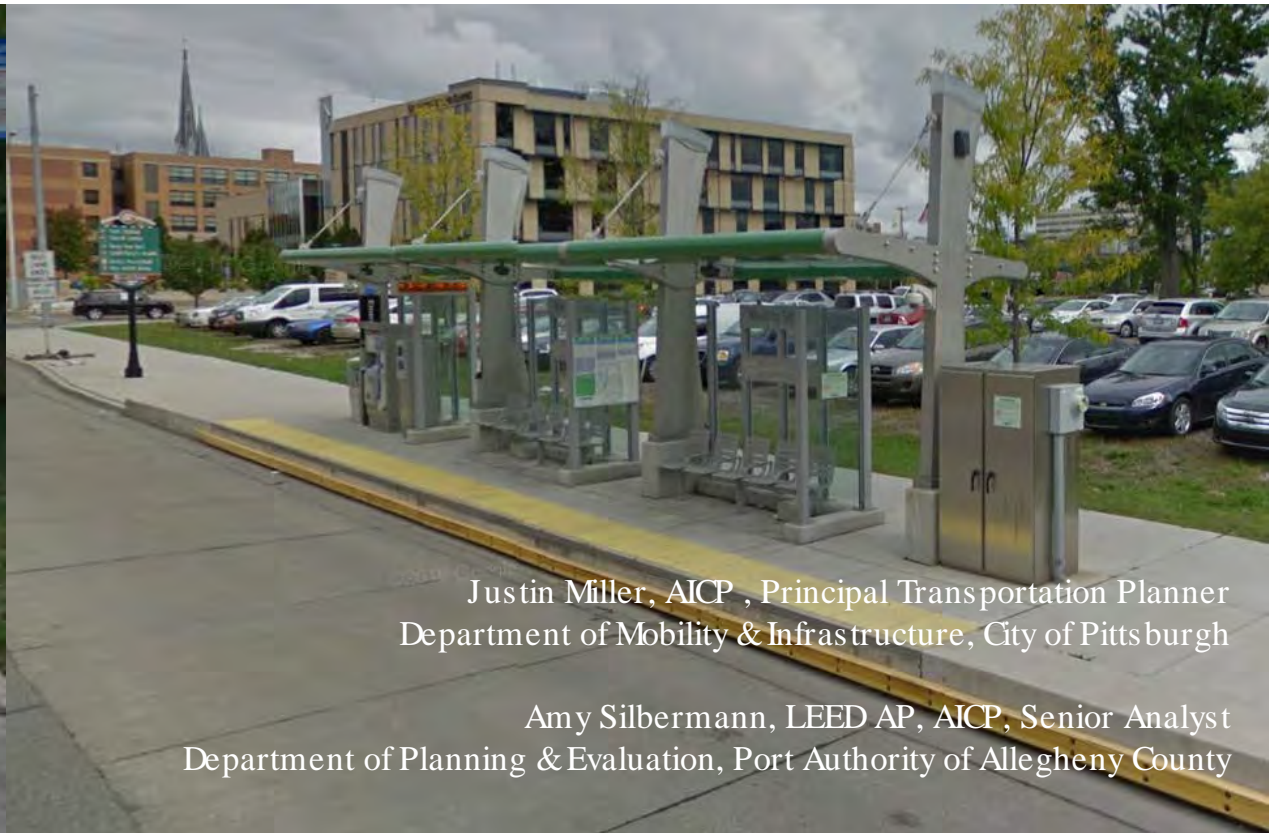


BUS RAPID TRANSIT PROJECT

DOWNTOWN – UPTOWN – OAKLAND – EASTEND

BRT Layout Workshop



Justin Miller, AICP, Principal Transportation Planner
Department of Mobility & Infrastructure, City of Pittsburgh

Amy Silbermann, LEED AP, AICP, Senior Analyst
Department of Planning & Evaluation, Port Authority of Allegheny County



Presentation Overview

- Review of this Spring's engagement process
- Project detail & the Locally Preferred Alternative (LPA)
- Topics for public discussion & feedback
 - **Street layout – review of LPA**
 - **Station amenities and sizes**
 - **Station placement – proposed locations and methods**
- Issues Still to Address
- Next steps
- Q & A



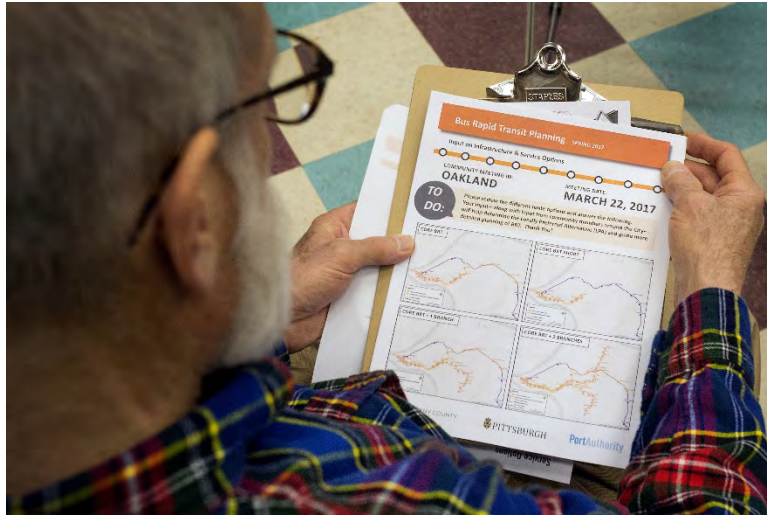
Spring 2017

Community Outreach Summary

- Nine community meetings with 259 attendees
- Open House with over 223 attendees
- Online survey with 1,983 responses
- 7 written comments (mail and email)
- 17 interviews with key stakeholders

