ACC EXPANSION

BLPC/PFRC JOINT MEETING #2

OCTOBER 02, 2019

Arlington Public Schools

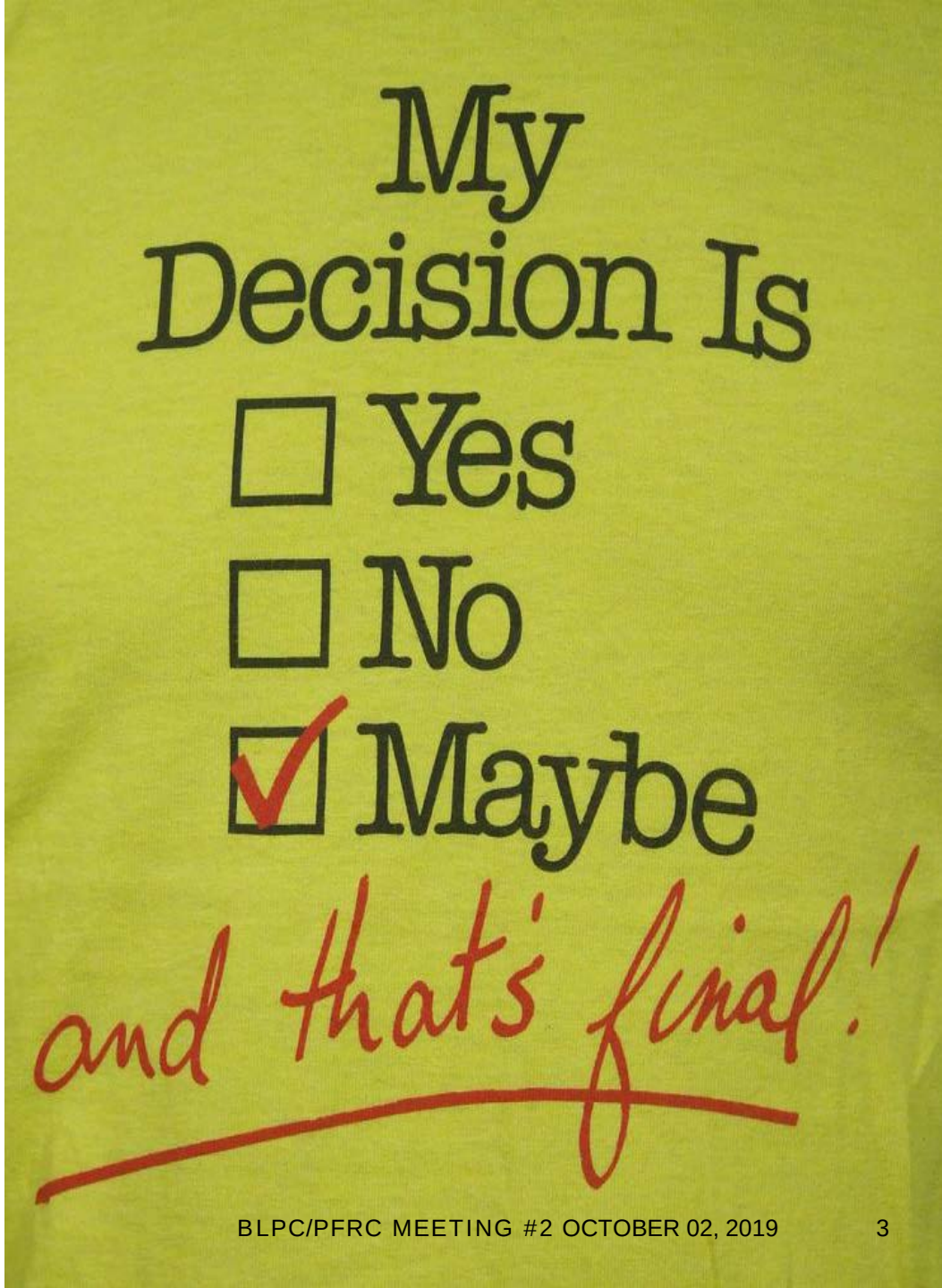
Stantec

WELCOME

WORKING AGREEMENT

- **Assume positive intentions.**
- **Allow everyone's voice to be heard.**
- **Focus on the work.**
- **Promote a sense of inquiry.**
- **Pay attention to self and others.**
- **Collaborate:**
  - **Acceptable rather than perfect.**
  - **Best intentions rather than a winning point.**

SCHOOL BOARD MAKES THE FINAL DECISION!



PROJECT UPDATES

MEET YOUR TEAM

BLPC / PFRC

Ted Black BLPC Chair

Barbara Kanninen School Board Liaison

Jim Lantelme PFRC Chair

Katie Cristol County Board Liaison

STAFF

John Chadwick

Jeff Chambers

Ben Burgin

Steve Stricker

Brett Wallace PFRC Coordinator

STANTEC

Derk Jeffrey

Francisco Waltersdorfer

Camilo Bearman

Haidi Liu

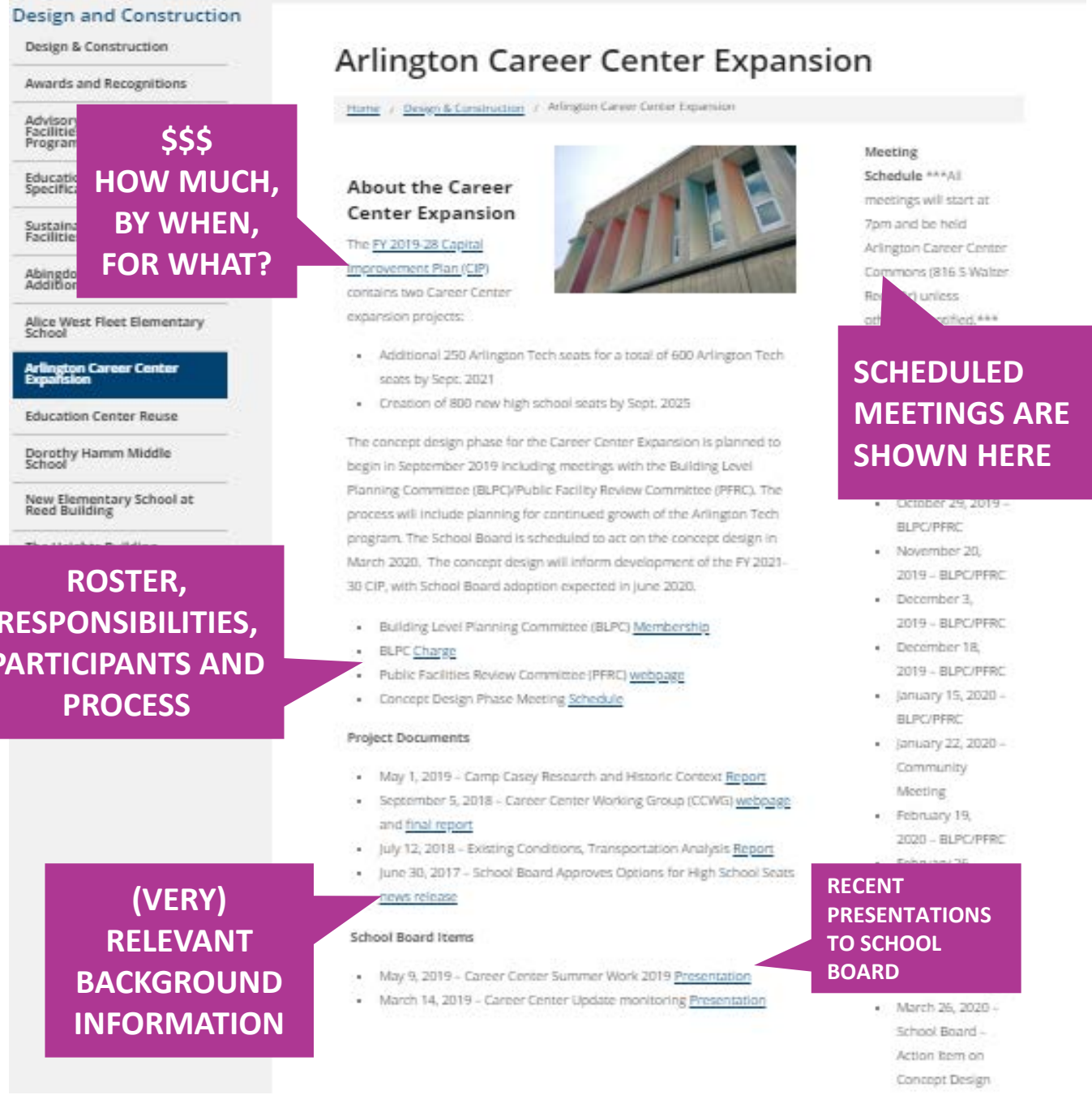
GOROVE SLADE

Robert B. Schiesel

WHAT WE DISCUSSED: CHECK IT OUT!

https://www.apsva.us/design-and-construction/arlington-career-center/

- **BLPC / PFRC**
  - **Members, meetings, process**
- **FY 2019 – 2018 CIP**
- **Project Documents**
  - **CCWG Final Report**
  - **SB Presentations**



WHAT WE DISCUSSED: PROJECT OVERVIEW

800+ additional seats for ACC option programs

Expansion of Arlington Tech to 600 seats
(As soon as possible)

High School-sized gym/assembly space

Performing Arts Center, Comprising Theater, Black Box Theater and Music classrooms

Cafeteria/ Multi-use space

Multi-use outdoor synthetic turf field with bleachers

450 to 500 space parking garage below grade, or other parking scenarios
(to be developed in collaboration with Arlington County staff)

BLPC CHARGE

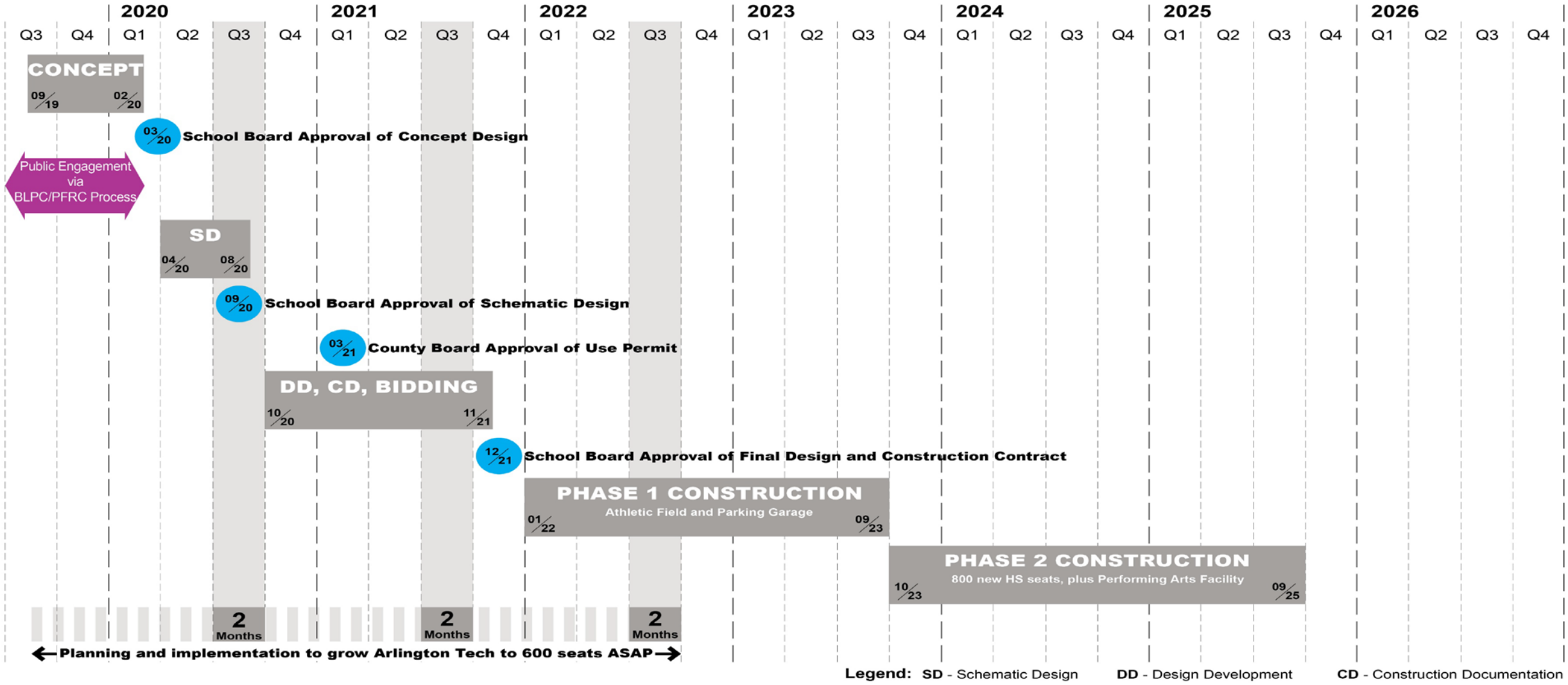
ARLINGTON CAREER CENTER

Columbia Pike Library to remain in place
(unless or until a suitable new location is found)

Replacement, enhancement and/or expansion of all special facilities for existing Career Technical Education (CTE) programs that are demolished or altered as part of the project

Future phases of expansion to allow as many different options as possible for phasing, instructional programs and outdoor athletic facilities, including possible neighborhood High School seats
(as and when needed in the future)

WHAT WE DISCUSSED - PROJECT SCHEDULE



WHAT WE DISCUSSED: ROLE OF BLPC

- **Based on Policy Implementation Procedure F-5.7 PIP-2**
- **School Board approved BLPC Charge found at:**
  https://go.boarddocs.com/vsba/arlington/Board.nsf/files/BFJQQB6A633D/$file/F1%20Career%20Center%20BLPC_Charge.pdf
- **Primary role is to serve as the principal communication liaison with community stakeholders**
- **Solicit comments from constituency groups and share with the BLPC for consideration**
- **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**
- **Make recommendations to the School Board**

WHAT WE DISCUSSED: ROLE OF PFRC

- **PFRC Charge (June 18, 2014) found at:**

  https://arlingtonva.s3.amazonaws.com/wp-content/uploads/sites/5/2014/06/PFRC_Charge_June2014.pdf

- **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.**

- **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 policies

  d. Provide means for broad-based public participation

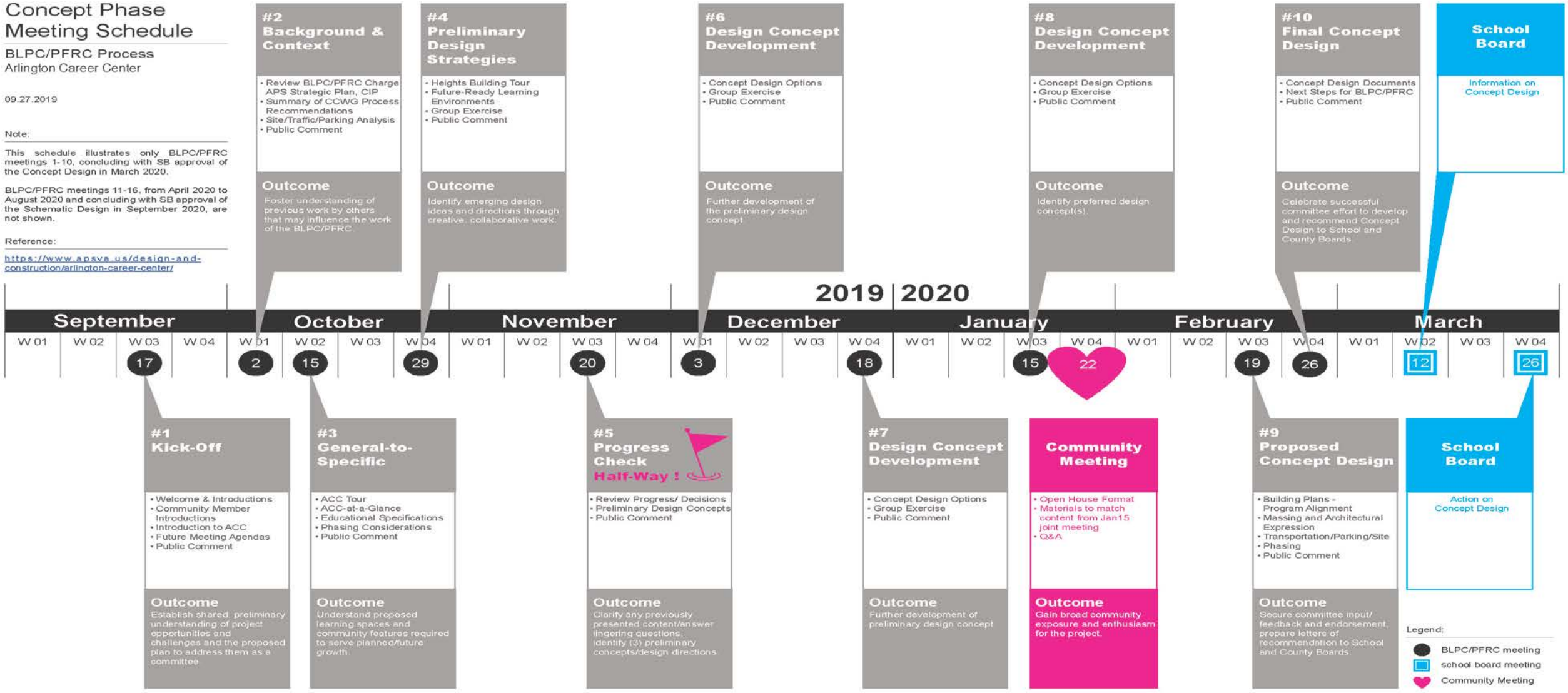
  e. Provide advice to County Board and County Manager

WHAT WE HEARD

COMMENT:	RESPONSE:
DATE REFERENCES ON MEETING SCHEDULE	Schedule Revised and Reposted
LEGIBILITY / READABILITY OF SLIDES	Fonts, Images Enlarged
CAREER CENTER PROGRAMS	Deep Dive into ACC at Meeting No. 3

AGENDA

PROJECT SCHEDULE: OVERVIEW



MEETING #1 – KICK OFF

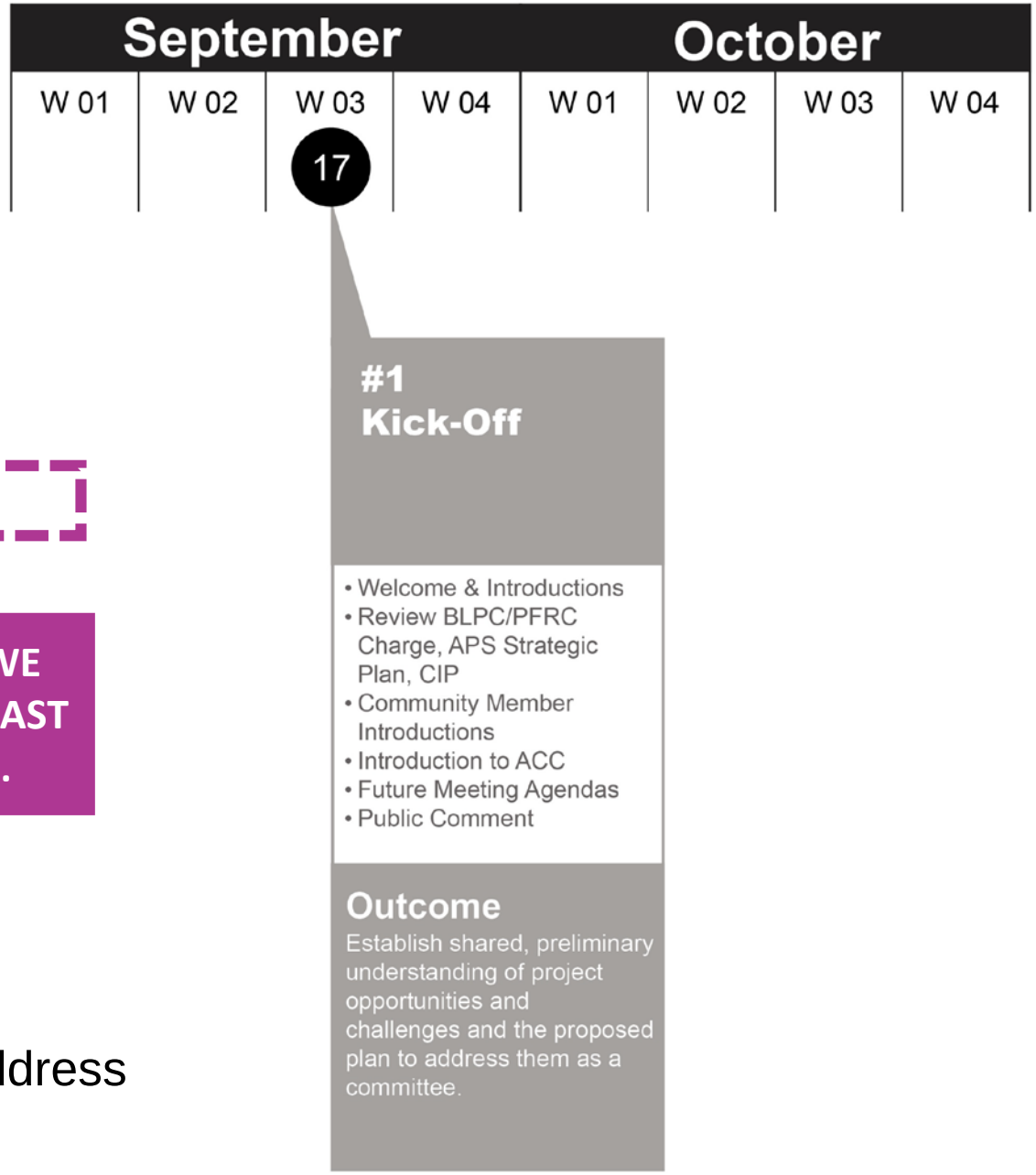
Agenda

- Welcome & Introduction
- Review BLPC/PFRC Charge, APS Strategic Plan, CIP
- Community Member Introductions
- Introduction to ACC
- Future Meeting Agendas
- Public Comments

WHAT WE MISSED LAST TIME…

Outcome

Establish shared, preliminary understanding of project opportunities and challenges and the proposed plan to address them as a committee.



MEETING #2 – BACKGROUND & CONTEXT

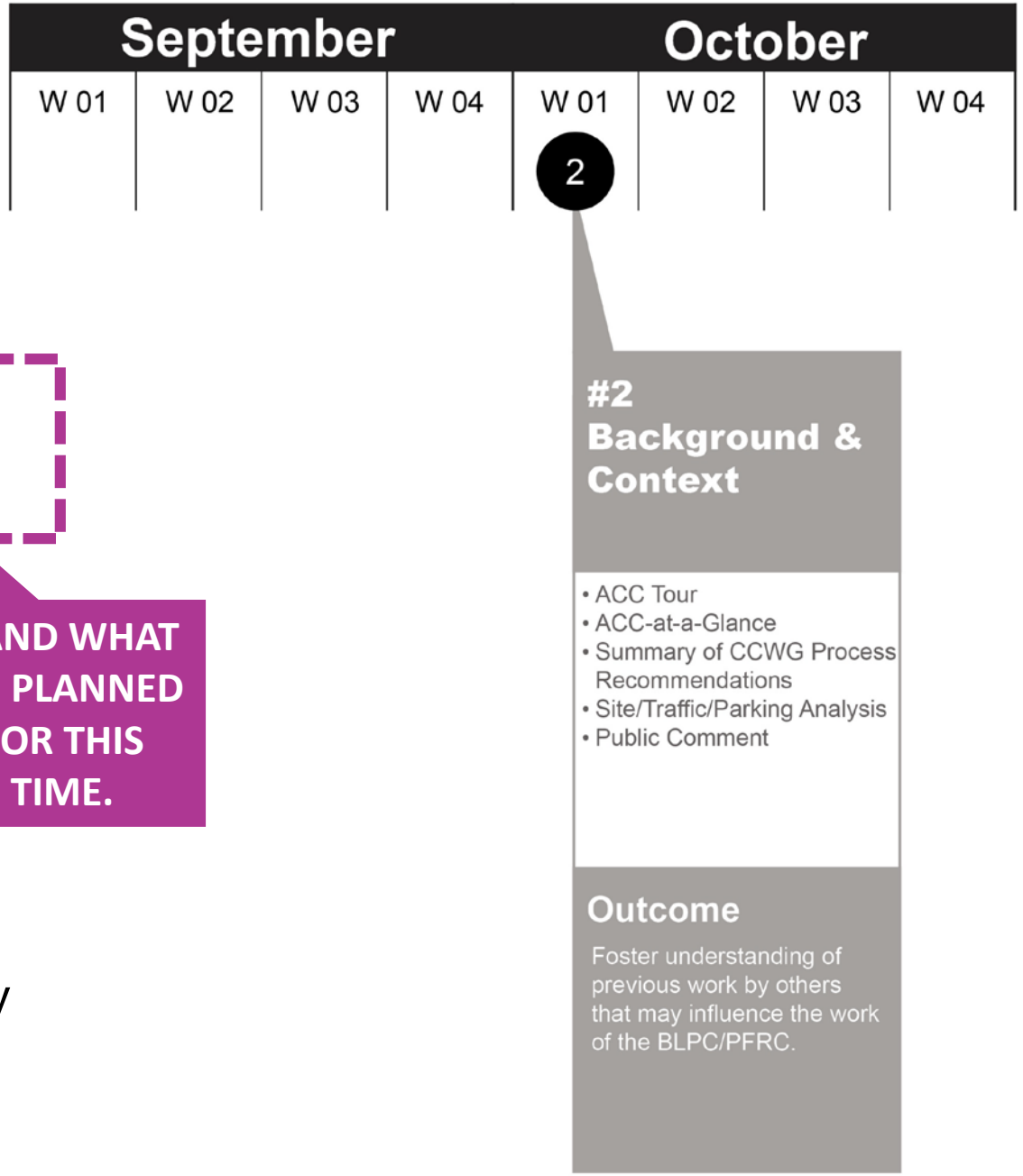
Agenda

- ACC Tour
- ACC-at-a-glance
- Summary of CCWG Process Recommendations
- Site/Traffic/Parking Analysis
- Public Comment

…AND WHAT WE PLANNED FOR THIS TIME.

Outcome

Foster understanding of previous work by others that may influence the work of the BLPC/PFRC.



