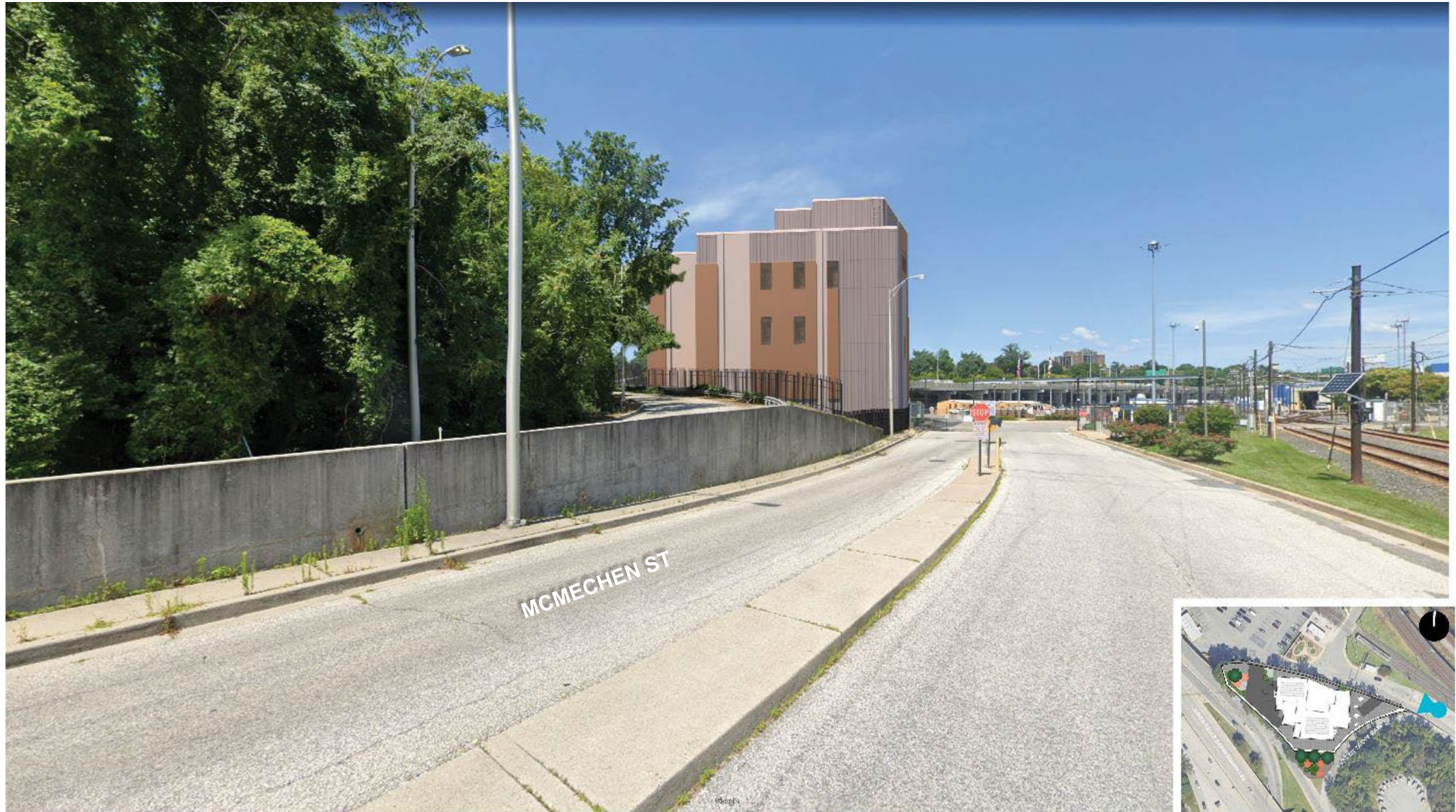


NVF – Rendering



View at MTA Facility Parking Lot

NVF – Rendering

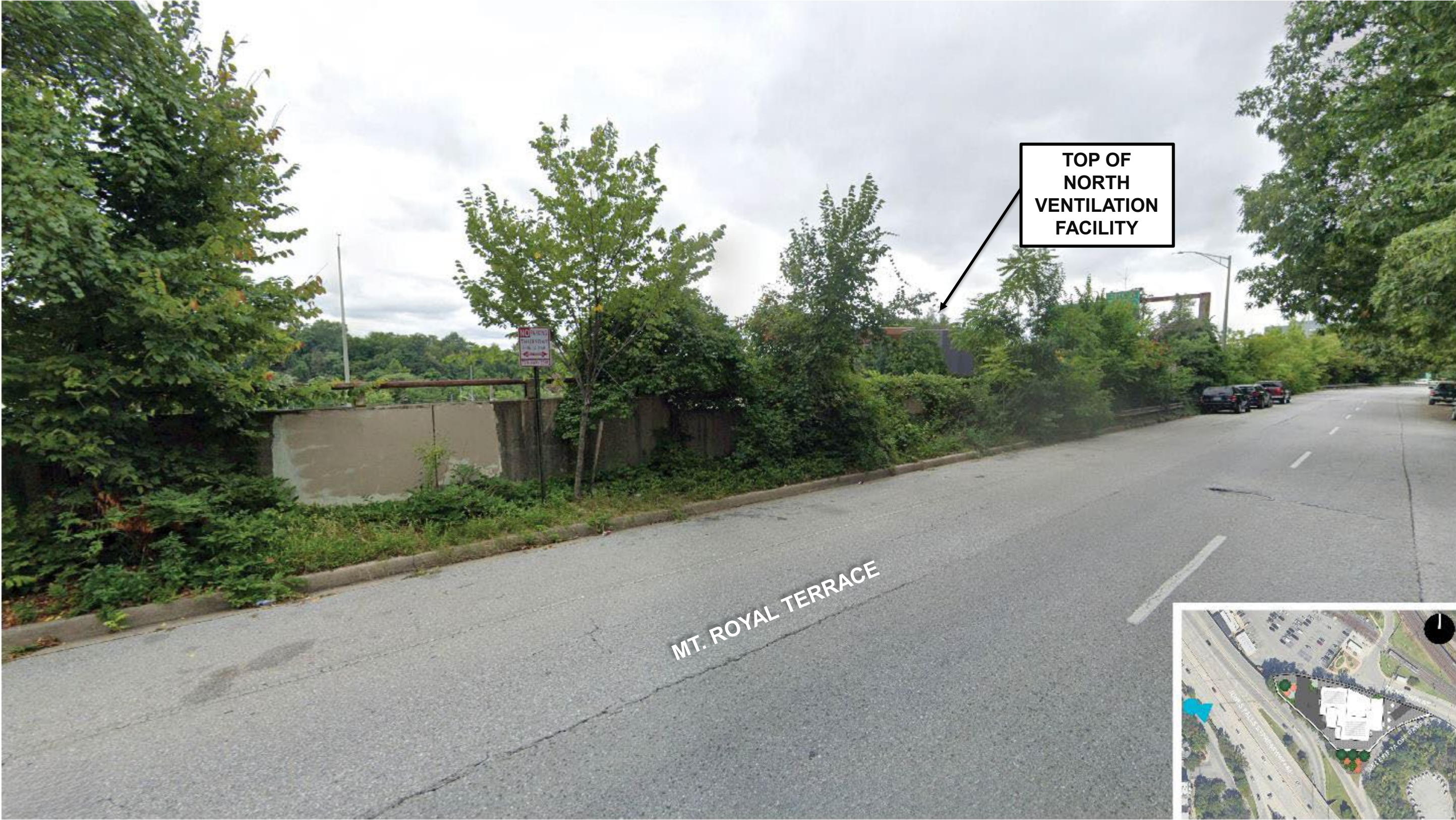


View at McMechen St.

Frederick Douglass Tunnel
B&P TUNNEL REPLACEMENT



NVF – Rendering from Mt. Royal Terr.



View at Mt. Royal Terrace

Context-Sensitive Design – IVF & SVF

- Provides the opportunity for community engagement in the design
- Considers historic properties in the design for elements such as:
 - Materials
 - Form
 - Scale
 - Design
 - Color
 - Texture
- Addresses IVF's siting within the Reservoir Hill & Bolton Hill Historic Districts
- Addresses SVF's siting within the Midtown Edmondson Historic District and close proximity to B&P Railroad Historic District

South Ventilation Facility

South Ventilation Facility (SVF) – Site



SVF – Landscape Design

-  SHADE TREE
-  FLOWERING TREE
-  EVERGREEN TREE
-  SHRUB
-  NATIVE GRASSES AND PERENNIALS
-  TURFGRASS ESTABLISHMENT
-  GROUNDCOVER
-  SHREDDED HARDWOOD BARK MULCH
-  GRAVEL
-  LOW EVERGREEN SHRUB BORDER
-  CONCRETE SIDEWALK
-  ASPHALT PAVEMENT
-  WROUGHT IRON FENCE (8' H)
-  LIMIT OF DISTURBANCE

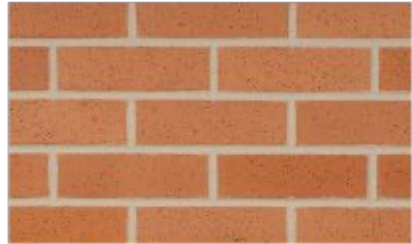


South Ventilation Facility

60% Design

SVF – Materials & Finishes

FACADE ELEMENTS



SALMON BRICK



IRON-SPOT BRICK



ROMAN BRICK



VITRIFIED BRICK



N PAYSON STREET - FRONT FACADE

CORNICE TYPES



- Maintains rhythm along block, with adjacent houses

