



Project Briefing – Parks & Recreation Commission

Alexandria Waterfront Implementation: Flood Mitigation

July 18, 2024

Matthew Landes, PLA – Portfolio Manager, Project Implementation

Historic and Modern Flooding

Draft, Deliberative, Pre-Decisional



FOOT OF KING STREET

CIRCA 1900



STRAND STREET



THOMPSONS ALLEY



KING STREET



PRINCE STREET



THOMPSONS ALLEY

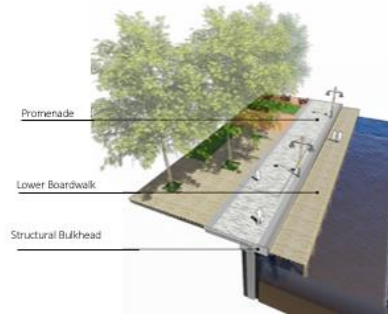
BACKFLOW

of River Outfalls



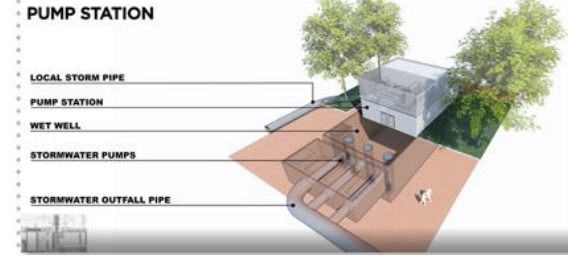
OVERTOPPING

of Bulkhead



INUNDATION

of Storm Sewers



The Waterfront Flood Mitigation Project will:

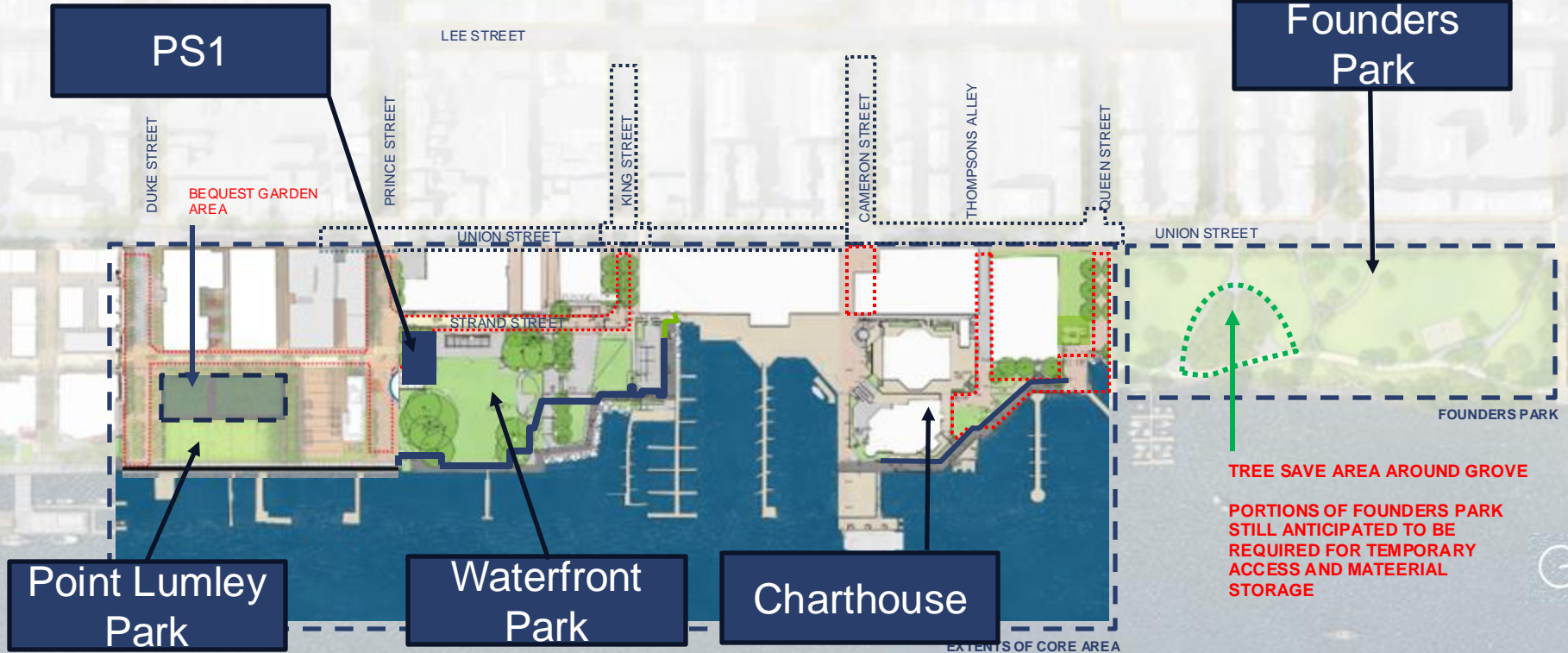
- Reduce frequency and severity of flooding from rainfall and the Potomac River
- Replace aging storm sewer and shoreline infrastructure
- Improve public accessibility and public amenities
- Actualize the goals of the Waterfront Small Area Plan

Construction Area – No programs/events mid-2025 to early-2028

Draft, Deliberative, Pre-Decisional

Project area closed to public and programs.