TOTAL = 2,489 points of input

Photos from community meetings

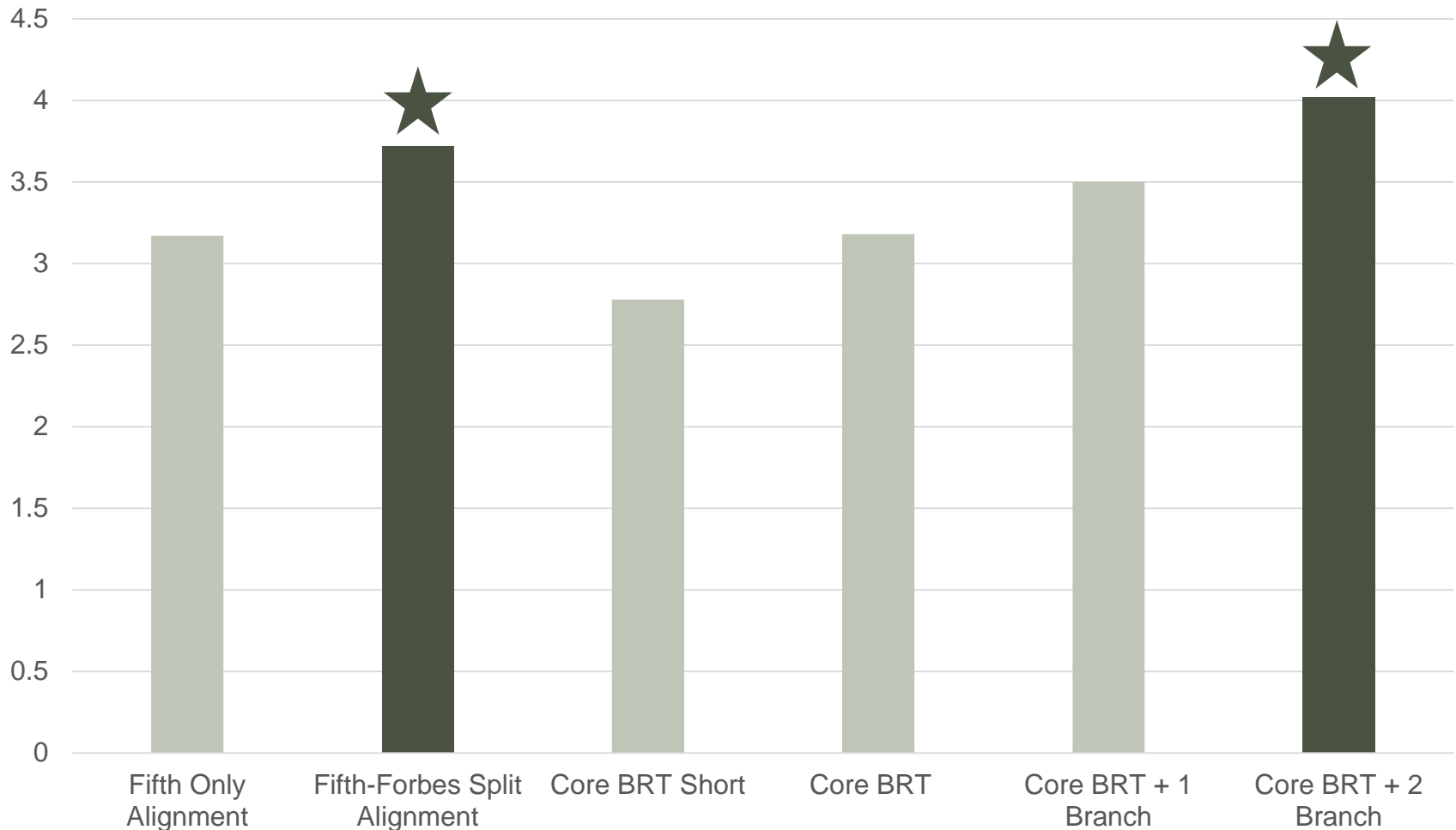


Photos from Open House



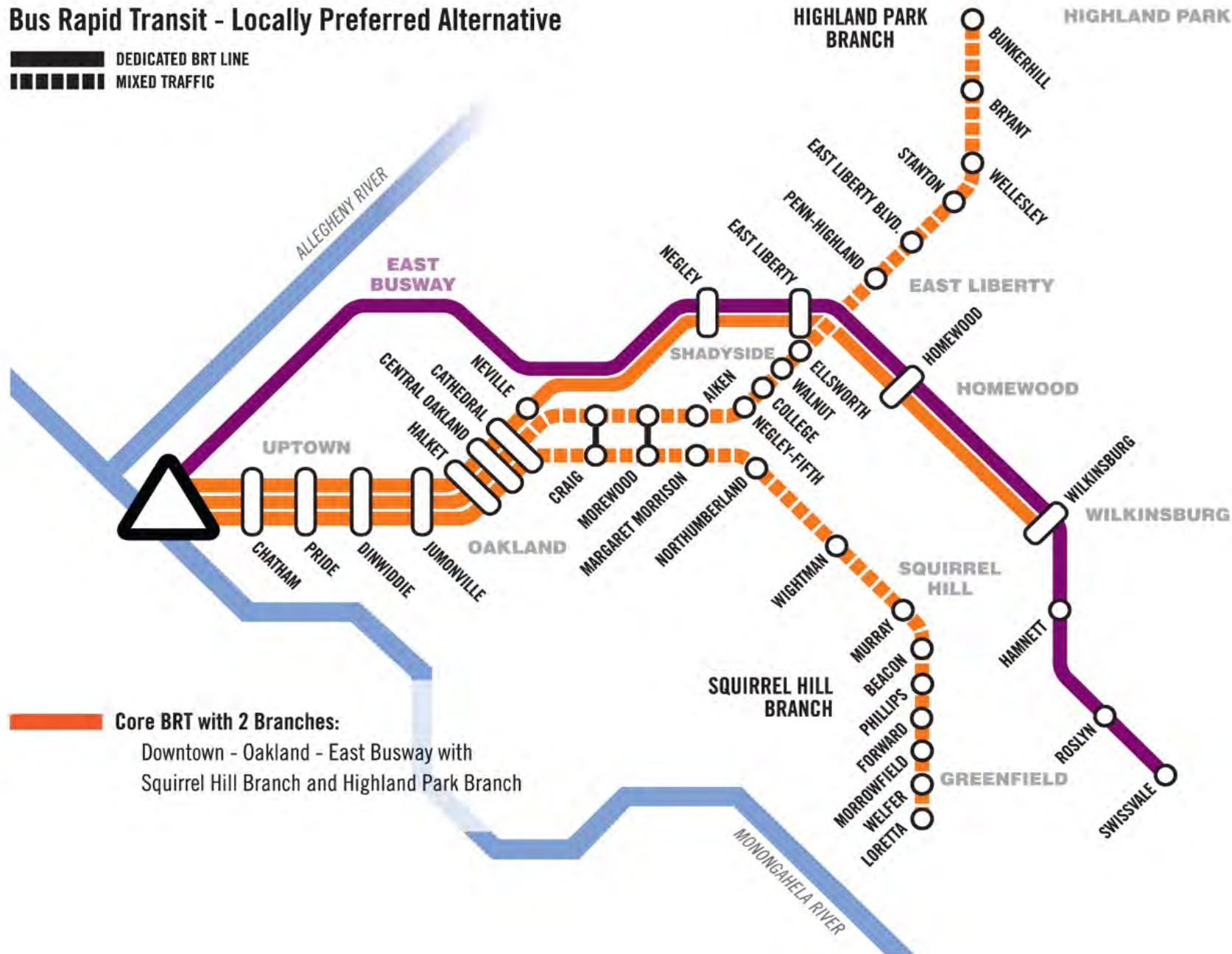
Online Survey Conclusions

Alignment and Service Average Weights (Scale 1-5; 5 is best)



Bus Rapid Transit - Locally Preferred Alternative

DEDICATED BRT LINE
MIXED TRAFFIC



BRT Draft Schedule*

BRT Frequencies in Minutes (approximate)

Time Period	Early	AM Peak	Base	PM Peak	Evening	Late	Weekend
Approximate Times	5:00am – 7:00am	7:00am - 9:00am	9:00am – 3:00pm	3:00pm – 6:00pm	6:00pm – 9:00pm	9:00pm – 2:00am	Varies
Core BRT Route	20	10	16	10	16	20	15-20
Squirrel Hill Branch	10	5	8	5	8	10	10-20
Highland Park Branch	20	10	16	10	16	20	15-20

Location Frequencies in Minutes (approximate)

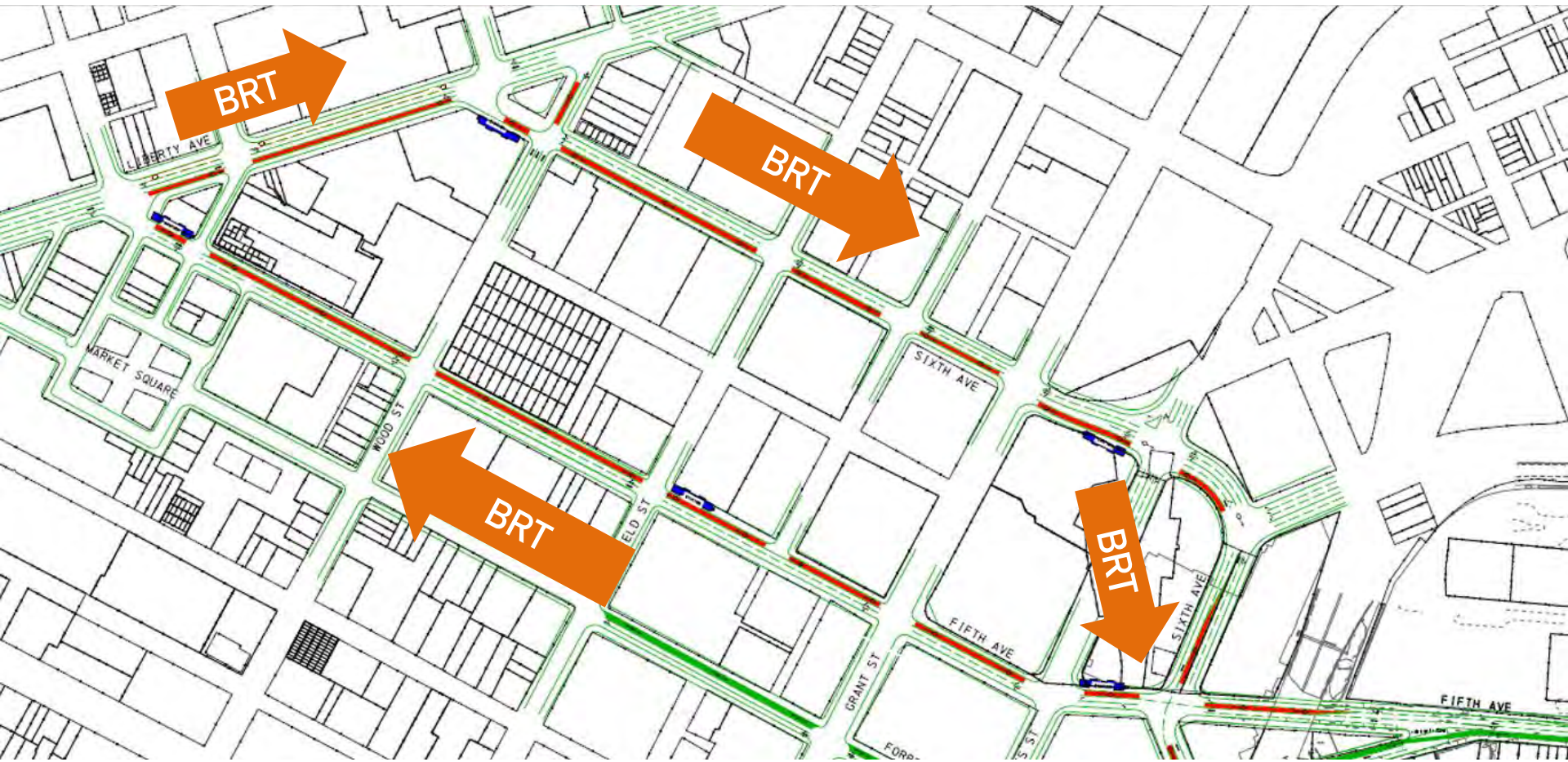
Time Period	Early	AM Peak	Base	PM Peak	Evening	Late	Weekend
Approximate Times	5:00am – 7:00am	7:00am - 9:00am	9:00am – 3:00pm	3:00pm – 6:00pm	6:00pm – 9:00pm	9:00pm – 2:00am	Varies
Fifth and Forbes Aves between Oakland and Downtown Pittsburgh (all three BRT routes)	5	2.5	4	2.5	4	5	4 – 8
Forbes Ave between CMU and Squirrel Hill (SH BRT, 61A, 61B, 61C)	6.5	2.5	5	2.5	5	6.5	6 - 10
Fifth Ave between Neville St and Highland Ave (HP BRT, 71D)	12	6.5	12	7.5	10.5	15	15

*This draft may change significantly between now and when BRT is implemented – it is for illustrative purposes only using today's bus schedules and resources. Future bus schedules may change resulting in different frequencies.