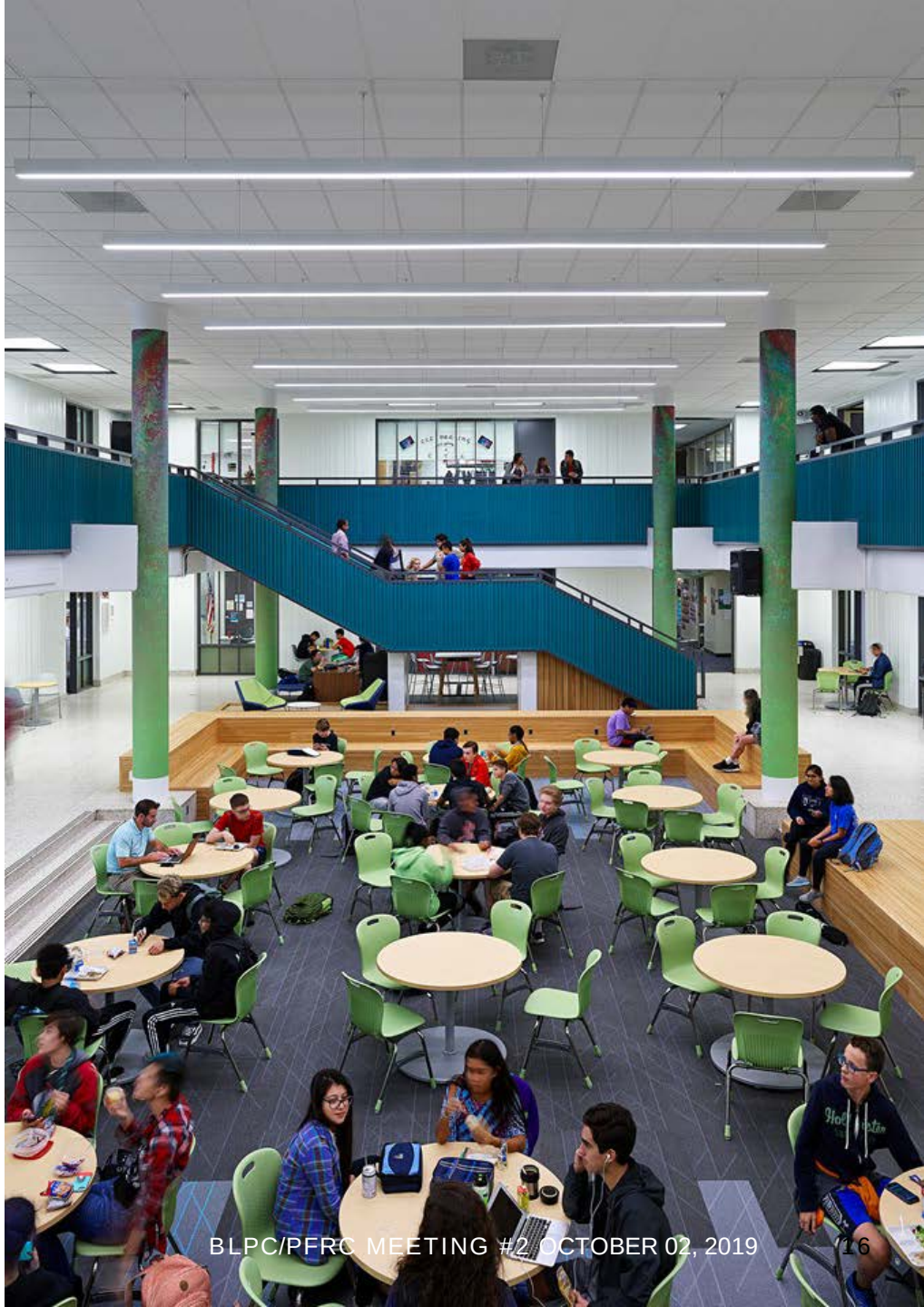
AGENDA

1. **PROJECT BUILDING BLOCKS**
   - FY 2019 – 2028 CIP
   - CCWG RECOMMENDATIONS

2. **TRANSPORTATION ANALYSIS**

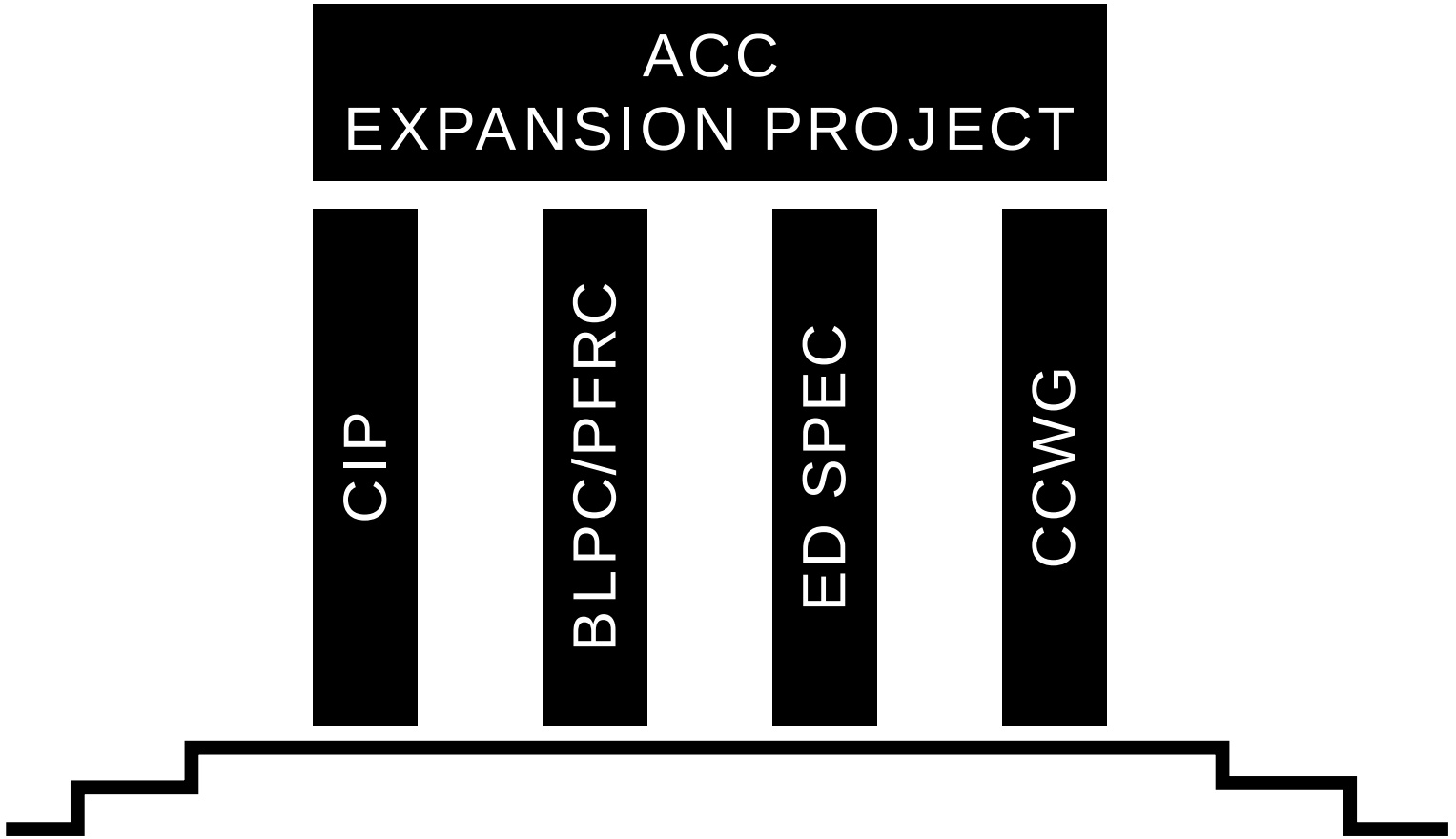
3. **NEXT STEPS**

4. **PUBLIC COMMENT**



PROJECT BUILDING BLOCKS

PROJECT BUILDING BLOCKS



CIP

Career Center/ Arlington Tech:

FY 17-26 Project 250 seats in 2021

Career Center Project:

Field and parking garage in 2023;
800 seats addition and performing arts in 2025

Project Description	OTHER FUNDING SOURCES: Operating	MC/MM (not bonds)	Capital Reserve[1]	Joint Fund: APS	Joint Fund: ArlCo	Previous Bond Funding	BOND FUNDING: FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	TOTAL BOND FUNDING	TOTAL PROJECT COST
SEATS AVAILABLE IN							Fall 2018	Fall 2019	Fall 2020	Fall 2021	Fall 2022	Fall 2023	Fall 2024	Fall 2025	Fall 2026	Fall 2027		
Stratford (1,000 seats in 2019) *	$0.80		$0.25	$2.11	$2.11	$22.25	$9.03										$9.03	$36.55
Wilson (114 seats in 2019) *	$1.90		$7.00	$3.00	$3.00	$82.90	$3.00										$3.00	$100.80
Major Infrastructure Projects (bond-funded MC/MM)							$7.20	$7.40	$7.60	$7.80	$8.00	$8.20	$8.40	$8.60	$8.80	$9.00	$81.00	$81.00
Career Ctr/Arl Tech (FY17-26 project; 250 seats in 2021) **	$0.75					$12.00	$1.00	$-	$5.00	250							$6.00	$18.75
Career Center Project - field and parking garage (2023); 800 seat Addition and performing arts facility (2025)	$1.30		$31.00			$6.00	$2.80	$3.10	$19.90	$21.00	$34.00	$60.40	$5.20	800			$146.40	$184.70
			$-											$2.50	$2.70	$13.90	$19.10	$35.00
			$-										$5.10	$5.50	$28.90	$31.10	$70.60	$73.90
			$2.10														$-	$2.10
																	$-	$0.95
																	$-	$0.85
			$1.97														$-	$1.97
																	$-	$2.89
			$46.32	$7.86	$7.86	$127.15	$63.13	$42.35	$37.05	$28.80	$42.00	$68.60	$18.70	$16.60	$40.40	$54.00	$411.63	$631.46

[1] This is a plan to allocate funds to Capital Reserve over the next ten years in order to mitigate the need for bond funding for needed buildings.

* Bonds for Stratford and Wilson being sold in FY 2019 are from previous bond referenda.

** The Career Center/Arlington Tech project funding was $12.75 million in the FY17-26 CIP. Of that amount, it is estimated that $4.54 million will have been used over the summers of 2017 and 2018 for internal modifications generating 350 seats. The remaining $8.21 million along with the new funding in the FY19-28 CIP will be used to provide the 250 additional seats needed for Arlington Tech.

[2] Adjusted cost for renovation of existing building in lieu of full cost of building new ES.

*** The 2026 bond referendum amount includes an additional $2M for the New ES project and $15.9M for the MS Renovation/Addition (not shown in this chart).

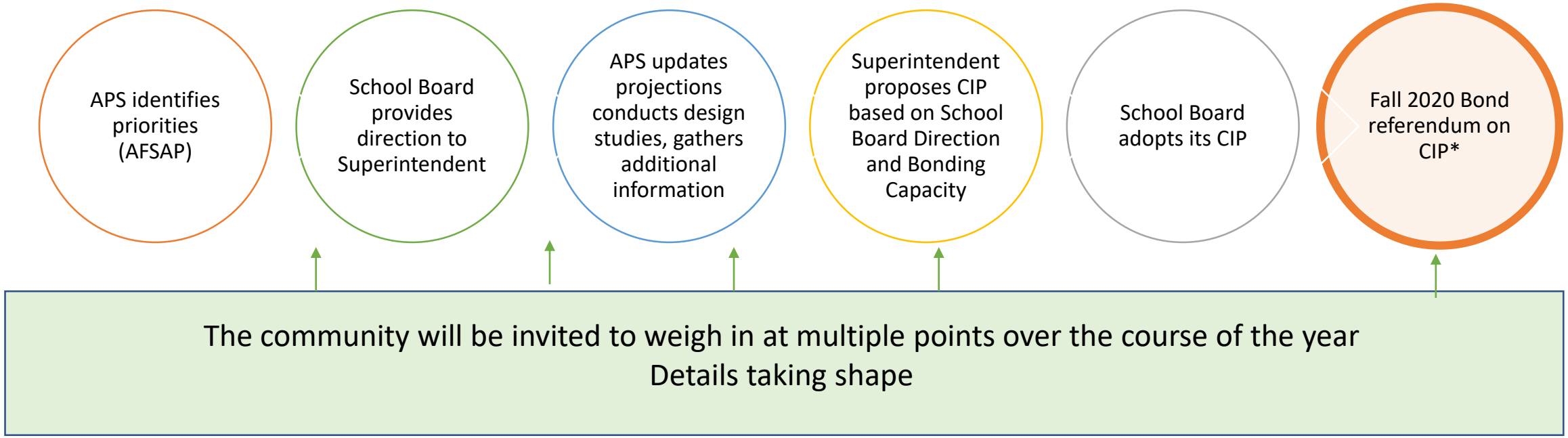
Bond Referenda Amounts	2018	2020	2022	2024	2026
	$103.00	$58.10	$114.00	$32.80	$109.60 ***

	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	Total
Debt Service Ratio Target ≤9.8%											
Debt Service Ratio -- APS	9.28%	9.57%	9.78%	9.56%	9.35%	9.45%	9.93%	9.38%	9.47%	8.84%	
Annual Bond Issuance	$63.13	$42.35	$37.05	$28.80	$42.00	$68.60	$18.70	$16.60	$40.40	$54.00	$411.63
Annual APS Debt Service Increase		$1.98	$2.10	($0.06)	$0.01	$2.13	$4.84	($2.44)	$2.13	($3.15)	$7.53

School Board Adopted FY 2019-2028 Capital Improvement Plan here:

https://www.apsva.us/wp-content/uploads/2019/01/06-APS-CIPBrochure.pdf

CIP Steps in the CIP Process



* At the September 24 School Board Work Session, this slide had previously referenced Fall 2019.

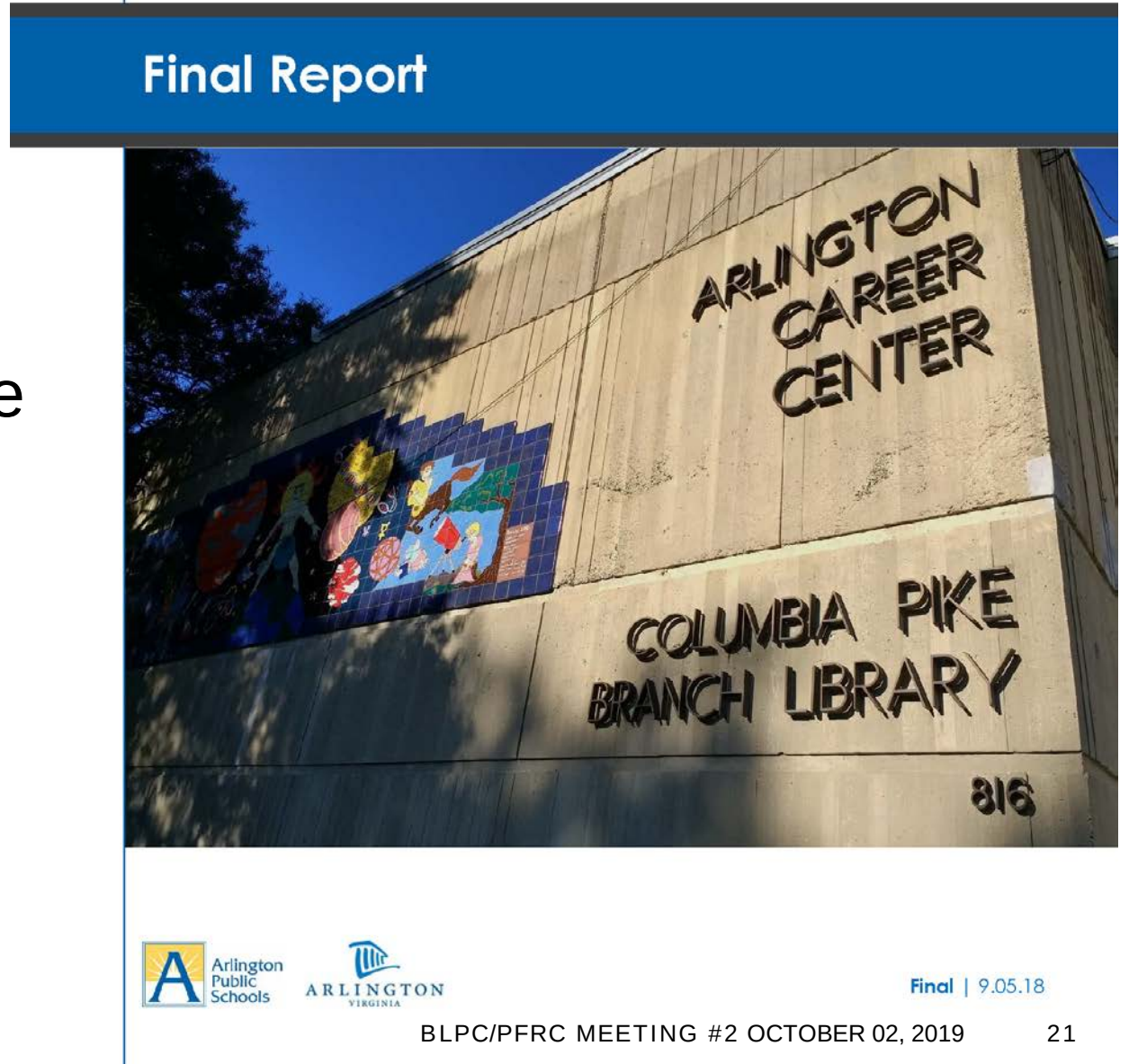
September 24,2019 School Board Work Session on the 2019 Arlington Facilities and Student Accommodation Plan can be found here:

https://go.boarddocs.com/vsba/arlington/Board.nsf/files/BGBTVJ793738/$file/AFSAP%20Work%20Session%20Presentation%209-24-19.pdf

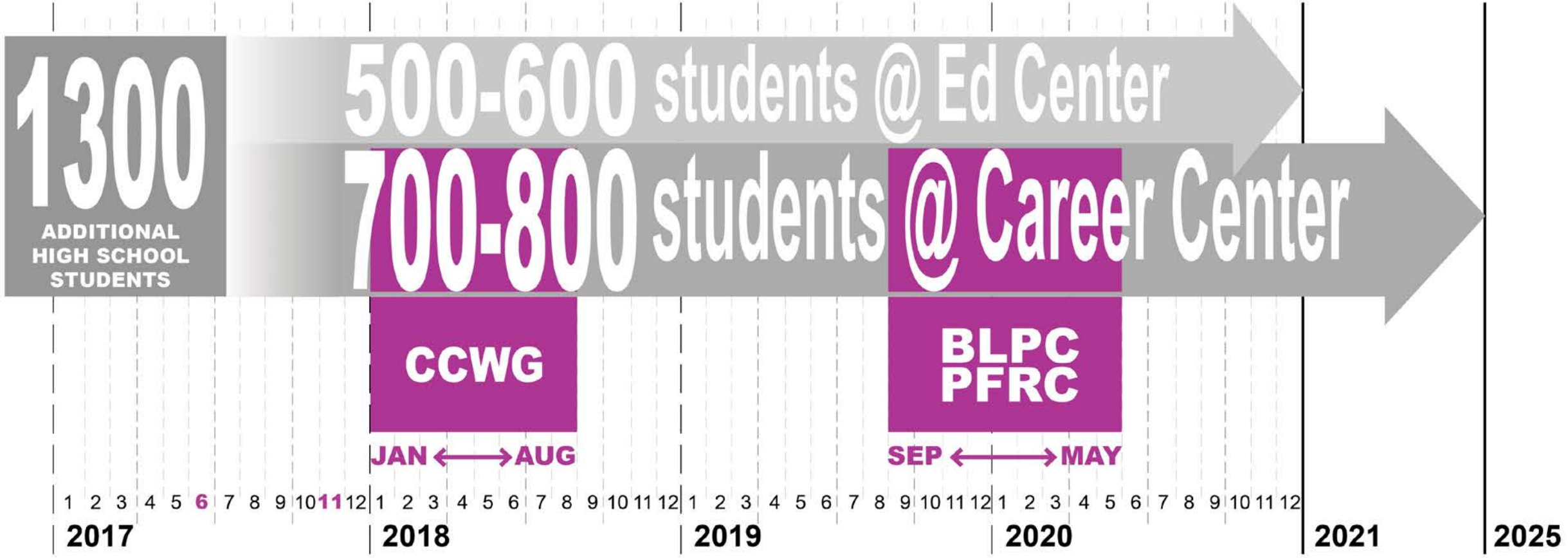
CCWG

‘I would not give a fig for the simplicity on this side of complexity, but I would give my life for the simplicity on the other side of complexity.’

- Oliver Wendell Holmes, Jr.



CCWG: CONTEXT



CCWG: CHARGE

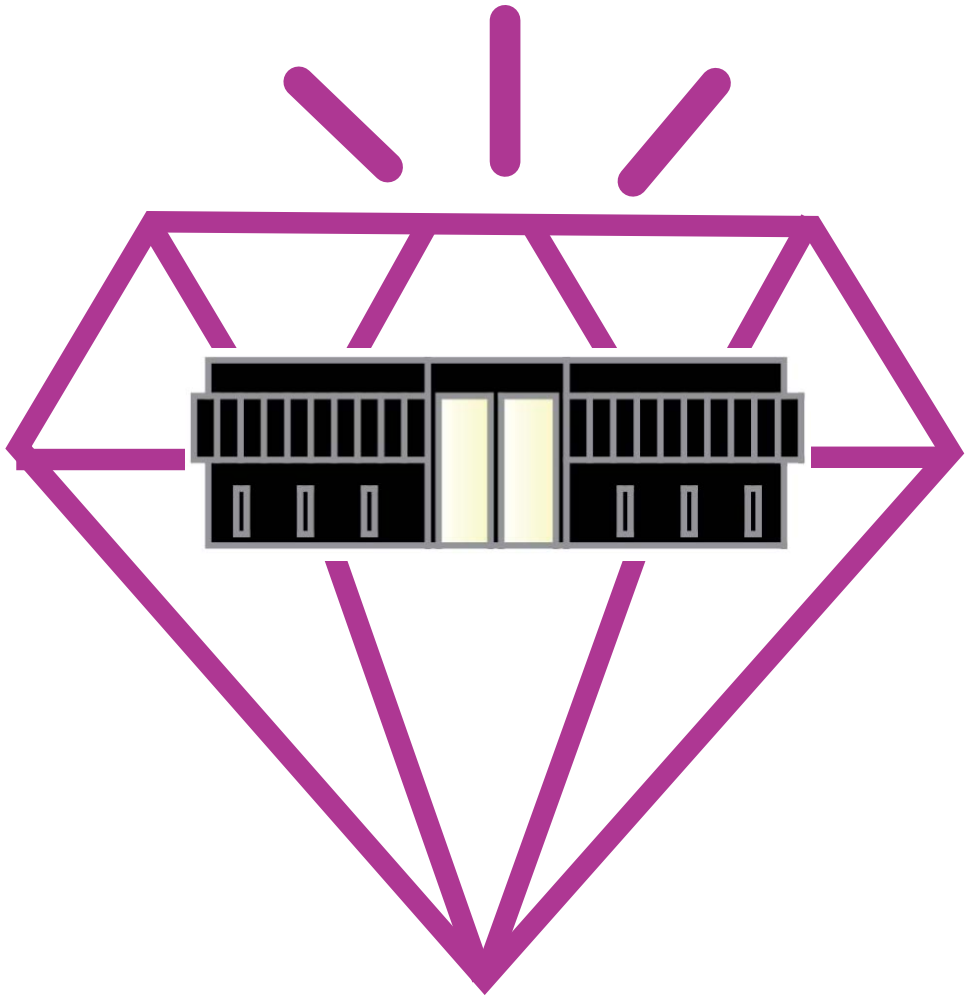
Study Area	Massing & Density	Future Expansion	Additional Amenities
12.5 acre north block 5.3 acre south block	Optimize site to accommodate at least 800 new high school seats	Long - term vision (beyond 10-year CIP) for the campus	Community Use

Facility-Specific Items	Library Subcommittee	Transportation & Parking	Implementation Plans
Site Limitations	Potential relocation of Columbia Pike Library	TDM	Phased approach to development

CCWG - RECOMMENDATIONS: VISION

"Jewel of the Pike"

- Improves upon available community amenities
- Contributes to sense of place on Columbia Pike
- Exhibits architectural character that equals unique, excellent education offered within



CCWG - RECOMMENDATIONS: VISION

‘NEAR TERM’

- 800 new high school seats
- All existing Career Center programs
- Expansion of Arlington Tech
- Arlington Community High School
- Montessori
- Columbia Pike Library

‘LONG TERM’

- 12.5 - acre site becomes a campus serving high school students only
- All existing programs + ACHS
- Columbia Pike Library to remain
- Montessori relocated to a site TBD

CCWG - RECOMMENDATIONS: VISION

'NEAR TERM'

800 new high school seats

All existing Career Center programs

Expansion of Arlington Tech

Arlington Community High School

Montessori

Columbia Pike Library

Highlighted items indicate CCWG recommendations that have been incorporated into the BLPC/PFRC charge for the Expansion of ACC.

CCWG - RECOMMENDATIONS: SITE AMENITIES / OPEN SPACE

‘NEAR TERM’

- One multi-purpose sports field
- Gymnasium
- Black Box Theater
- Auditorium
- Cafeteria
- Underground parking

‘LONG TERM’

- Same indoor/outdoor facilities as the 3 high schools
- Competition fields and spectator seating
- Pool

CCWG - RECOMMENDATIONS: SITE AMENITIES / OPEN SPACE

'NEAR TERM'

One multi-purpose sports field

Gymnasium

Black Box Theater

Auditorium

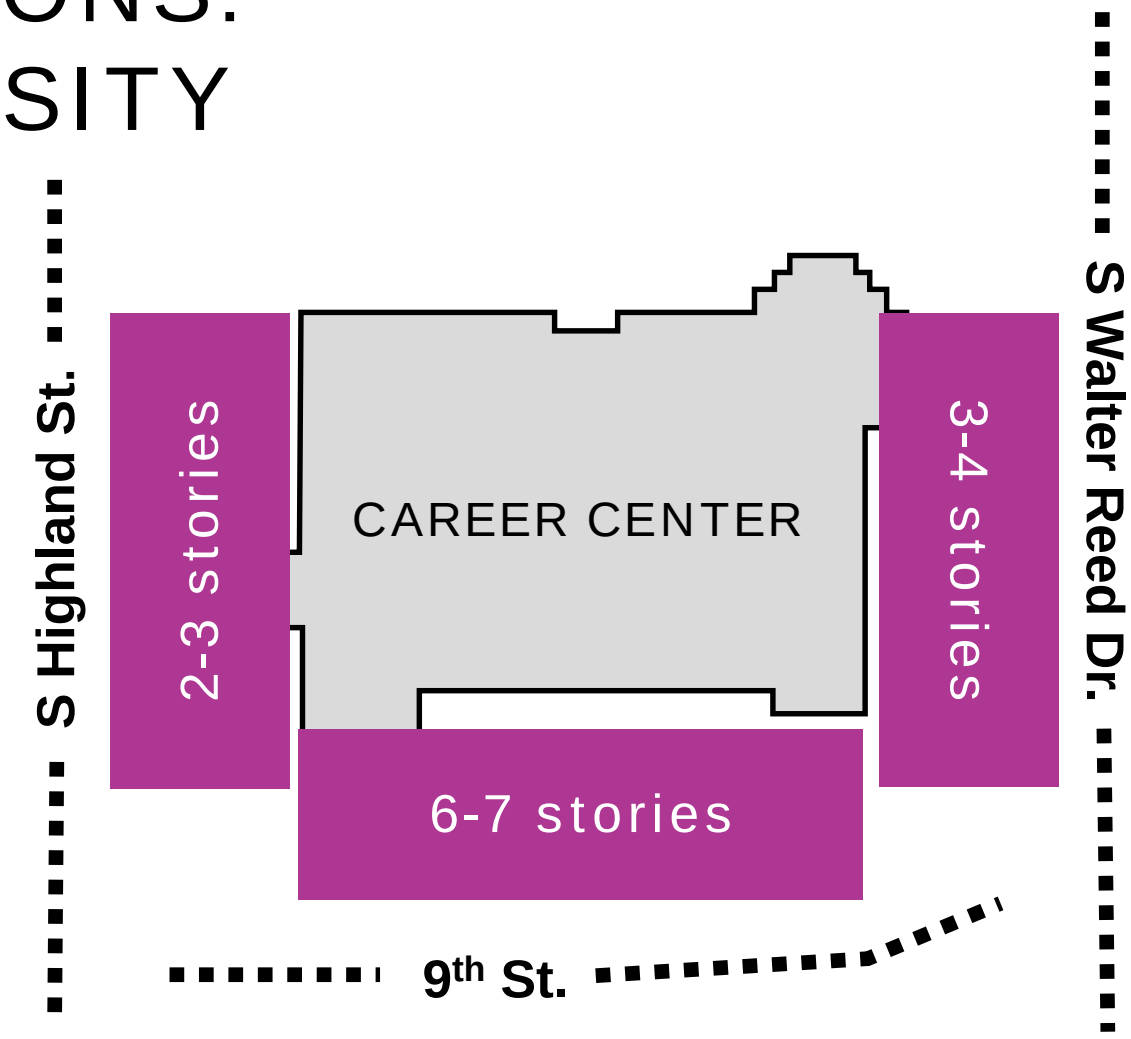
Cafeteria

Underground parking

Highlighted items indicate CCWG recommendations that have been incorporated into the BLPC/PFRC charge for the Expansion of ACC.