STAIR TYPES



BRICK STAIRS



STONE STAIRS

SVF – 60% Design



Aerial View at Mosher St.

SVF – 60% Design



Aerial View at N. Payson St.

Public Comments and Recommendations

- Exterior Design
 - Revise window shape and size to be more consistent with windows of existing row houses
 - Revise bays to have consistent widths
 - Add visual weight to the base of building
 - Revise to be more compatible with existing row houses
 - Revise Brick Color to be a closer match to the existing Salmon brick color

- Building Height (*in progress - not reflected in current design*)
 - Decrease height of the building

South Ventilation Facility

Design Development

South Ventilation Facility

- Uniform Bay Widths
- Window Size & Shape
- Continuous Base
- Continuous Cornice
- Use of Materials
 - Brick Color – Salmon
- Location for future artwork/mural



60% DESIGN



CURRENT

SVF - Design Development



60% DESIGN

Uniform Bay Widths

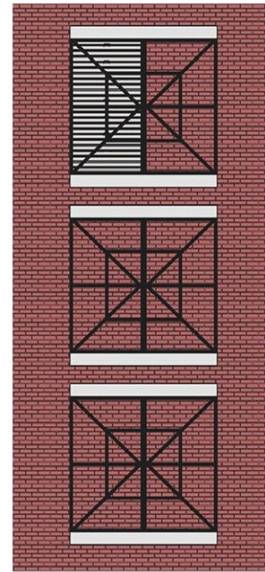


CURRENT

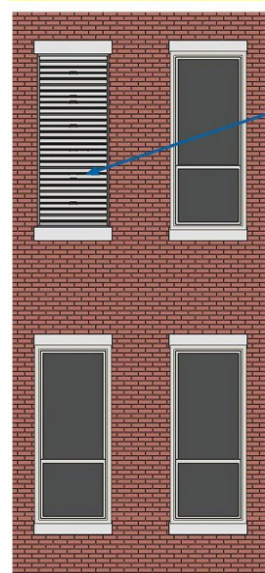
Frederick Douglass Tunnel
B&P TUNNEL REPLACEMENT



SVF - Design Development



60% DESIGN



Window Size & Shape

CURRENT

SVF - Design Development



60% DESIGN



Continuous
Cornice

CURRENT

SVF - Design Development



SVF - Design Development



60% DESIGN

FINISHES

-  Red Brick (Salmon)
-  Light Brown Brick
-  Light Grey Brick
-  Light Brown Stone
-  White Stone