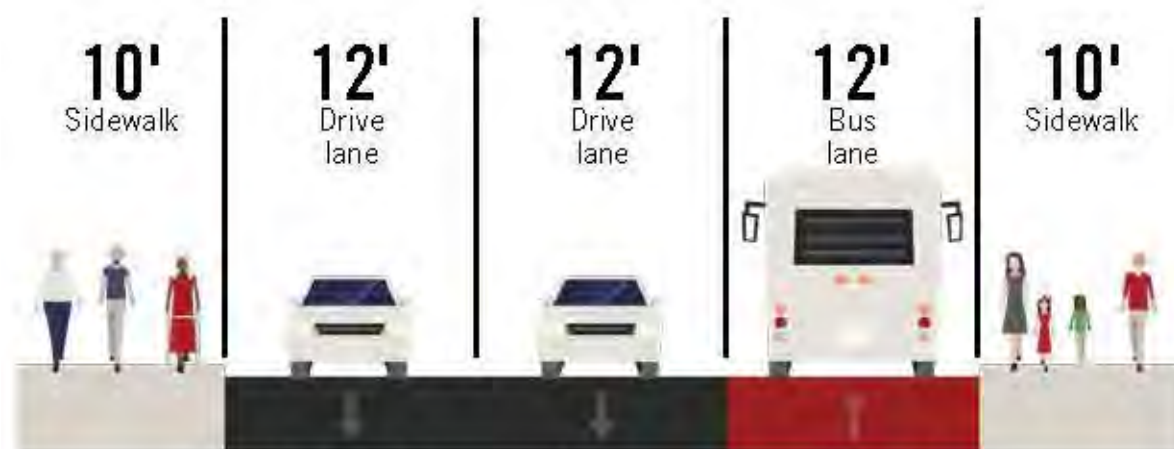


REVIEW OF LOCALLY PREFERRED ALTERNATIVE AND STREET LAYOUT

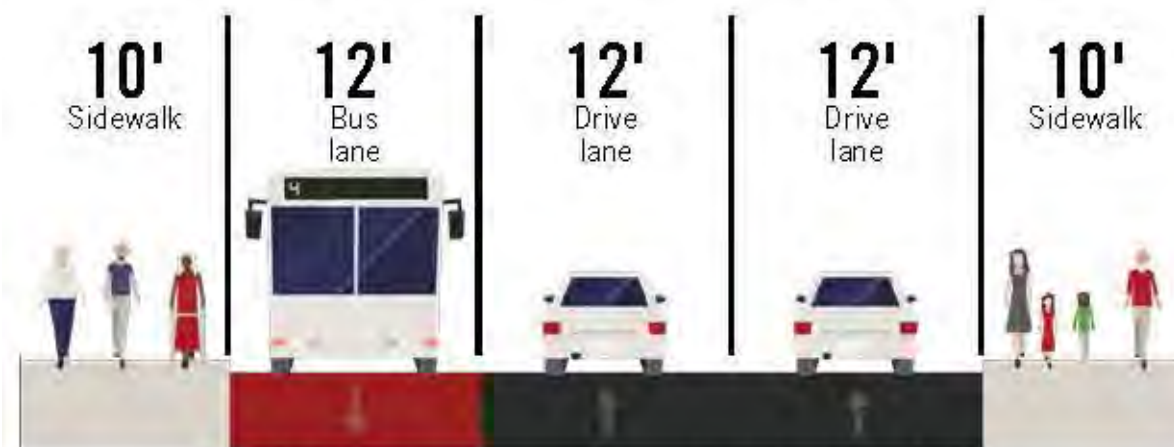
Infrastructure Alignment: Downtown



Infrastructure Alignment: Downtown

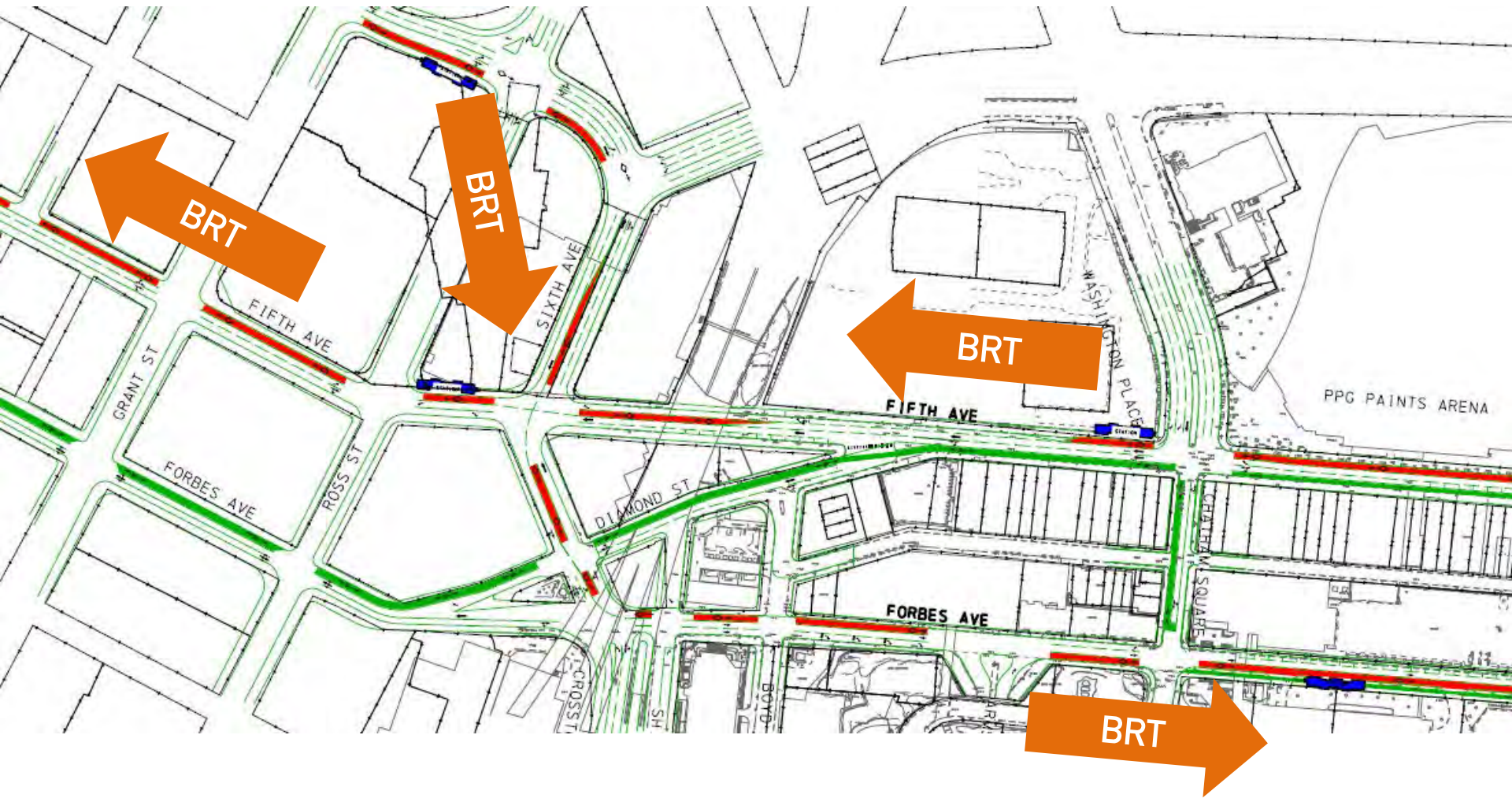


Fifth Ave. Proposed (Grant St. to Wood St.)

