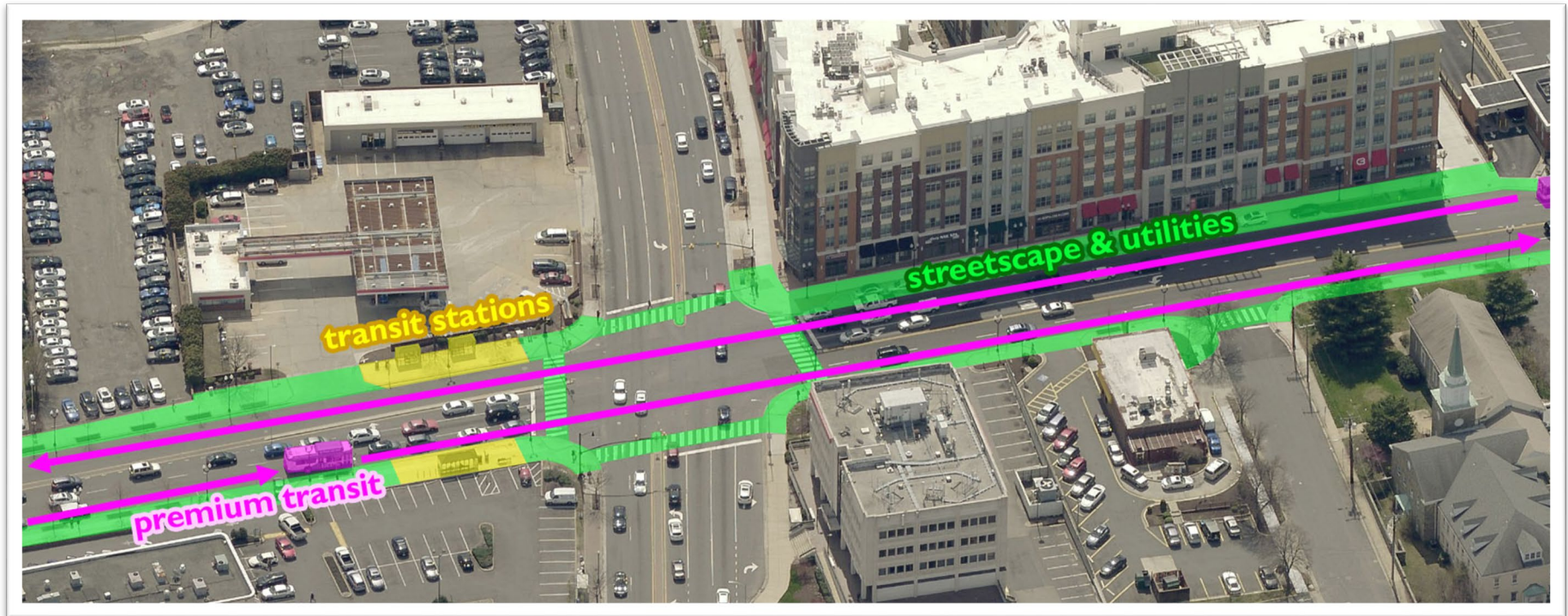


# Improving Columbia Pike for All Users

*Overview of Arlington's transportation investments on Columbia Pike*



# Agenda

- What we have accomplished
- What still needs to be completed
- Why there is a delay in the transit stations
- What's the path forward for transit stations
- What does this mean for the Premium Transit Network and the 16M

# What's Happening on Columbia Pike?

Improvements are making the road into a safer, more accessible route for everyone – whether you walk, bike, take transit or drive.

## 1. Improving the streetscape

Modifying the roadway for a consistent cross section with medians and left-turn lanes, and adding wider sidewalks, enhanced crosswalks, street trees, streetlights and traffic signals;  
Parallel bike routes added on 9th and 12th Streets



## 2. Improving utility reliability and aesthetics

Upgrading water pipes and sewer lines and moving electrical and communications utilities underground

## 3. High-capacity transit stations

Adding larger, safer, more accessible and attractive transit stations to accommodate more bus riders and to speed up bus service

## 4. Premium transit

Will offer frequent, reliable, and simpler to understand bus service with a new one-seat ride from Skyline to Pentagon City–Crystal City