CURRENT

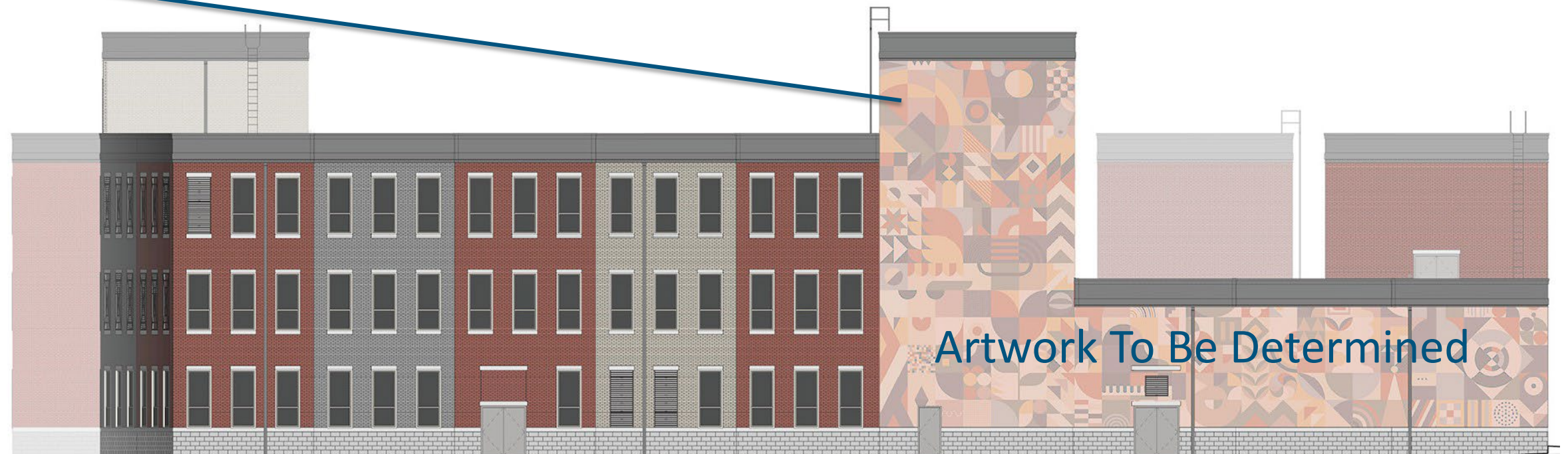
Use of
Materials

SVF - Design Development



60% DESIGN

Art Mural – possible location



Artwork To Be Determined

CURRENT

SVF – Design Development - Rendering



Aerial View at Mosher St.

SVF – Design Development - Rendering



Aerial View at Mosher St.

SVF – Design Development - Rendering



Aerial View at Mosher St.

SVF – Design Development - Rendering



Aerial View at Mosher St.

Intermediate Ventilation Facility

Intermediate Ventilation Facility (IVF) - Site



Intermediate Ventilation Facility

60% Design

IVF - Materials & Details

FACADE ELEMENTS



SALMON BRICK

- Produced at brickyards in south and southwest Baltimore
- Dates back to 1850s
- Porous, often painted



PRESSED BRICK

- Less porous
- Initially manufactured by hand, then by machine



IRON-SPOT BRICK

- Early 1900s
- Referred to as vitrified brick
- Fired longer at higher temperature, increased durability and impermeability



RUSTICATED STONE

- Rough texture
- Beige, tan, or shades of red



TERRACOTTA

- Used for panels and friezes



MARBLE

- Used for front steps
- Quarried locally in Cockeysville, MD
- Usually large slabs
- White in color



FACADE PROJECTIONS

- Bay and bow windows, and turrets to break up flat facades



WINDOW TREATMENT

- Variation in window treatment
- Rectangular and arched windows
- Contrasting lintels and sills



CORNICES

- Maintains rhythm along block, with adjacent houses

IVF - 60% Design



View at Eutaw Place & W. North Avenue

IVF - 60% Design



Aerial View at W. North Avenue

IVF - 60% Design



View along Eutaw Place



Public Comments and Recommendations

- Exterior Design
 - Revise design to be more unified and cohesive
 - Option 1: compatible with existing modern or contemporary buildings
 - Option 2: compatible with existing historic row houses
- Site & Bldg. Footprint (*in progress - not reflected in current design*)
 - Consider impacts of Alley 14 (Jordan St. Connection) to pedestrians and vehicles
 - Relocate the Parking Lot & reduce impervious pavement
 - Revise building footprint to provide for a setback consistent with existing buildings
 - Redesign to activate the sidewalk – murals, public art, lighting, and street furniture

Intermediate Ventilation Facility

Design Development – Options 1 & 2

IVF - Option 1 Precedents



MICA (LOOKING SOUTH; W. NORTH AVENUE)



HEALTH & HUMAN SERVICES BUILDING (LOOKING EAST; BETWEEN W. NORTH AVENUE & WHITMORE AVENUE)