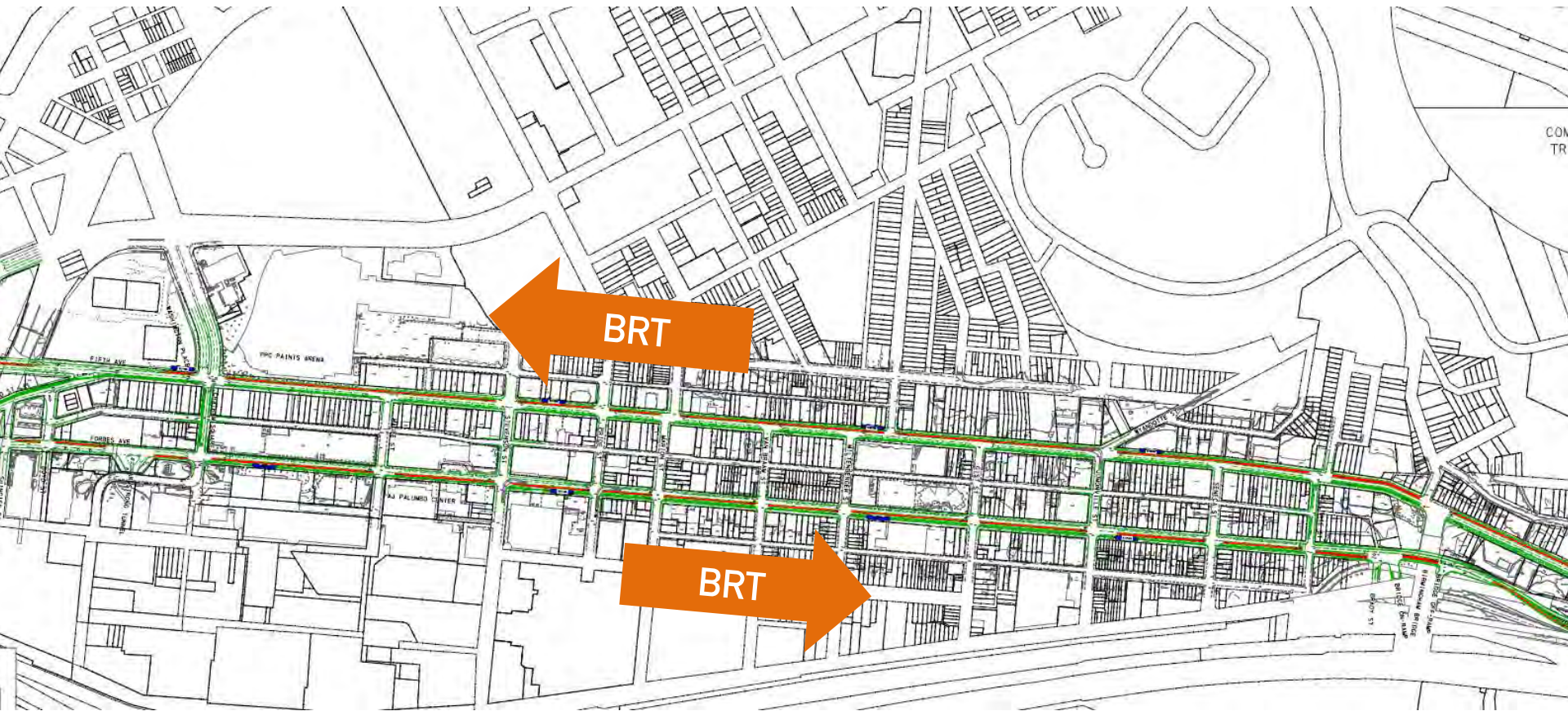


Sixth Ave. Proposed (Grant St. to Wood St.)