Construction in streets: King, Cameron, Union, Prince, and Strand Streets



EXTENTS OF CORE AREA

Waterfront Parks Open During Construction

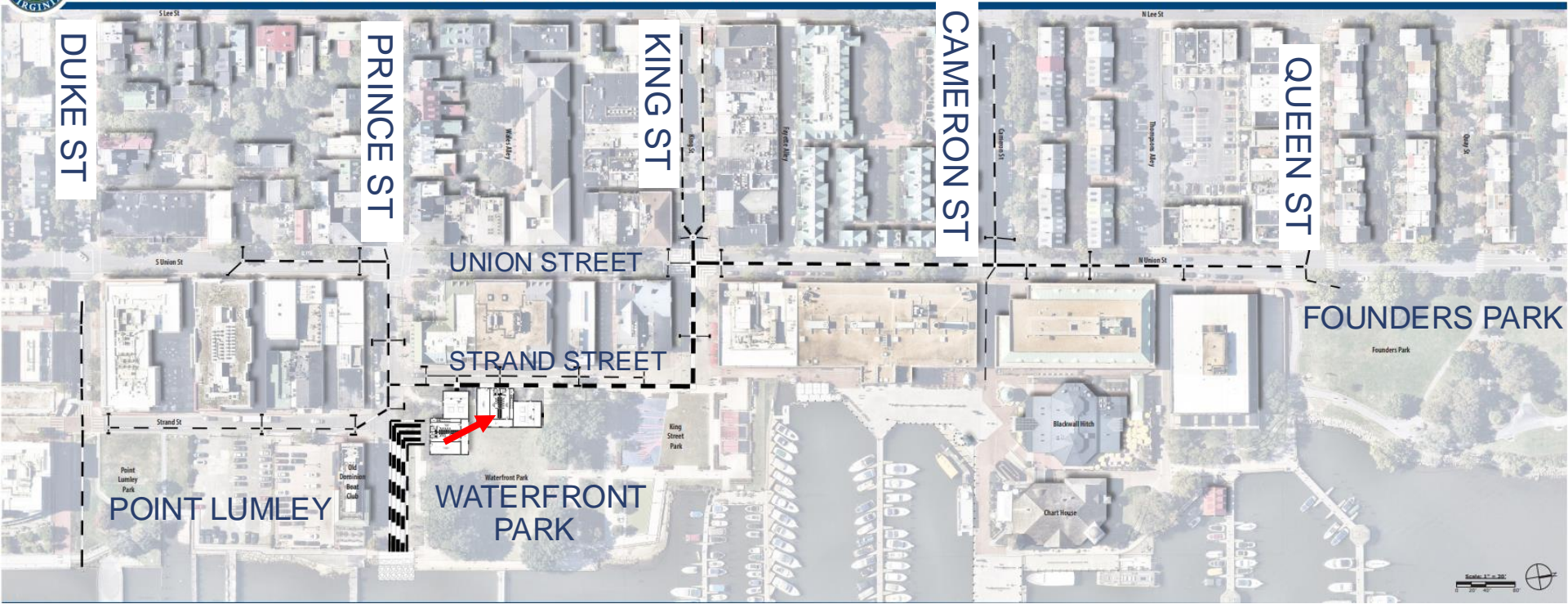


Stormwater Infrastructure Plan

Draft, Deliberative, Pre-Decisional

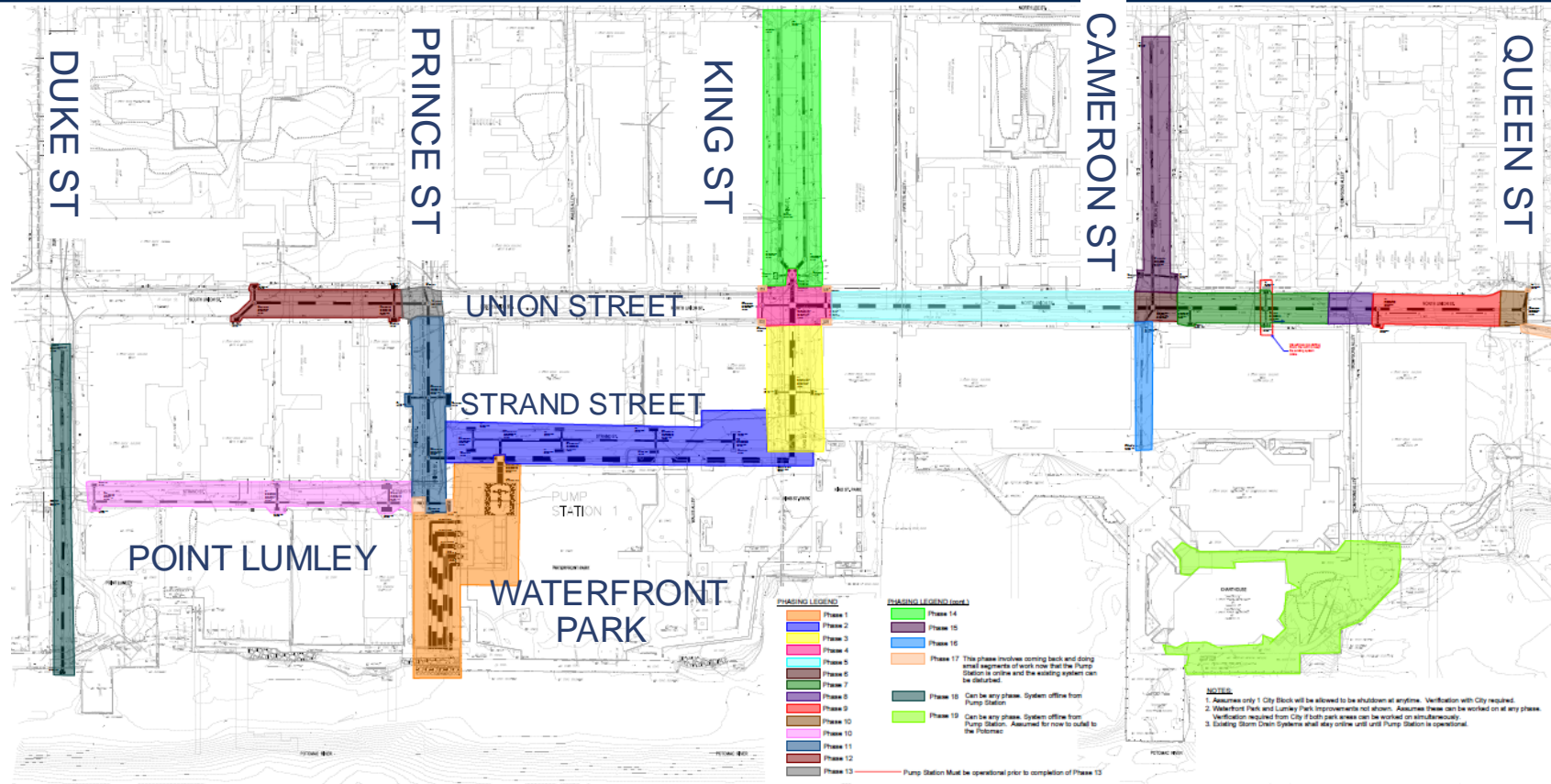


City of Alexandria Waterfront Flood Mitigation - Stormwater Infrastructure Plan



Stormwater Infrastructure Phasing Plan

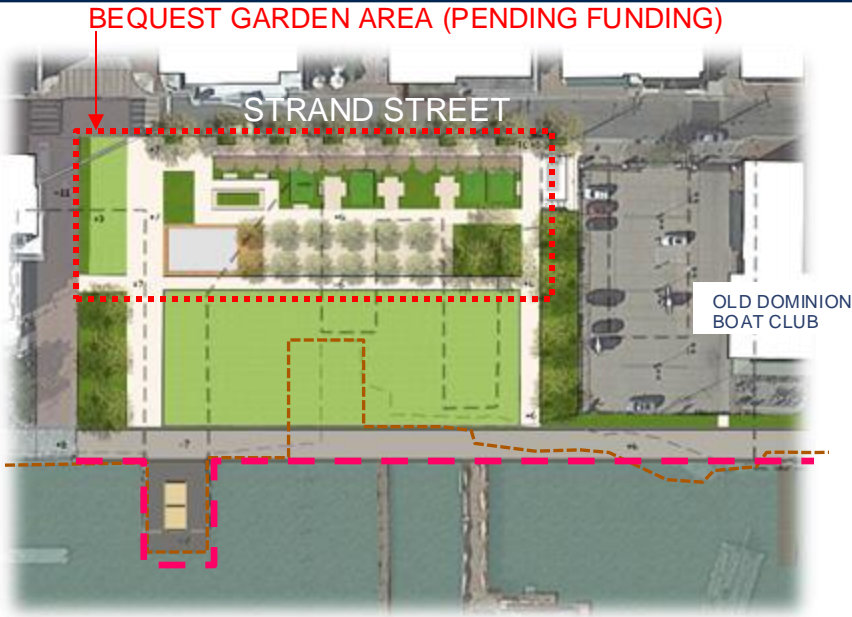
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***FULL STREET CLOSURE ANTICIPATED FOR STORMATER AND UTILITY REPLACEMENTS. ESTIMATED DURATIONS FORTHCOMING.**

Point Lumley Park – Shoreline Alternatives

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ALL NEW BULKHEAD OPTION

- Technically Preferred Concept – not currently in budget.
- Advancing in case additional funding obtained.



BUILT-UP SHORELINE ALTERNATE

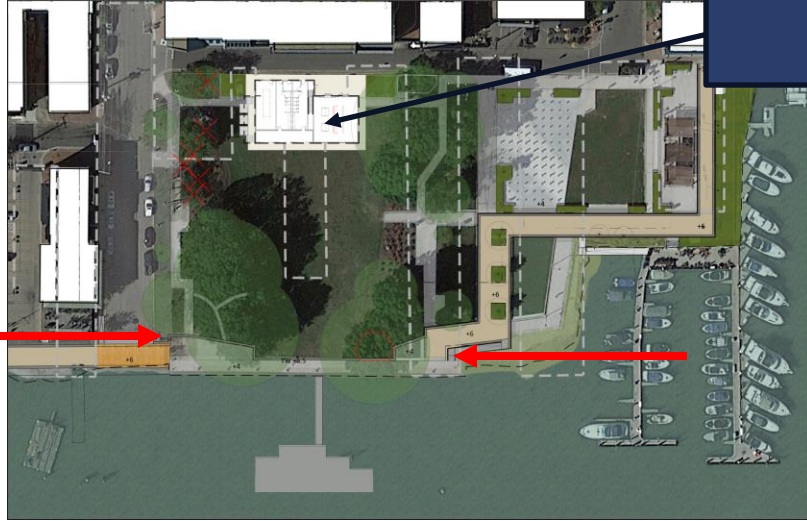
- Concept anticipated to be within current budget.
- Cost and impacts a primary driver in selection

1/2 ACRE OF NEW PARK SPACE!

Waterfront Park - Pump Station Location

Draft, Deliberative, Pre-Decisional

INTERNAL FLOOD WALL OPTION



- Concept anticipated to be within budget.

ALL NEW BULKHEAD OPTION



- Technically Preferred Concept – not currently within budget.
- Advancing in case additional funding obtained.