IVF - Option 1 Contemporary – Rendering



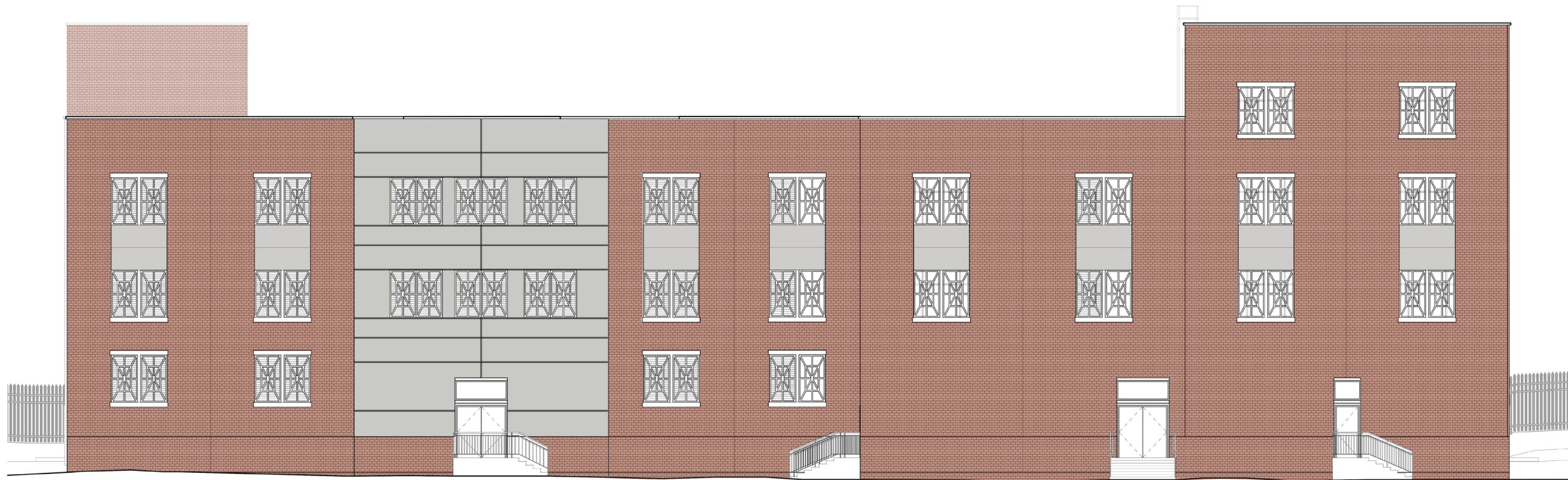
Aerial View at W. North Avenue

Frederick Douglass Tunnel
B&P TUNNEL REPLACEMENT



IVF - Option 1 - Contemporary

- Unified Design
- Uniform Bay Widths
- Window Size & Shape
- Materials – brick & metal panel



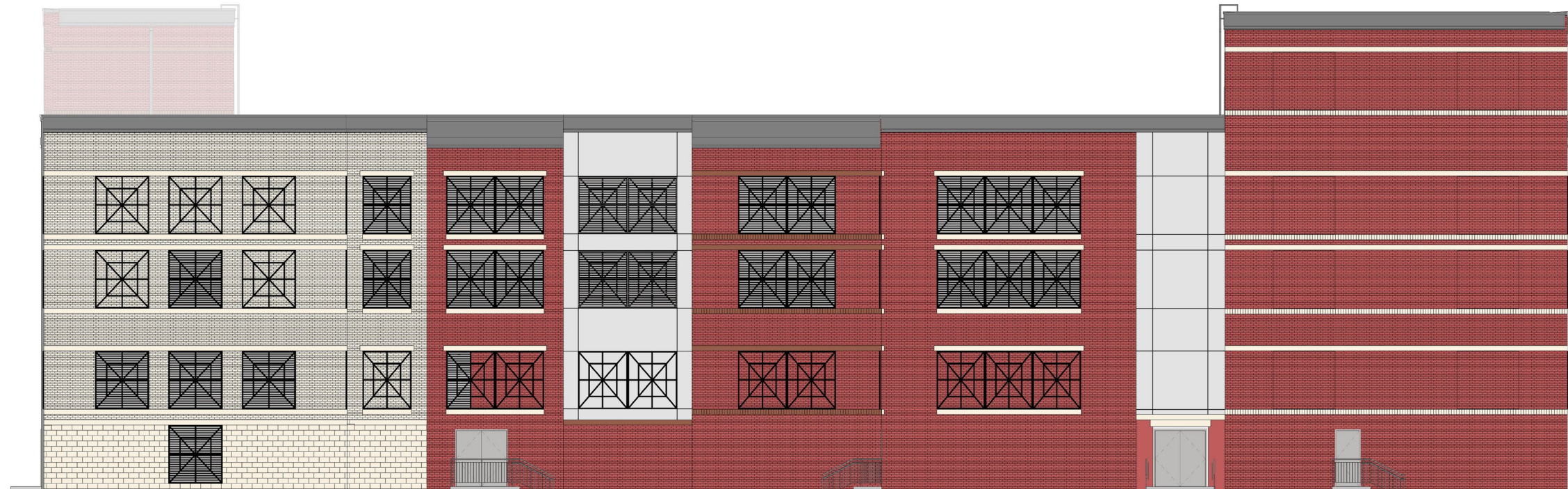
W. North Avenue (South Elevation)



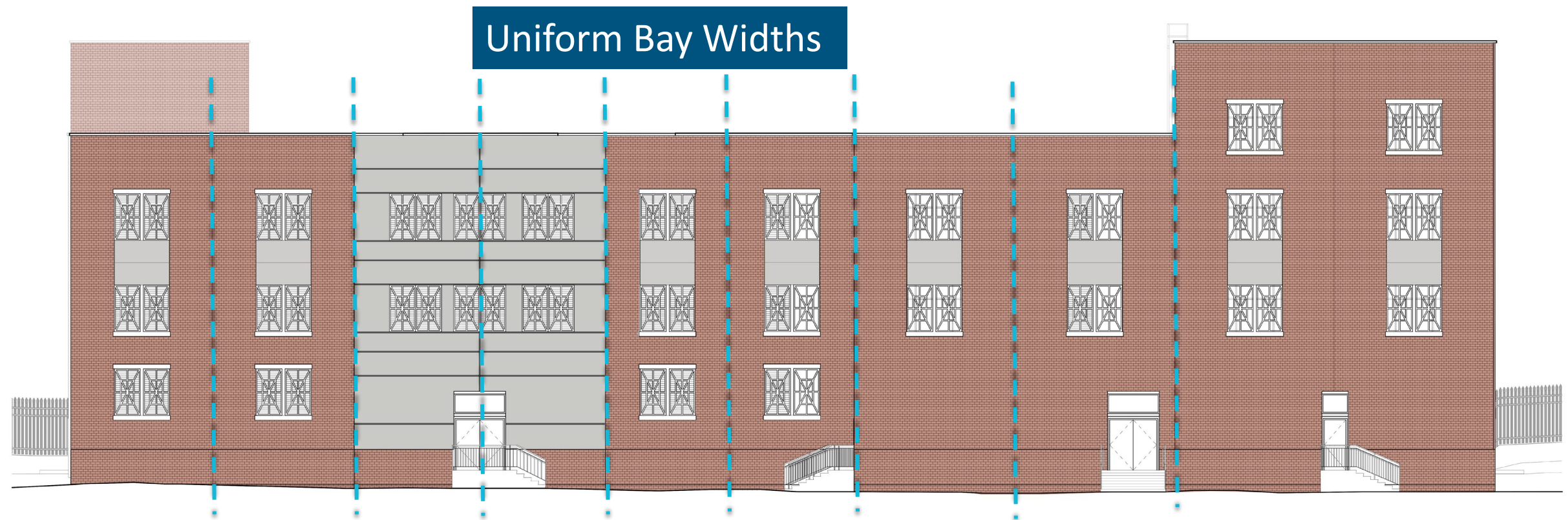
Eutaw Place (West Elevation)

IVF - Option 1 Contemporary - Comparison

60% DESIGN



CURRENT
(OPTION 1)