CCWG - RECOMMENDATIONS: MASSING & DENSITY

“Under or up, but not out.”



CCWG - RECOMMENDATIONS: BUILDING DESIGN / SUSTAINABILITY

High quality, Cost Effective, Daylit, Flexible, Accessible, Expandable, Energy-Efficient!

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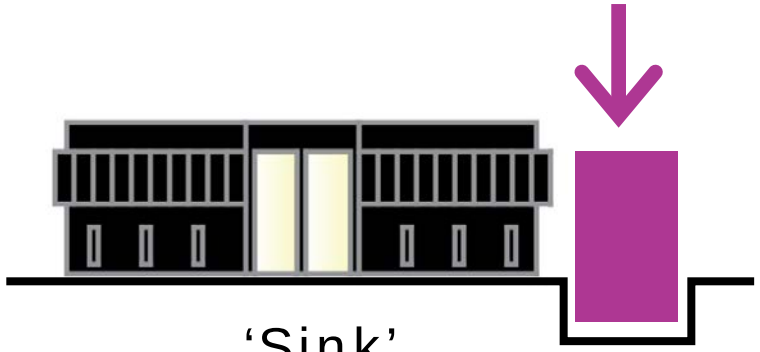

'Sink' high-bay spaces

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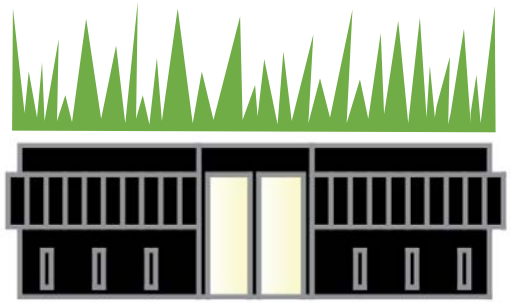


Roof terraces, Green roofs, PV panels

CCWG - RECOMMENDATIONS: SITE PHASING

‘NEAR TERM’

Build underground parking garage with multi-purpose sports field on top

Relocate CTE shops to Highland St., open 9th St. for new building

Build 3rd floor above the Career Center

Multi-story educational facility on 9th St. for new building

‘LONG TERM’

Complete educational expansions

Pool

Relocate Montessori

CCWG - RECOMMENDATIONS: PARKING & TRANSPORTATION, TDM

1	2	3
Assess parking needs for neighborhood and option school	Determine whether robust TDM could reduce overall parking needs	Develop a parking program (mix / balance of on-/off-site, cost, etc.)

CCWG - RECOMMENDATIONS: SOUTH BLOCK PROPERTIES

1	2	3	4
Columbia Pike Library + Cultural Uses	Student Services + Programs compatible with Career Center	Partnerships with local colleges and universities, supporting dual enrollment	ACHS

CCWG - RECOMMENDATIONS: COLUMBIA PIKE LIBRARY

Columbia Pike Library

Remain on campus until it can be relocated.

QUESTIONS?

TRANSPORTATION

Transportation

Career Center BLPC/PFRC

October 2, 2019

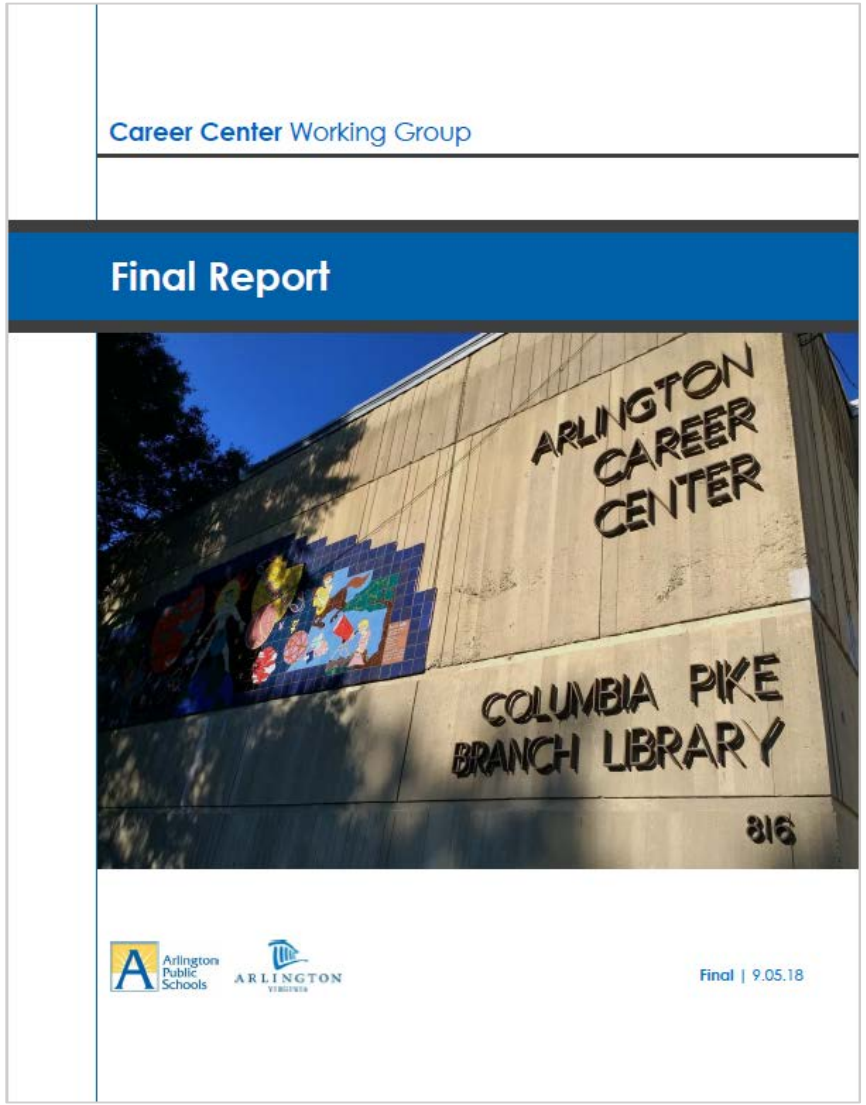
Introduction, Plan, and Goals

CCWG Final Report: Page 14

"Prior to commencement of the BPLC/PFRC process, conduct a comprehensive parking and transportation analysis…

The analysis must:

- Provide an assessment of parking needs for a neighborhood and an option school;
- Study how a robust TDM program could reduce overall parking needs;
- Inform a parking program that includes a balanced mix of on-site and off-site parking and considers costs, site constraints and neighborhood consideration; and
- Determine availability of off-site parking that could reduce the number of spaces needed on the Career Center site."



What have we been up to?

During CCWG:
Limited Existing Conditions Report
⇛Reviewed CC mode splits
⇛Described multi-modal options
⇛Performed traffic and parking counts
⇛Presented traffic capacity analyses

After CCWG:
Expanded upon Existing Report
⇛Met with County staff to review scope
⇛More traffic counts and capacity analyses
⇛More parking counts (incl. off-site garages)

We then analyzed a future scenario
Even though we won't have ed specs or design alternatives for a while, we decided to perform an analysis of a 'future' condition. This would help us gain knowledge about what the potential impacts could be.

We chose to analyze the CCWG near-term recommendations, assuming everyone parked on site, and the same driving/parking rates as today.

Why? – It's the closest we have to a worst-case scenario for traffic/parking (the near-term has a higher population).

The transportation plan:

Before design alternatives begin (today):
⇛Present the knowledge we gained from the existing conditions and CCWG near-term analysis
⇛Review what transportation items we need to focus on during conceptual versus schematic design

During design alternatives (mtgs 6, 7, 8):
⇛Provide quick feedback on alternatives and options
⇛Present pros/cons when alternatives arise
⇛Develop preliminary recommendations

During schematic design:
⇛Analyze selected design alternative in detail
⇛Finalize recommendations
⇛Write a Multi-modal Transportation Analysis (MMTA)

Today's goal:
By the end of today we want the Committees to understand what transportation decisions will be the most important during the development of design alternatives, and our initial thoughts on how major transportation elements should be aligned.

And provide responses to the CCWG final report.

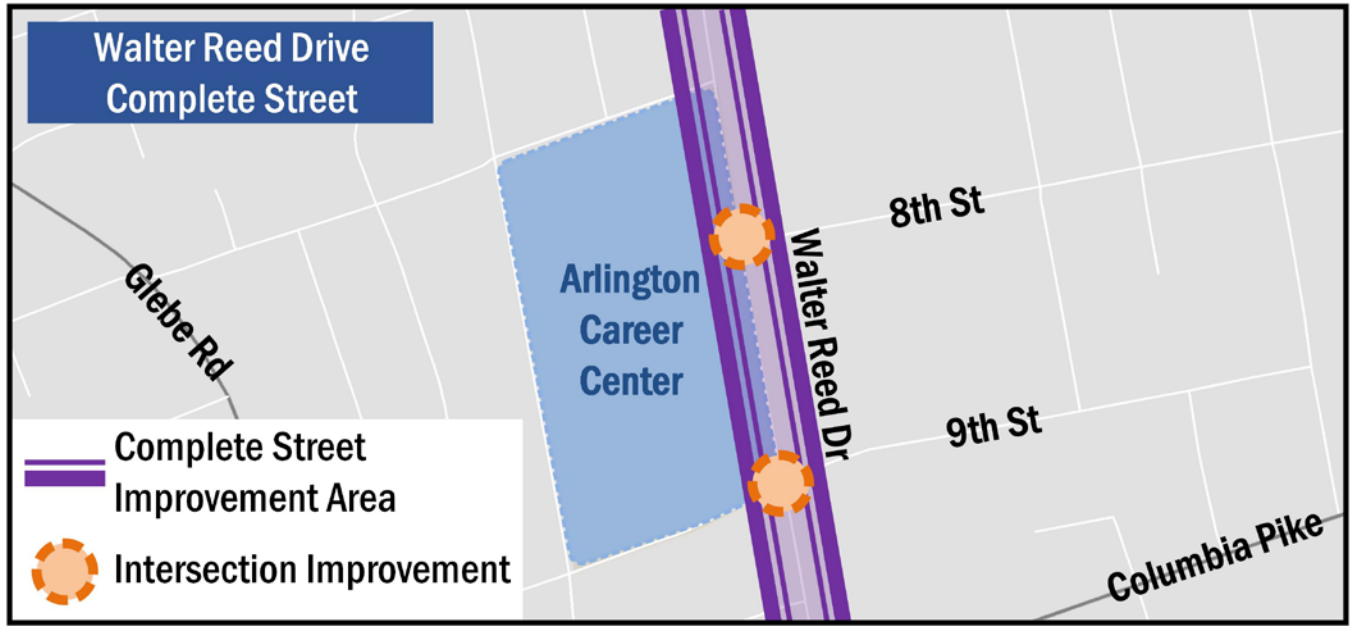
Topic		Conceptual Design	Schematic Design
	Transportation Demand Management (TDM)	Set targets, identify high-level policies that influence demand	Provide specific details (e.g. bike parking)
	Multi-Modal Connections	Review pedestrian, bicycle, and transit facilities nearby	Review connections between buildings and facilities
	Parking	Determine amount of spaces needed, develop general strategy for parking location and access	Design parking lots and assign spaces for each user type
	Traffic	Develop general strategy of where site access will be, review potential traffic impacts	Finalize recommendations on traffic mitigations
	Bus Loading/Unloading	Identify location for bus loading/unloading	Develop specific recommendations to accommodate turns and queuing for students boarding/alighting
	Parent Drop-off/Pick-up	Identify locations and general strategy	Develop specific recommendations (e.g. signing and marking changes)
	Loading/Deliveries	Identify general location	Perform truck maneuvering analysis and detailed loading dock design

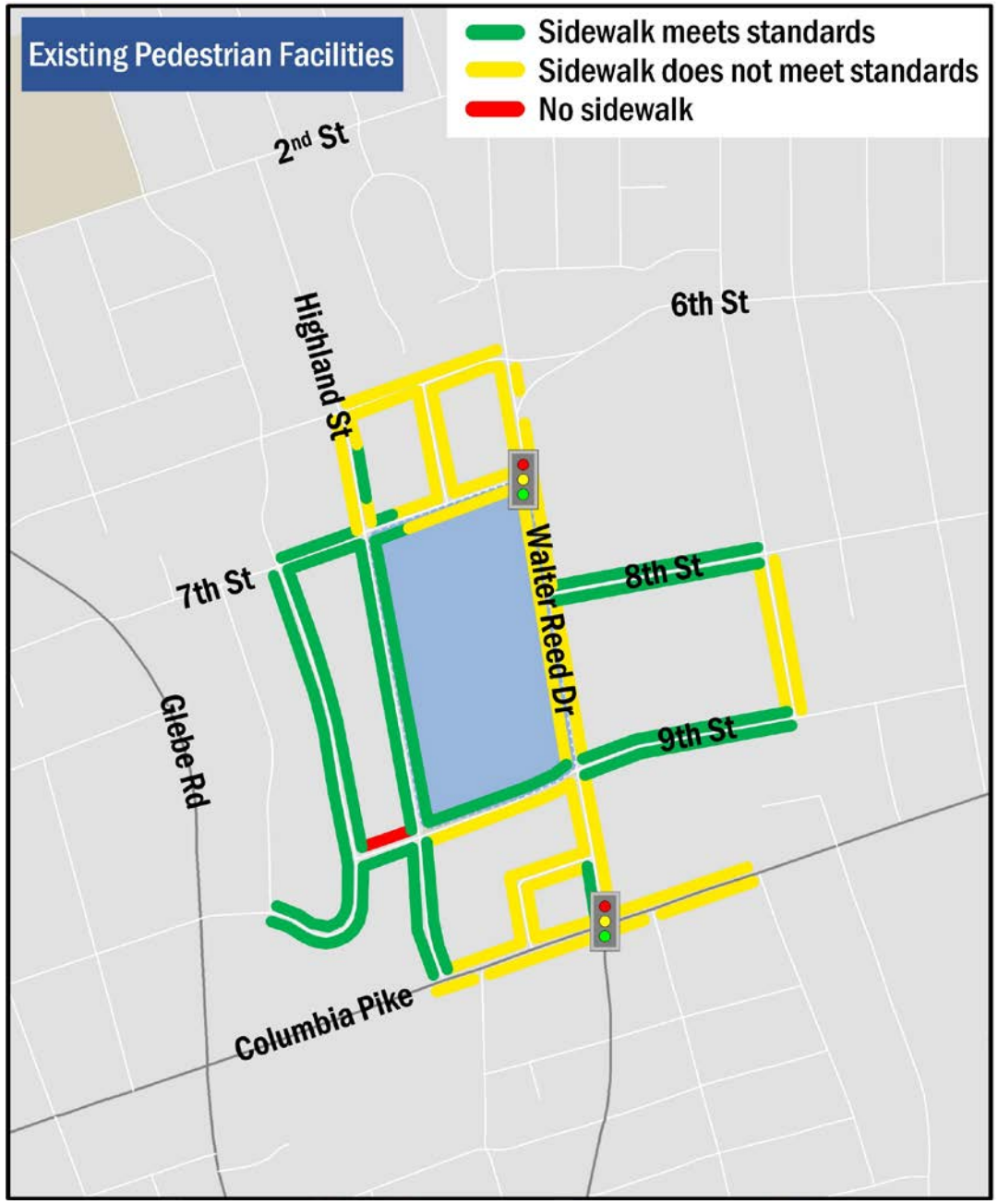
Multimodal connections & TDM

Pedestrian

The CC is in an area with a quality walking environment. There are sidewalks present surrounding the CC and signalized crossing points along Walter Reed Drive at 7th Street and Columbia Pike.

Pedestrian improvements will be provided as part of the **Walter Reed Drive Complete Street** project. This will bring all crossings up to standards and reduce crossing distances at 8th and 9th Street, creating a pedestrian-friendly environment.



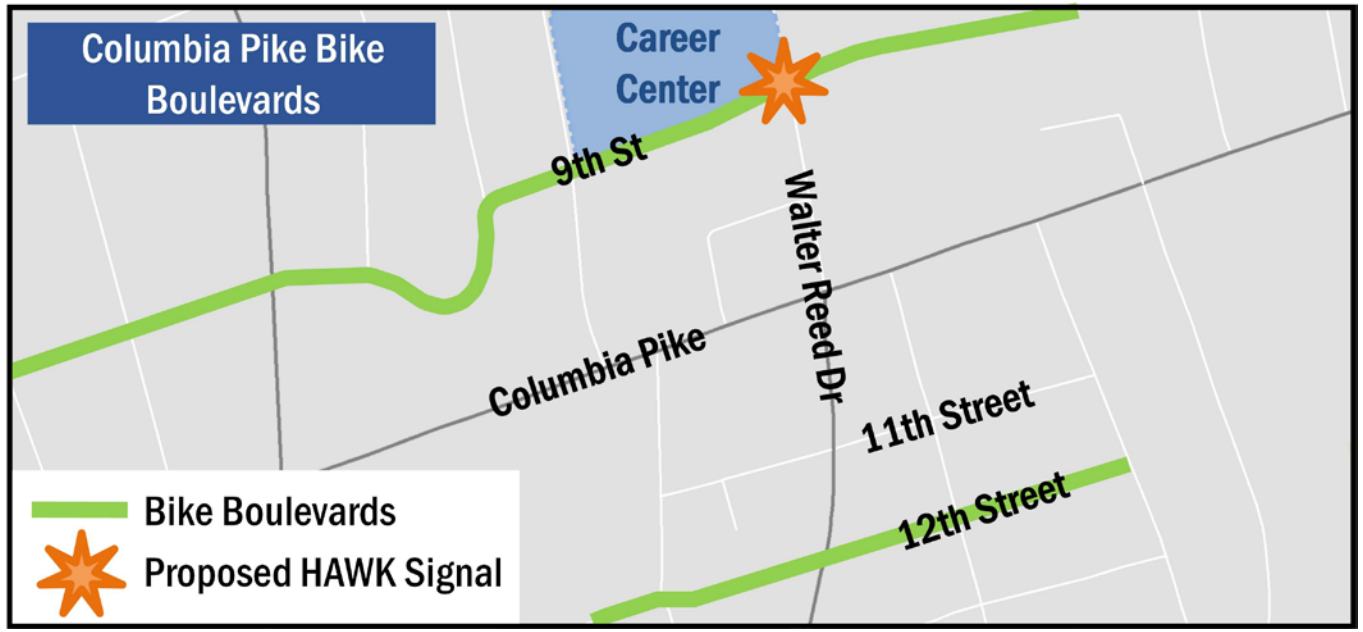


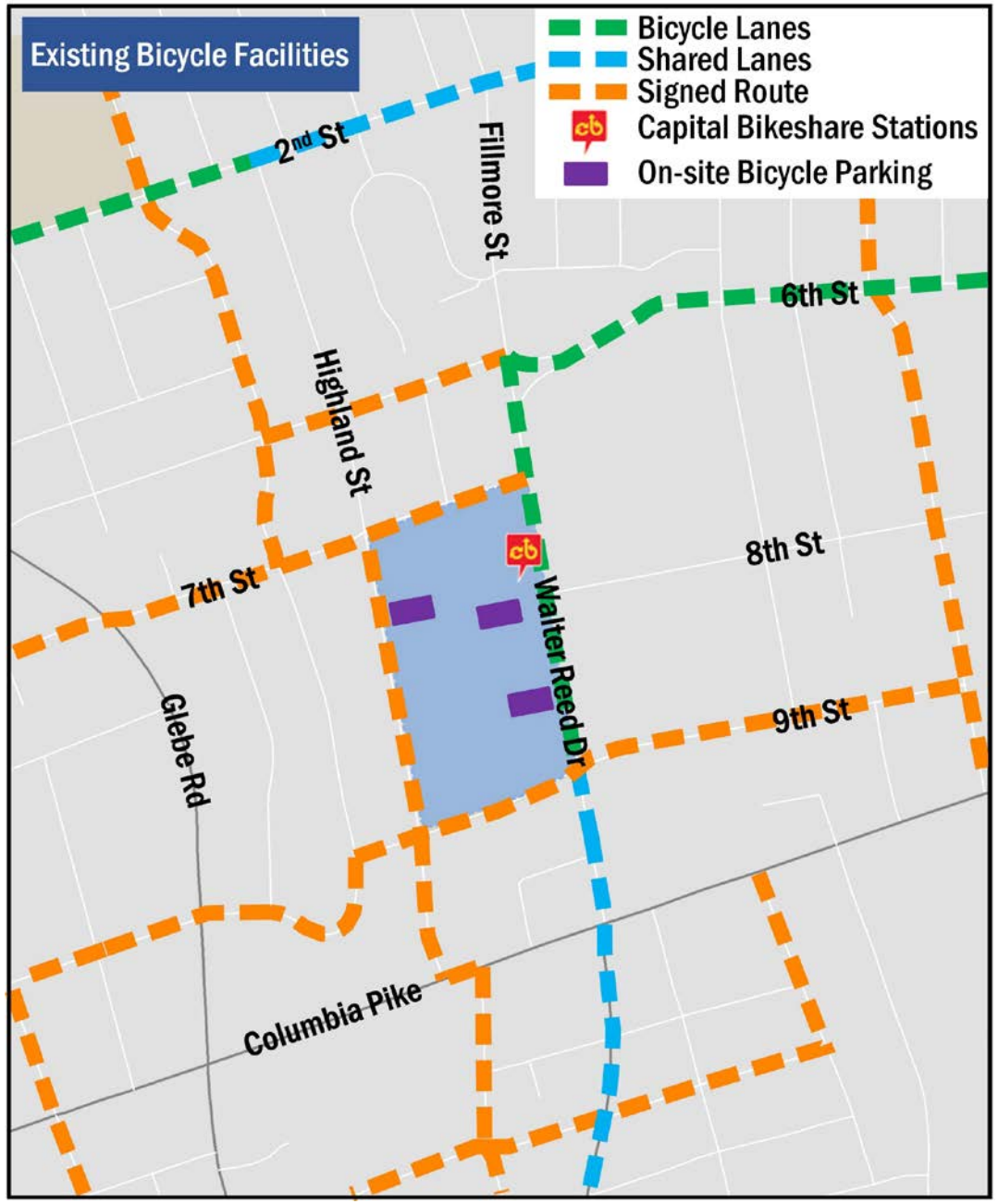
Bicycle

There are **bicycle lanes** along Walter Reed Drive, 2nd Street, and 6th Street. Other **bicycle-friendly roads** surround the CC. Additional amenities include:

- 50 on-site bicycle parking spaces
- A 12-dock Capital Bikeshare station on Walter Reed Drive

Bicycle improvements will be provided as part of the **Columbia Pike Bike Boulevards**. This will supplement the lack of facilities along Columbia Pike with parallel bike boulevards along 9th Street and 12th Street.

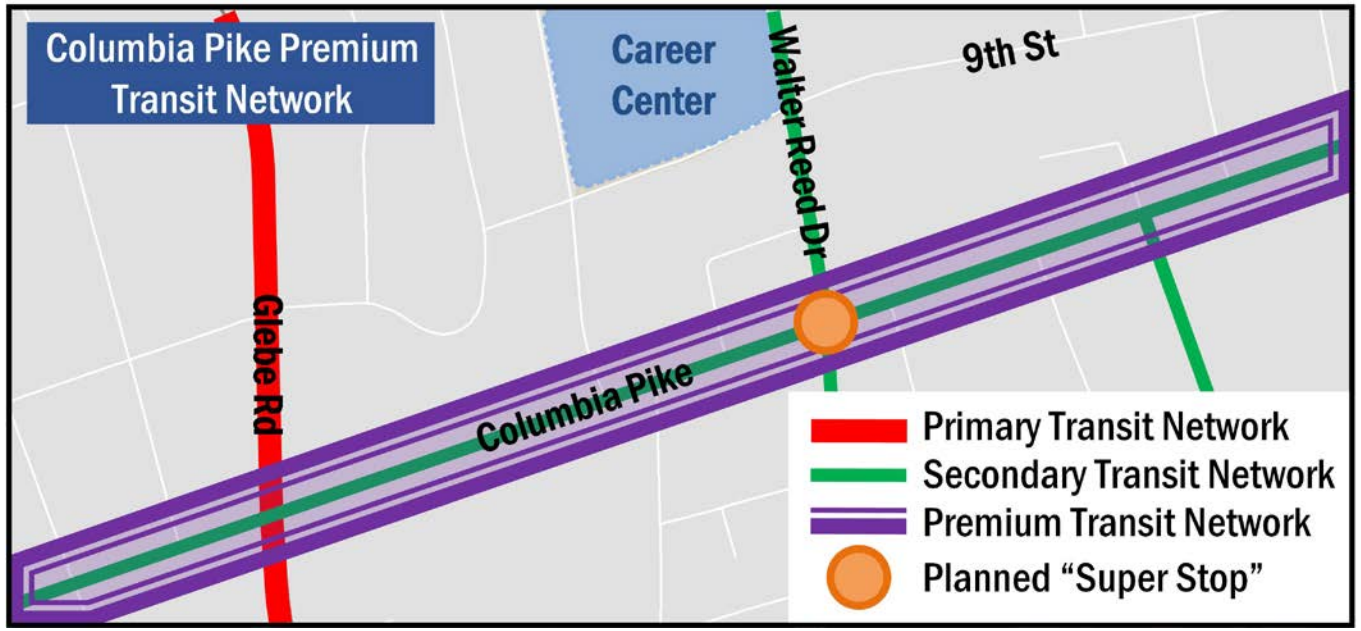


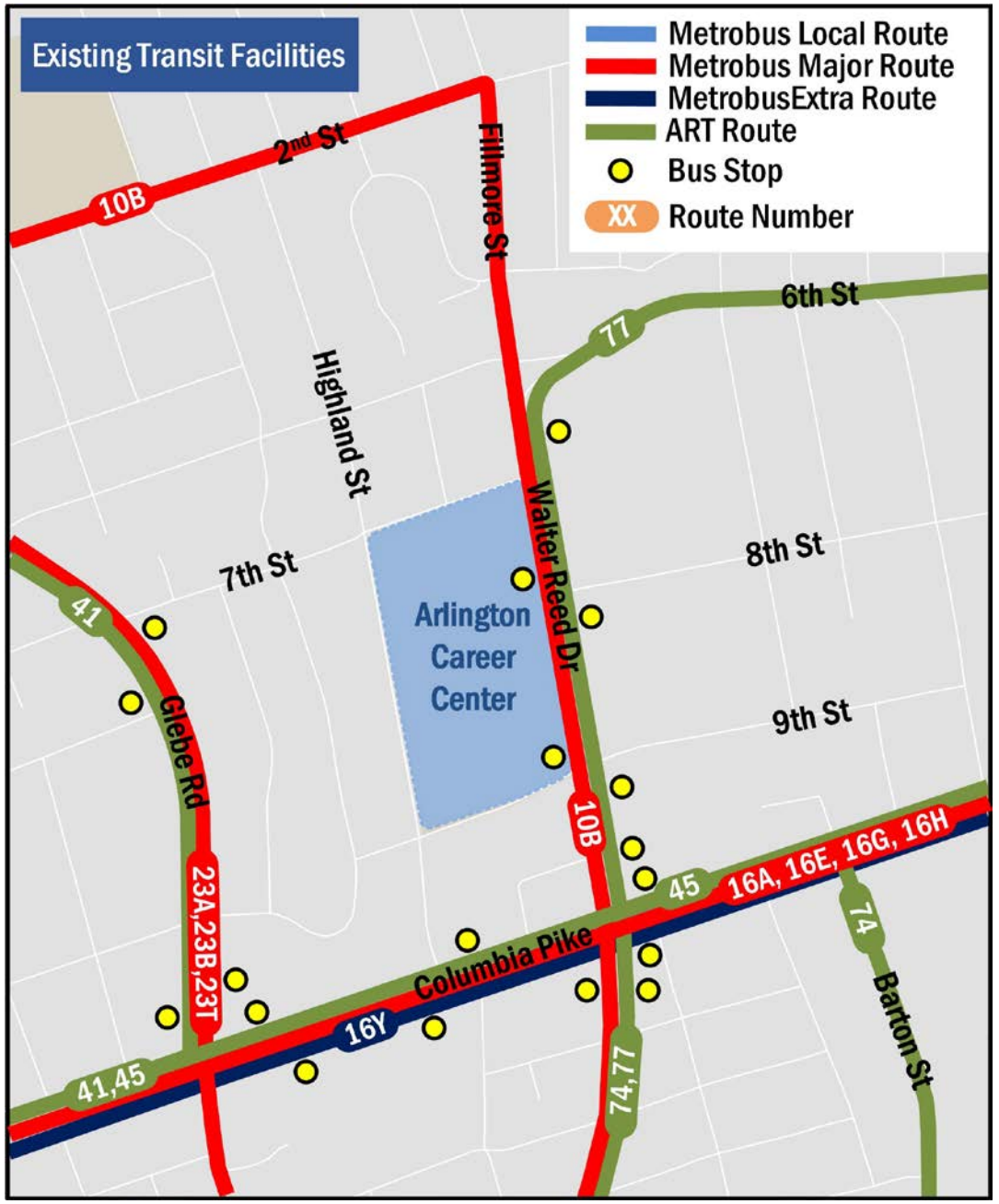


Transit

Ample bus service to/from the CC is provided by both **ART** and **Metrobus**. The majority of bus routes travel along Columbia Pike, but routes also travel along Walter Reed Drive and Glebe Road.