# Accomplishments during COVID

- Columbia Pike Multimodal Segments H&I (Jefferson St. to Four Mile Run) substantially completed in November 2020
  - Utility undergrounding to be finished in late 2021
  - Five segments of Multimodal project now complete or substantially complete
- Substantially completed foundations and platforms for first 8 transit stations in December 2020
  - Sites covered with asphalt, awaiting delivery of shelters
- Started construction on Columbia Pike Four Mile Run Bridge pedestrian enhancements in April 2021
  - Completion expected in fall 2021
- Worked with WMATA to ensure return of Metrobus 16Y service in September 2021

# Columbia Pike Multimodal Project

**Before Improvements – Approaching S. Jefferson Street**

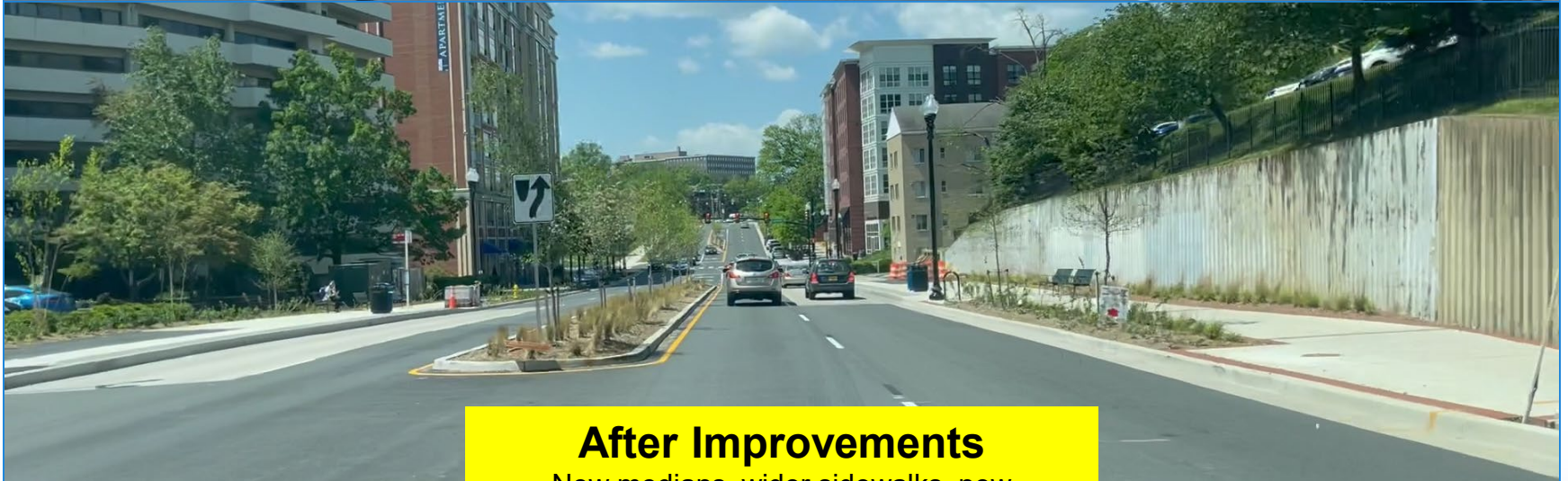


**After Improvements**

Left-turn lanes, wider sidewalks, new streetlights and traffic signals, street trees and landscaping