Infrastructure Alignment: Downtown-Uptown Transition



Infrastructure Alignment: Uptown



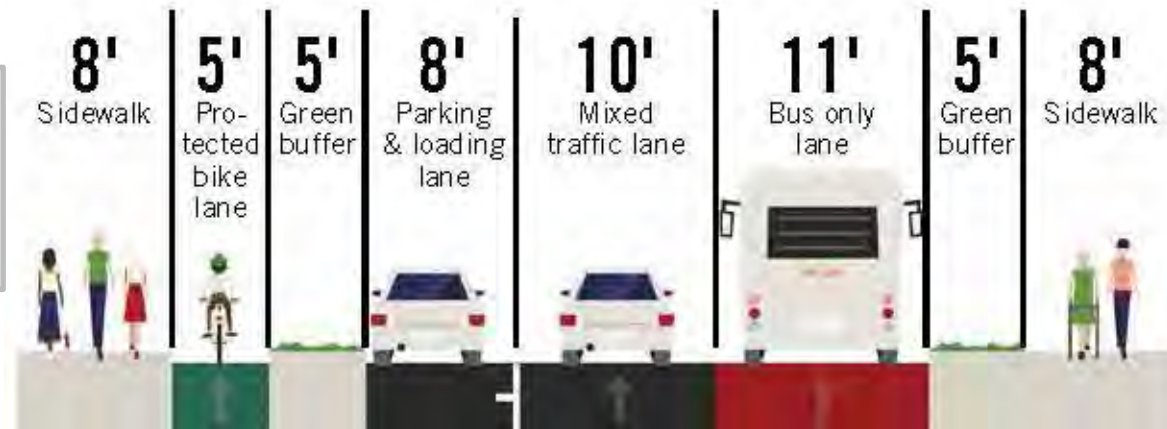
Infrastructure Alignment: Uptown

Station areas

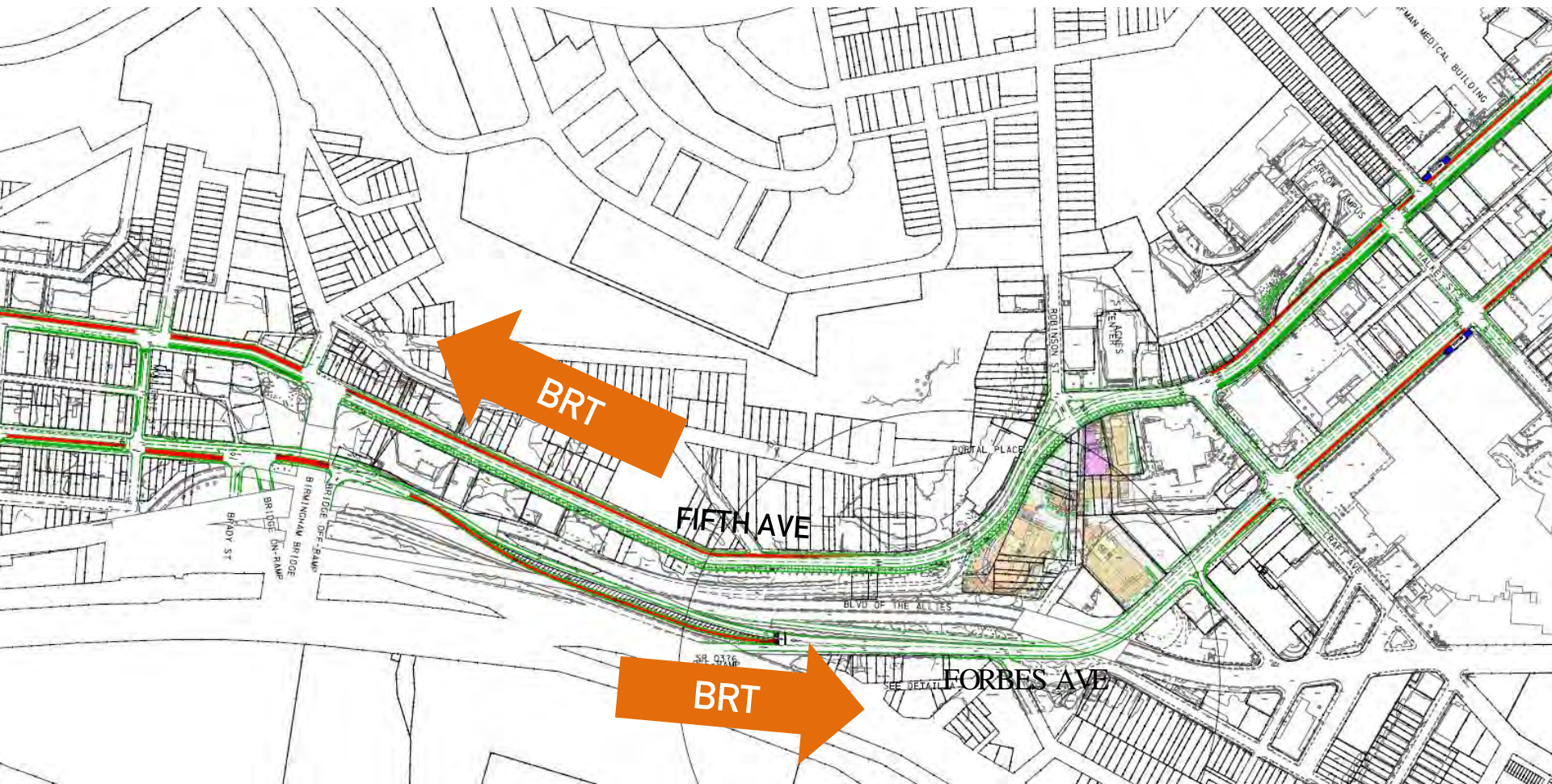


Fifth & Forbes – Same cross-section, opposite directions

Mid-block areas



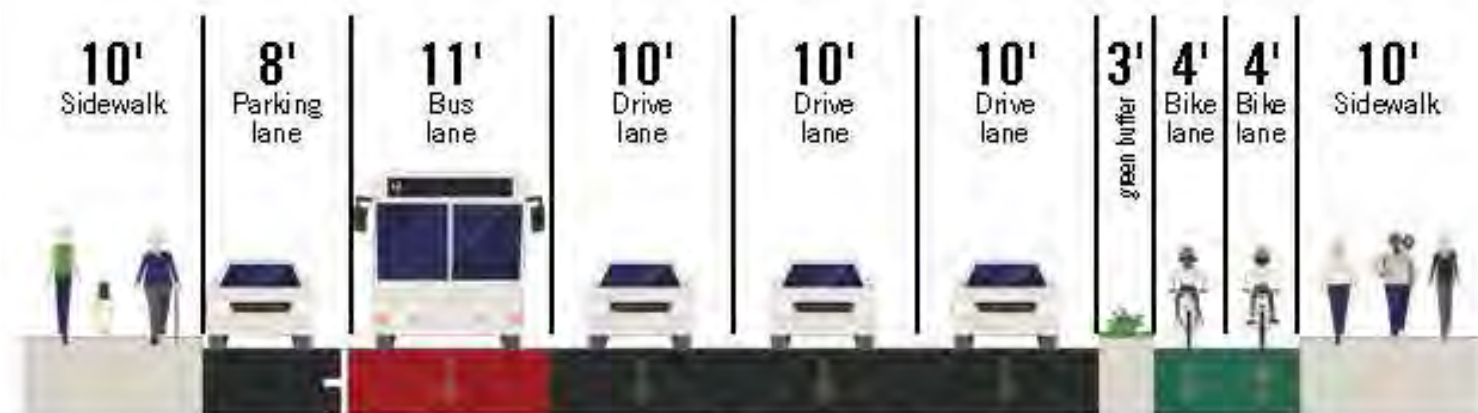
Infrastructure Alignment: Uptown-Oakland Transition



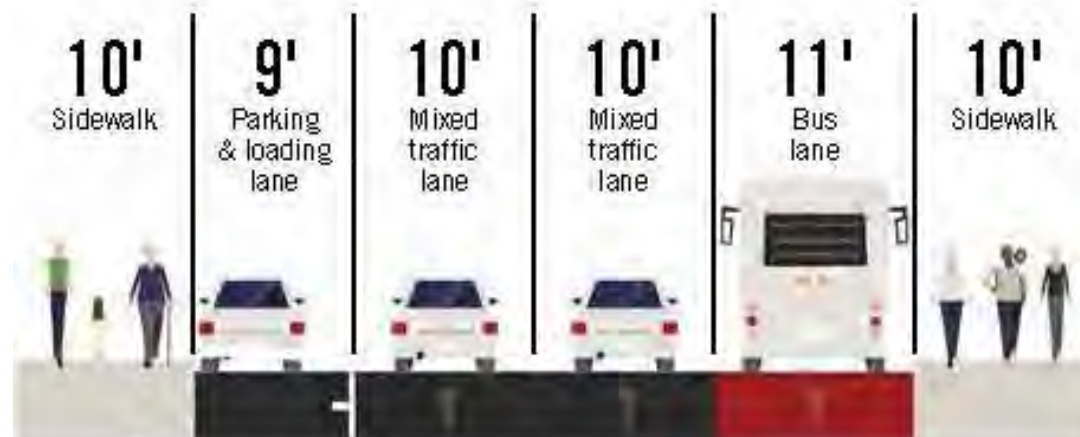
Infrastructure Alignment: Oakland



Infrastructure Alignment: Oakland



Fifth Ave. Proposed (McKee Pl. to Bigelow Blvd.)



Forbes Ave. Proposed (Craft Ave. to Bigelow Blvd.)



REVIEW OF PROPOSED STATION PLACEMENT, SIZE, AND AMENITIES

How did we come to propose station locations where we did?

1. Distance

Port Authority's Stop/Station Spacing Guidelines:
(Transit Service Guidelines 2015 page 9)

Service Type	Minimum Spacing	Average Spacing
Rapid Service (BRT)	1,000 feet (about 1/5 mile)	2,500 feet (about 1/2 mile)
Express Service	650 feet (about 1/8 mile)	1,200 feet (about 1/4 mile)
Local Service	650 feet (about 1/8 mile)	900 feet (about 1/6 mile)

Rapid and local services will overlap between the East End branches and Oakland – need to find a middle ground here



Station Spacing

1 mile of bus route:

Rapid



Local

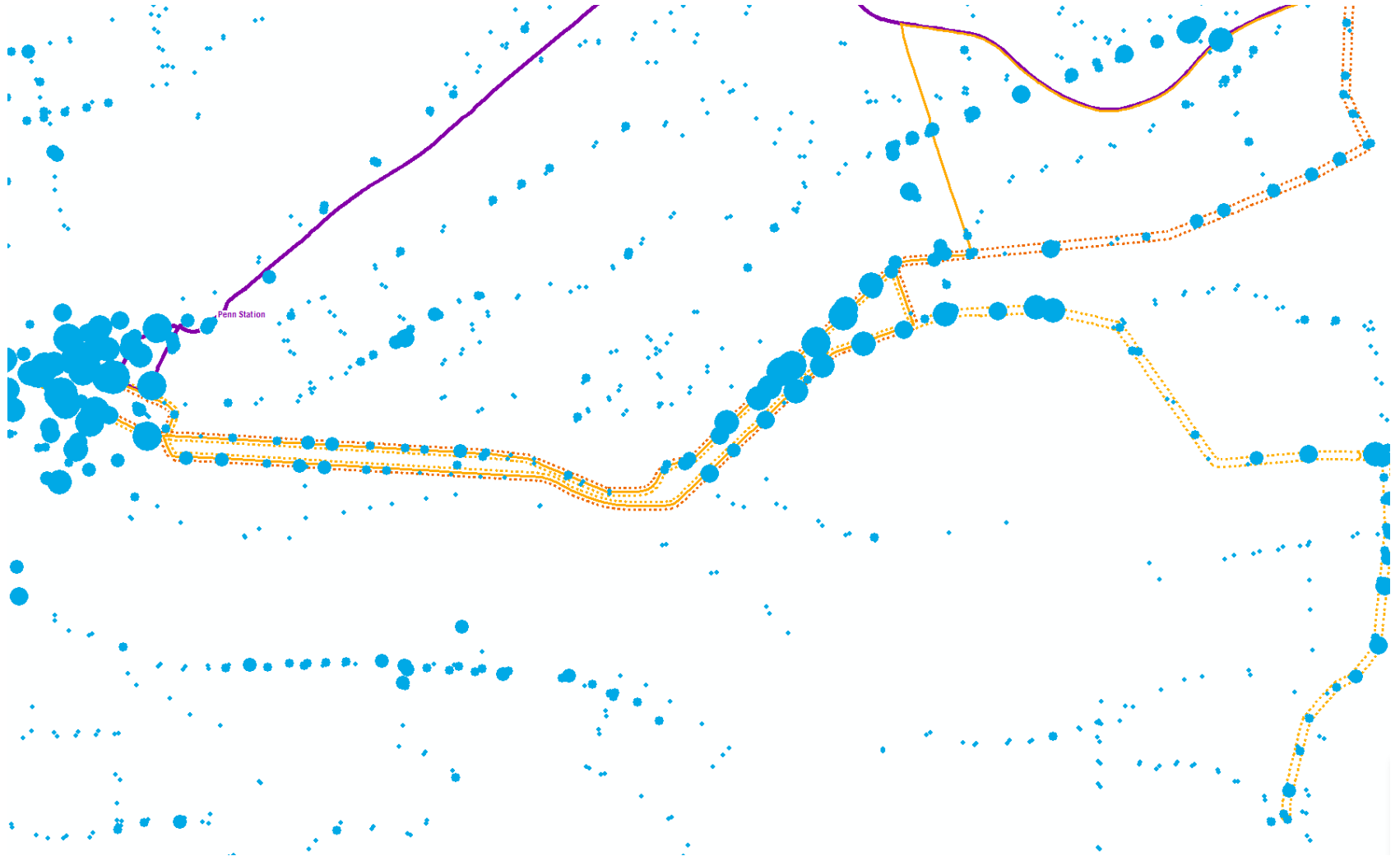


Proposed BRT



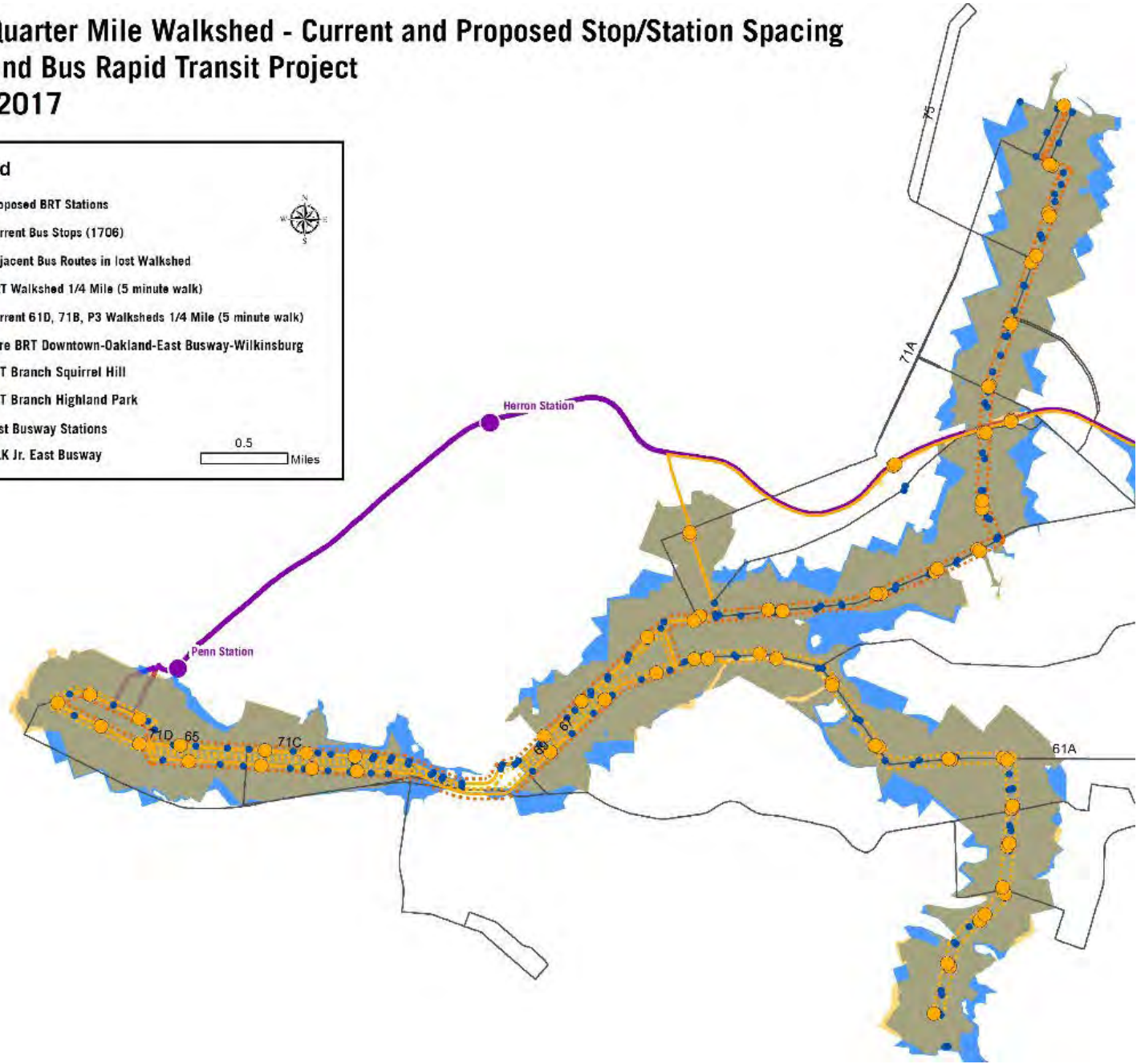
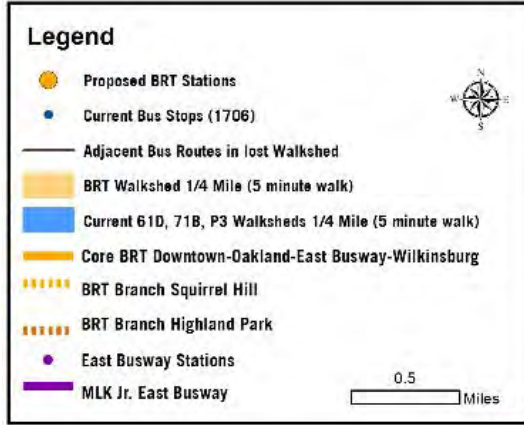
Destinations / High Activity Areas