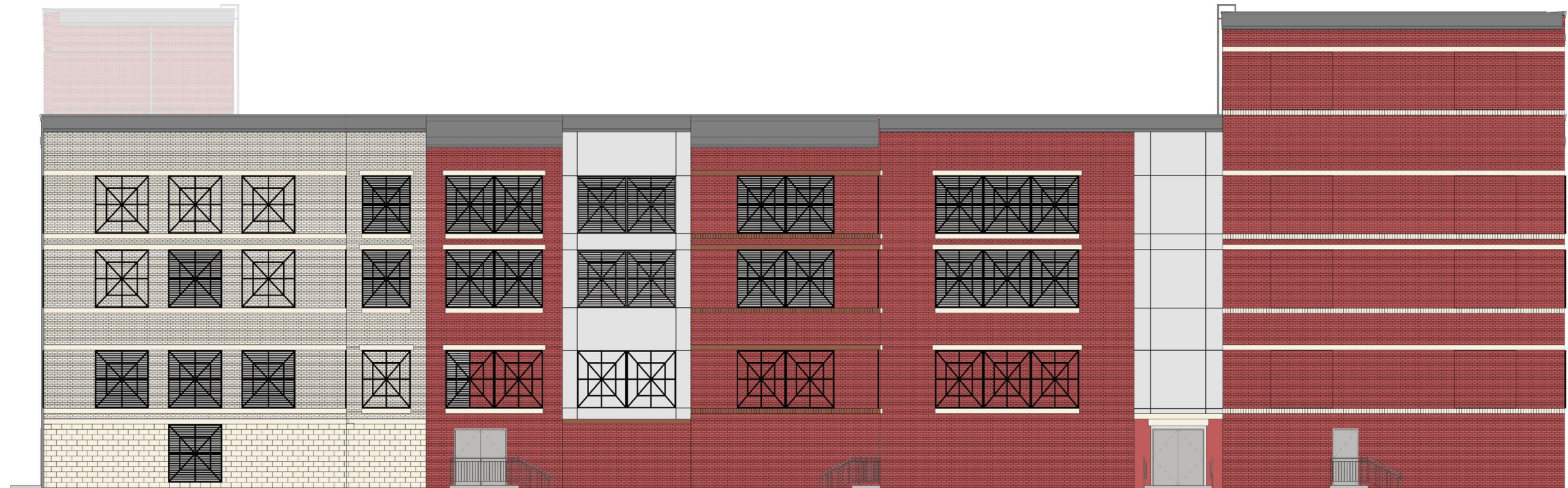
W. North Avenue (South Elevation)

Frederick Douglass Tunnel
B&P TUNNEL REPLACEMENT



IVF - Option 1 Contemporary - Comparison

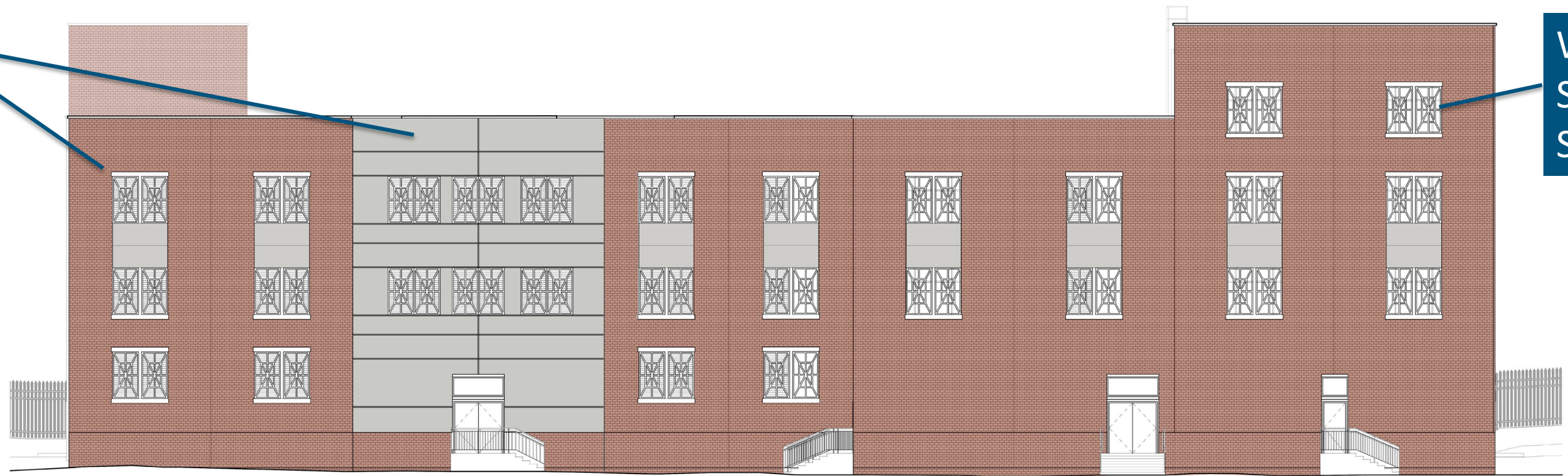
60% DESIGN



Brick & Metal Panel

Window Size & Shape

CURRENT
(OPTION 1)



W. North Avenue (South Elevation)

Frederick Douglass Tunnel
B&P TUNNEL REPLACEMENT



IVF - Option 1 Contemporary Rendering Comparison



60% DESIGN



CURRENT (OPTION 1)

View at Eutaw Place & W. North Avenue

IVF - Option 2 Precedents



WHITELOCK STREET (LOOKING SOUTH; BETWEEN MADISON AVENUE & MORRIS)



PARK TERMINAL FACILITY (LOOKING SOUTH; BETWEEN N. FULTON AVENUE & DRUID HILL AVENUE)



IVF - Option 2 Historic - Rendering



Aerial View at W. North Avenue

IVF - Option 2 – Historic

- Unified Design
- Uniform Bay Widths
- Window size & shape
- New Window types:
 - Arched
 - Projected Bay
- Materials – brick & stone
- Arched stonework