# Columbia Pike Multimodal Project

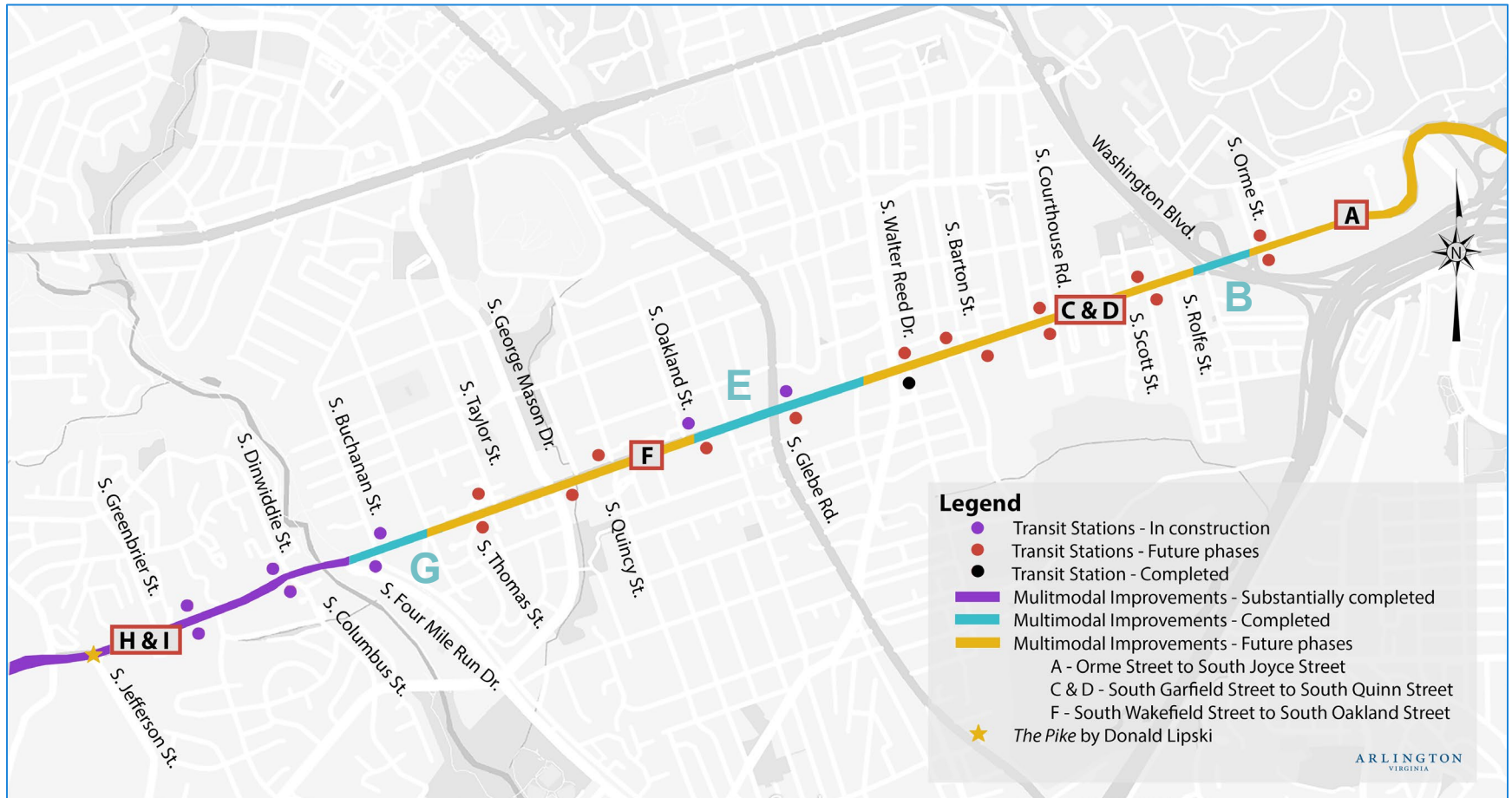
**Before Improvements – Approaching S. Greenbrier Street**



**After Improvements**

New medians, wider sidewalks, new streetlights, street trees and landscaping

# Project Map



# Columbia Pike Multimodal Project

## Existing conditions near S. Orme Street

(Segment A: S. Orme St to S. Joyce St)



## Rendering showing planned improvements





# Columbia Pike Multimodal Project

## Existing conditions near S. Courthouse Road

(Segment C: S. Queen St to  
S. Courthouse Road)