Waterfront Plan (2014)

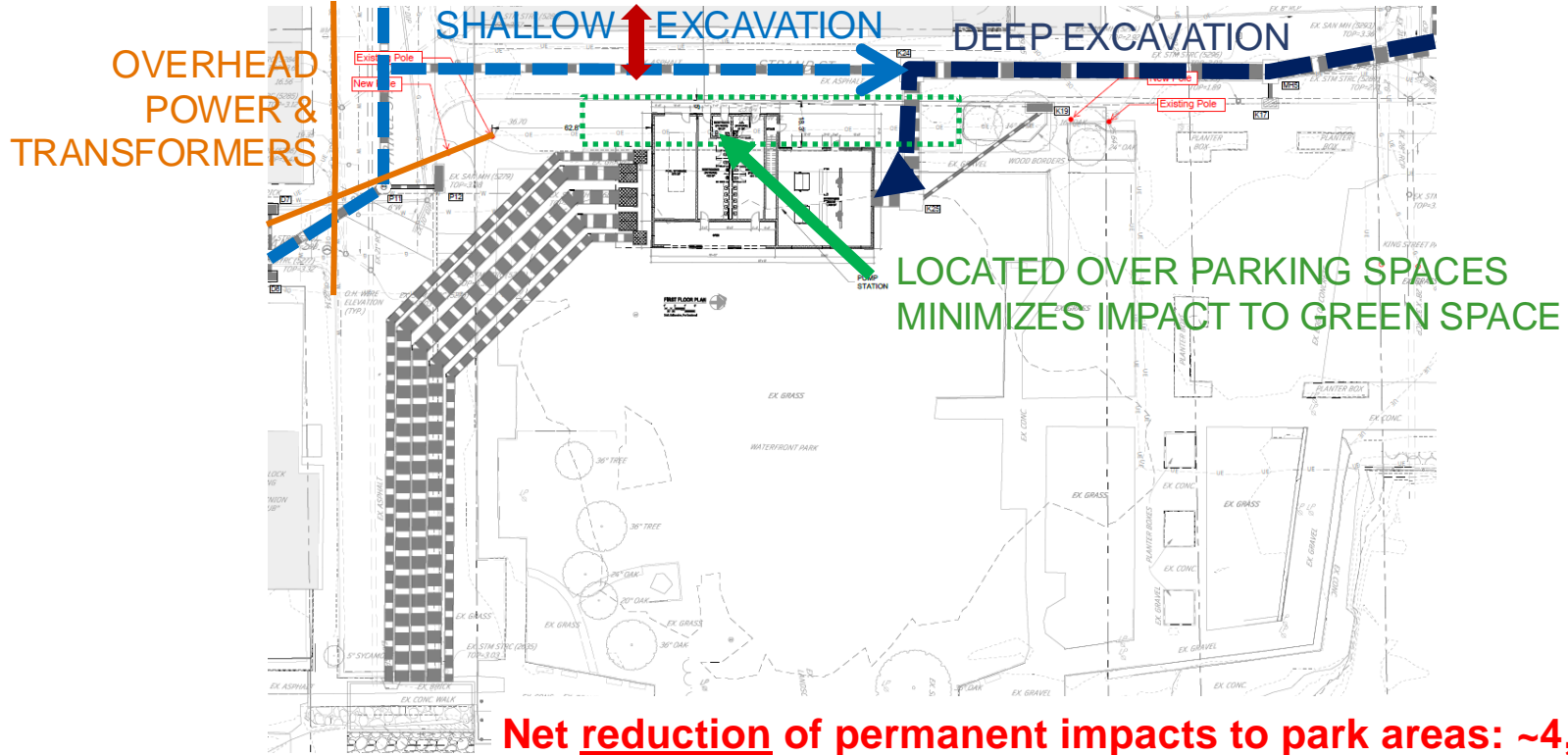
Draft, Deliberative, Pre-Decisional



MINIMIZATION OF IMPACTS

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MINIMIZES IMPACT TO GARAGE ENTRANCE

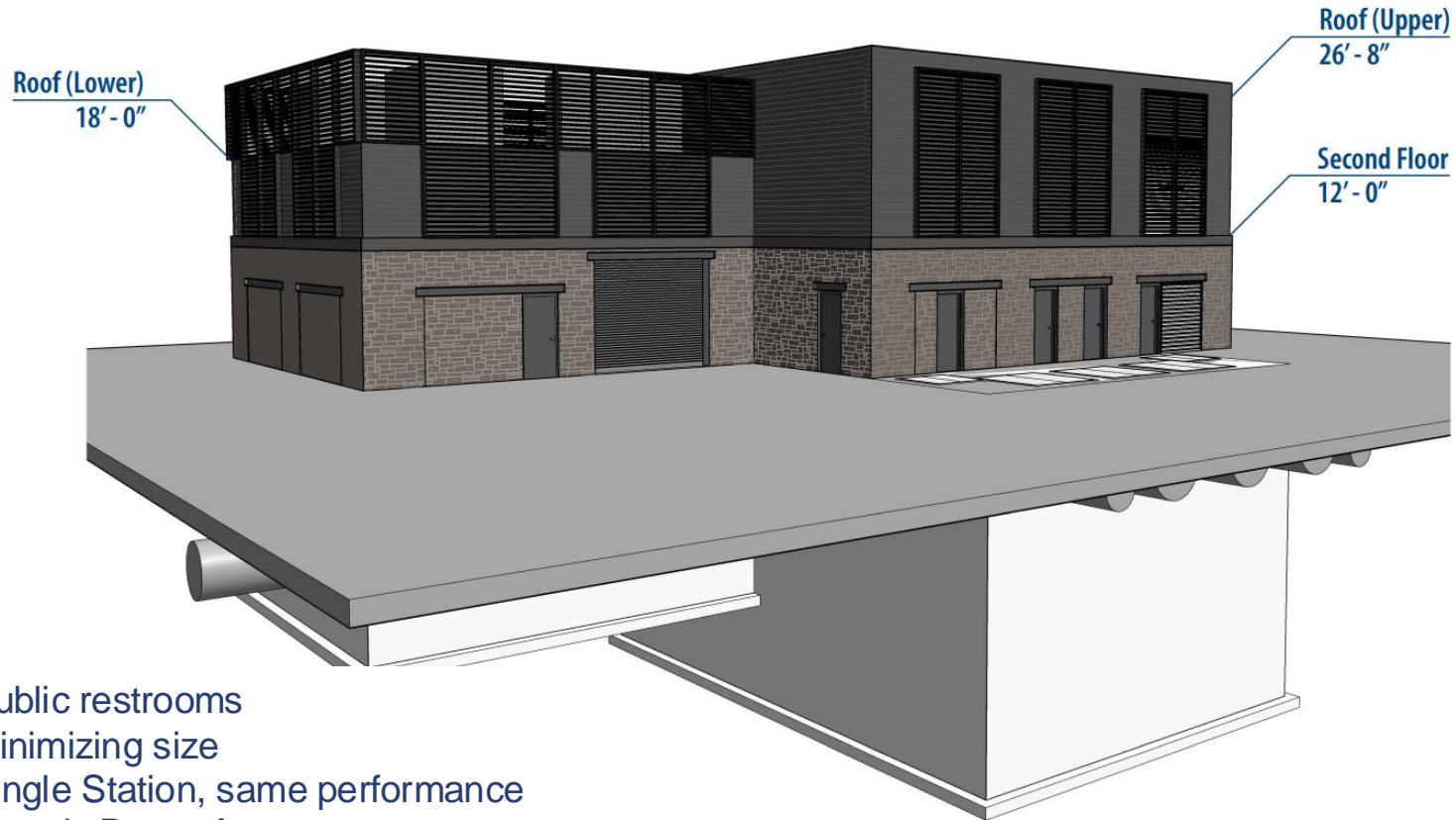


Net reduction of permanent impacts to park areas: ~4,200 SF

Net INCREASE in Park Space with Strand Lot Conversion (~3,160 SF of greenspace lost in Waterfront Park)