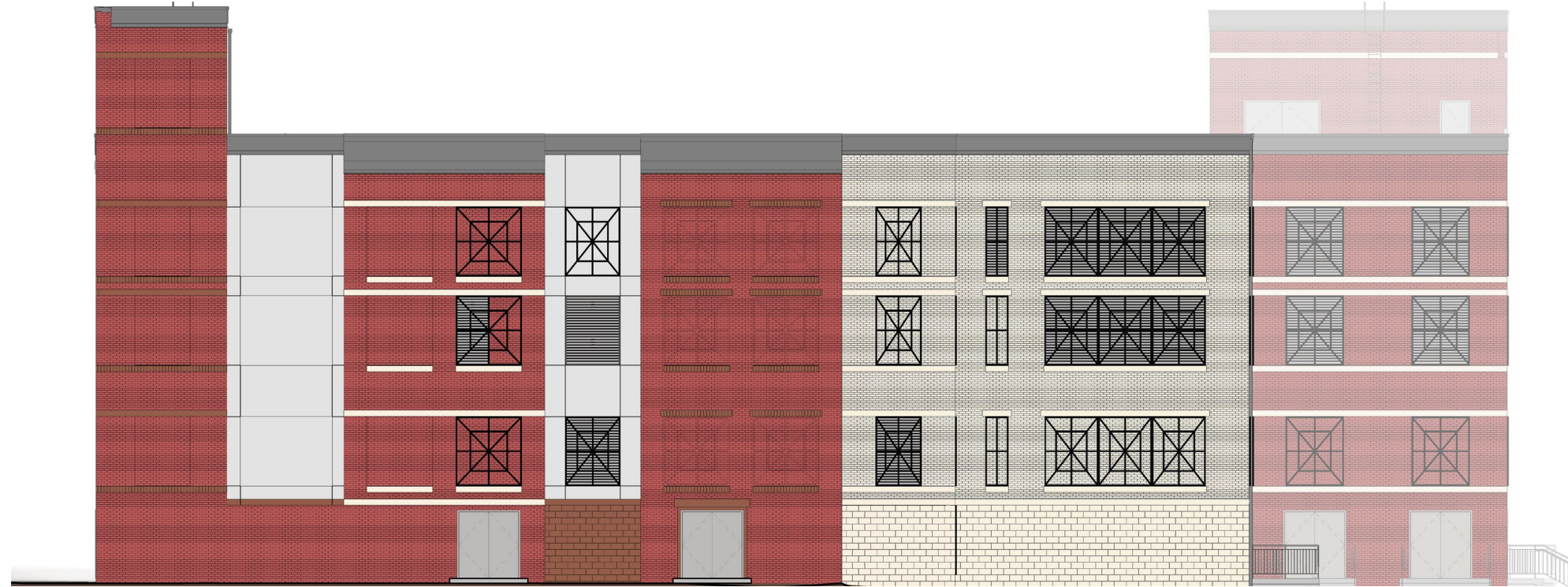
W. North Avenue (South Elevation)



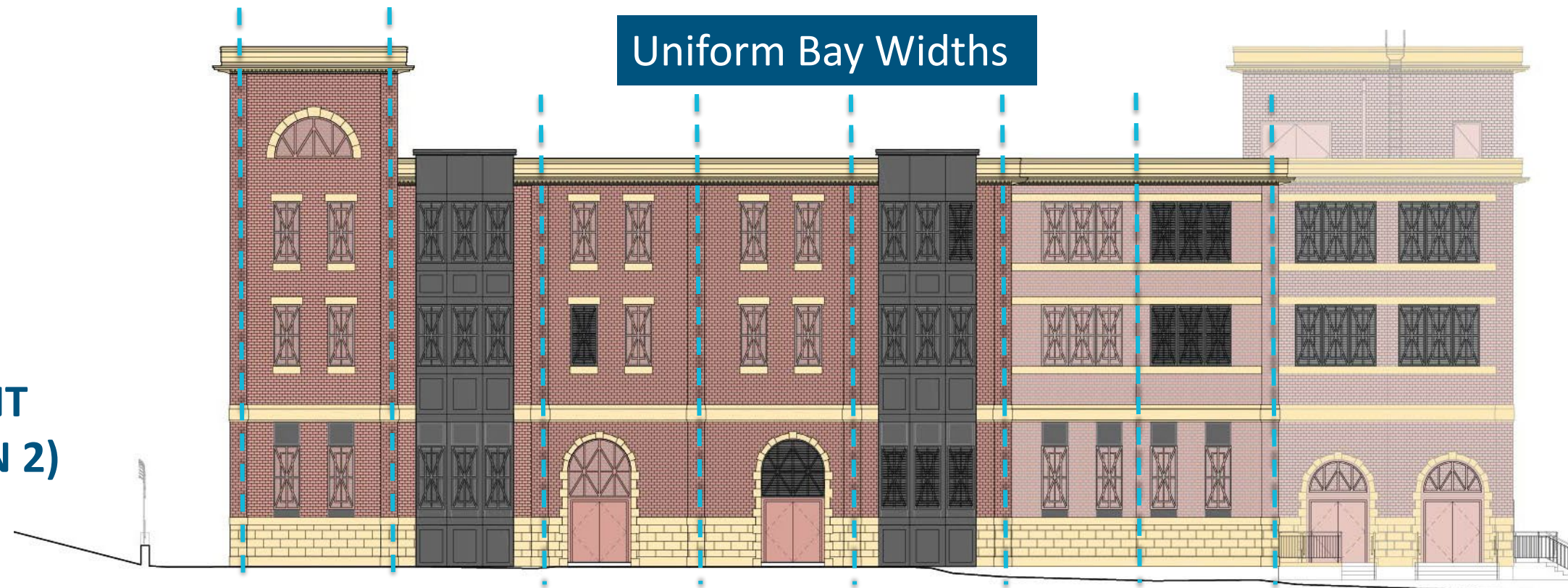
Eutaw Place (West Elevation)

IVF - Option 2 Historic - Comparison

60% DESIGN



CURRENT
(OPTION 2)



Eutaw Place (West Elevation)