## Rendering showing planned improvements



# Columbia Pike Multimodal Project

## Existing conditions near S. Taylor Street

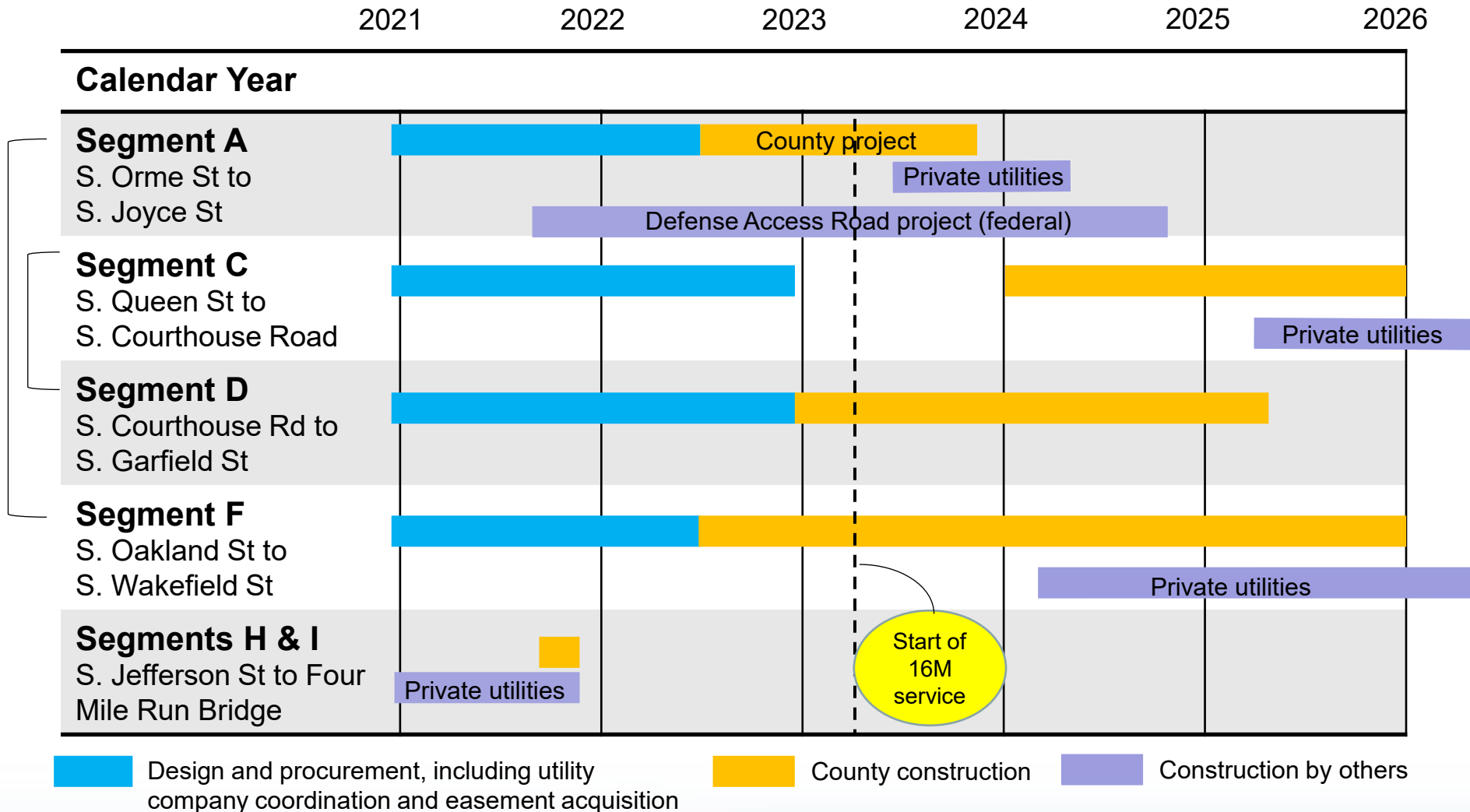
(Segment F: S. Oakland St to  
S. Wakefield St)



## Rendering showing planned improvements



# Columbia Pike Multimodal Timeline



**Note:** Project schedules are heavily dependent on acquisition of easements, cooperation of utility companies and unforeseen ground conditions. Schedules may need to be adjusted based on work by utility companies, which is not controlled by the County.