Data allows us to see how many riders get on and off at each stop

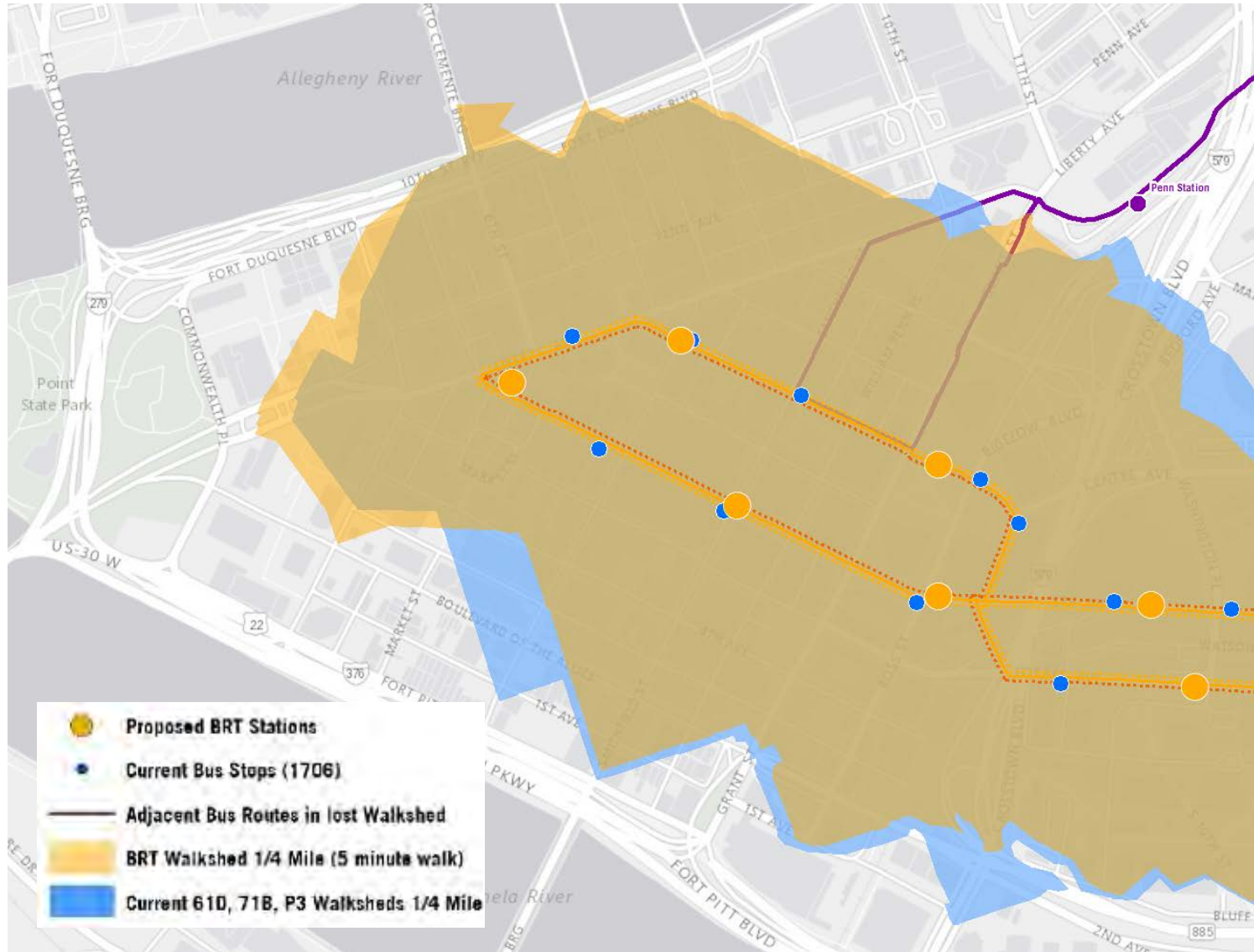


Walksheds of Proposed Station Locations

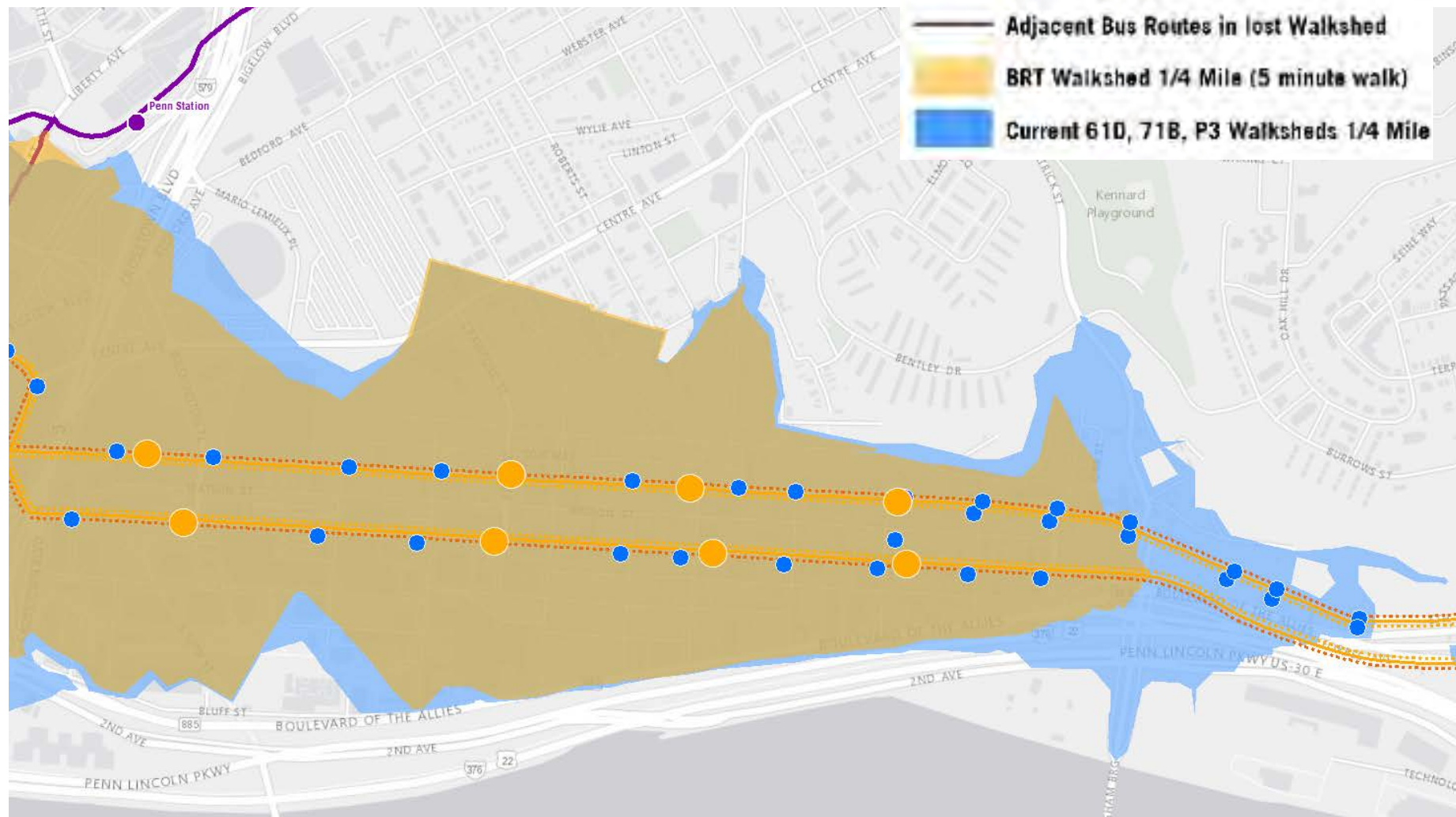
One Quarter Mile Walkshed - Current and Proposed Stop/Station Spacing Oakland Bus Rapid Transit Project June 2017








Downtown

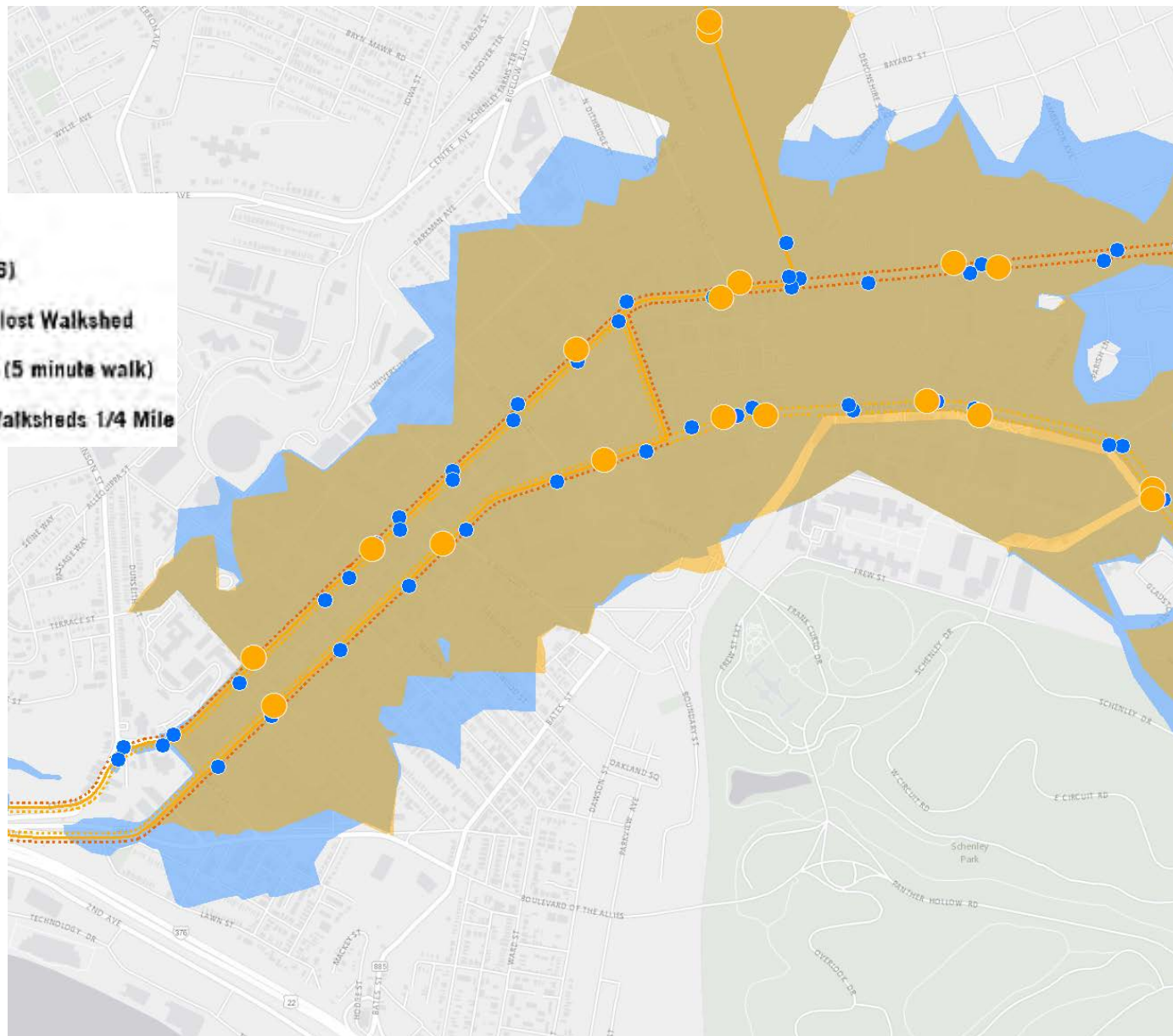


Uptown



Oakland

-  Proposed BRT Stations
-  Current Bus Stops (1706)
-  Adjacent Bus Routes in lost Walkshed
-  BRT Walkshed 1/4 Mile (5 minute walk)
-  Current 610, 71B, P3 Walksheds 1/4 Mile