Waterfront Park Pump Station

Draft, Deliberative, Pre-Decisional

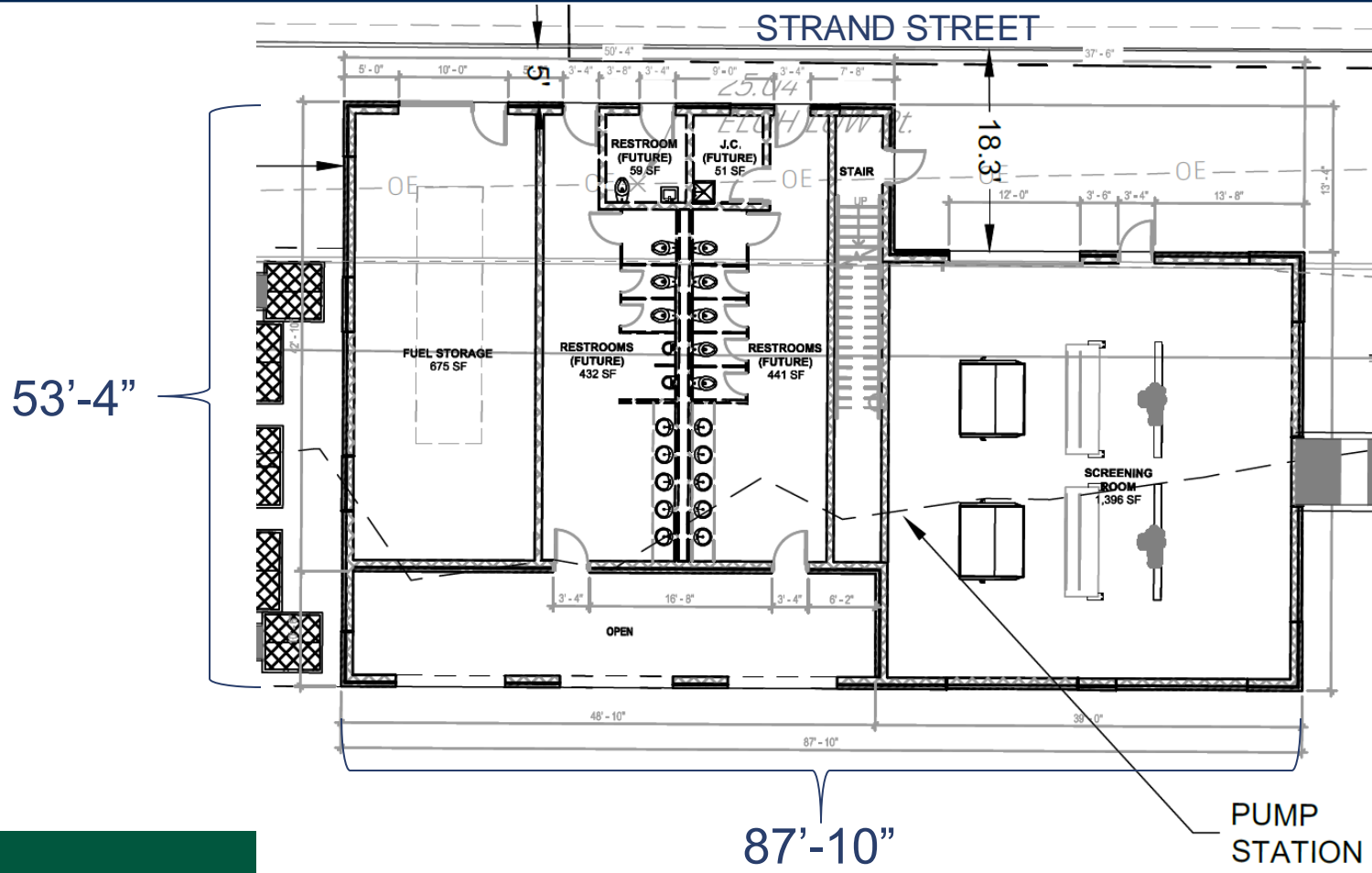


- Public restrooms
- Minimizing size
- Single Station, same performance
- Electric Power for programs

WEST ELEVATION – FACING STRAND ST

Pump Station Floor Plan

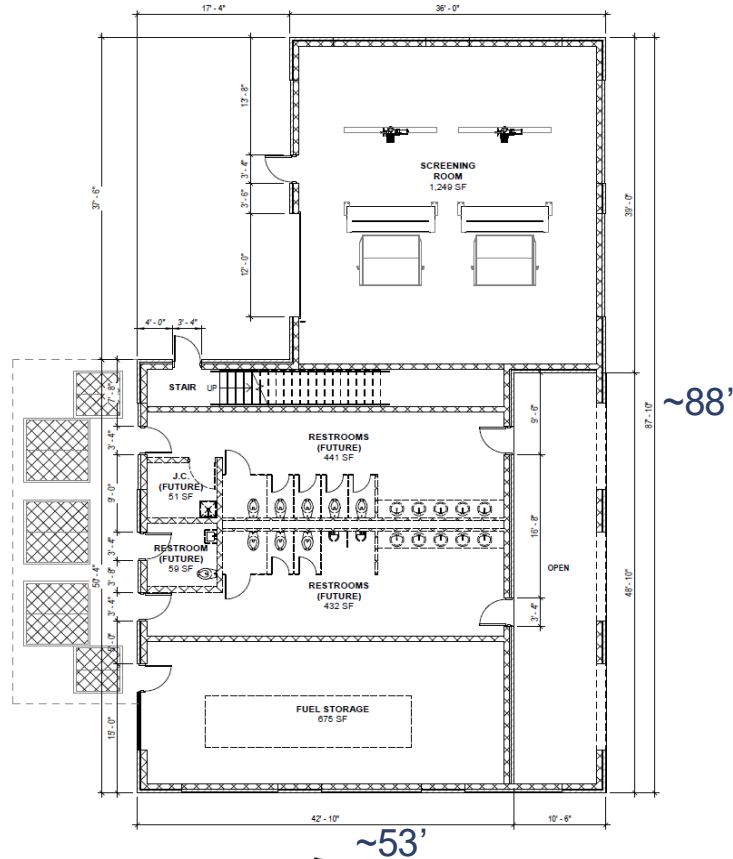
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PUMP
STATION

PUMP STATION DIMENSIONS

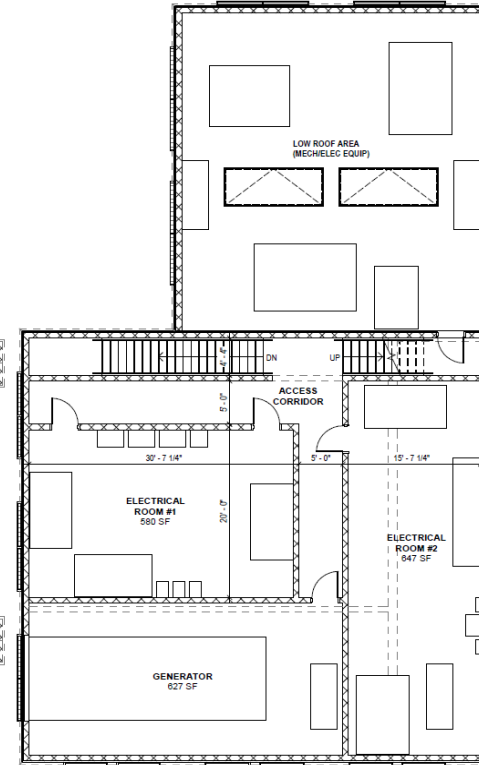
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FIRST FLOOR PLAN