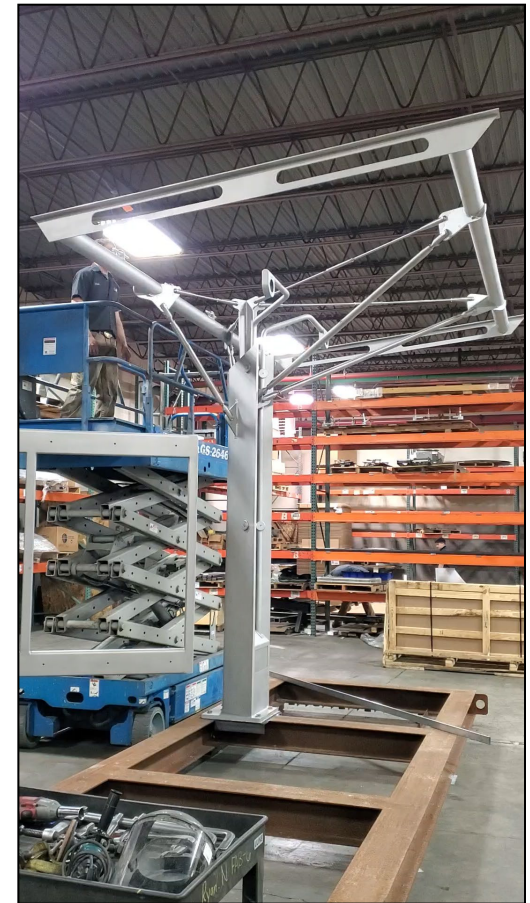
# Revised Approach for Transit Stations

- Due to increasing costs and schedule delays associated with the Kit of Parts design, DES is proposing a new approach for the transit stations
  - The Kit of Parts is a custom-designed set of modular stations
- **New plan:** Use a prefabricated shelter from Future Systems with modifications that incorporates elements of the current design into a shelter that is more cost effective and can be installed on Columbia Pike without further delays

# Kit of Parts Prototype Issues

- **November 2020:** Future Systems (shelter fabricator) identified stability issues with the shelter prototype
  - Prototype did not meet structural stability requirements due to significant torsional (rotational) motion around its central column when subjected to lateral loads
- **February and March 2021:** Parsons (Engineer of Record) revised shelter design to address torsional issues, but Future Systems notified County of constructability concerns with the revised design
  - Concerns also expressed by County's Inspection Services Division and independent structural engineer (STV)
- **Schedule impact:**
  - Additional 6 months to demonstrate second prototype
  - Plus 7 months from prototype acceptance to delivering shelter modules for first 8 stations

Kit of Parts prototype



# Options Considered

Both options preserve real-time bus arrival displays, higher curb for easier boarding, lighting for safety, seating, and long platforms to accommodate two buses at a time

## Option 1:

Continue with Kit of Parts design



## Option 2:

Switch to Prefabricated Shelters from Future Systems, with modifications



Example of Integra series (5 bay) bolt-down shelter from Future Systems

# Prefab Option Maintains and Improves on Kit-of-Parts Features

Features	Option 1: Kit of Parts	Option 2: Prefab w/ modifications
Modular design	☑	☑ +
Near-level boarding	☑	☑
Durability	☑	☑
Design aesthetic (glass, stainless steel)	☑	☑
Canopy coverage	☑	☑
Rear and side windscreens	☑	☑
Real-time information	☑	☑
Lighting	☑	☑
ADA accessibility	☑	☑
Seating	☑	☑ +

Shallower design provides more clear space for pedestrians and better accommodates Form Based Code developments