Frederick Douglass Tunnel
B&P TUNNEL REPLACEMENT



IVF - Option 2 Historic - Comparison

60% DESIGN

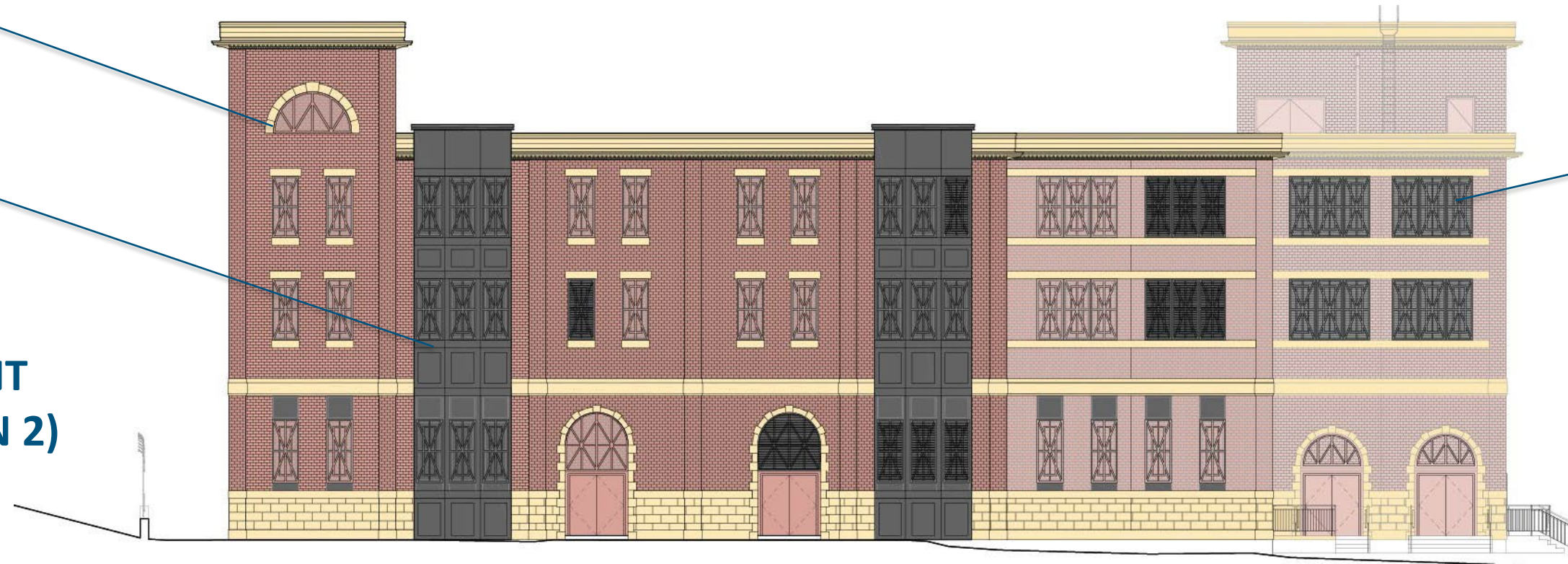


Arched Windows

Bay Windows

Window Size & Shape

CURRENT (OPTION 2)



Eutaw Place (West Elevation)



IVF - Option 2 Historic - Comparison

60% DESIGN



Brick

Metal Panel Bays

CURRENT
(OPTION 2)

Stone Base



Arched Stonework

Eutaw Place (West Elevation)

Frederick Douglass Tunnel
B&P TUNNEL REPLACEMENT



IVF - Option 2 Historic Rendering Comparison



60% DESIGN



CURRENT (OPTION 2)

View at Eutaw Place & W. North Avenue

IVF - Option 1 & 2 - Comparison



OPTION 1



OPTION 2

View at Eutaw Place & W. North Avenue

Intermediate Ventilation Facility – Alley 14



Alley 14 / Jordan St. Connection





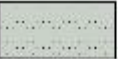



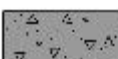




- Status is pending public input
- Consider impacts to pedestrians and current vehicular traffic patterns
- May allow for:
 - Parking Lot Relocation
 - Reduction of pervious pavement and additional landscaping
 - Revision of Building Footprint setback

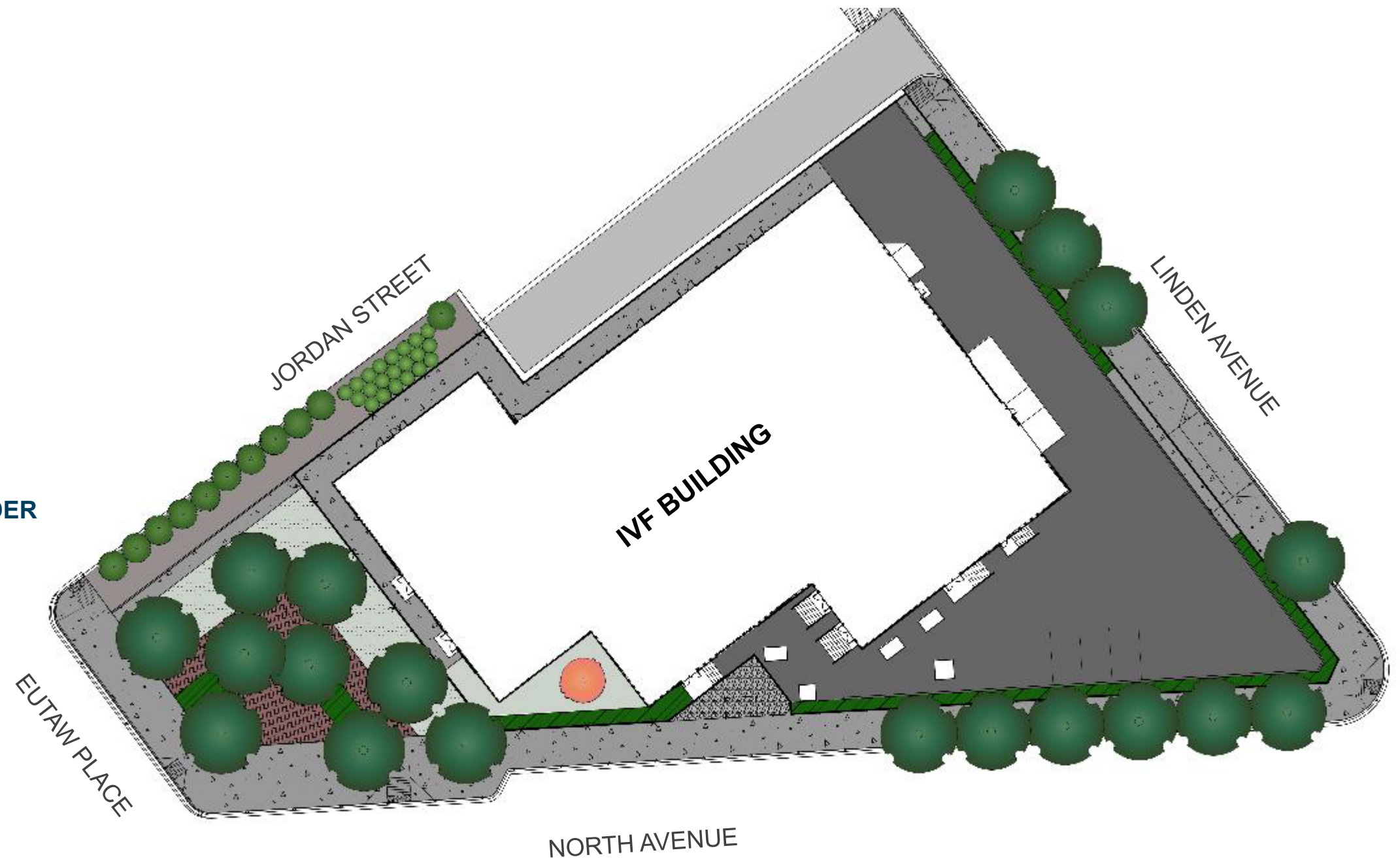
Intermediate Ventilation Facility - Option 1 Landscape Design Precedents