Transit improvements will be provided as part of the **Columbia Pike Premium Transit Network**. In addition to increased connectivity, this will also provide enhanced bus stops and efficiency.





Takeaways for Design Alternatives

Orient on-site multi-modal facilities towards Walter Reed Drive and 9th Street

Orient vehicular activity towards Highland & 7th or on-site, to minimize conflicts and increase safety for all modes

Bike parking on CC should be spread out in multiple locations

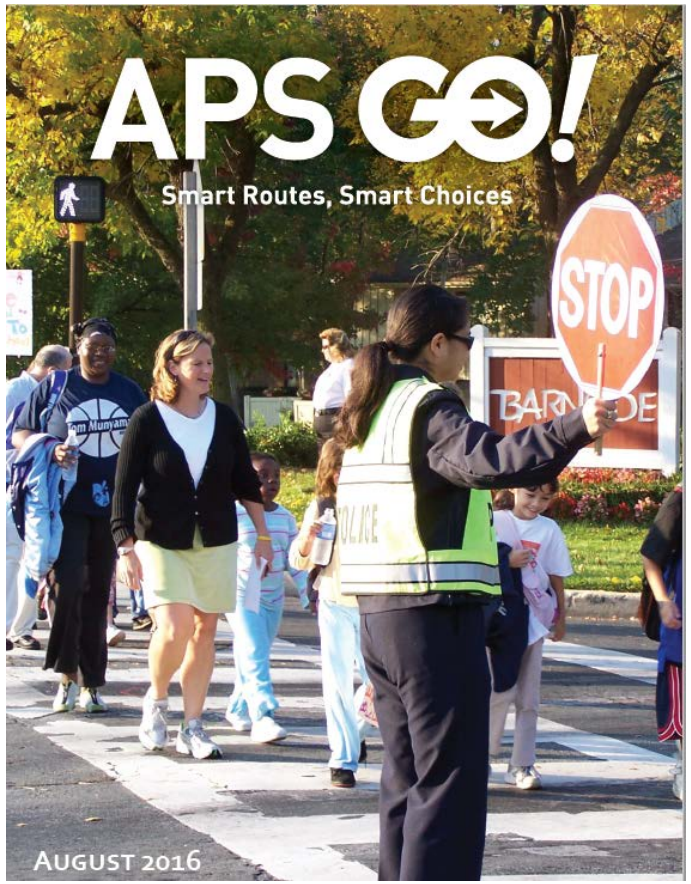
What is Transportation Demand Management (TDM)?

The congestion of any transportation system is based on the capacity of its **supply** and the **demand** it accommodates.

TDM is a set of policies, strategies and operational measures that target the **demand** side of this equation.

They attempt to reduce demand by:

⇛Transferring demand from cars to other modes
⇛Increasing the amount of passengers/car
⇛Spreading out demand over time
⇛Spreading out demand over space



APS Go! is the TDM program for APS

APS Go! – Programs and Targets

APS Go! is the TDM program for APS. The program focuses on the needs of students and staff, while considering the interests of the surrounding communities.

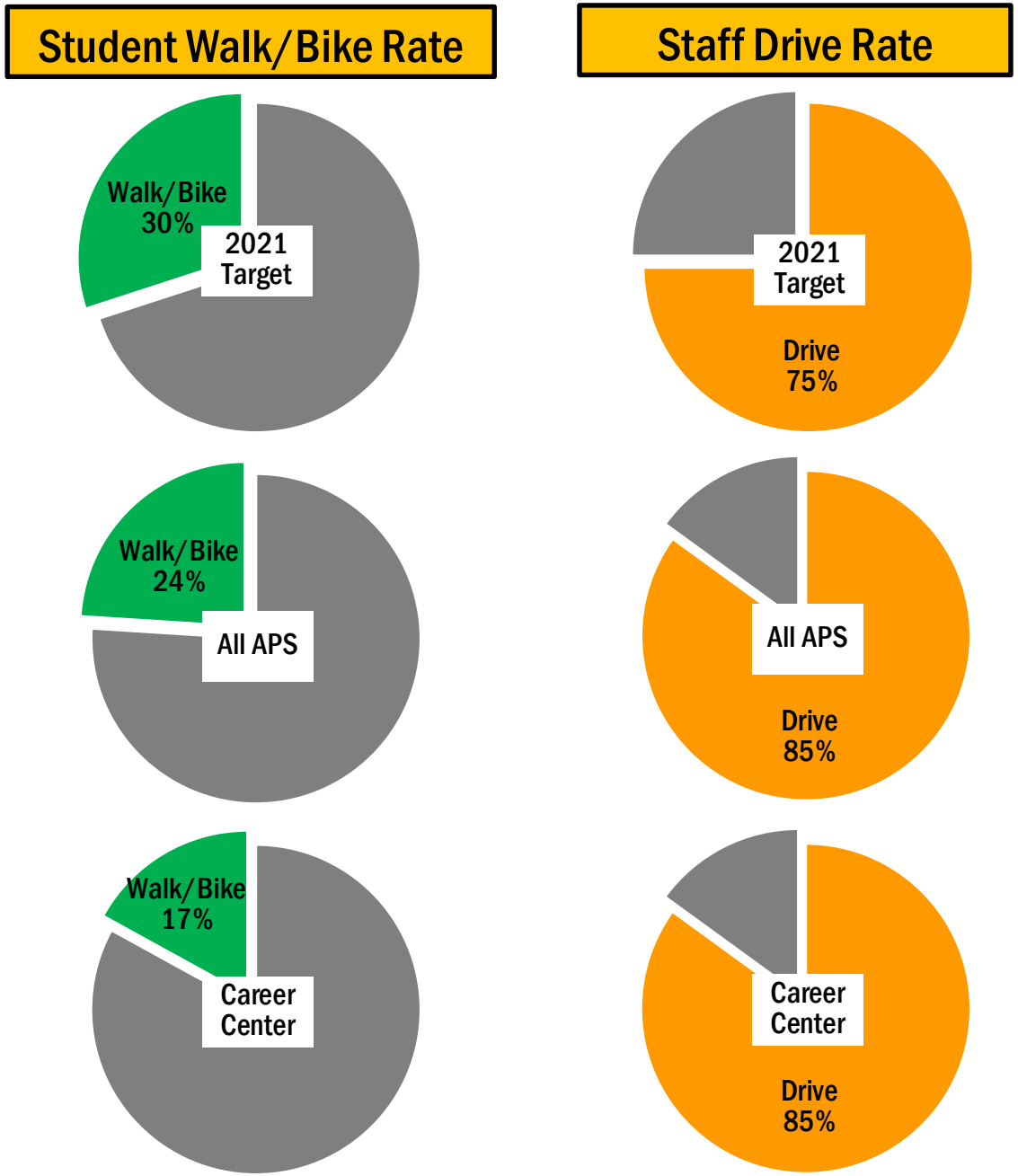
What is currently offered?

For Students:

- iRide (SmarTrip card for students offering discounted fare on ART buses)

For Staff:

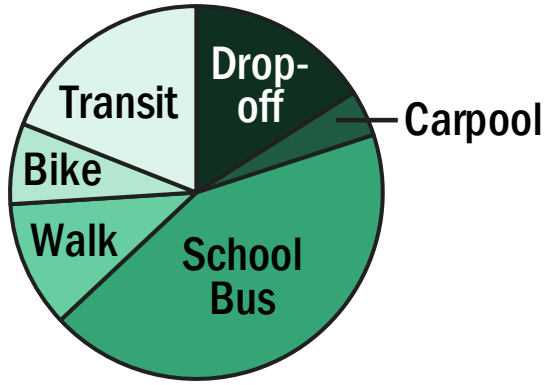
- Free Capital Bikeshare membership
- Commuter Connections
- Carpool Community
- Vanpool Connect
- Guaranteed Ride Home



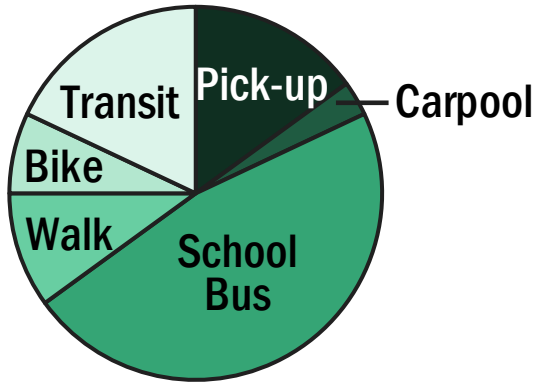
Existing Mode Splits: CC Students

Grades 9 & 10

Morning



Afternoon



Most students travel to/from school using the school bus (~45%)

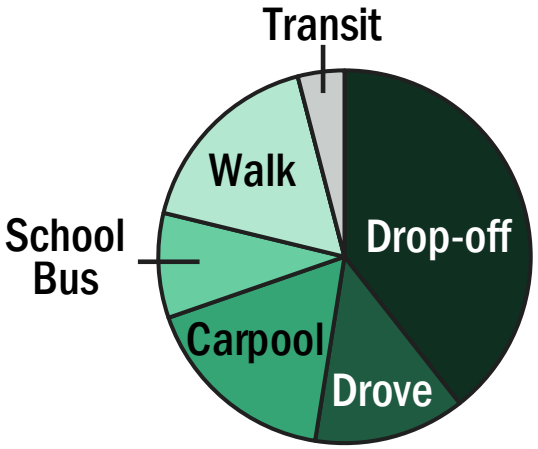
~20% of students are car passengers

~20% of students use public transit

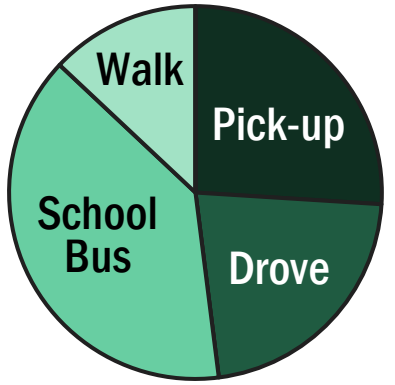
~15% of students bike or walk

Grades 11 & 12

Morning



Afternoon

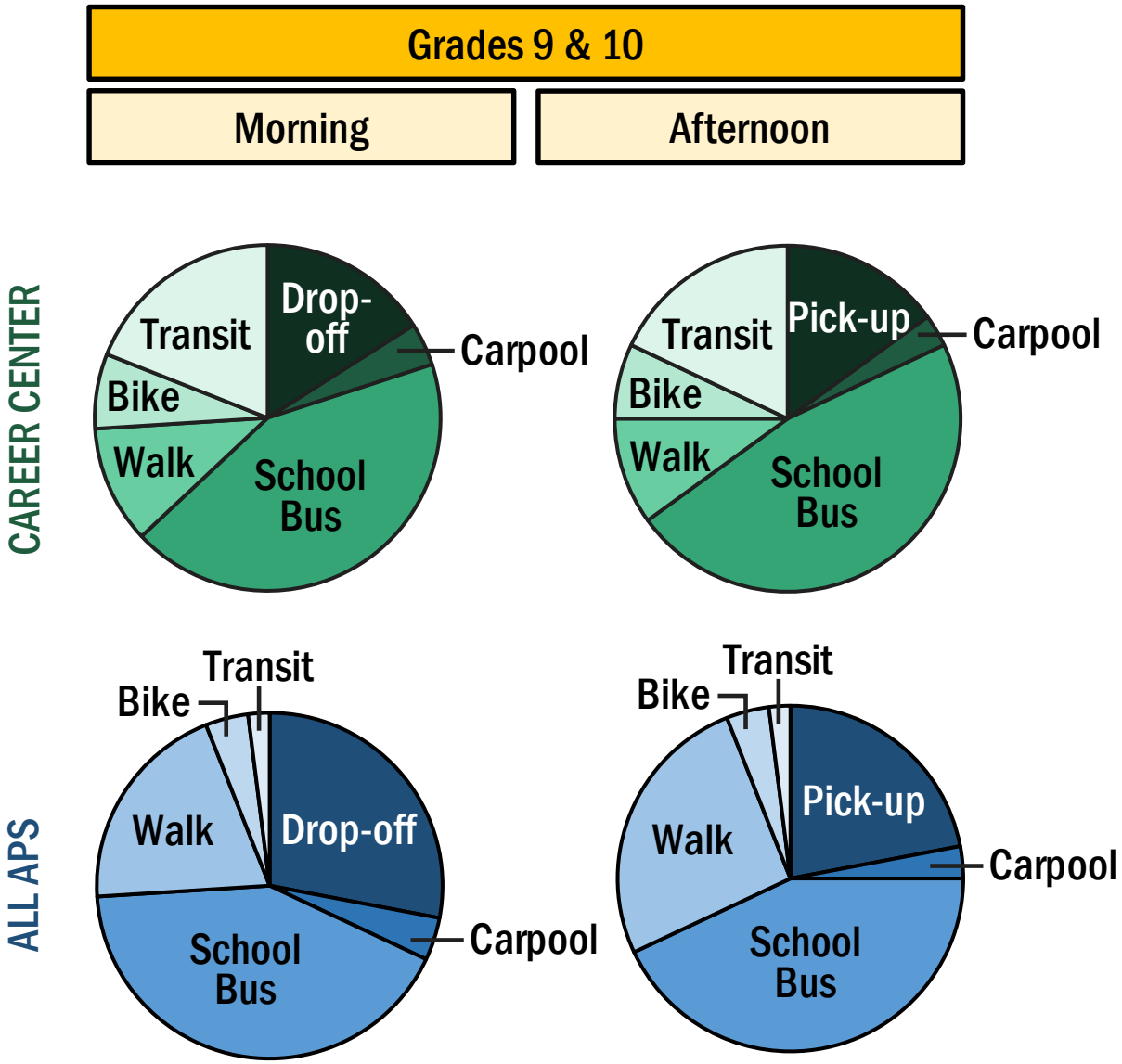


Morning and afternoon mode splits vary:

- The percentage of students that ride a school bus is lower in the morning (9%), while the number getting dropped-off is higher (39%)
- More students take the school bus in the afternoon (39%)

Less than ¼ of students drive and park

Existing Mode Split Comparison: County-wide (Grades 9 & 10)



There are several differences between CC and all APS travel modes:

- CC drop-off/pick-up is lower (~15% vs ~25%)
- CC use of transit is significantly higher (18% vs 2%)
- Fewer students at the CC walk to/from school (10% vs 20%)
- CC bicycle use is slightly higher (7% vs 4%)

Increased transit and bicycle use is likely due to the quality transit options and bicycle routes surrounding the CC campus

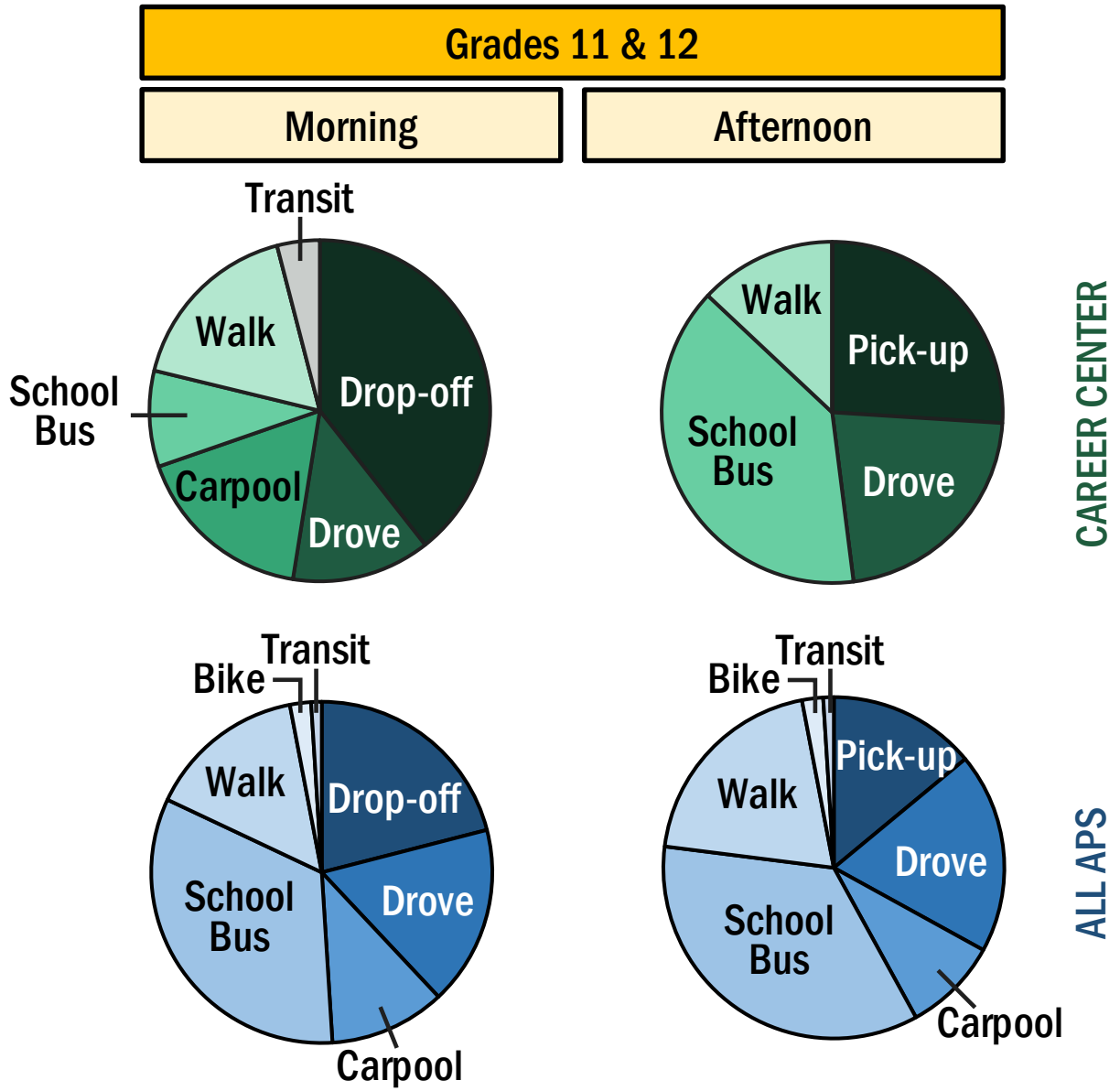
Existing Mode Split Comparison: County-wide (Grades 11 & 12)

The percentage of driving and walking students are similar to the APS averages

Both the CC and APS averages show low bicycle and transit use

However, there are significant differences between CC and all APS travel modes:

- CC school bus use is lower in the morning (9% vs 33%)
- Number of students getting dropped-off in the morning is much higher at the CC (39% vs 21%)



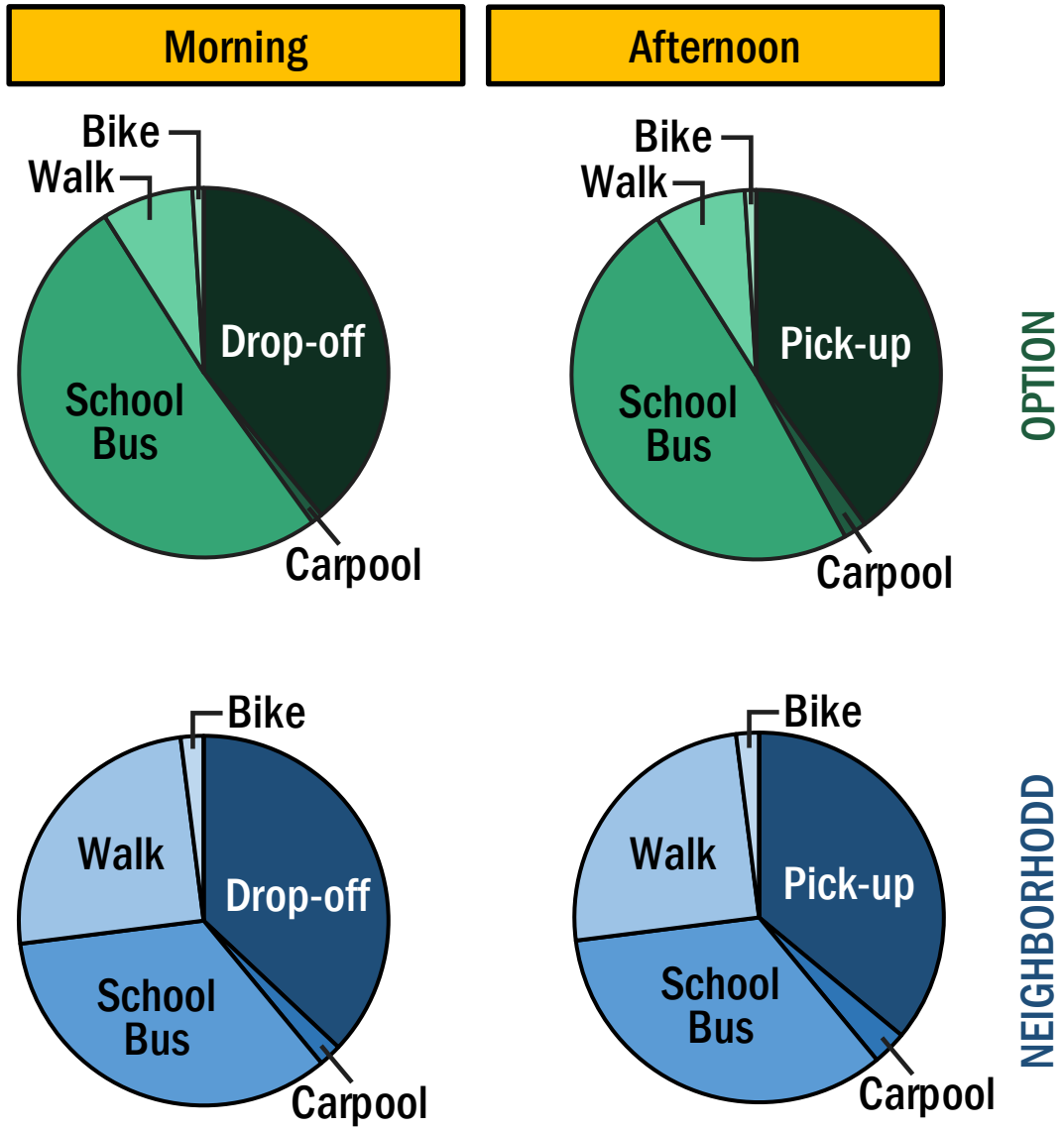
Existing Mode Split Comparison: Option versus Neighborhood Seats

To demonstrate the differences between option and neighborhood seats, average mode splits for option and neighborhood elementary school students were compared

The major difference is the number of students that walk/bike instead of take the school bus:

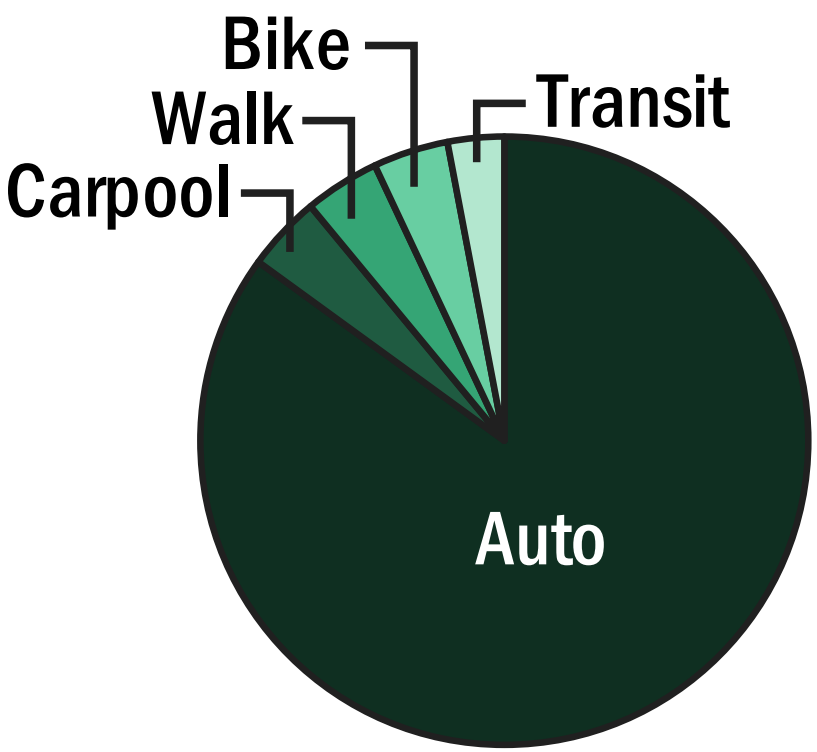
- Nearly 50% of students take the school bus at option schools, versus 34% at neighborhood schools
- Instead, more students walk/bike at neighborhood schools (27% vs 9%)

The percentage of students that are dropped-off/picked-up are generally consistent, at about 40%

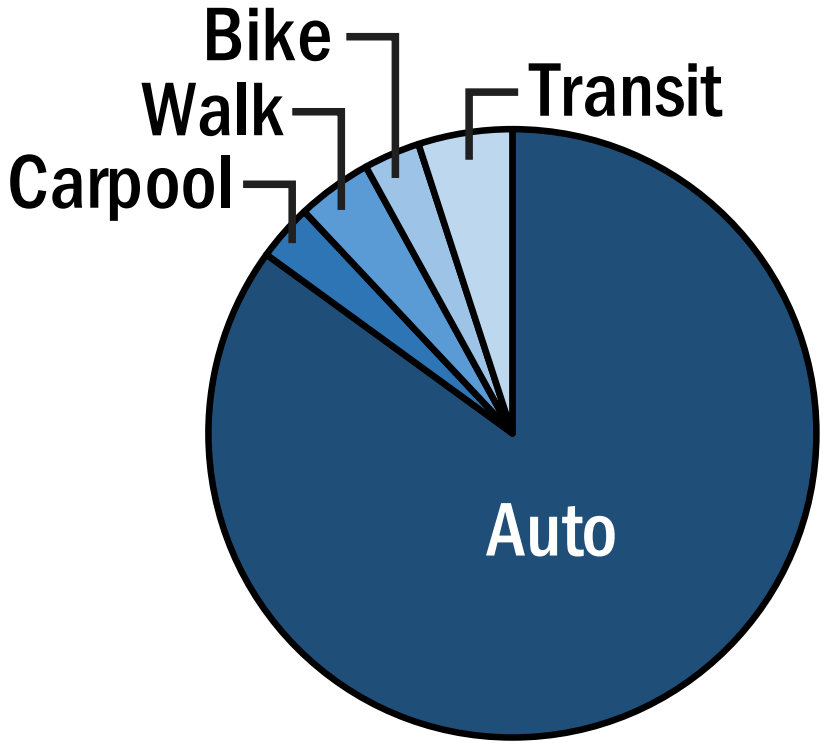


Mode Split Comparison: Staff

Career Center Staff



All APS Staff



Mode splits for CC staff are very similar to staff mode splits across all APS staff, with **85% of staff that drive**

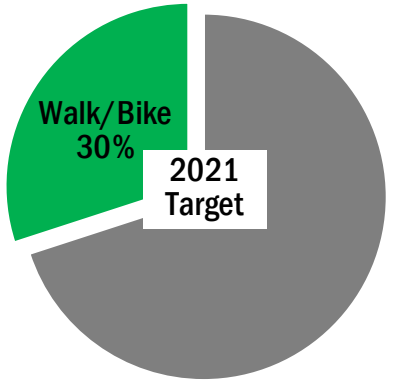
Mode Splits: Targets for CC?