Will have equal or more seating than Kit of Parts

# 5 BAY STATION\*



*\* Initial design rendering, subject to change*



# Prefab Option Costs Significantly Less than Kit of Parts

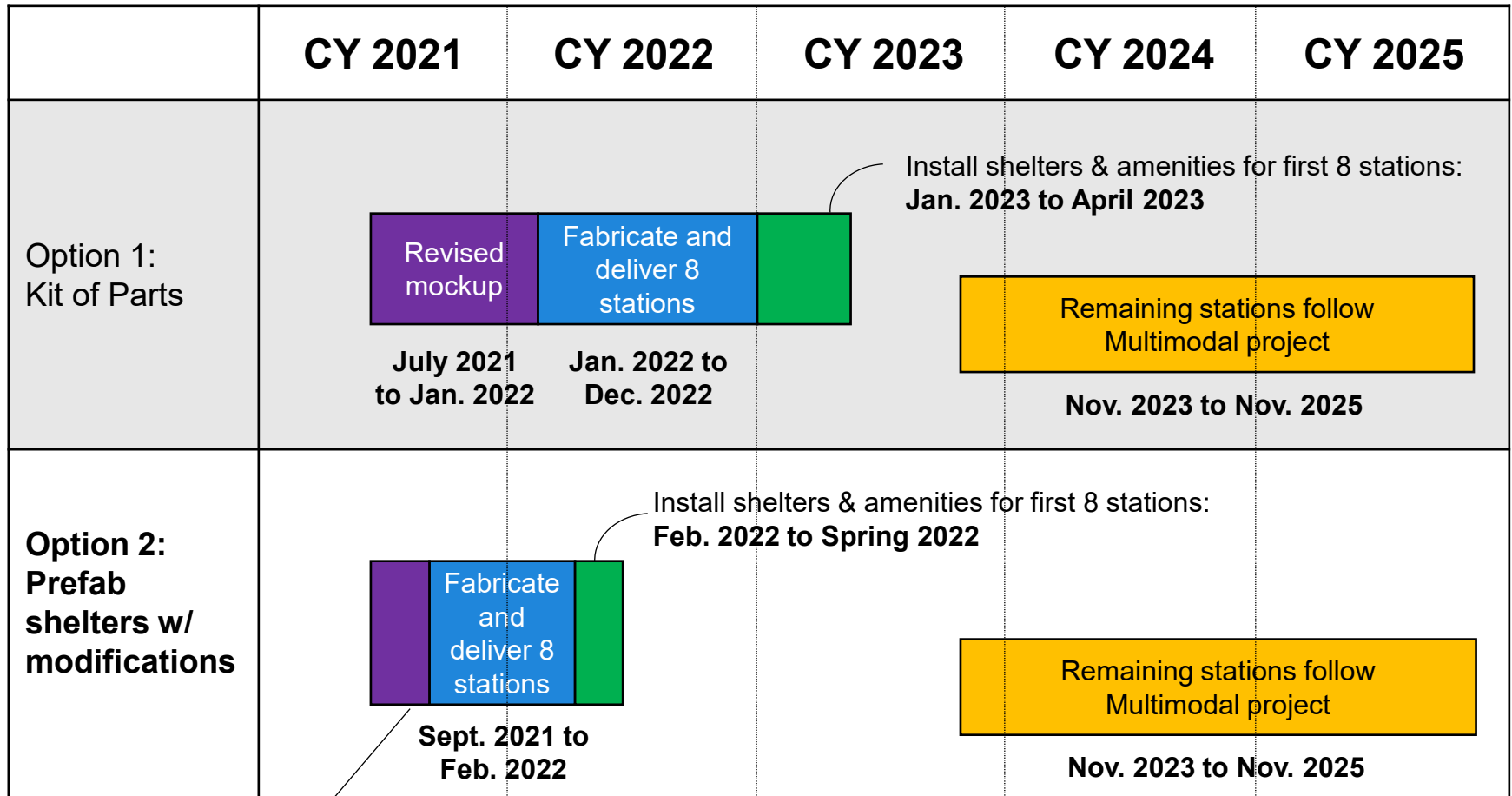
Estimated cost for 23 transit stations * (\$000)	Option 1: Kit of Parts	Option 2: Prefab w/ Modifications
Future Systems revised shelter	\$5,382	\$1,480
Construction-related costs and staff	\$3,220	\$1,258
Contingency & escalation (30%)	\$2,581	\$822
Costs to date	\$3,636	\$3,636
<b>**TOTAL</b>	<b>\$14,819</b>	<b>\$7,196</b>

\* Total project budget in CIP (\$000) = \$16,915

\*\* Today's dollars

# Prefab Option Delivers Stations Sooner

## Notional Schedule Comparison



Modify Future Systems contract and award fabricator contract for 23 stations:  
**July 2021 to Sept. 2021**

# Premium Transit Network

The Premium Transit Network will feature three different types of service to meet the needs of different riders:



Service	Timeline
<p><b>Local connector service</b>            New Metrobus 16M (replacing 16G/H/K) will connect Skyline and Crystal City and serve every transit station on Columbia Pike</p>	<p>2018 - First phase implemented (Metrobus 16 Line restructuring)            2023 - Implement 2nd phase (includes Metrobus 16M)</p>
<p><b>Limited-stop service</b>            Simplified limited-stop Metrobus service for frequent, faster trips to the Pentagon and points in DC</p>	<p>Spring 2023</p>
<p><b>Neighborhood connections</b>            Enhanced ART service to link nearby neighborhoods to Columbia Pike</p>	<p>Spring 2023</p>

# Premium Transit Network

The following amenities will be phased in:

(Note: Some features are dependent on coordination with WMATA or on completing Multimodal improvements)



- **Frequent service**

- Buses every 6 minutes: more frequent than anywhere else in the Northern VA region
- Considered among the top performing bus routes in the entire Metrobus system

- **New transit stations**

- Comfortable passenger experience, higher curbs for easier boarding and real-time bus arrival displays

- **Improved bus travel times**

- Bus service will be consolidated at the transit stations to improve travel times
- Streamlined fare payment system will help reduce bus dwell times
- SmarTrip in Apple Wallet and Google Pay allows smartphone payment/reloading

- **Branded vehicles and information**

- Make transit easy to identify and understand
- Updated “Pike Ride” logo introduced in 2018