Corner of Pratt Street and South Calvert Street, Baltimore, MD

Intermediate Ventilation Facility - Option 1 Landscape Design

-  SHADE TREE
-  FLOWERING TREE
-  EVERGREEN TREE
-  SHRUB
-  TURFGRASS ESTABLISHMENT
-  GRAVEL
-  SHREDDED HARDWOOD BARK MULCH 3 INCH DEPTH (SHBM)
-  LOW EVERGREEN SHRUB BORDER
-  CONCRETE SIDEWALK
-  BRICK PAVING
-  ASPHALT PAVEMENT
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-  LIMIT OF DISTURBANCE



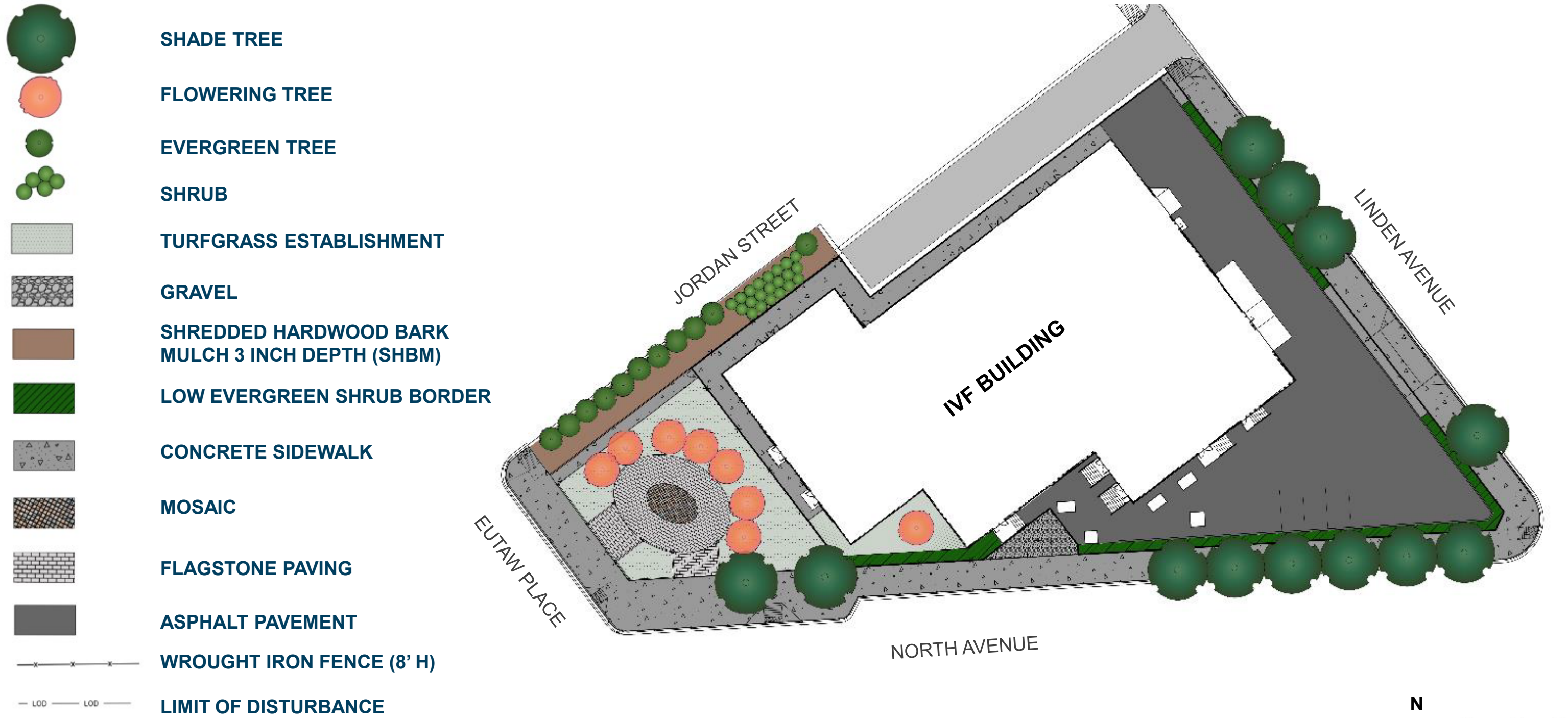
- Option 1 - Landscape Design
- Fence line on SW corner moved back, closer to building
- Revised SW corner landscape design – open to public

Intermediate Ventilation Facility - Option 2 Landscape Design Precedents



Median at Eutaw Place, Baltimore, MD

Intermediate Ventilation Facility - Option 2 Landscape Design



- Option 2 - Landscape Design
- Fence line on SW corner moved back, closer to building
- Revised SW corner landscape design – open to public

Q & A

Q&A Protocol

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- Please respect the opinions of others
- Use the microphone to ask questions and allow for all to hear
- Allow experts to answer questions without interruption
- Limit themselves to one follow up/clarifying question

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Frederick Douglass Tunnel Program



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