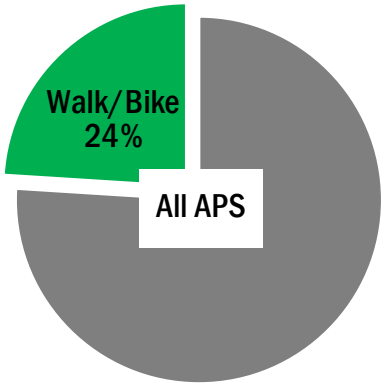
The student walk/bike target of 30% may be difficult to achieve if CC programs are option.
⇛Instead, a target for walk/bike/public transit (45%), may be more appropriate

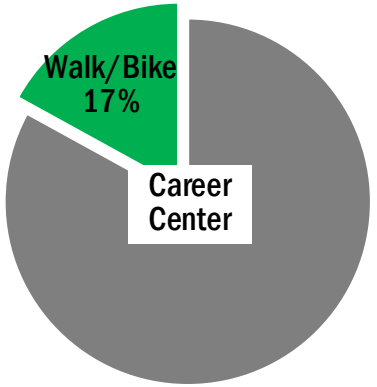
We also should consider a student (11th and 12th grade) target for driving
⇛A reasonable target could be 10%, given a significant focus of TDM towards this goal

The staff drive alone target of 75% seems reasonable given trends since APS Go! started.
⇛May require change in staff parking policies

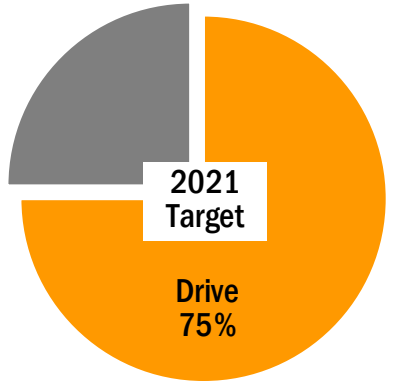
Student Walk/Bike Rate

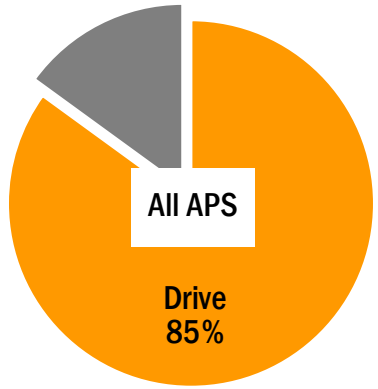


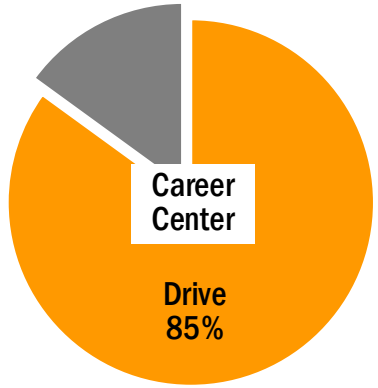




Staff Drive Rate







TDM Takeaways

Existing mode splits show that multi-modal planning should focus on public transit and cycling.

Presence of quality multi-modal options allows for other TDM strategies to be more effective (e.g. charging for parking).

TDM targets can be incorporated into parking and traffic analyses – what targets are appropriate?

Parking

Analysis performed to date

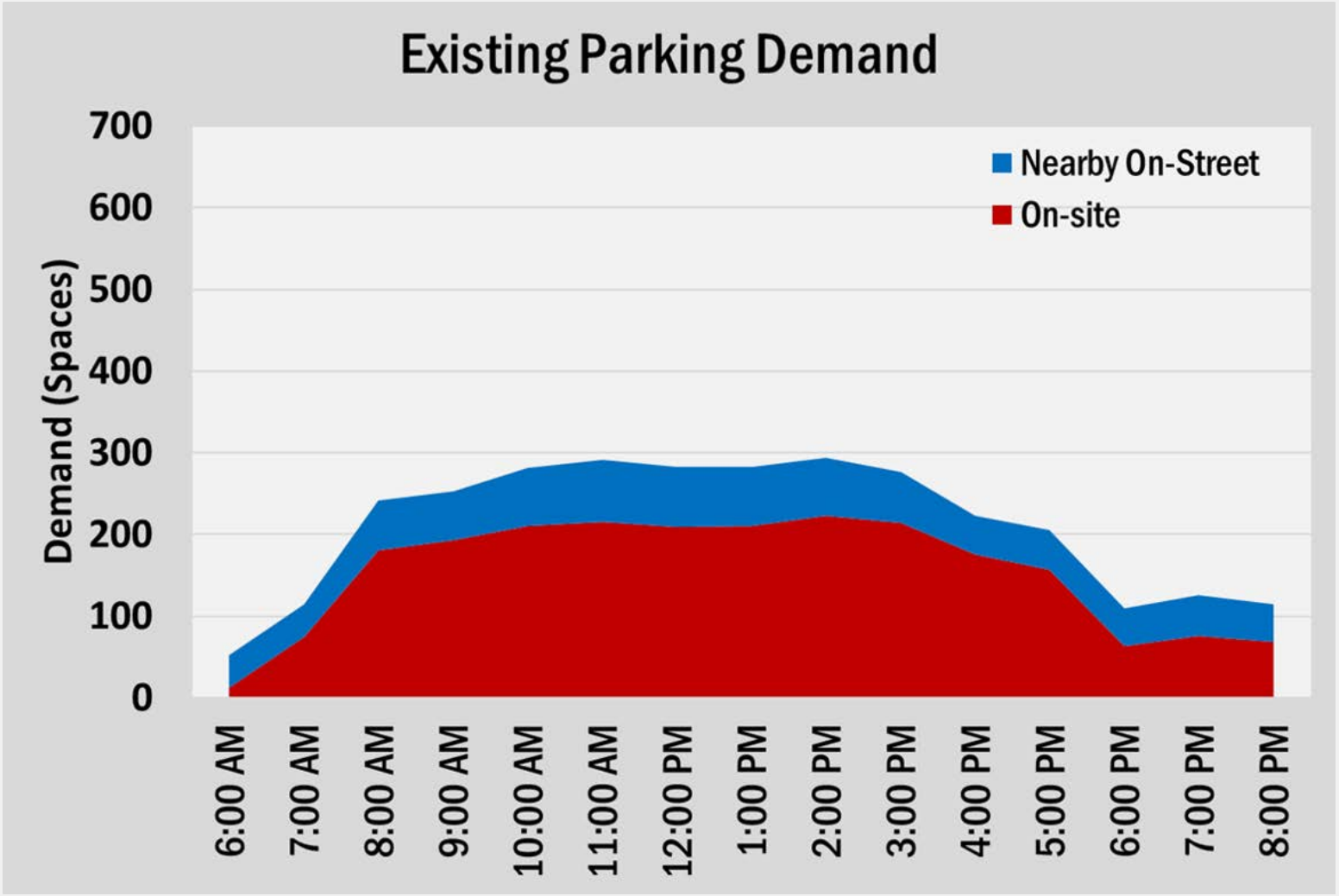
- Examined trends in on-street parking to identify CC-parking demand accommodated on-street
- Built a parking model to estimate CC demand
- Used that model to calculate demand of CCWG near-term program
- Reviewed potential supply for the calculated demand
- Identified the main parking decisions we will have in Design Alternatives

A detailed summary of the parking data and analysis is included as an appendix to this presentation (and will be included on the project website).

Existing Parking Demand

Based on the usage on a block by block level over time, we identified likely CC parkers on-street. We then added that to get the total existing CC parking demand (around 300 spaces).

The next step was to create a parking model that replicates this curve, which would then be used to project future parking demand.



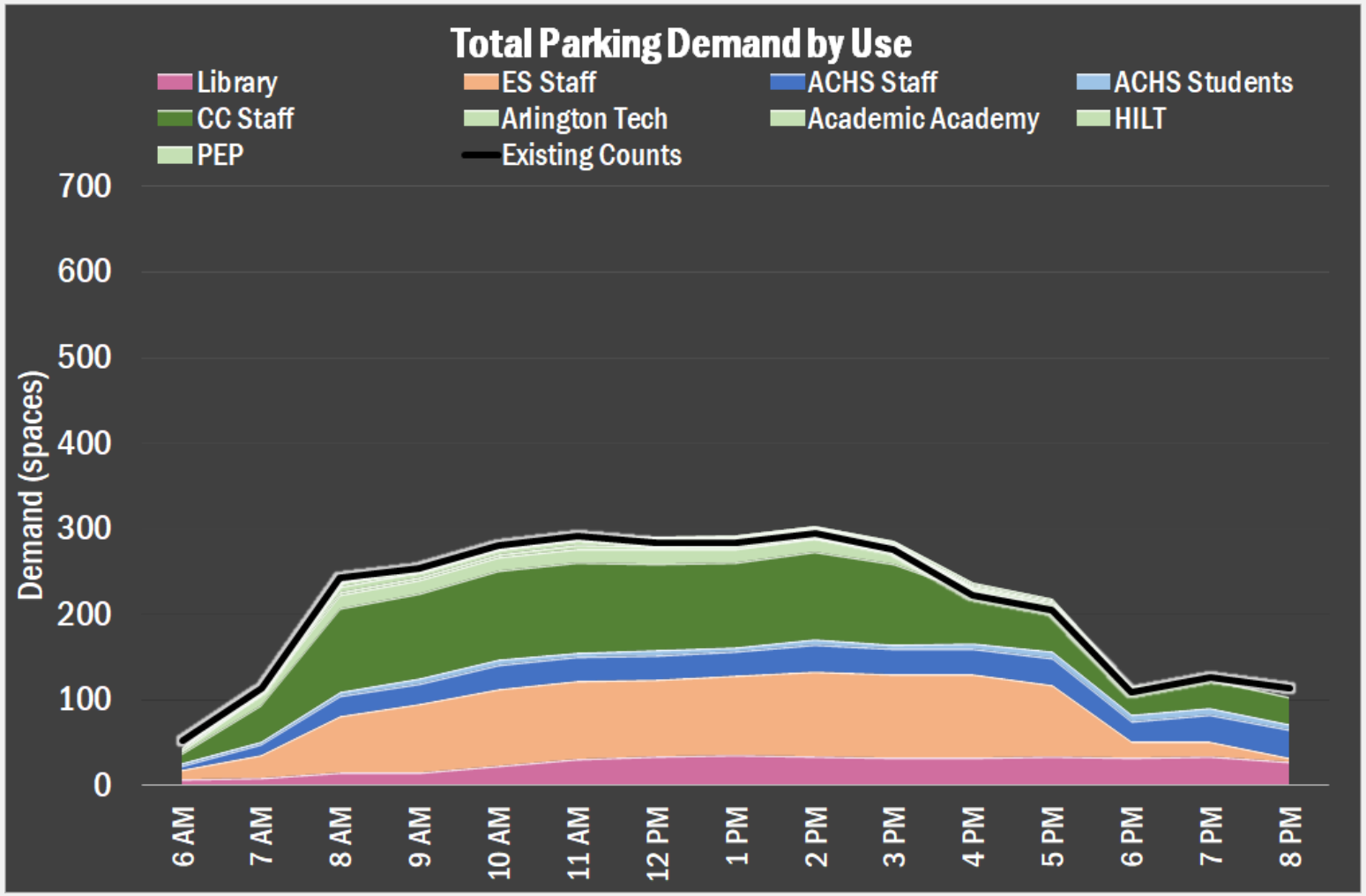
Parking Model

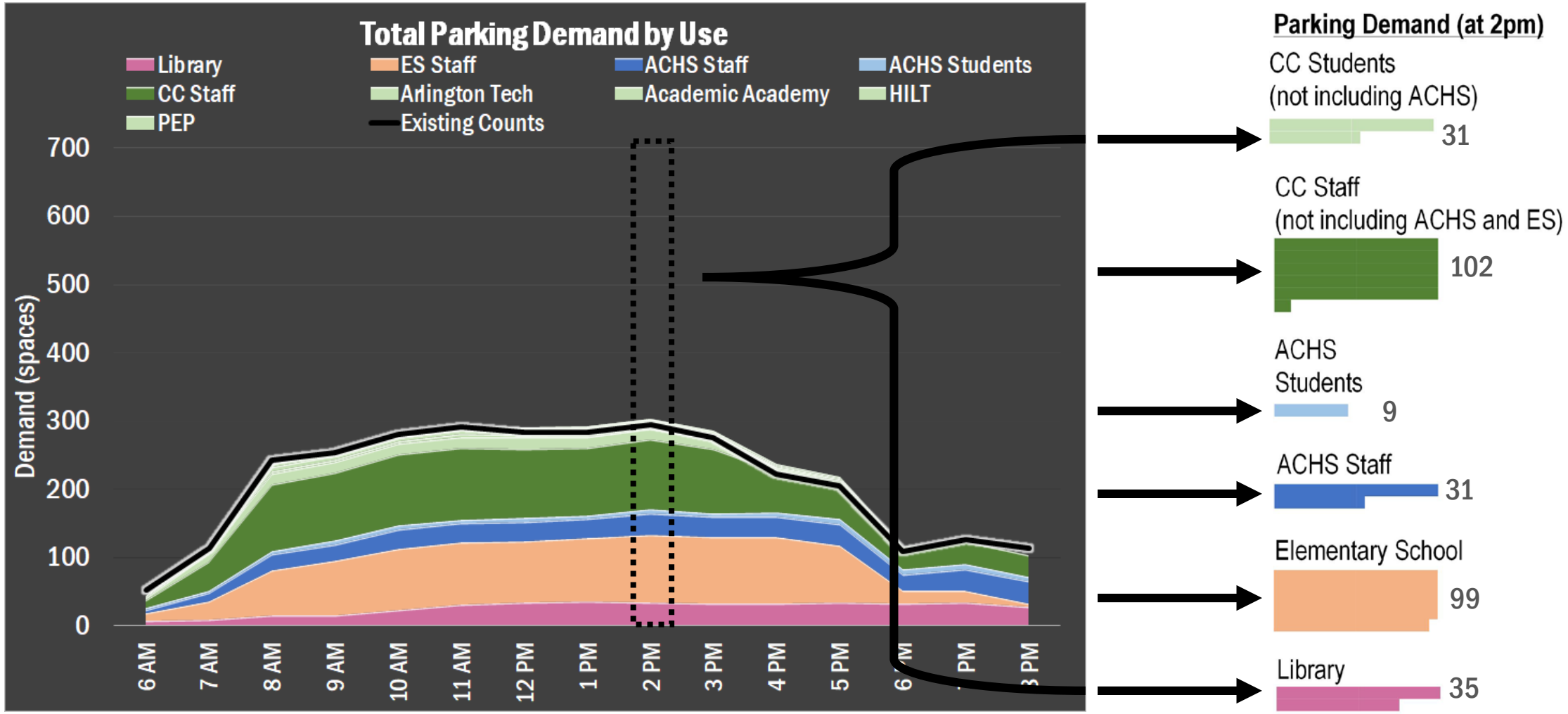
The parking model is broken down by CC user-types with distinct profiles.

Model gets close to replicating existing counts

- Overestimates slightly, but we're okay with that

Major component is school staff – 76% of parking demand.




Total Parking Demand by Use
Library
ES Staff
ACHS Staff
ACHS Students
CC Staff
Arlington Tech
Academic Academy
HILT
PEP
Existing Counts
Demand (spaces)
700
600
500
400
300
200
100
0
6 AM
7 AM
8 AM
9 AM
10 AM
11 AM
12 PM
1 PM
2 PM
3 PM
4 PM
5 PM
Parking Demand (at 2pm)
CC Students
(not including ACHS)
31
CC Staff
(not including ACHS and ES)
102
ACHS
Students
9
ACHS Staff
31
Elementary School
99
Library
35

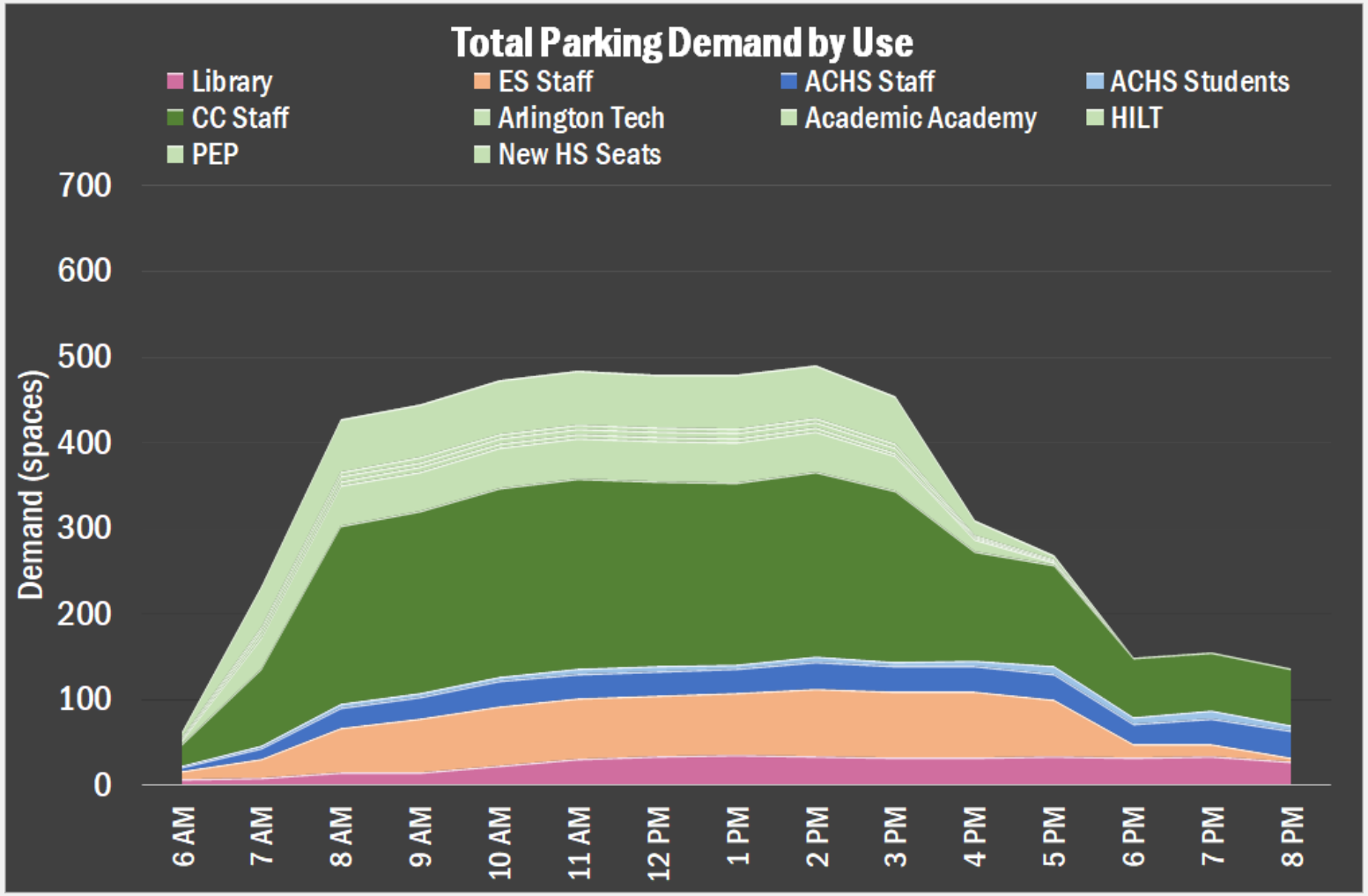
Future Parking Model

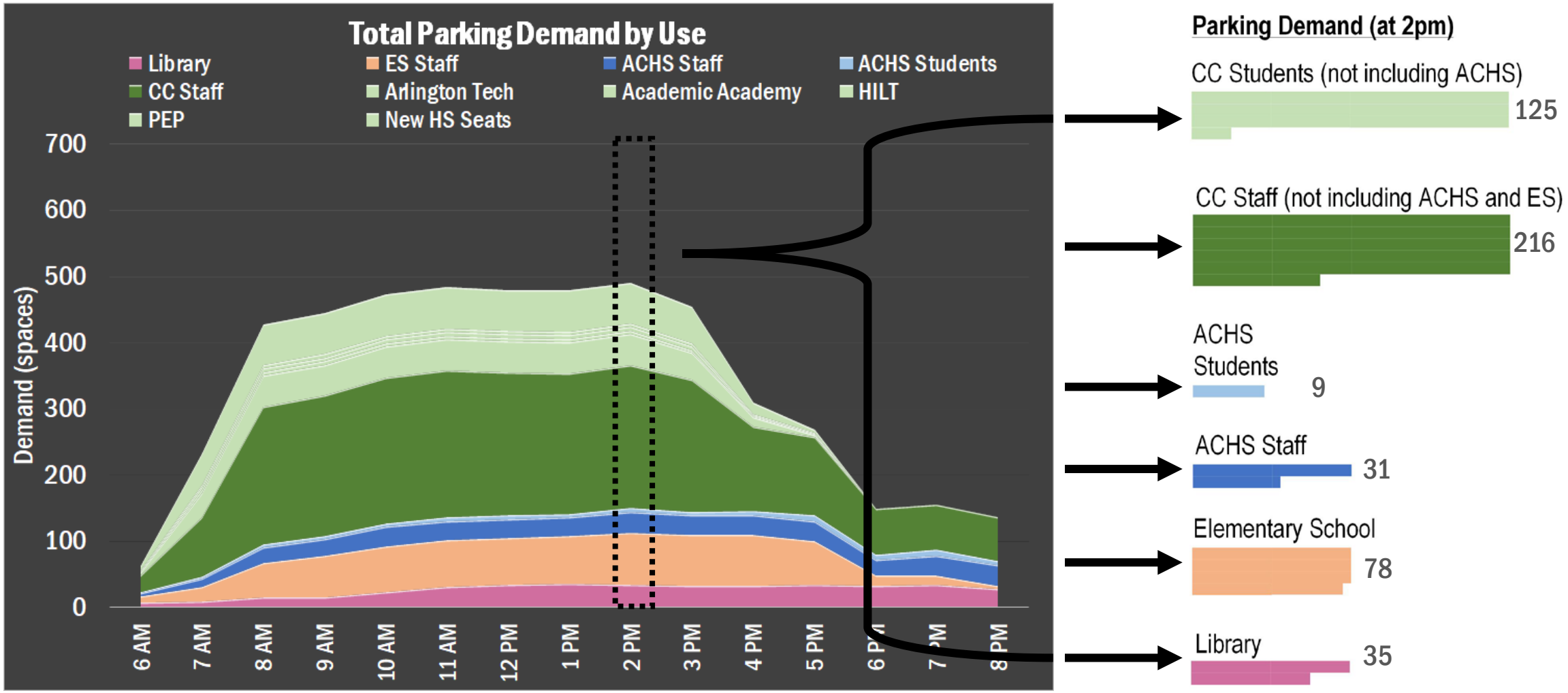
When we plug in the numbers from the CCWG near-term program into the model, we get the following curve:

Future demand peak: 494 spaces
(Existing demand peak: 307 spaces)

Increased demand comes mainly from the significant increase in HS students and overall CC staff due to the increase in HS students from both the Arlington Tech growth and the new 800 students.