Draft, Deliberative, Pre-Decisional



SECOND FLOOR PLAN

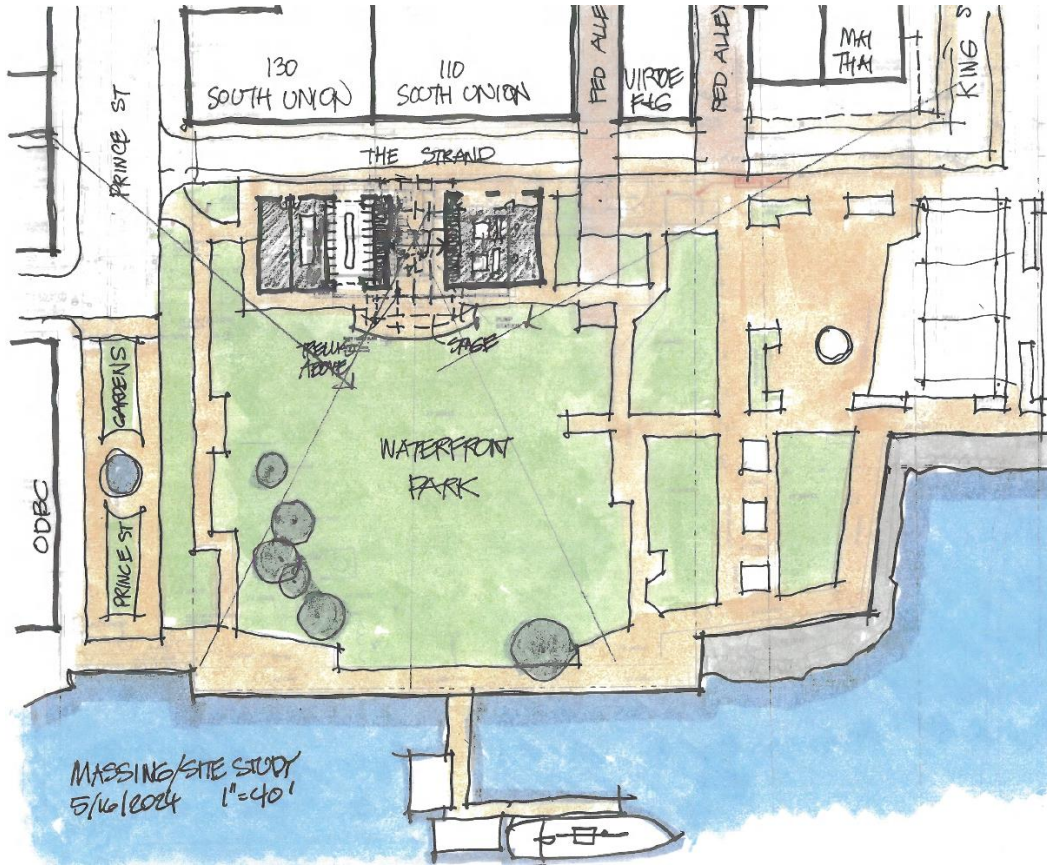


Draft, Deliberative, Pre-Decisional



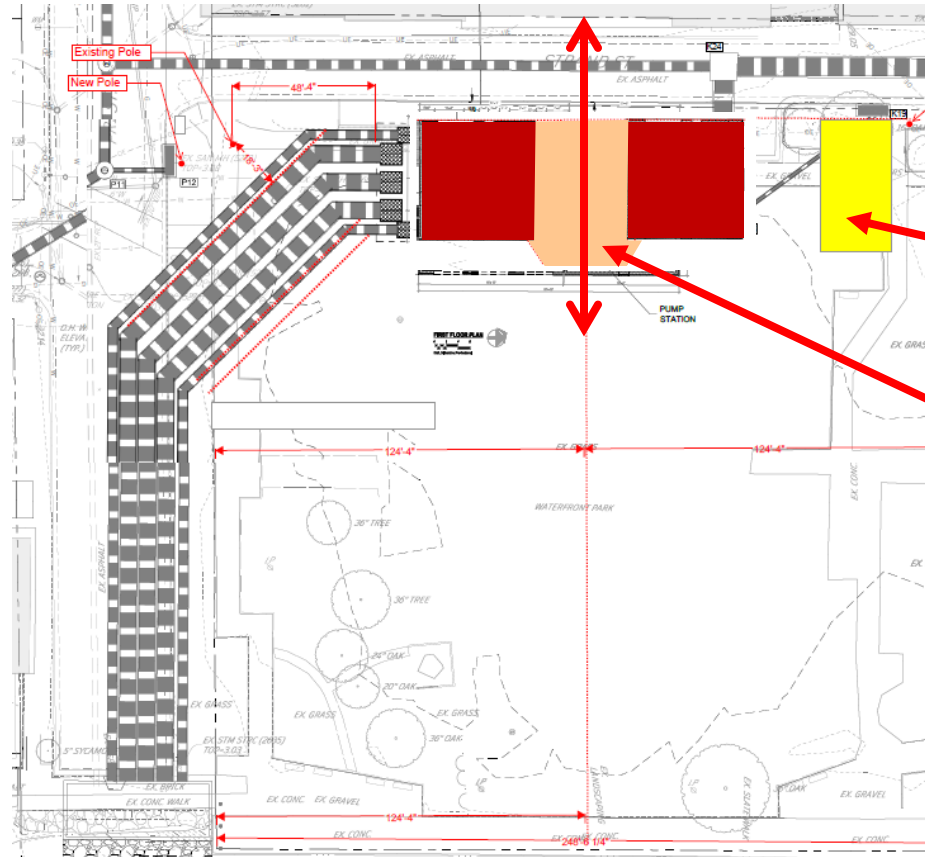
Waterfront Park: Alternate Concept Layout





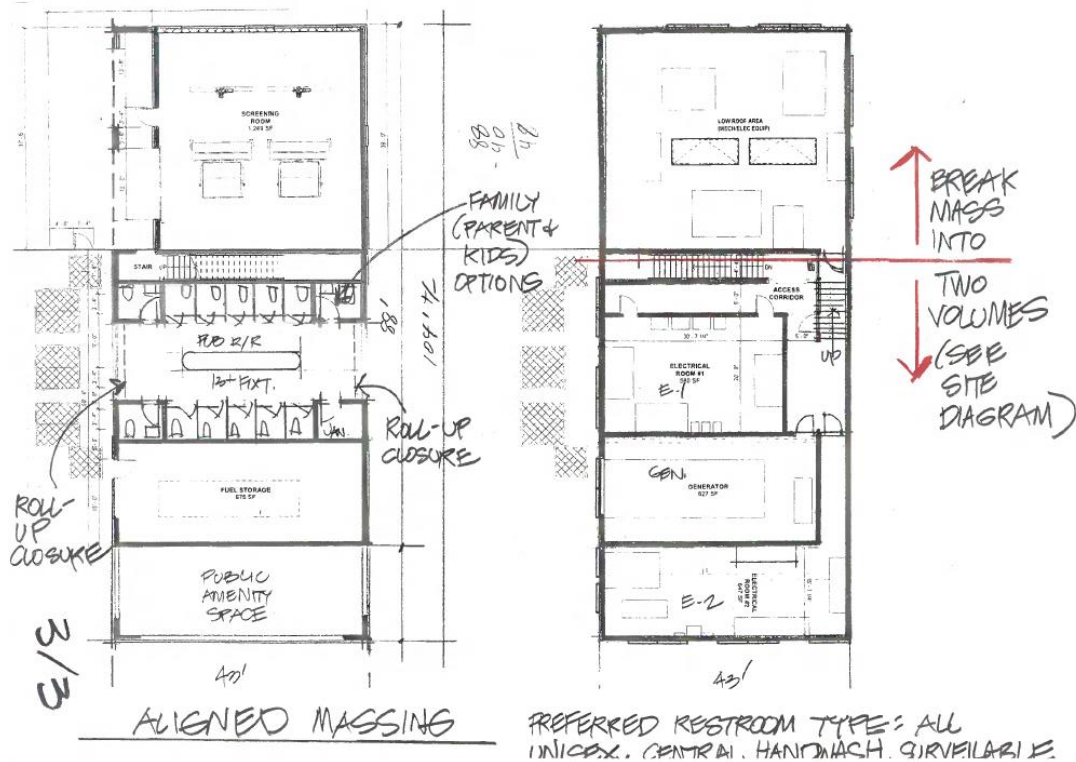
Waterfront Park – Staff Alternative

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ALTERNATE
GENERATOR LOCATION
OPTION

BREEZEWAY & COVERED
STAGE / PLAZA

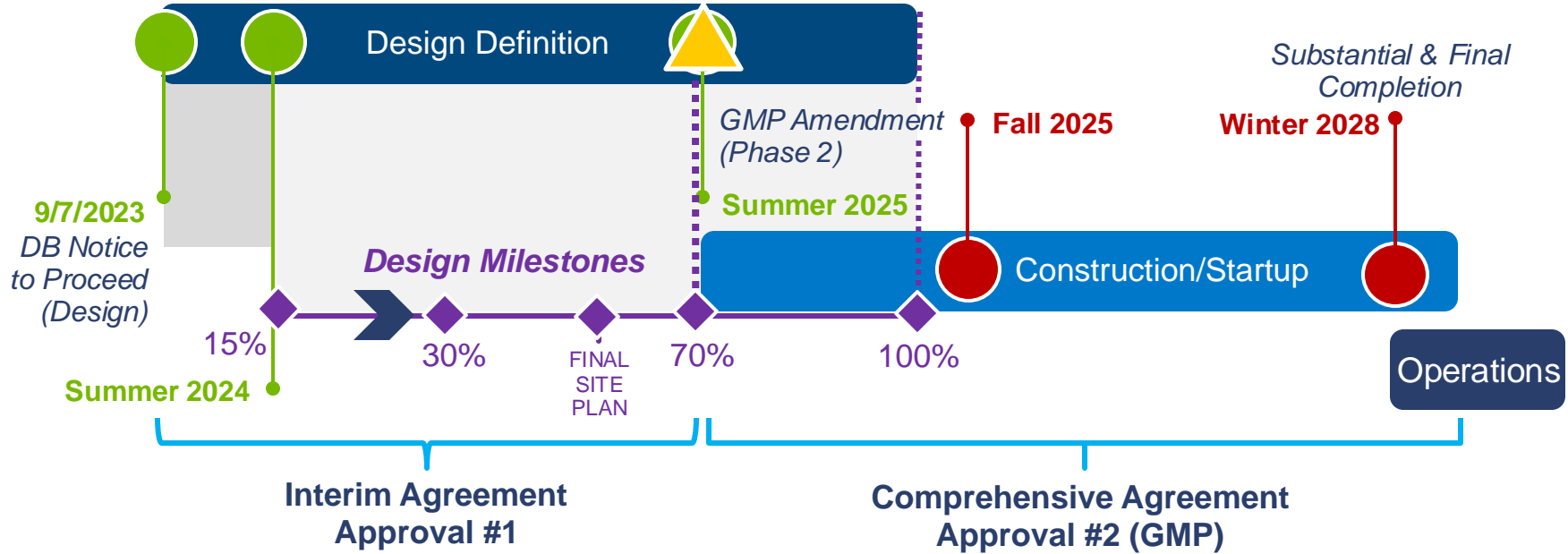


Project Schedule



Project Schedule

- Planning Commission and Council Approval (DSUP)
- ▲ Council Approval/Action on Contract



Questions?