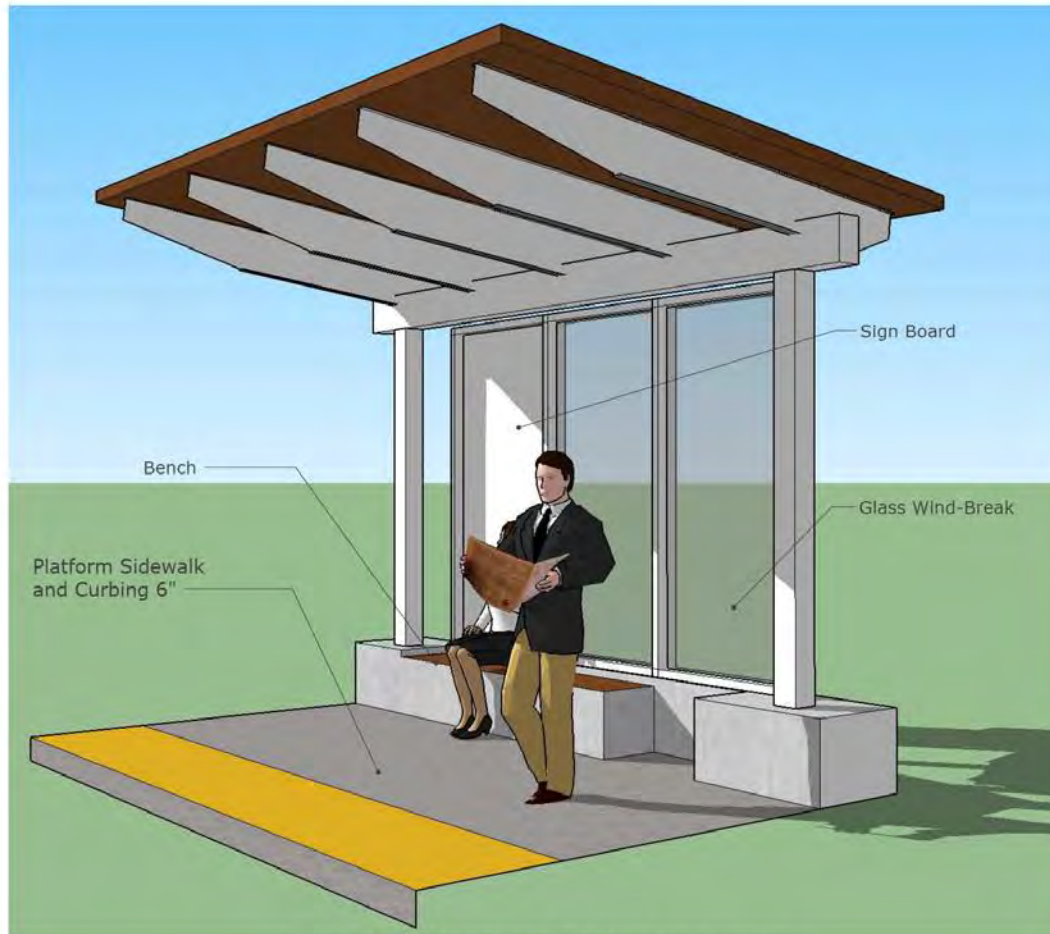


Station Types

1. Neighborhood Station – small scale
2. Intermediate Station – moderate size
3. Transit Center – large scale

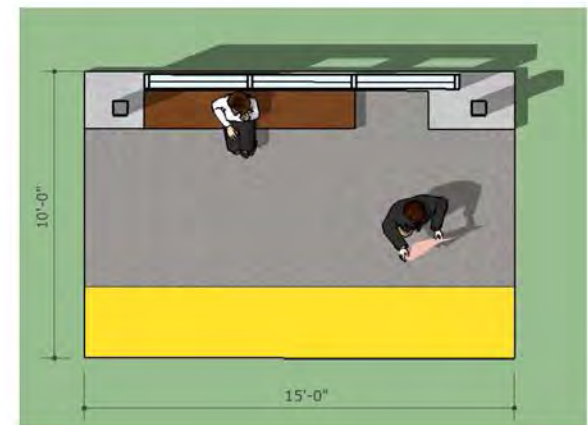
Three categories of stations can have between 1-7 ‘**modules**’ of shelter, each 15 feet long

What is a station module?



Small Neighborhood Station Perspective

10 feet wide by 15 feet
long sheltered area



Neighborhood Station

Includes:

Single bay shelter

Bench

Next bus real time arrival info

Trash can

Could also include:

Ticket vending machine

Bike rack



Intermediate Station

Includes:

2-4 modules of shelter

Benches

Next bus real time arrival info

Trash can

Ticket vending machine

Could also include:

Information kiosk

Bike rack



Transit Center

Includes:

5-7 modules of shelter

Benches

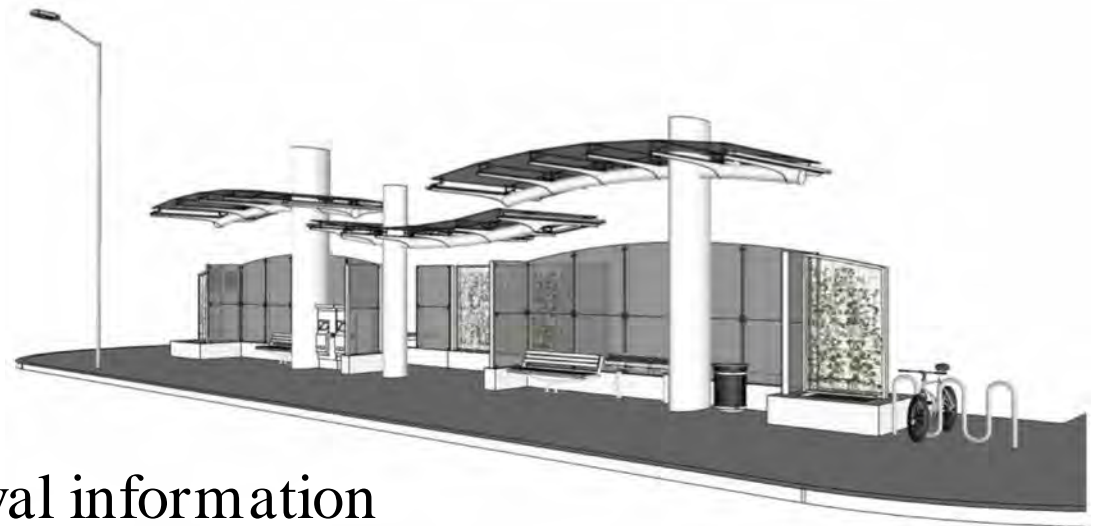
Next bus real time arrival information

Trash cans

Ticket vending machines

Information kiosk

Bike rack





Updates on Concerns Heard to Date

ACTIVELY WORKING ON

Needed for Small Starts Grant

- ACCESS paratransit operational issues
- Station spacing
- Station location and size

NOT YET ACTIVELY WORKING ON

Not critical at this phase but critical to project success

- Fare policies
- Transfers (time, physicality, and fare)
- Curb access (deliveries)
- Schedules/Service modification
- Equity concerns (non-BRT routes)



What's Next?

- Finalizing exact station locations
- Submitting grant application

Future:

- Community input on
 - Traffic movements (turning restrictions, etc.)
 - Layover locations
 - Parking and curb access concerns
- Schedules/Service changes
- Fare Policy

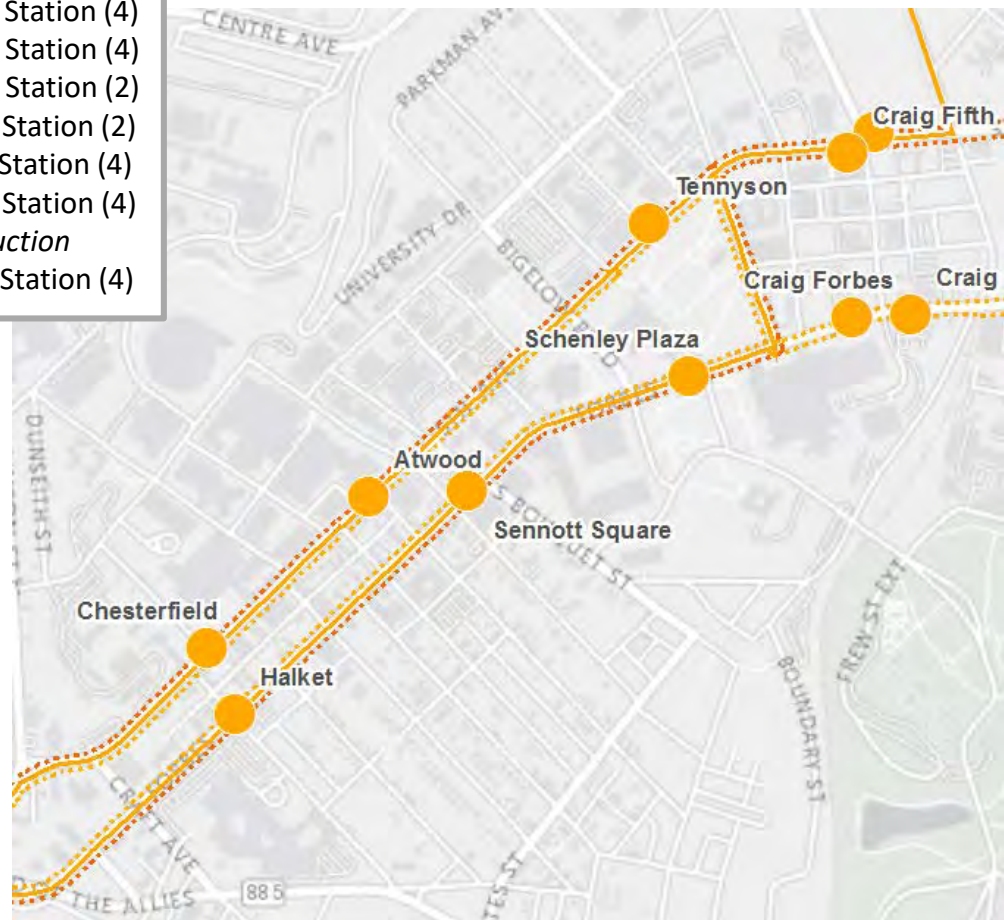
The image features a logo consisting of a thick black circle. Inside the circle, the text "Q&A" is written in a bold, orange, sans-serif font. To the left of the circle, there is a solid orange horizontal bar that extends from the left edge of the frame to the edge of the circle.

Q&A

Oakland Break Out Discussions

Name	Direction	Location	Modules/Size
Halket	Outbound	Nearside	Intermediate Station (4)
Sennott Square	Outbound	Nearside	Transit Center (7)
Schenley Plaza	Outbound	Farside	Transit Center (7)
Craig Forbes	Outbound	Farside	Intermediate Station (4)
Craig Fifth	Outbound	Nearside	Intermediate Station (4)
Centre	Outbound	Nearside	Intermediate Station (2)
Centre	Inbound	Farside	Intermediate Station (2)
Craig Fifth	Inbound	Nearside	Intermediate Station (4)
Tennysen	Inbound	Nearside	Intermediate Station (4)
Atwood	Inbound	Farside	<i>Under Construction</i>
Chesterfield	Inbound	Nearside	Intermediate Station (4)

1. How does the station integrate with nearby businesses and neighborhood activities?
2. Is the size appropriate for anticipated riders?
3. Are there activities near the station that need to be considered in the design?
4. What amenities would be suitable for this location?



Bus Bulb Outs



Source: Streetsblog - Chicago

Branches - Bus Bulb Outs



Source: NACTO



Source: NACTO