Staff is 66% of demand
Student drivers are 27% of demand




Total Parking Demand by Use
Library
ES Staff
ACHS Staff
ACHS Students
CC Staff
Arlington Tech
Academic Academy
HILT
PEP
New HS Seats
Demand (spaces)
700
600
500
400
300
200
100
0
6 AM
7 AM
8 AM
9 AM
10 AM
11 AM
12 PM
1 PM
2 PM
3 PM
4 PM
5 PM
8 PM
Parking Demand (at 2pm)
CC Students (not including ACHS)
125
CC Staff (not including ACHS and ES)
216
ACHS Students
9
ACHS Staff
31
Elementary School
78
Library
35

Parking Demand sources:

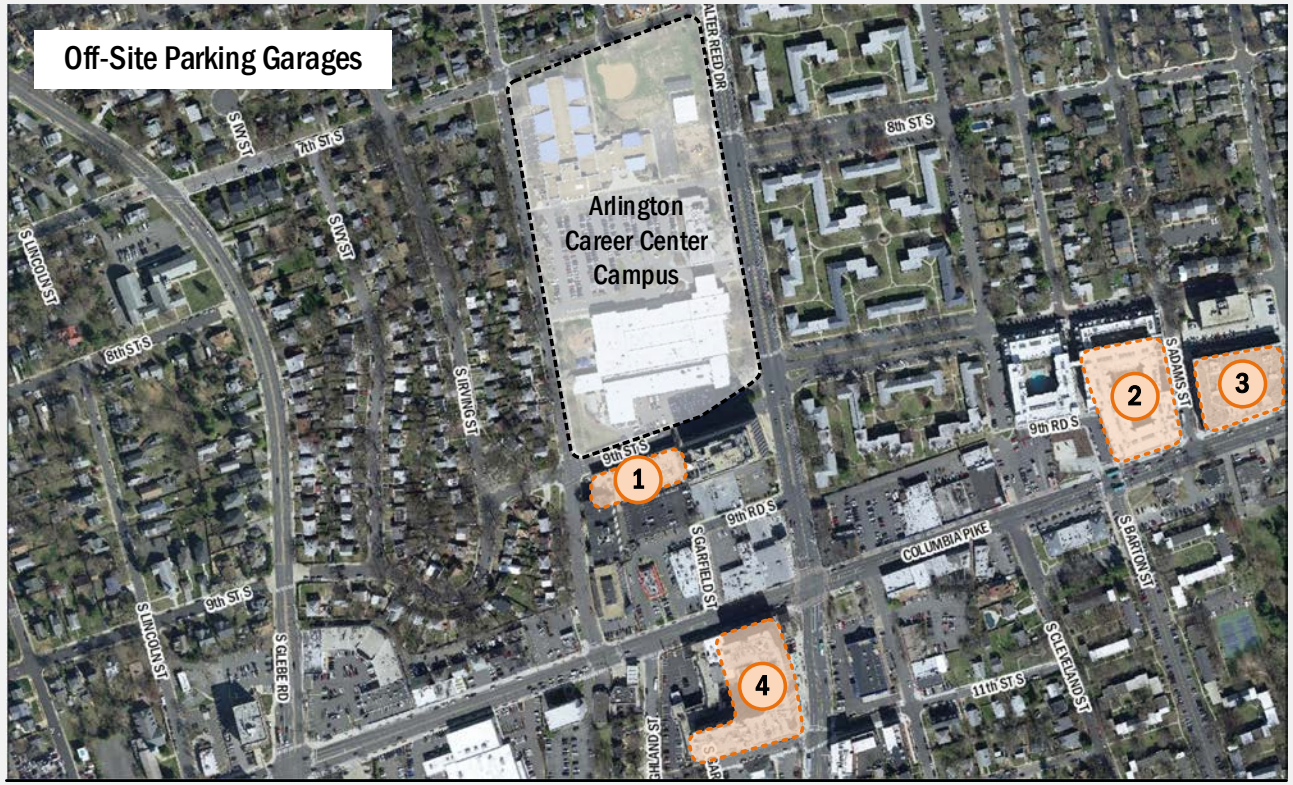
(1) On-site

Charge is to look at three options:
-Minimal on-site
-1 level of underground parking
-2 levels of underground parking

(2) On-street

-Metered parking
(63 available spaces at 2pm)
-Time-restricted parking (17 spaces)
-Unrestricted parking (478 spaces)

(3) Off-site parking garages



Total unoccupied spaces (during school day) in off-site garages identified: **620 spaces**

Actual amount of off-site spaces that could be used by CC demand (due to constraints and other arrangements): **150-200 spaces**

Garage	1. ECDC Garage	2. Penrose Garage	3. Siena Park Garage	4. Halstead Garage
Parking Supply	302 spaces (not public)	320 public spaces	123 public spaces (excludes monthly pass area)	151 public spaces (non-residential)
Peak demand during school day	43 cars	115 cars	41 cars	77 cars

Major Design Alternative decisions

Where will the parking be?

- How much on-street parking can be used with minimal conflicts?
- How much do we use the off-site garages? How many spaces are available for APS use (e.g. they aren't reserved for zoning minimums)?

How do we handle student parking?

- Do we discourage parking by not providing students parking?
- Do we designate student parking to limit potential conflicts with other parkers?

Parking Demand (at 2pm)

CC Students (not including ACHS)

CC Staff (not including ACHS and ES)

ACHS Students

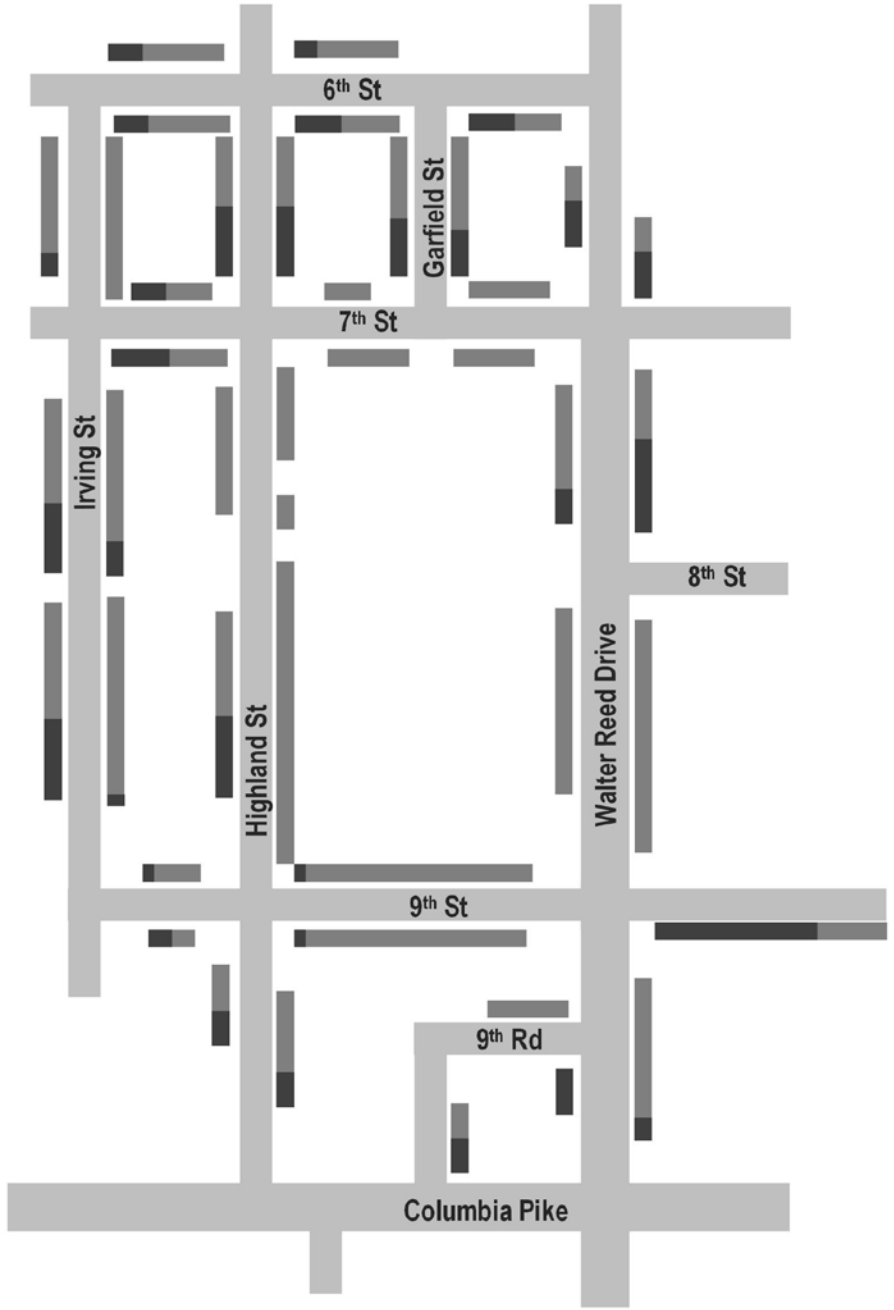
ACHS Staff

Elementary School

Library

Parking Spaces

- Represents 1 parking space
- Empty Spaces
- Parked Spaces



Off-Site Supplies

(with peak demand during school-day)

ECDC Garage

Penrose Garage

Siena Park Garage

Halstead Garage

One example (to get us started)

What if we:

- Met the TDM targets we discussed earlier
- Accommodated the remaining student demand on-street, on blocks directly adjacent to the CC (including changing the long-term metered parking so students could use it)
- Built a small lot on site for ADA parking, visitors and other reserved uses
- Used the ECDC garage to park uses that may not be on the CC long-term
- Obtained access to 150 to 200 spaces in the off-site garages

Parking Demand (at 2pm)

CC Students (not including ACHS)

CC Staff (not including ACHS and ES)

ACHS Students

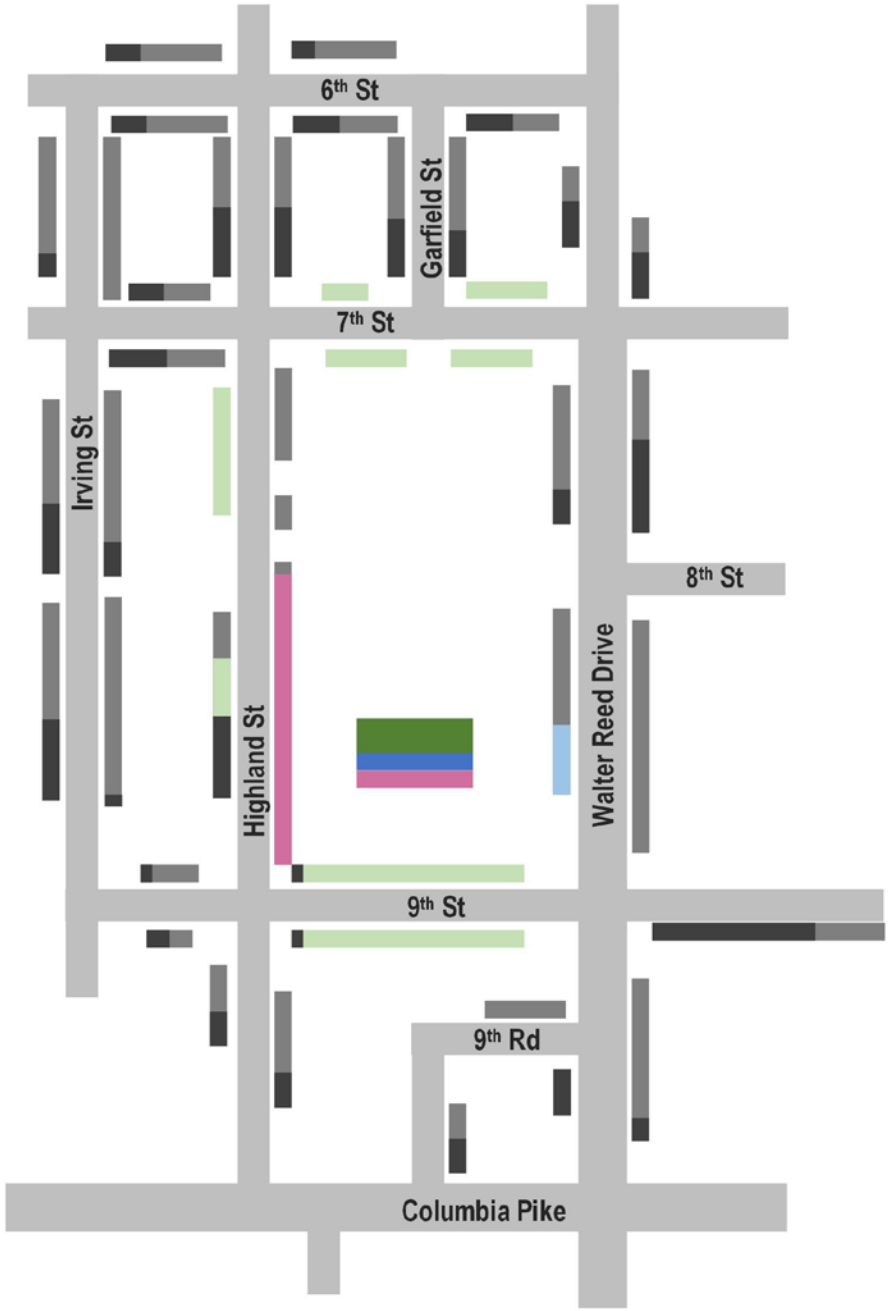
ACHS Staff

Elementary School

Library

Parking Spaces

- Represents 1 parking space
- Empty Spaces
- Parked Spaces



Off-Site Supplies

(with peak demand during school-day)

ECDC Garage

Penrose Garage

Siena Park Garage

Halstead Garage

TDM Reductions


SPEED
HUMP
Arlington
Career Center
ARLINGTON
COMMUNITY
HIGH SCHOOL

Traffic

Analysis performed to date

- Performed capacity analyses at 13 intersections near the CC, during commuter rush hour, and afternoon dismissal school peak hour
- Built a model to estimate vehicle trips generated
- Used that model to calculate traffic demand of CCWG near-term program
- Performed capacity analysis for the CCWG near-term condition
- Reviewed where CC traffic influences the surrounding network the most
- Identified the main traffic decisions we will have in Design Alternatives

A detailed summary of the traffic analysis is included as an appendix to this presentation (and will be included on the project website).

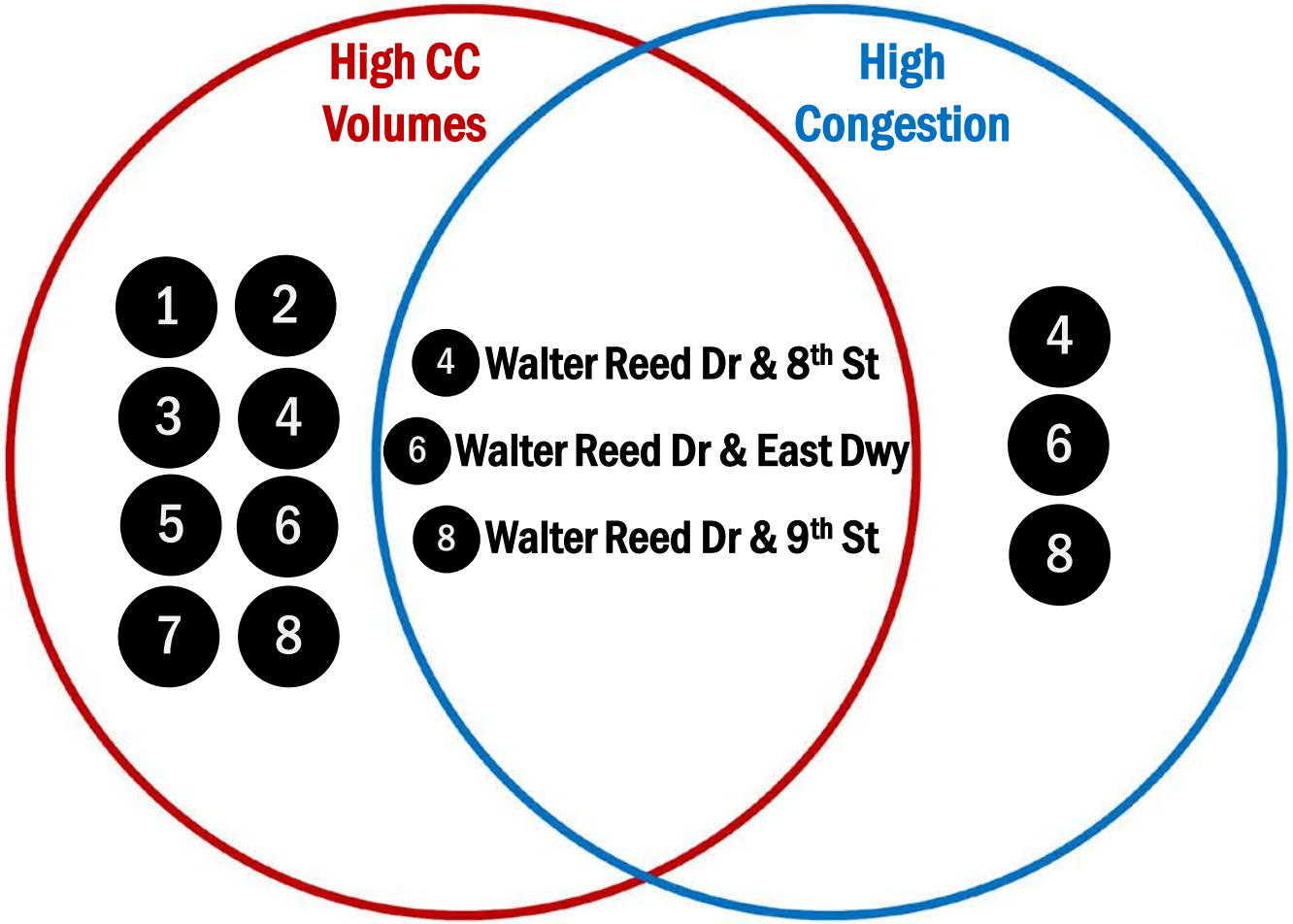
Summary of traffic analyses

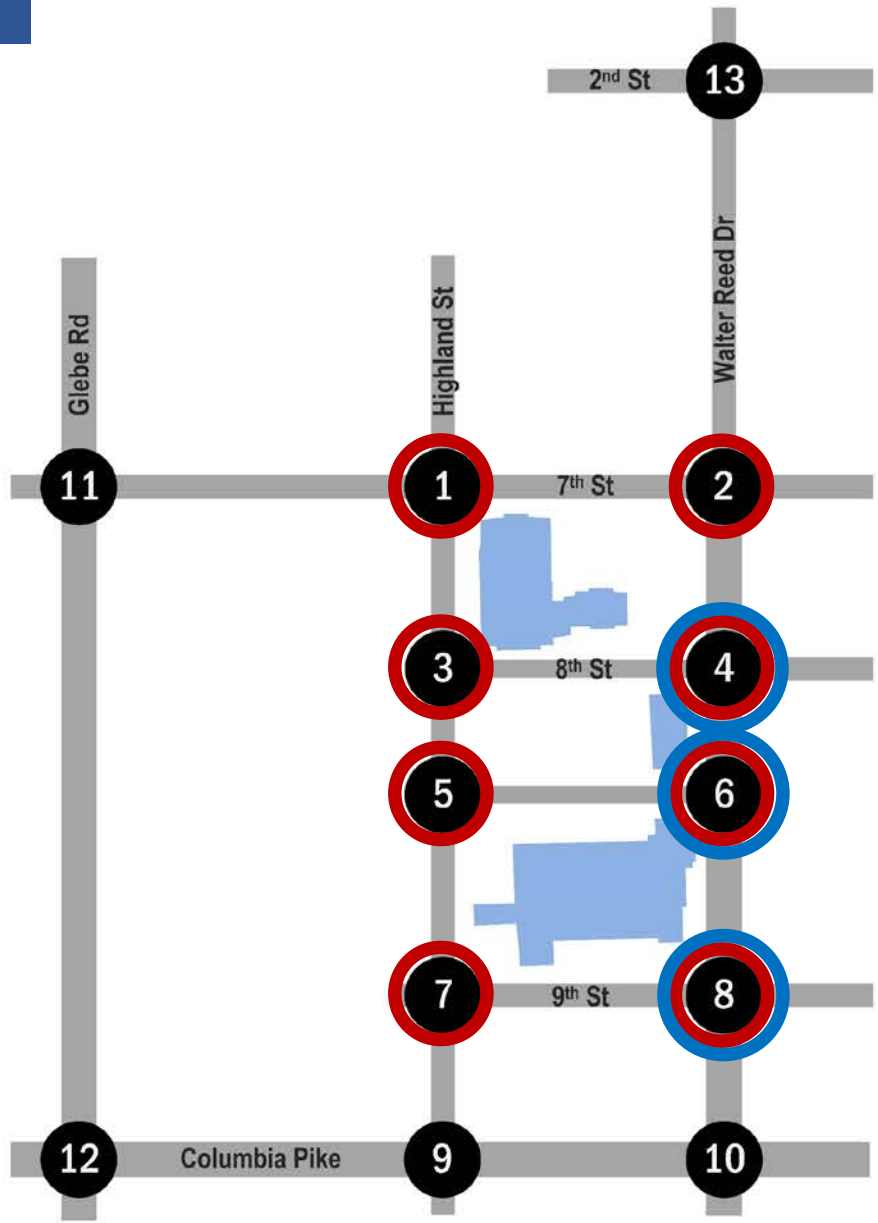
What we looked for:

(1) Intersections where the amount of traffic going through them was significantly high during any of the 3 time periods we analyzed (over 15% of cars were going to/from the CC)

(2) Intersections with high delays or congestion during any of the 3 hours we analyzed

Future Traffic Conditions: Areas of Concern

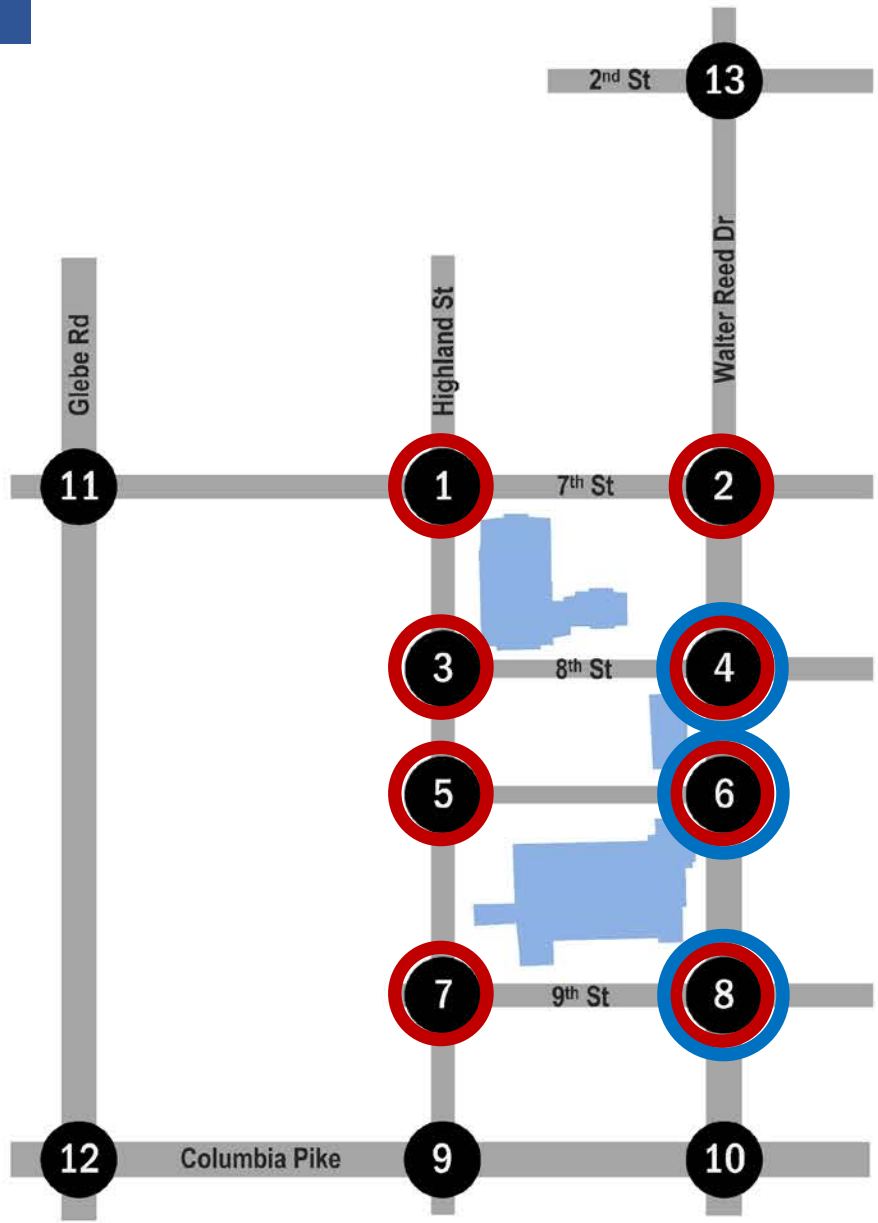




Future Traffic Conditions: Areas of Concern

What does this tell us:

- Even in the worse-case scenario, the traffic impacts of what goes on the CC site will be limited to intersections adjacent to the CC
- We need to carefully coordinate locations of parking and access with the Walter Reed complete streets project and consider ways to reduce CC traffic on Walter Reed
- The intersection of Walter Reed and 9th Street shows significant congestion in our future models and is flagged for improvements in the Walter Reed complete streets. It is likely we will need to review potential improvements to support the project here.



Major Design Alternative Decisions

Factors that affect traffic:

1. The programs on site and population levels

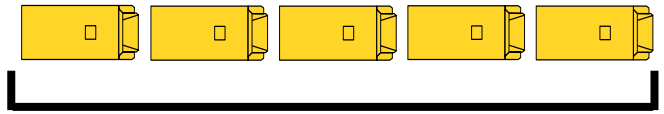
2. Pick-up/drop-off area locations
   - This could change primary routes around the site
   - Depending on locations, could affect surrounding intersections for the better or worse

3. Amount of on-site parking
   - This will affect the distribution of traffic throughout the area (less concentration around the site)

Buses & Pick-Up/Drop-Off

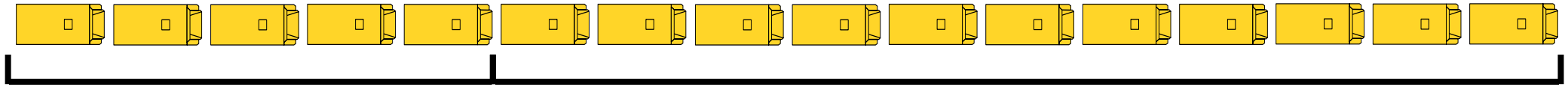
Maximum Bus Demand

Existing HS Bus Demand



5 buses

Future HS Bus Demand



5 existing buses

+11 additional buses

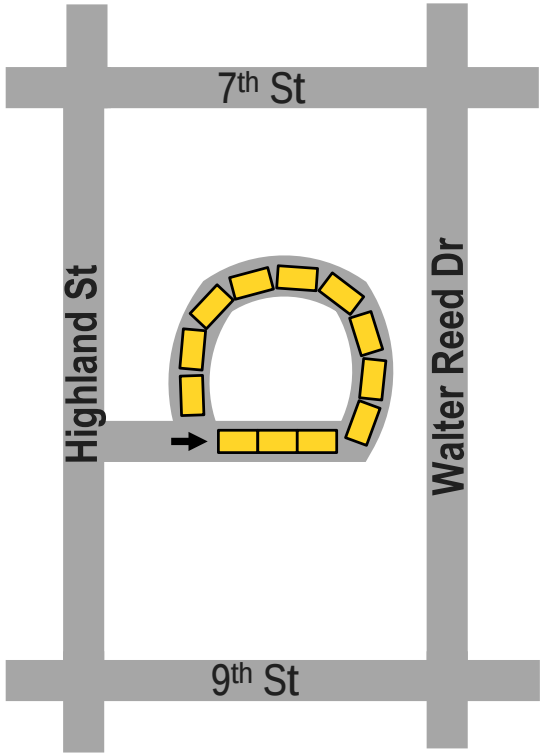
Based on the existing student count, 5 buses are required.

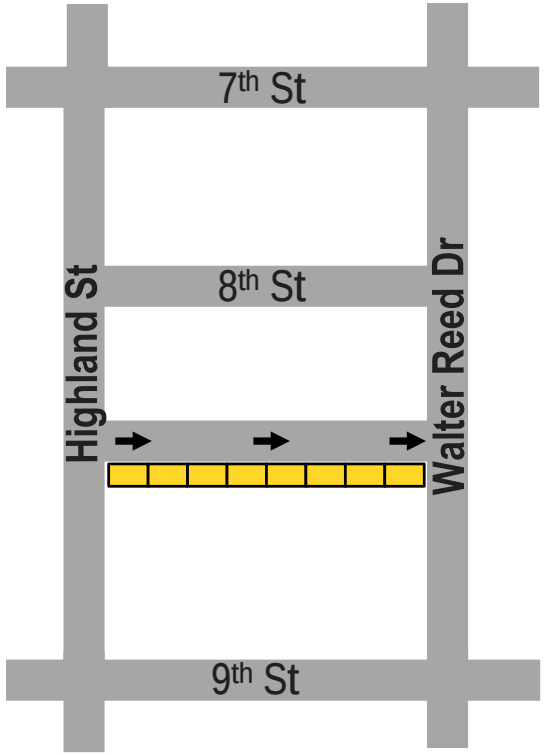
However, the 1,200 seat increase at the CC will require 11 additional buses to meet demands.