**Matthew Landes, PLA,
Project Implementation
Waterfront@AlexandriaVA.gov**



Reference, as needed





Baseline - Two Pump Station Impacts

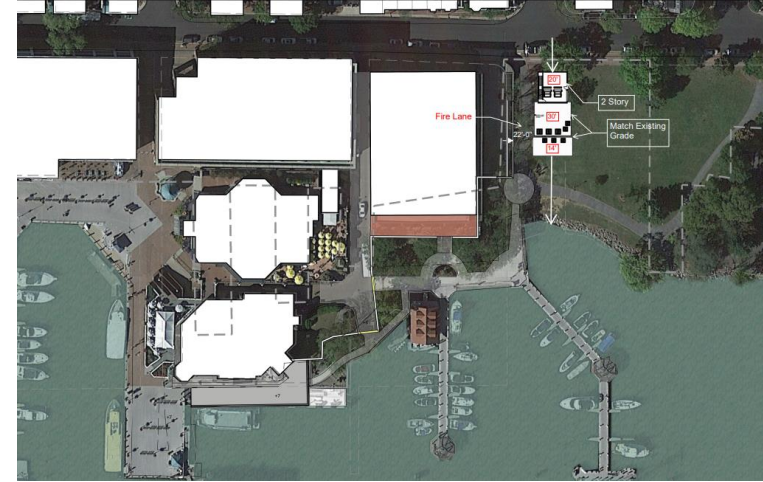
Draft, Deliberative, Pre-Decisional

PUMP STATION 1 – WATERFRONT PARK



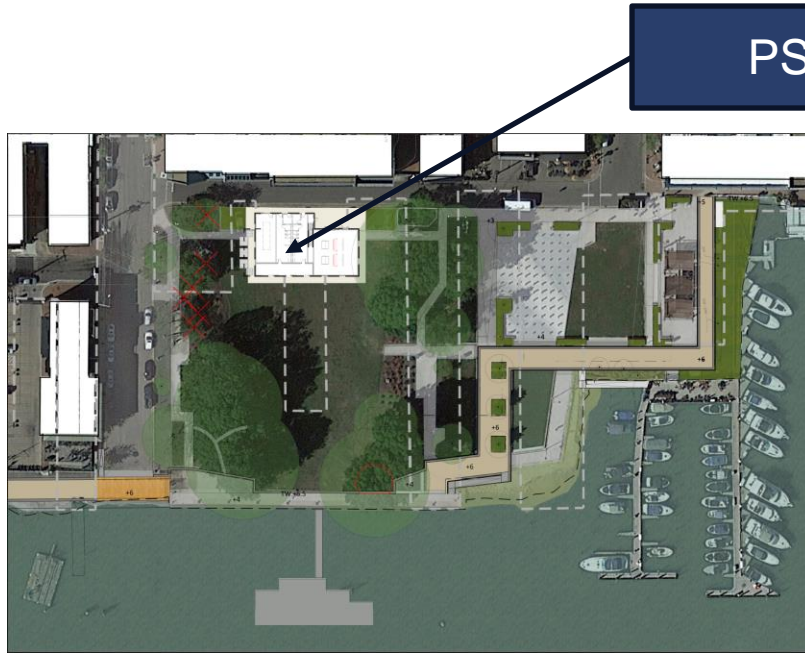
- Above Grade Size: ~35'x60'footprint
- Total Impact: ~4,800 SF
- Long side facing Prince Street
- Two Stories – internal stair

PUMP STATION 2 – FOUNDERS PARK



- Above Grade Size: 35'x40'
- Total Impact: ~4,100 SF
- Long side facing to Founders Park
- Two Stories- internal stair

Total Combined permanent impact to public space: ~8,900 SF



- Above Grade Size: 53'x88'
- Total Impact: ~4,700 SF
- Long side facing Strand Street
- Two Stories- internal stair

- Concept anticipated to be within budget.

Total permanent impact to public space: ~4,700SF

Net reduction of permanent impacts to park areas: ~4,200 SF

Net reduction of permanent impacts to park areas: ~4,200 SF

- Significantly reduces capital cost and risk due to:
 - Contaminated soil in Founders Park
 - Cultural Resource Implications/Risks
 - Eliminates excavation and construction next to an existing building (211 Harbor Center)
 - Single building site / building crew
 - Lowers dewatering costs
- Single Asset to operate and maintain
- Lower replacement and lifecycle costs
- Maintains/Maximizes Open Space
- Eliminates permanent visual impacts to Founders Park

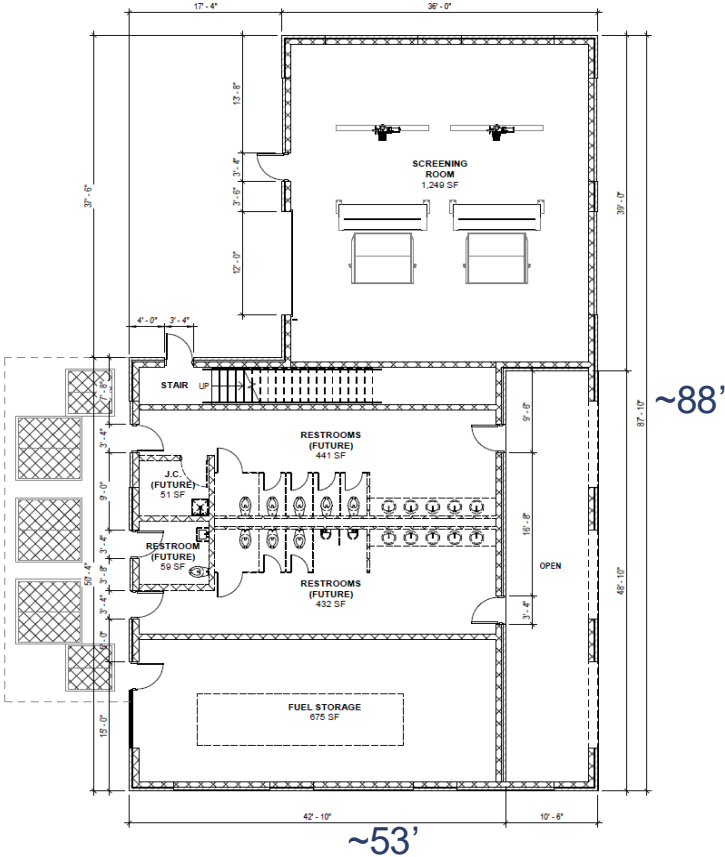
Points of Reference

Draft, Deliberative, Pre-Decisional

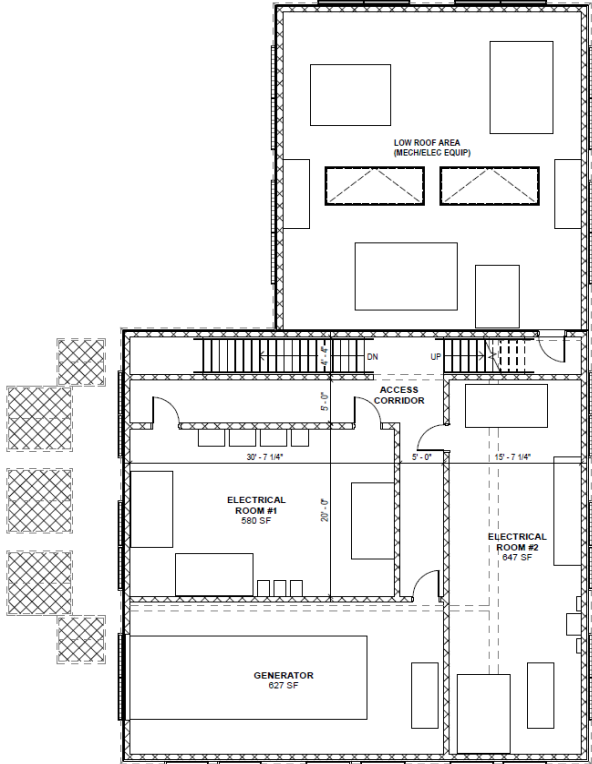
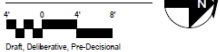


PS1- WATERFRONT PARK (Single Station)