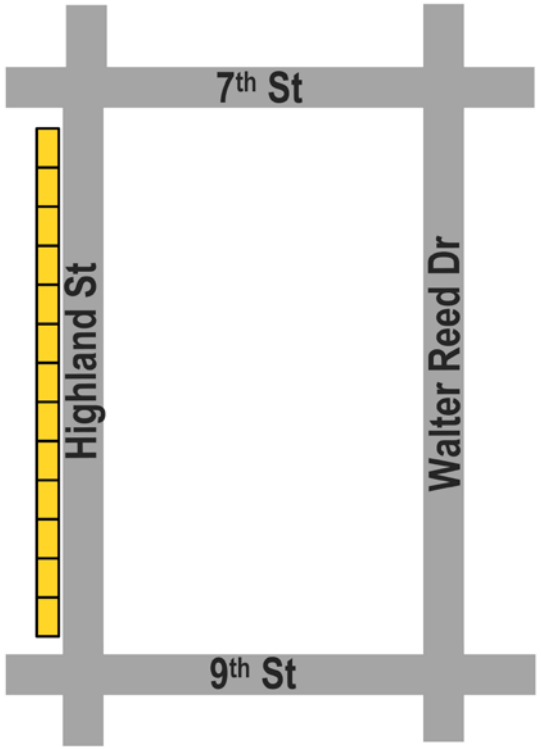
(*based on general rule-of-thumb for buses/HS student*)

Bus Loading/Unloading Areas

*These are not recommendations: Just drawings showing generally how much space these approaches require







Location	On-site	On-site	Off-site
Available Queuing Space	Moderate	Low	High
Bus Access	Driveway	Driveway	Off-site
Accommodates Demand?	With staging	With staging	Yes

*Current design

Pick-Up/Drop-Off Dispersion

There are official drop-off/pick-up areas along S Highland Street… but other areas are used too.

Elementary School

- Drop-offs occur several places in addition to the official areas
- Some parents park and walk in their students
- Some parents use bus unloading area after buses have left

High School

- Drivers wait in the parking lot until buses leave
- Once buses leave, the bus area is used for general loading

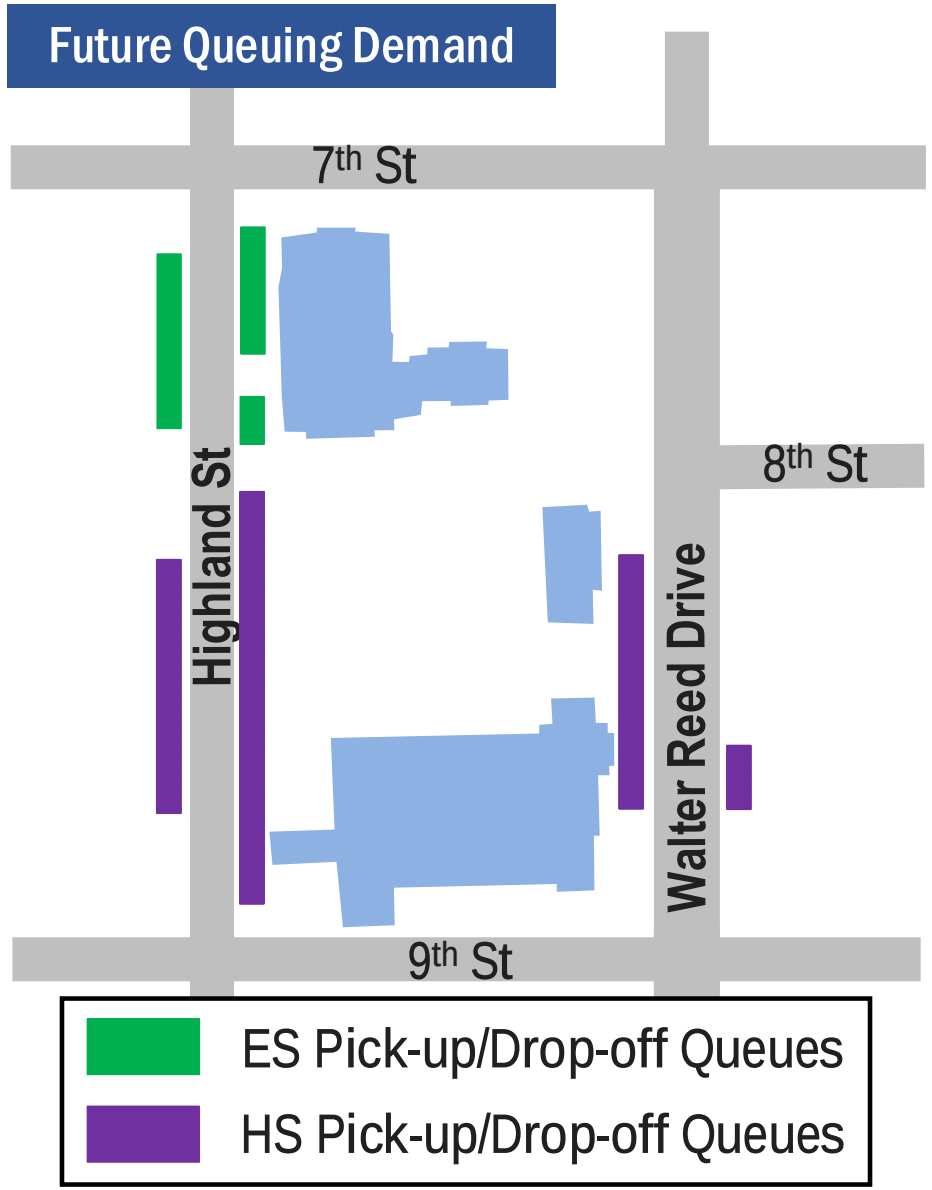
Pick-Up/Drop-Off Areas & Queues

How does pick-up/drop-off work at the CC now?

- Pick-up/drop-off activity is spread out
- Although activity occurs outside of official areas, it is not causing any issues
- Queuing does not block traffic or create unsafe pedestrian crossings
- Spreading out traffic load over several locations reduces impacts on S Highland Street

Estimated queuing space needed with increased students:

- High School: 64 cars *(+49 cars)*
- Elementary School: 20 cars



**Not a recommendation: Just a drawing showing generally how much space the queuing needs require*

Decisions for Design Alternatives

Where should buses load/unload?

- On-site? Takes up a lot of space.
- Curbside? Displaces parking supply.

What approach should parent drop-off/pick-up have?

- Official/unofficial location(s)?

How should buses and parent drop-off be arranged to avoid conflicts?

- With each other and other modes

What opportunities do we have for sharing space?

- For example: curbside bus loading zones and visitor parking?

Summary & Next Steps

Topic		Conceptual Design	Current Thinking
	Transportation Demand Management (TDM)	Set targets, identify high-level policies that influence demand	Aim for high transit/cycling splits for students, consider staff parking disincentives
	Multi-Modal Connections	Review pedestrian, bicycle, and transit facilities nearby	Layout buildings/site to take advantage of nearby facilities
	Parking	Determine amount of spaces needed, develop general strategy for parking location and access	Use as much off-site (on-street and in-garage) supply as possible
	Traffic	Develop general strategy of where site access will be, review potential traffic impacts	Spread out where drivers want to go to minimize impacts, work with County on potential Walter Reed improvements
	Bus Loading/Unloading	Identify location for bus loading/unloading	Try to keep off-site as much as possible and share space with other needs. Avoid conflicts with peds/bikes to create a safe network
	Parent Drop-off/Pick-up	Identify locations and general strategy	Consider multiple locations (both official and unofficial)
	Loading/Deliveries	Identify general location	Avoid conflicts with ped/bikes

CCWG Final Report: Page 14

"Prior to commencement of the BPLC/PFRC process, conduct a comprehensive parking and transportation analysis…

The analysis must:

- **Provide an assessment of parking needs for a neighborhood and an option school;**
- Study how a robust TDM program could reduce overall parking needs;
- Inform a parking program that includes a balanced mix of on-site and off-site parking and considers costs, site constraints and neighborhood consideration; and
- Determine availability of off-site parking that could reduce the number of spaces needed on the Career Center site."

- There's not a lot of difference in driving mode splits between neighborhoods and choice schools. Major differences come in the amount of walk/bike versus school bus.
- The CC has a very strong transit mode split for existing students.
- Main difference with neighborhood versus option is option could require more buses

CCWG Final Report: Page 14

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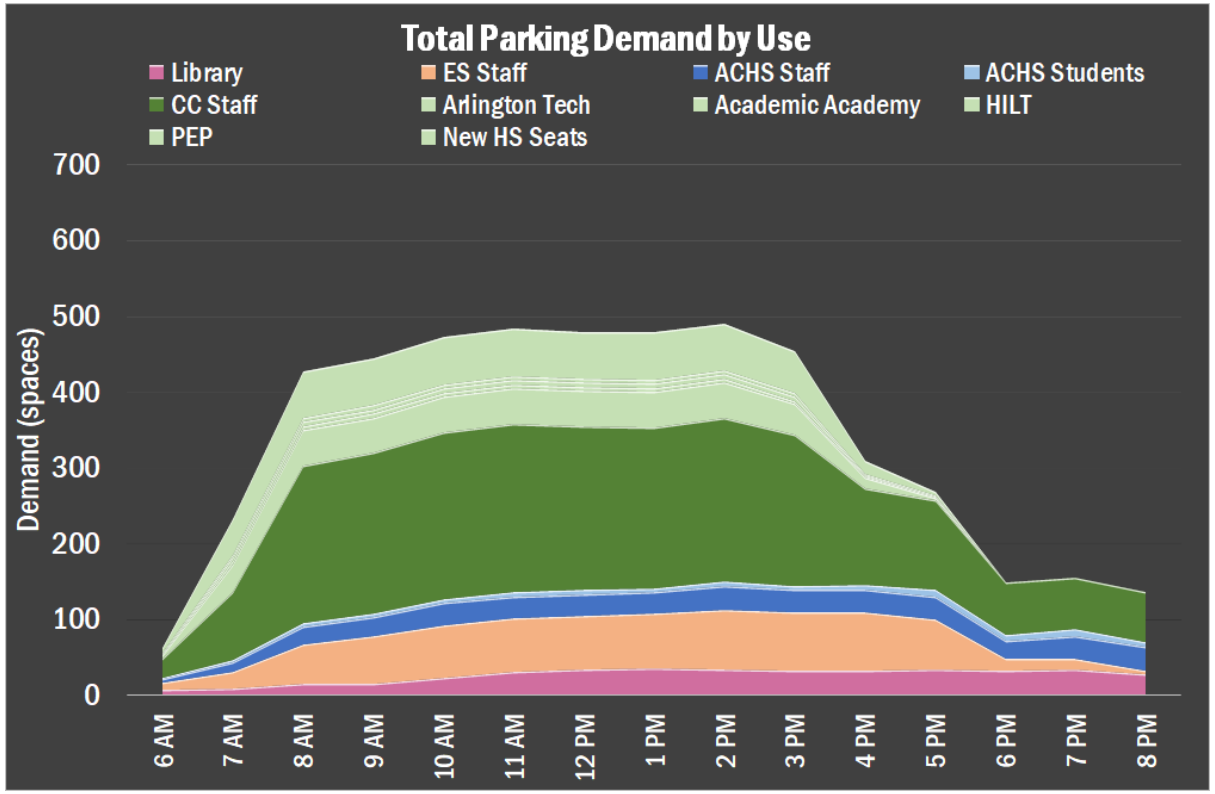
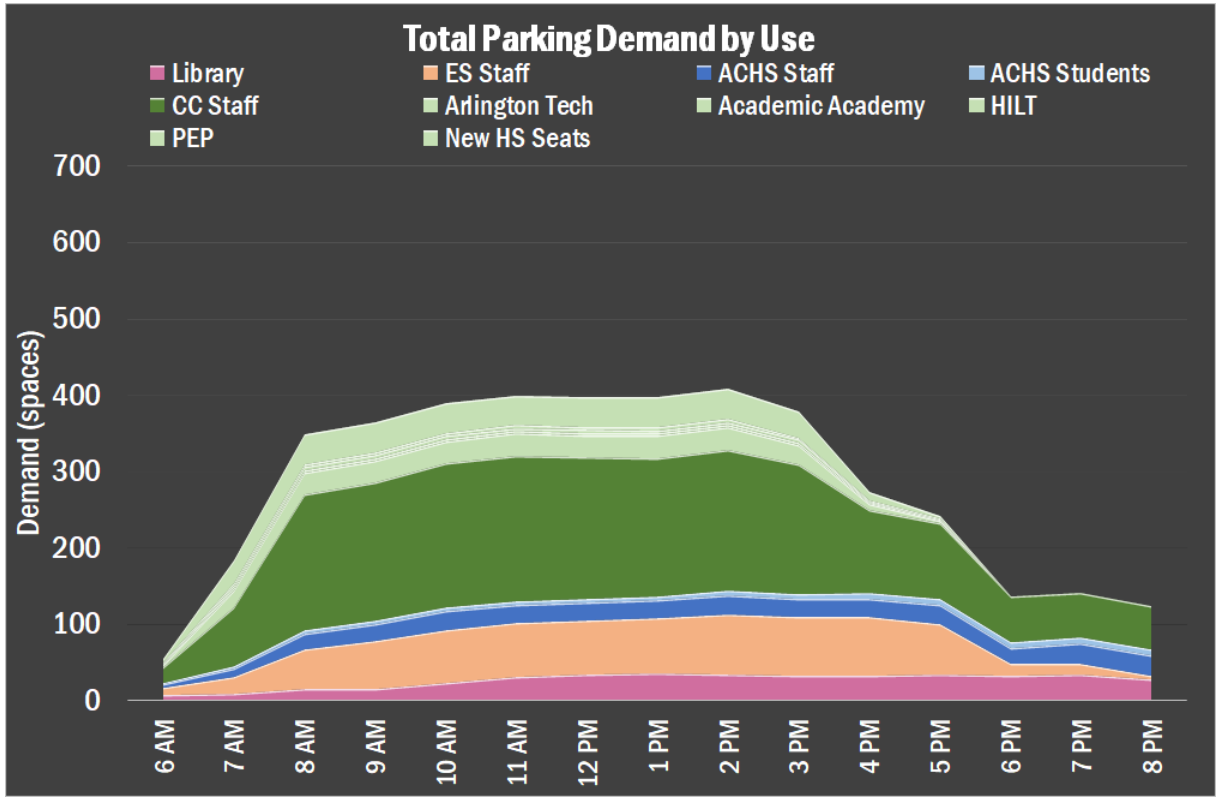
- Determine availability of off-site parking that could reduce the number of spaces needed on the Career Center site."

- We estimate around 15% demand reduction if we hit the mode split targets suggested earlier.
  - 10% student drive (11th/12th grades)
  - 75% staff drive

Existing mode split



Target mode split



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- **Determine availability of off-site parking that could reduce the number of spaces needed on the Career Center site."**

- We conducted counts to show the availability of off-site parking
- Next step: determine how many of the spaces in off-site garages can be secured for school-hours use by CC

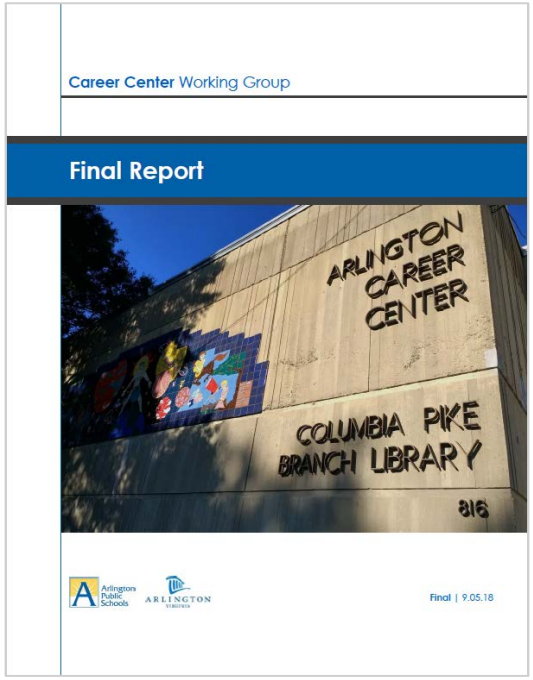
Guidance

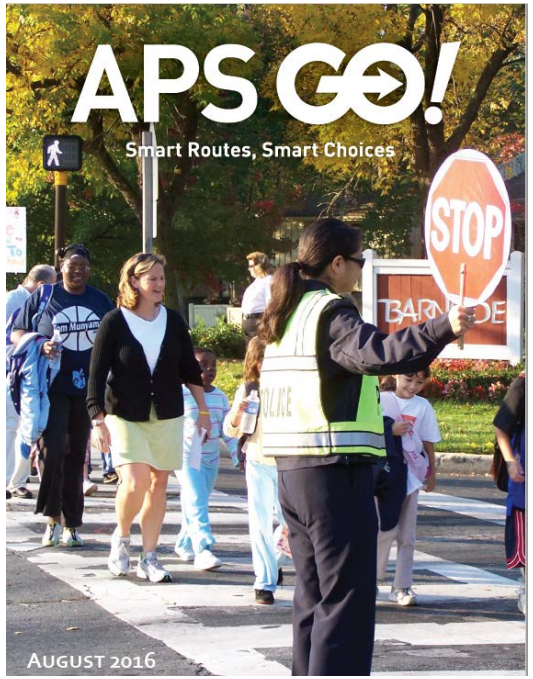
During this project, we will help the committees navigate various transportation options. We will use to a set of goals and show how different decisions and alternatives meet those goals.

To develop the goals, we looked for guidance from several places:

- CCWG final report
- BLPC Charge
- Arlington County Master Transportation Plan
- APS Go!

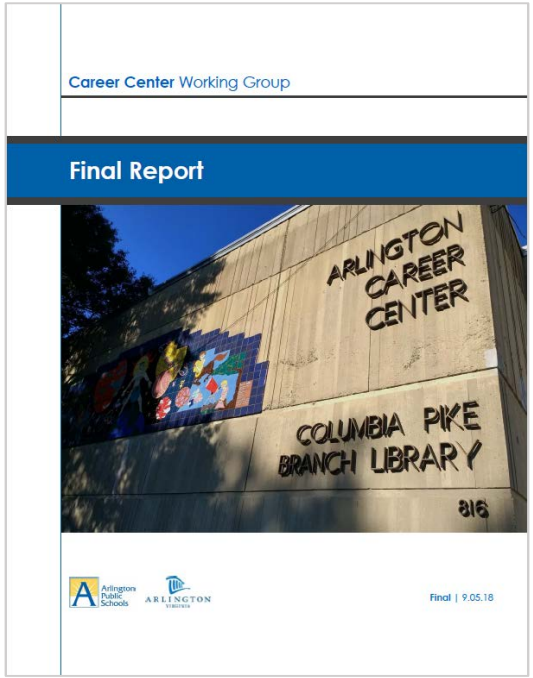
There is a lot of overlap, but we boiled it down to the following seven goals.

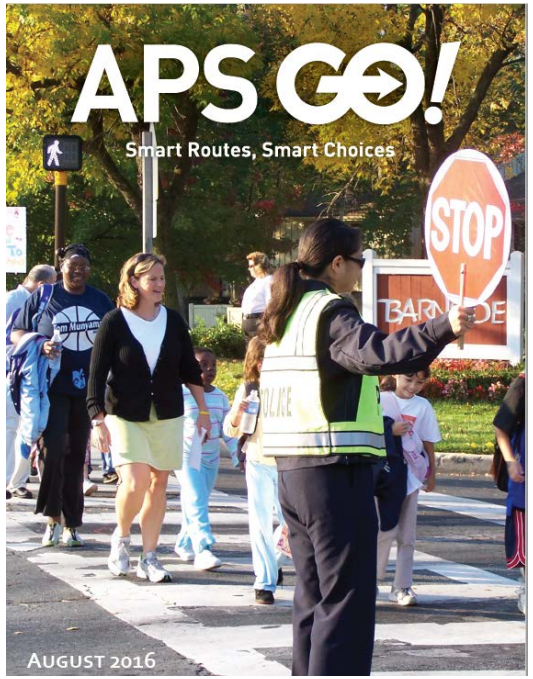




Transportation Goals

1. Provide and promote multi-modal options to help reduce the amount of driving to the Career Center
2. Create a safe campus for all modes of travel
3. Minimize traffic impact generated by the Career Center
4. Minimize parking costs of project
5. Minimize on-street parking conflicts
6. Provide efficient and convenient transportation options for APS families and staff
7. Minimize space dedicated to transportation infrastructure on CC campus





What could this look like?

Options	Transportation Goals						
	Provide and promote multi-modal options	Safety for all-modes	Minimize traffic impacts	Minimize parking costs	Minimize on-street parking conflicts	Efficient and convenient options for APS families and staff	Minimize space dedicated to transport-ation on campus

What could this look like?

Options	Transportation Goals						
	Provide and promote multi-modal options	Safety for all-modes	Minimize traffic impacts	Minimize parking costs	Minimize on-street parking conflicts	Efficient and convenient options for APS families and staff	Minimize space dedicated to transport-ation on campus
Alternative A	●○○○	—	○○○○	○○○○	●●●●	●●●●	●●●○
Alternative B	●●○○	—	●○○○	●●○○	●●○○	●●●○	●●●○
Alternative C	●●●●	—	●●●○	●●●●	●○○○	●●○○	●●●●

Our next steps…

More investigation:

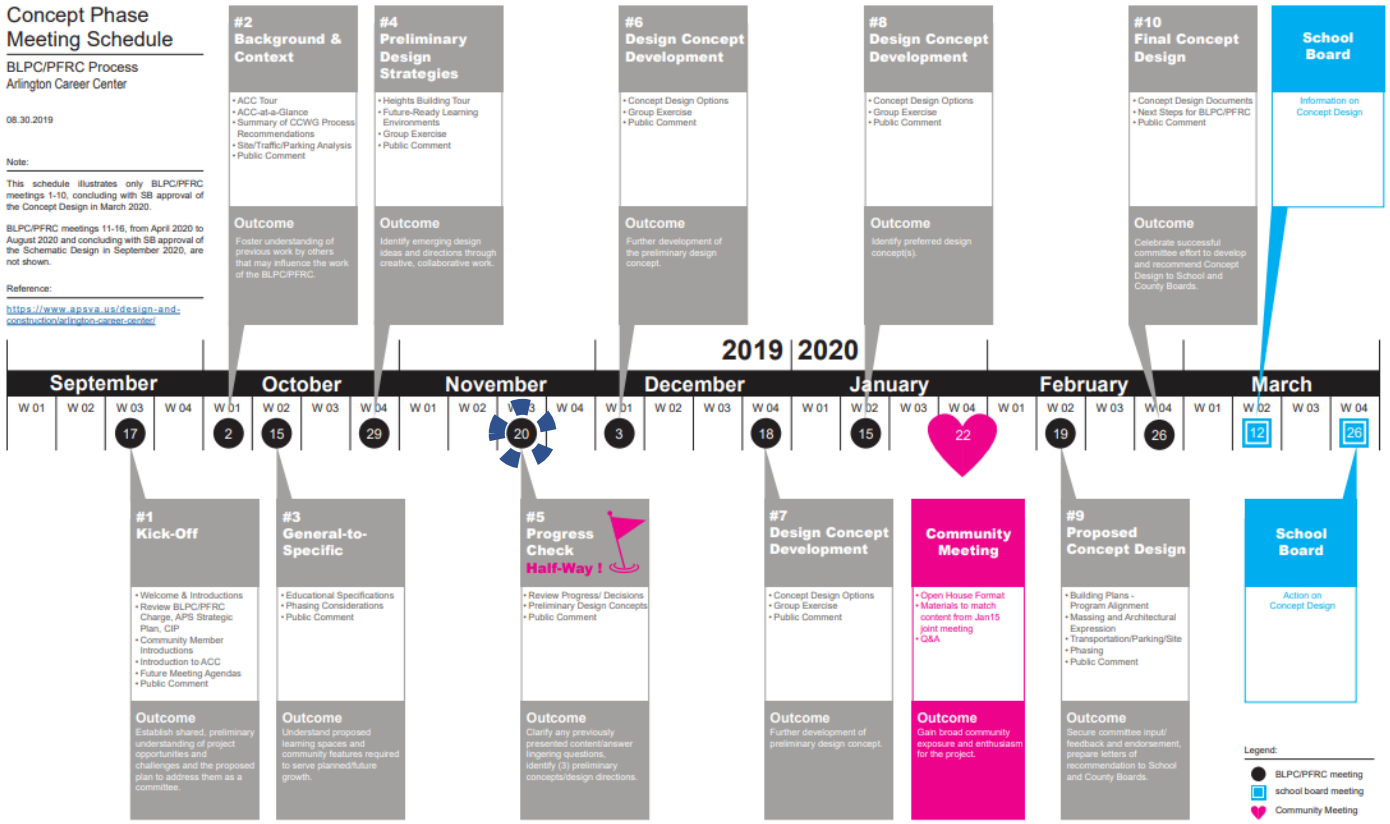
- Availability of off-site parking garages
- County's Walter Reed Complete Street plans

Present again before Design Alternatives meetings (#6, #7, #8):

- Meeting #5: Progress Check (11/20)
- Respond to feedback

Perform more data collection/analysis as needed:

- We have more data collection budget reserved for this Fall
- Analysis budget includes up to 3 more future scenarios (like for example 3 potential Design Alternatives)



Your homework…

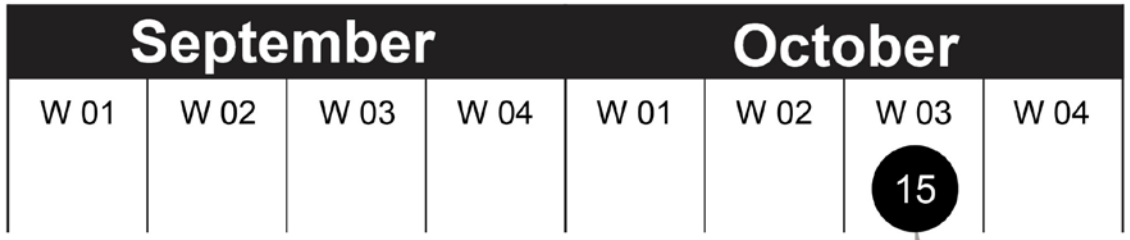
Send feedback (to APS):

- Do we have the right guidance/goals?
- Anything to test before Design Alternative meetings?
- What updates prior to Design Alternative would be most beneficial?

QUESTIONS?

NEXT STEPS

MEETING #3



Agenda

Pre-Meeting Tour of ACC (6:00 – 7:00 pm)

- We Are ACC – Programs, Students, Culture, Operations
- Educational Specifications for ACC Expansion
- Project Phasing Considerations
- Public Comment

Outcome

Understand the current programs and space utilization at ACC, and the proposed learning spaces and community features needed to serve future growth.