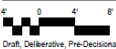
Draft, Deliberative, Pre-Decisional



FIRST FLOOR PLAN

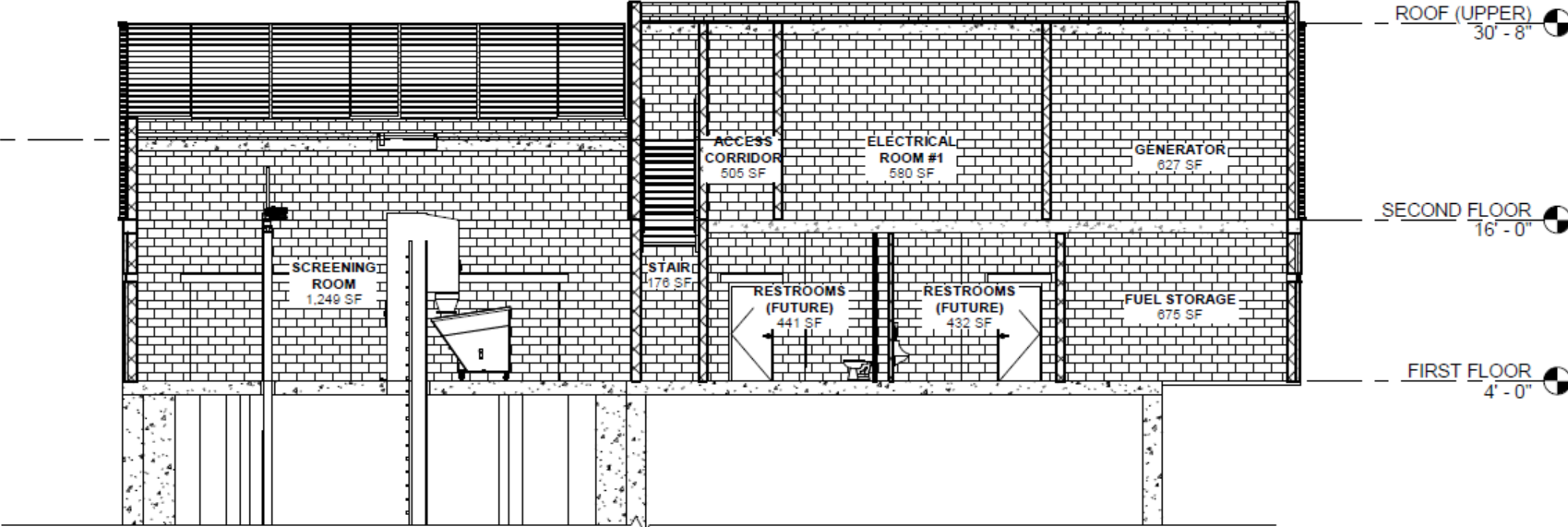


SECOND FLOOR PLAN



PS1- WATERFRONT PARK (Single Station)

Draft, Deliberative, Pre-Decisional



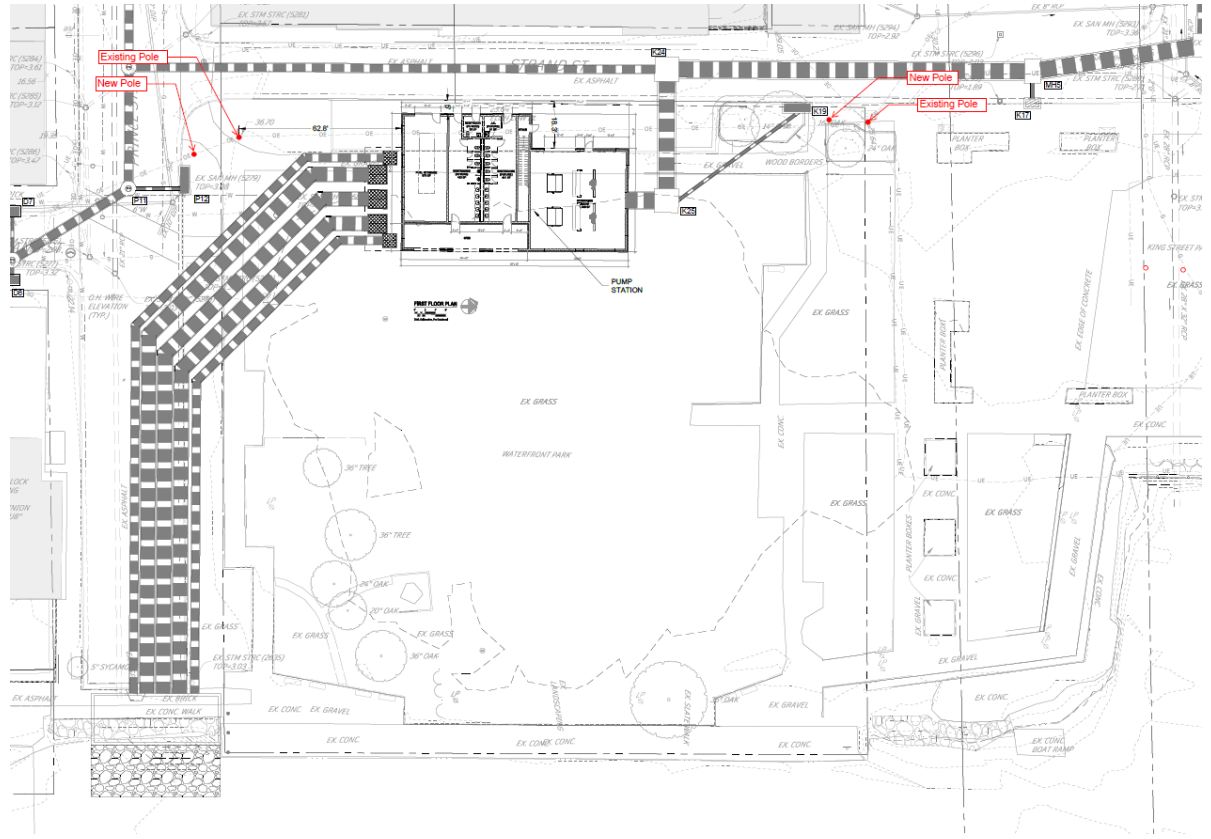
LONGITUDINAL SECTION



Draft, Deliberative, Pre-Decisional

Stormwater Infrastructure Plan – Waterfront Park

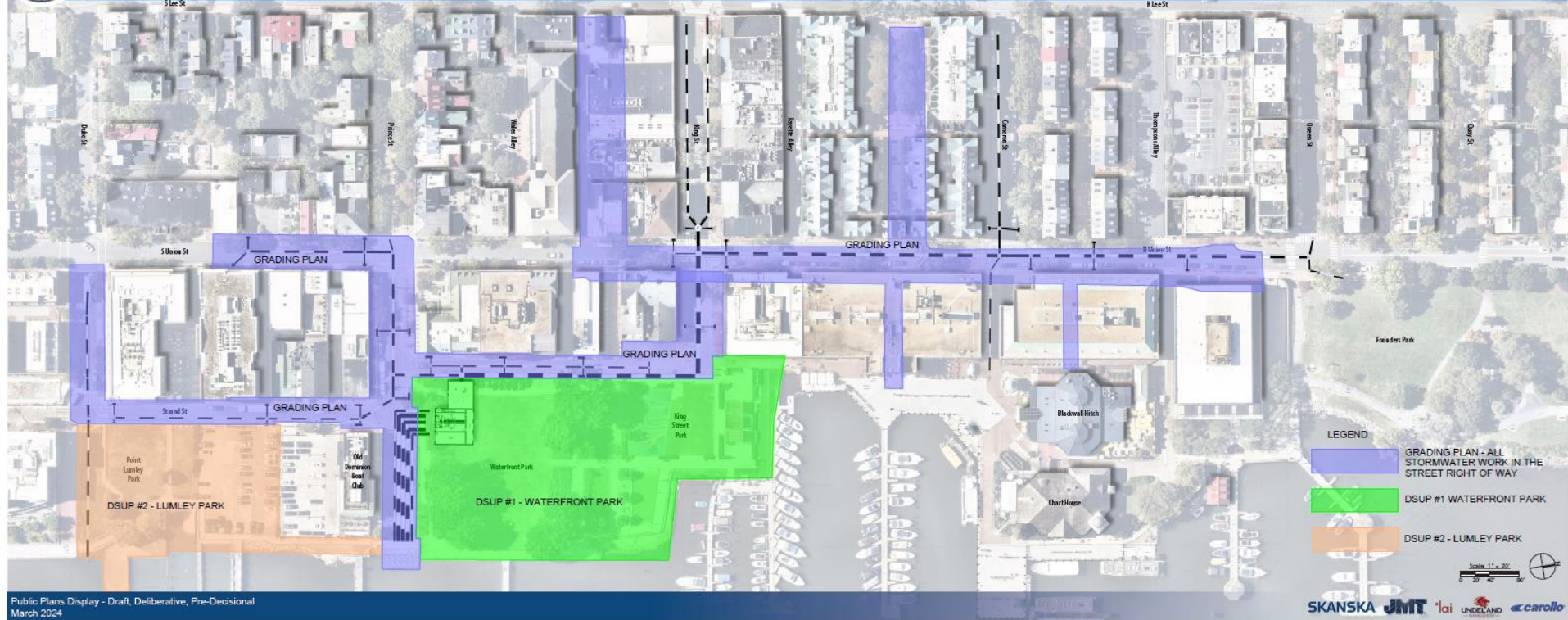
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Development Review Process

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 **City of Alexandria**
Waterfront Flood Mitigation - Stormwater Infrastructure Plan

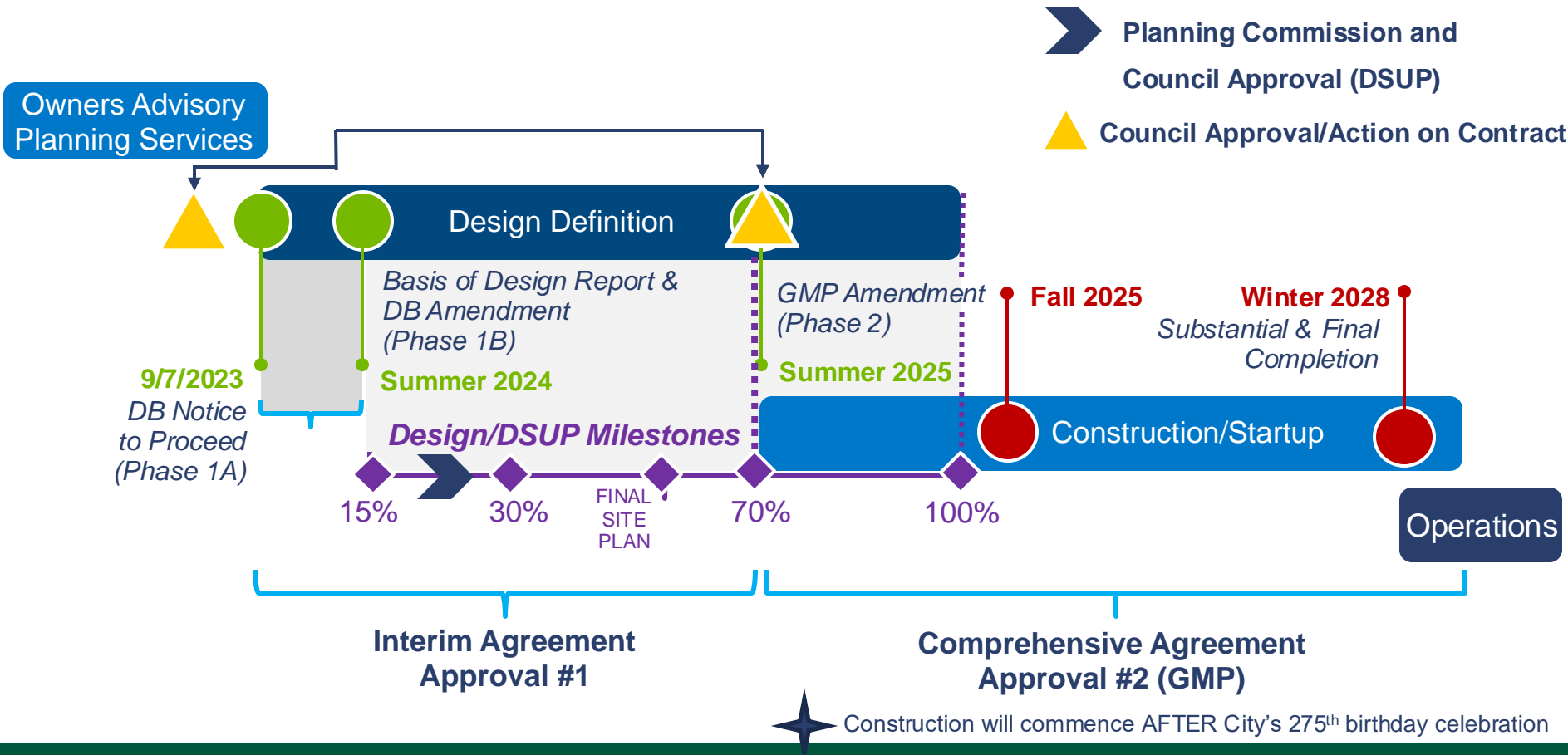


Public Plans Display - Draft, Deliberative, Pre-Decisional
March 2024

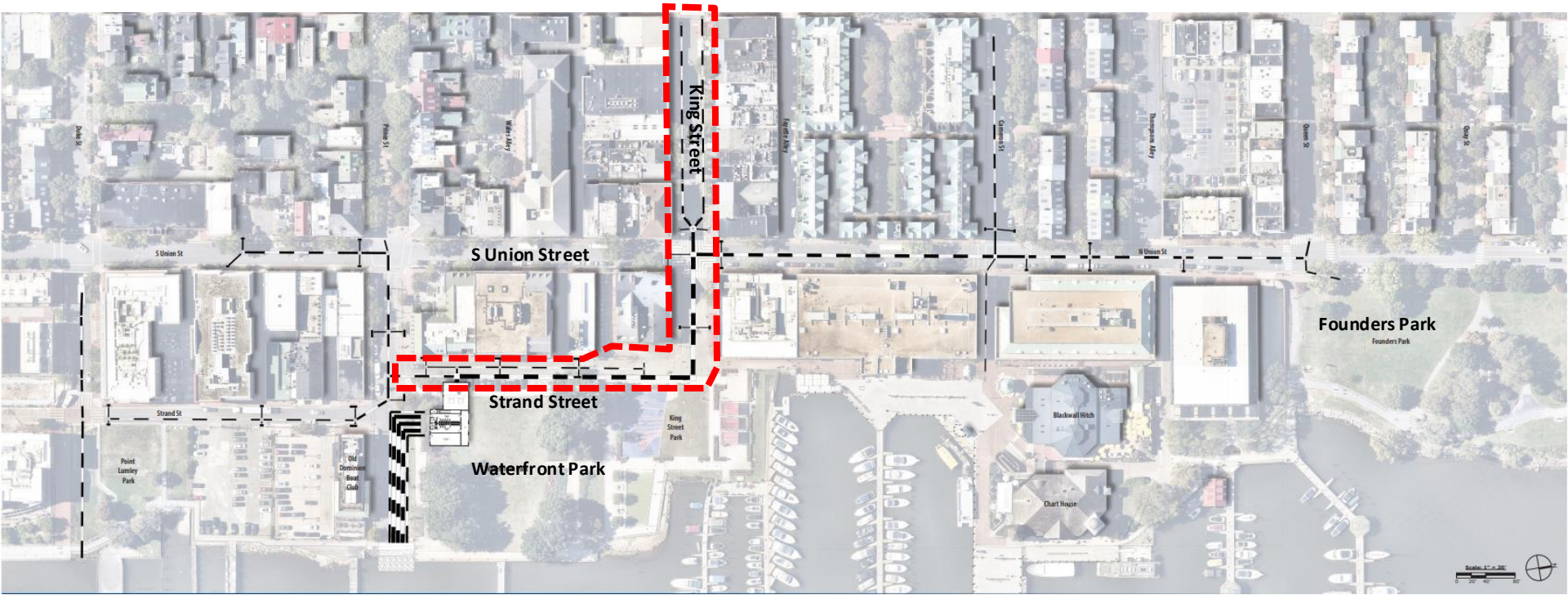
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*DSUP AREA 1 AND 2 ANTICIPATED TO BE REVIEWED AND APPROVED UNDER A COMBINED UMBRELLA DSUP/PUBLIC HEARING
*GRADING PLAN ANTICIPATED FOR THE PORTIONS OF THE PROJECT WHICH QUALIFY UNDER A LINEAR PROJECT WAIVER

Baseline Project Schedule

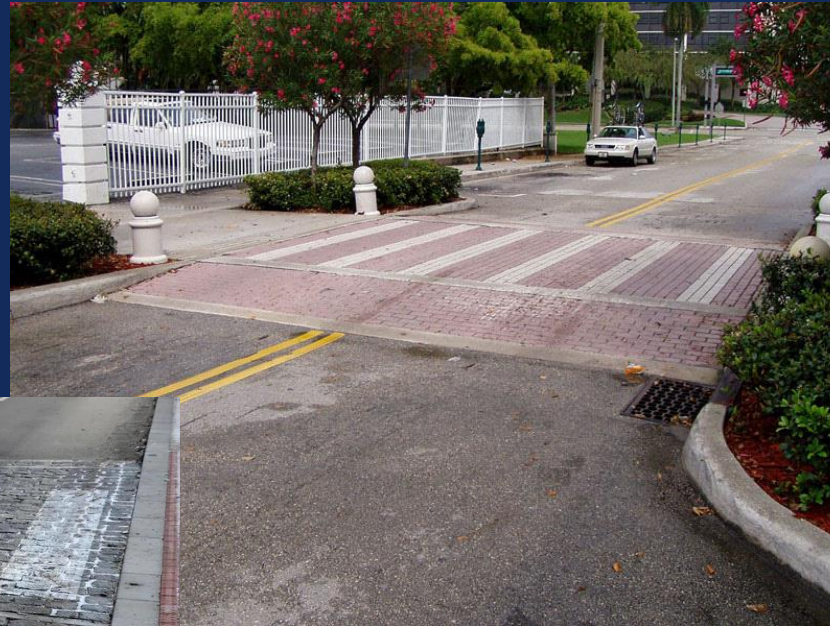


Lower King Street Pedestrian Improvements



Street Materials

Intersection Design



Illustrative Pedestrian Streets

Pedestrian Mall, Charlottesville