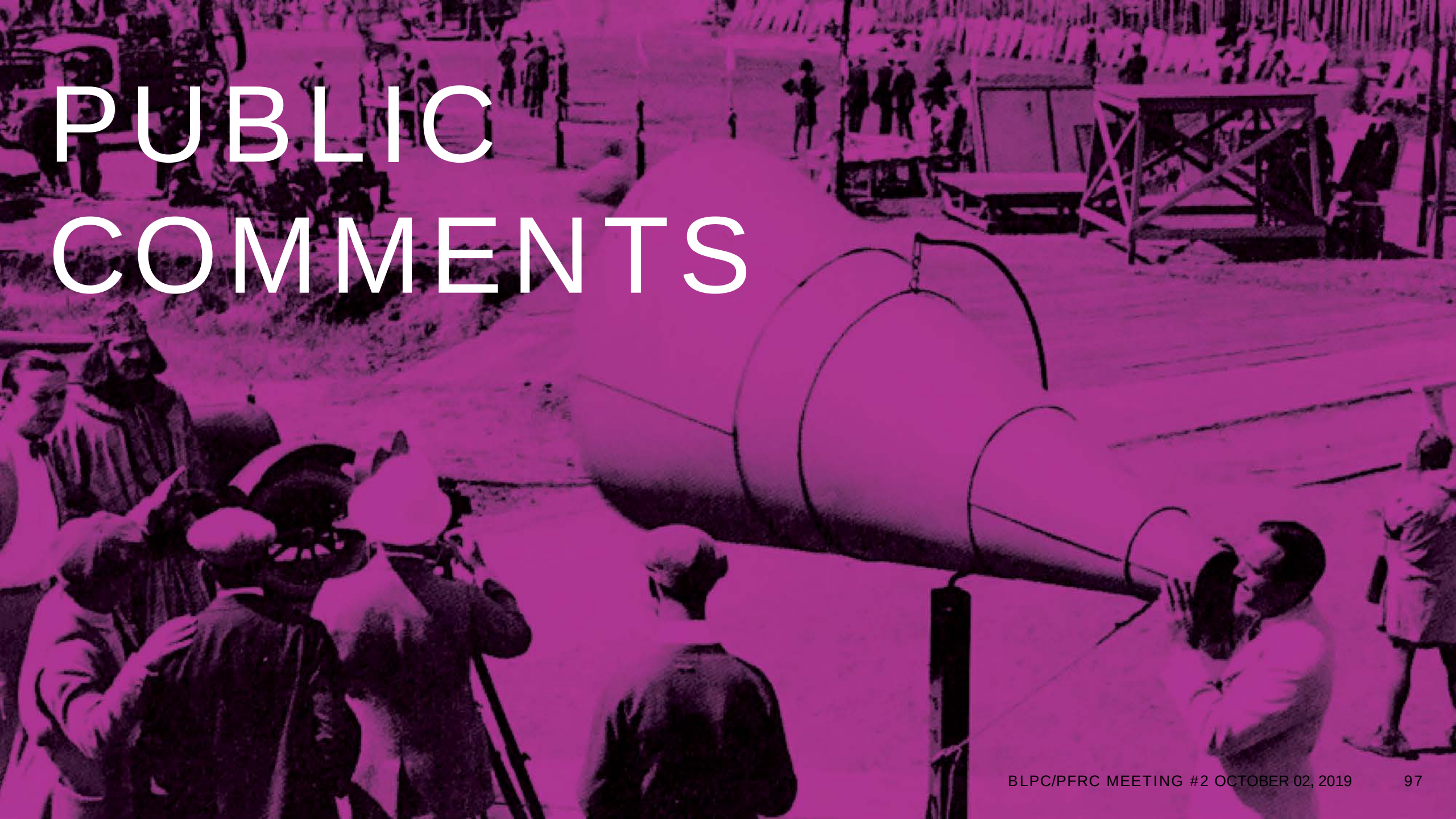
#3 General-to-Specific

- Educational Specifications
- Phasing Considerations
- Public Comment

Outcome

Understand proposed learning spaces and community features required to serve planned/future growth.

PUBLIC COMMENTS



ADJOURN

ADJOURN

As a reminder the APS Project Manager is:

Steve Stricker
(703) 228-7749
steven.stricker@apsva.us

Public meeting dates and past presentations are posted on the APS project website: https://www.apsva.us/design-and-construction/arlington-career-center/

Next meeting: October 15, 2019 @ 7:00pm (6:00 – 7:00 ACC Tour)

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

APPENDIX

Appendix:
Detailed Parking Analysis

10/2/2019

Parking Counts

Results of parking data collection
⇛On-site
⇛On-street
⇛Off-site garages

What did it tell us?
⇛Peak CC parking demand
⇛Locations of CC parked cars

Parking Demand

Breakdown of current demand
⇛Elementary School
⇛High School
⇛Library

Calculation of future demand
⇛Parking model
⇛Changes to CC populations
⇛Projected parking demand

Parking Supply Options

What's available?
⇛Options for CC site
⇛Off-site locations
⇛On-street supply

Potential scenarios
⇛All parking on-site
⇛No parking on-site
⇛Somewhere in-between?

Parking Counts

Locations

❶ Surface lot on the CC site

❷ On-street parking nearby
(*within the boundary shown*)

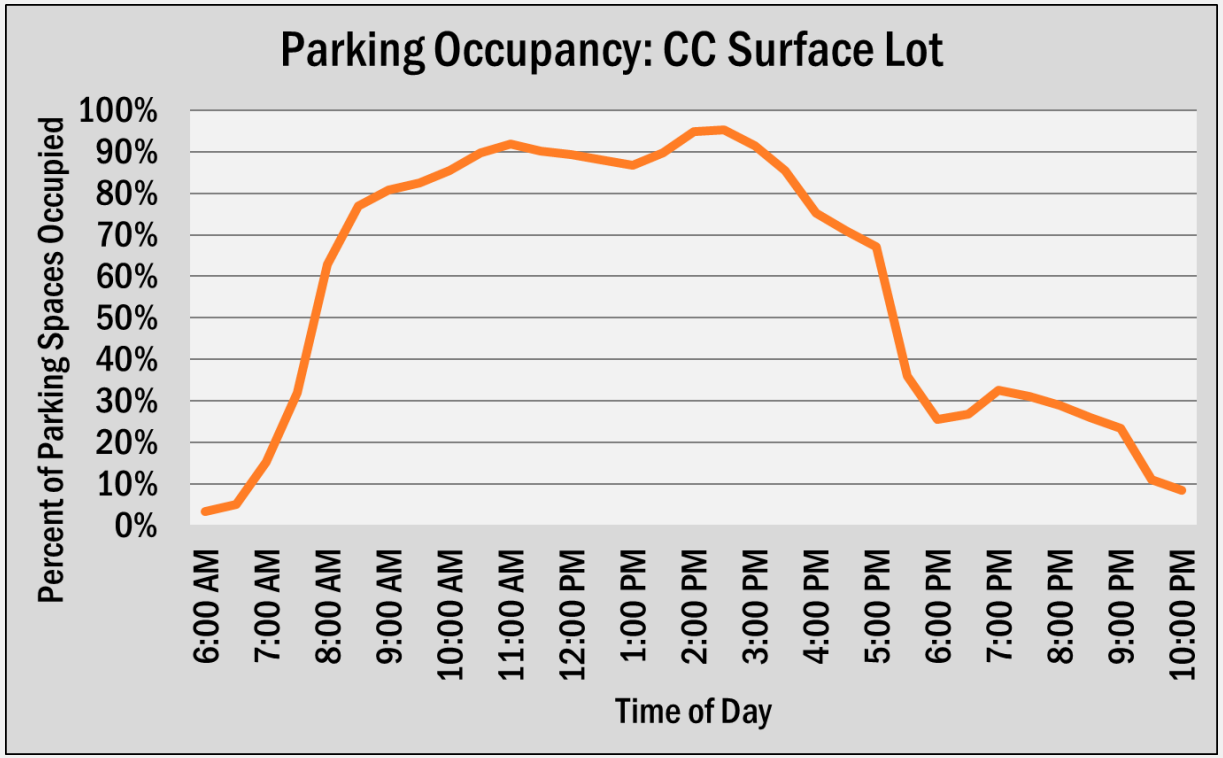
❸ Four off-site parking garages
- The ECDC Garage
- Penrose
- Siena Park
- Halstead

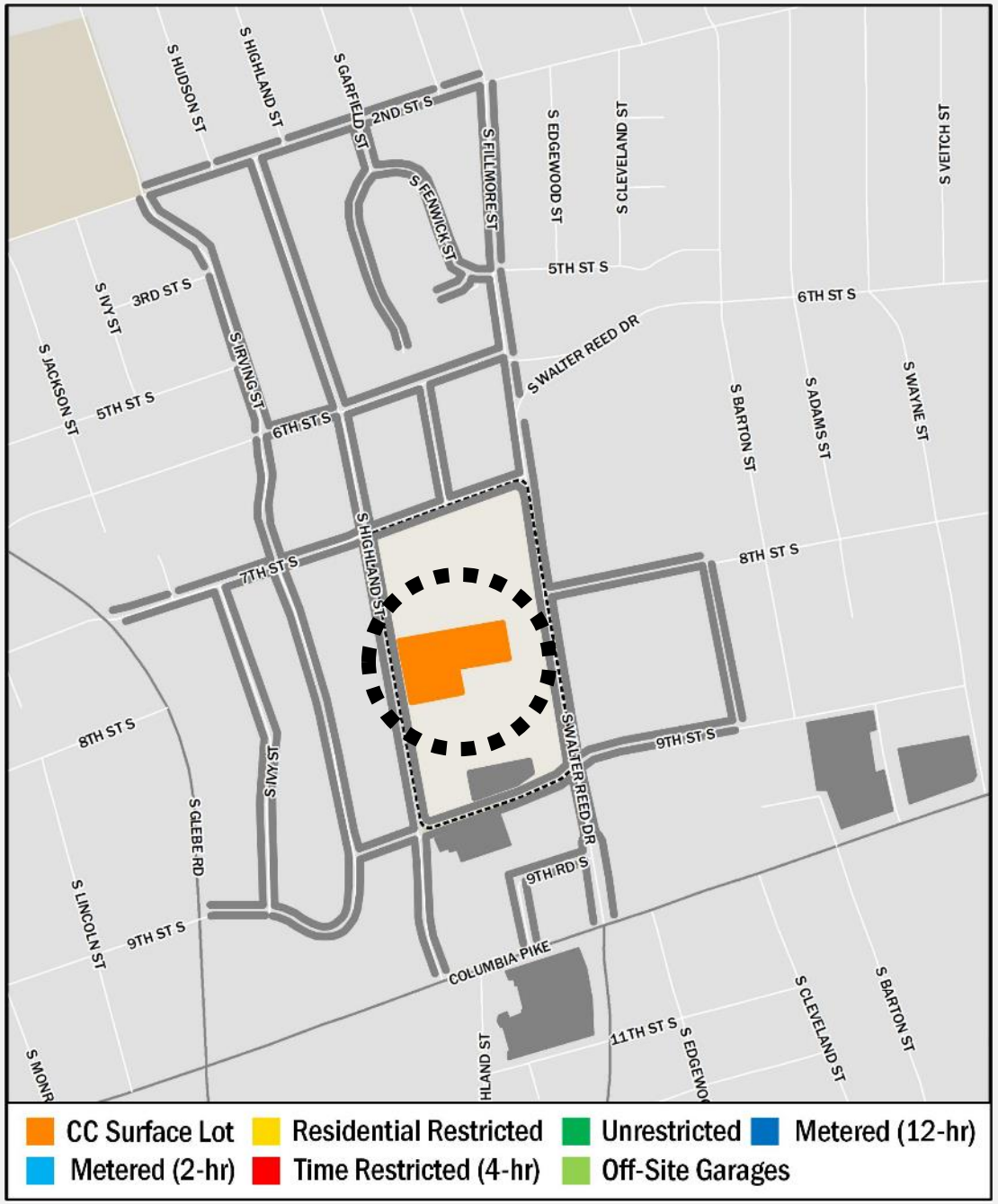
Data taken every 30 minutes on a Wednesday between 6am and 10pm

Parking Counts – CC Surface Lot

Peaks between 2:00 and 3:00pm

Practically full between 10am and 3:30pm
(*empty spaces are reserved*)



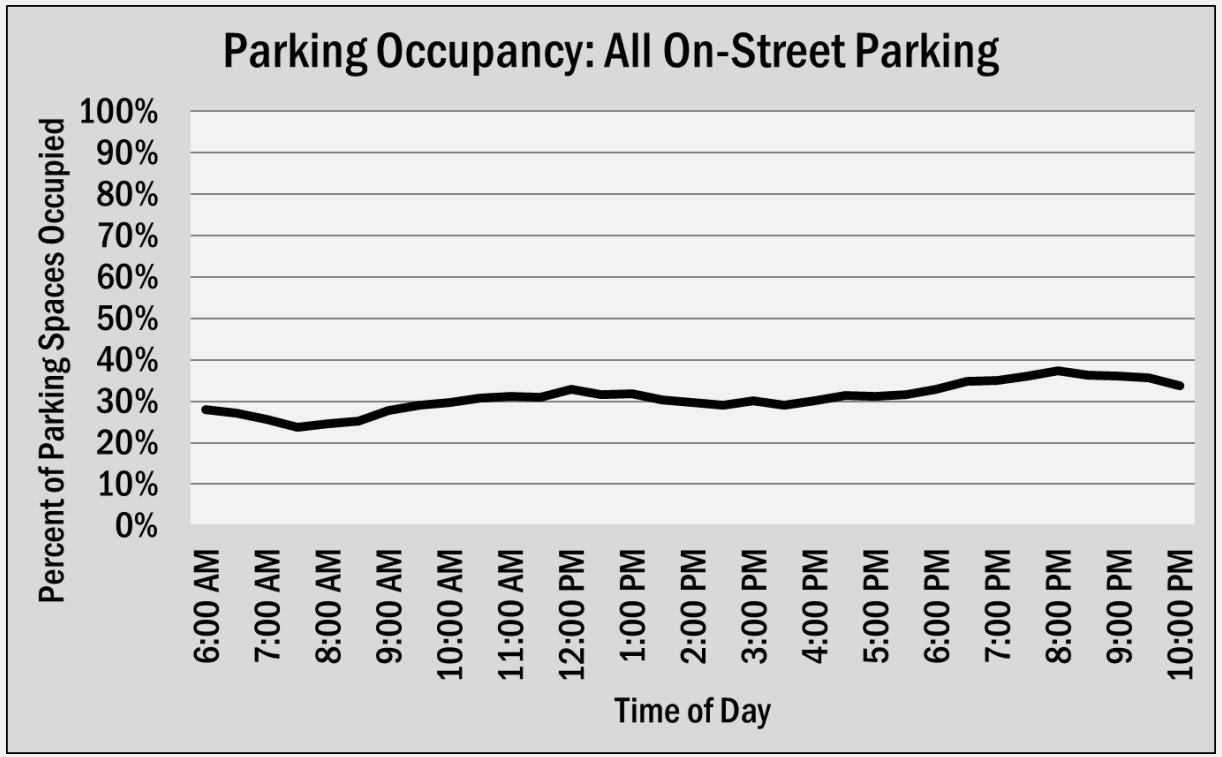


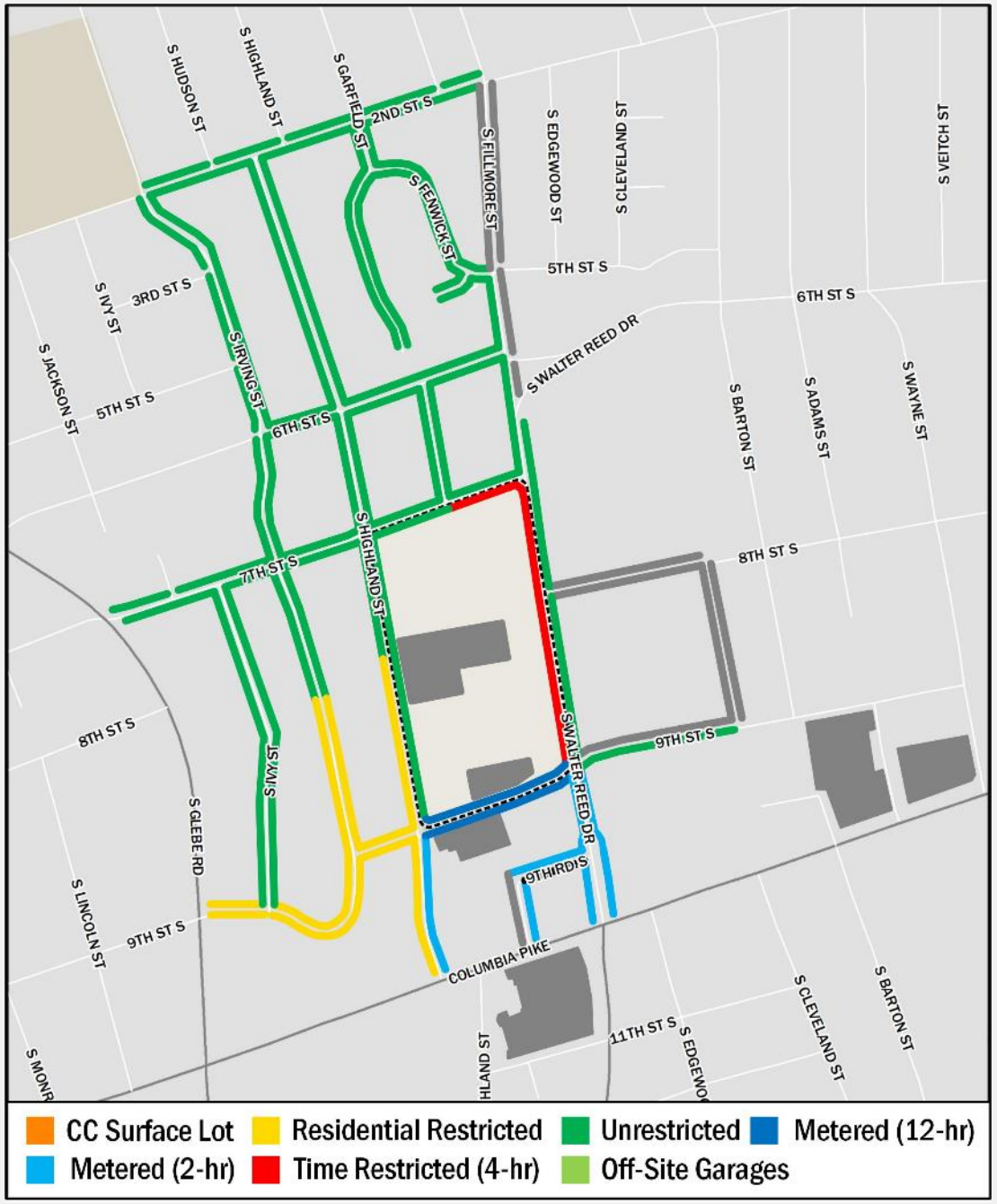
Parking Counts – All On-Street Parking

Steady occupancy levels throughout the day

Peaks in the evening around 8:00pm

Never exceeds 40% occupancy

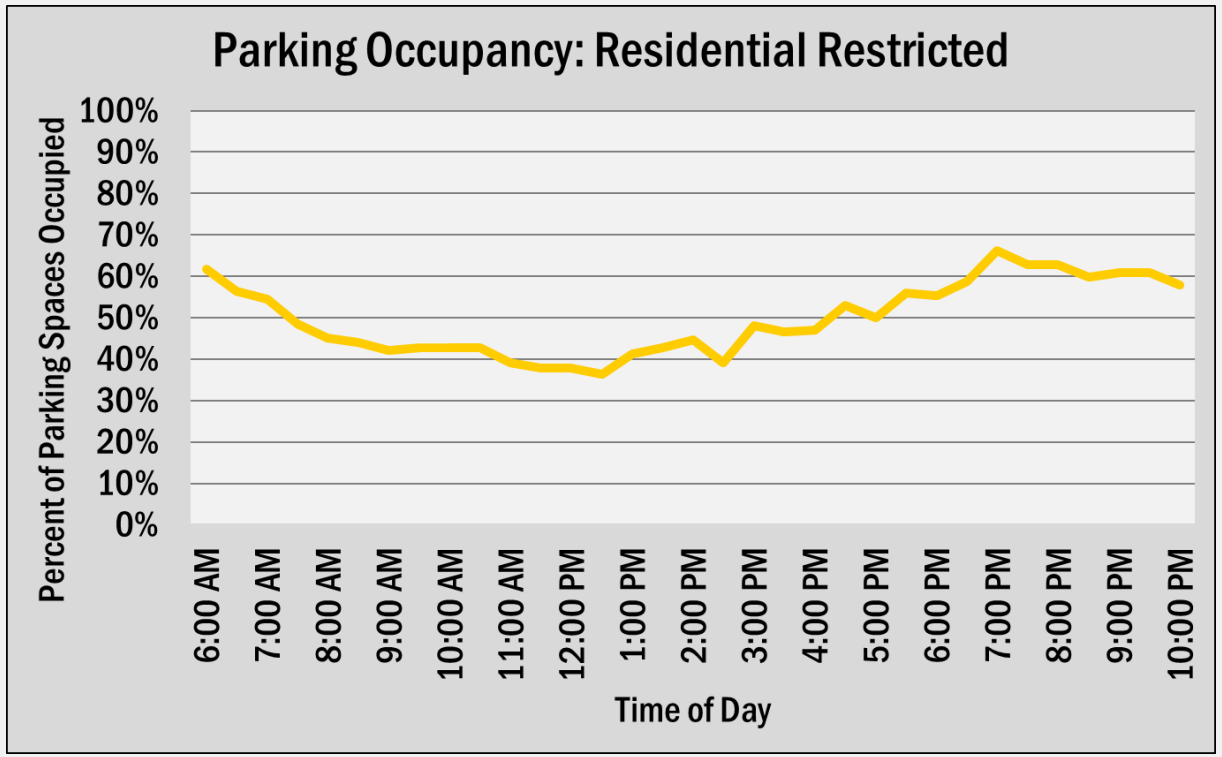


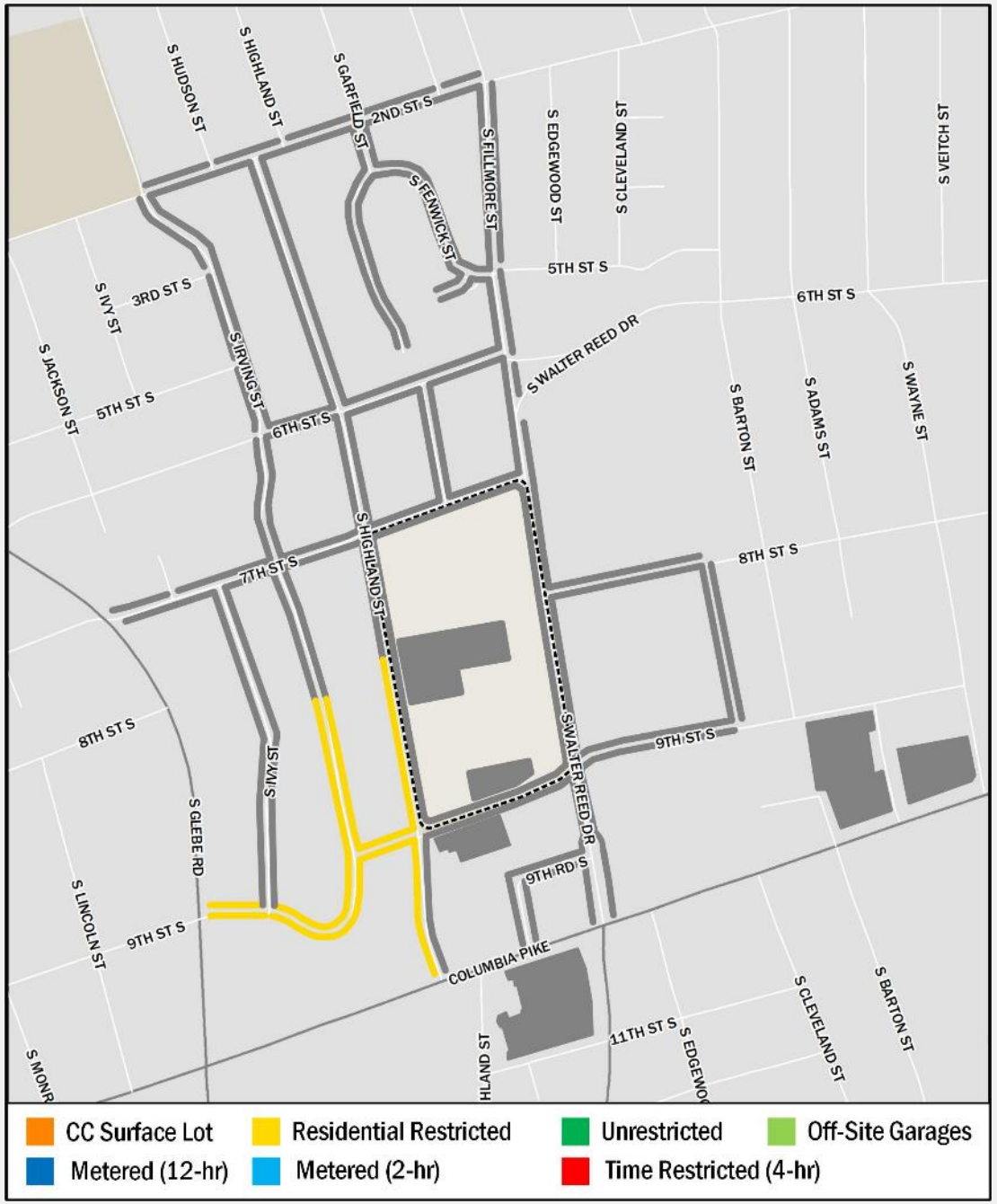


Parking Counts – Residential Restricted

Peaks in the evening around 7:00pm

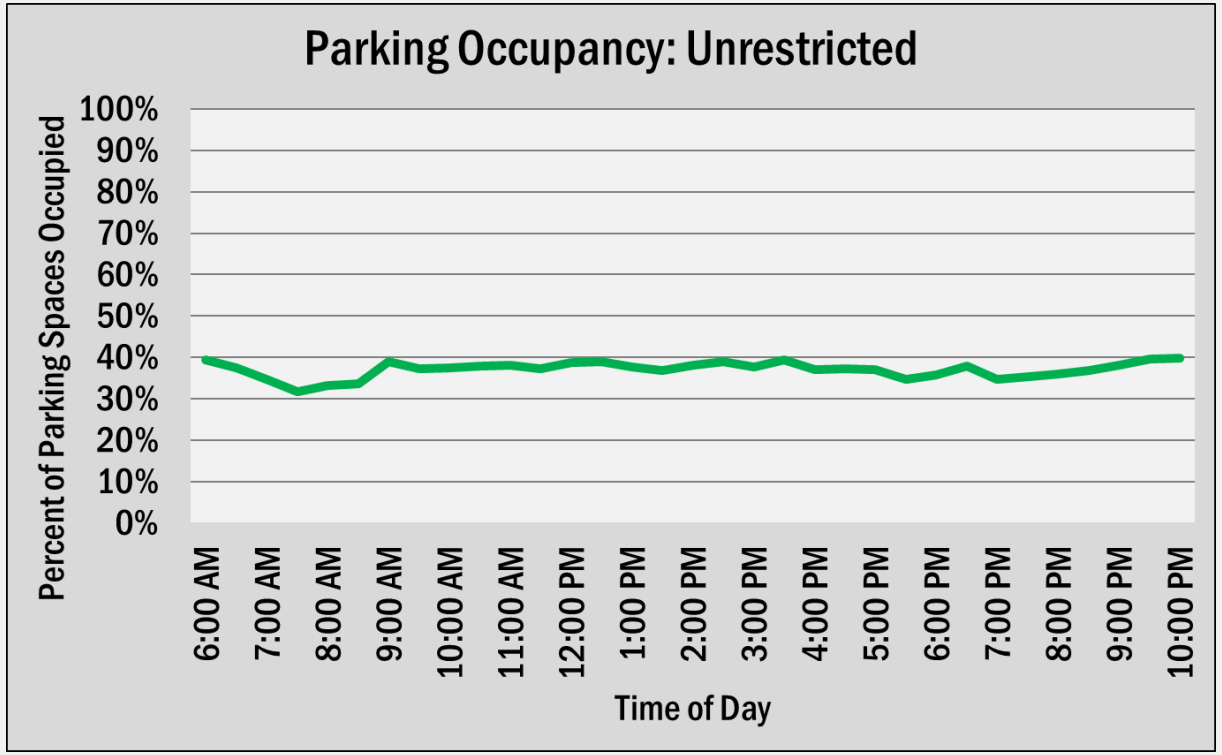
Traditional pattern of lowest use during the day and highest during the evening and overnight





Parking Counts – Unrestricted

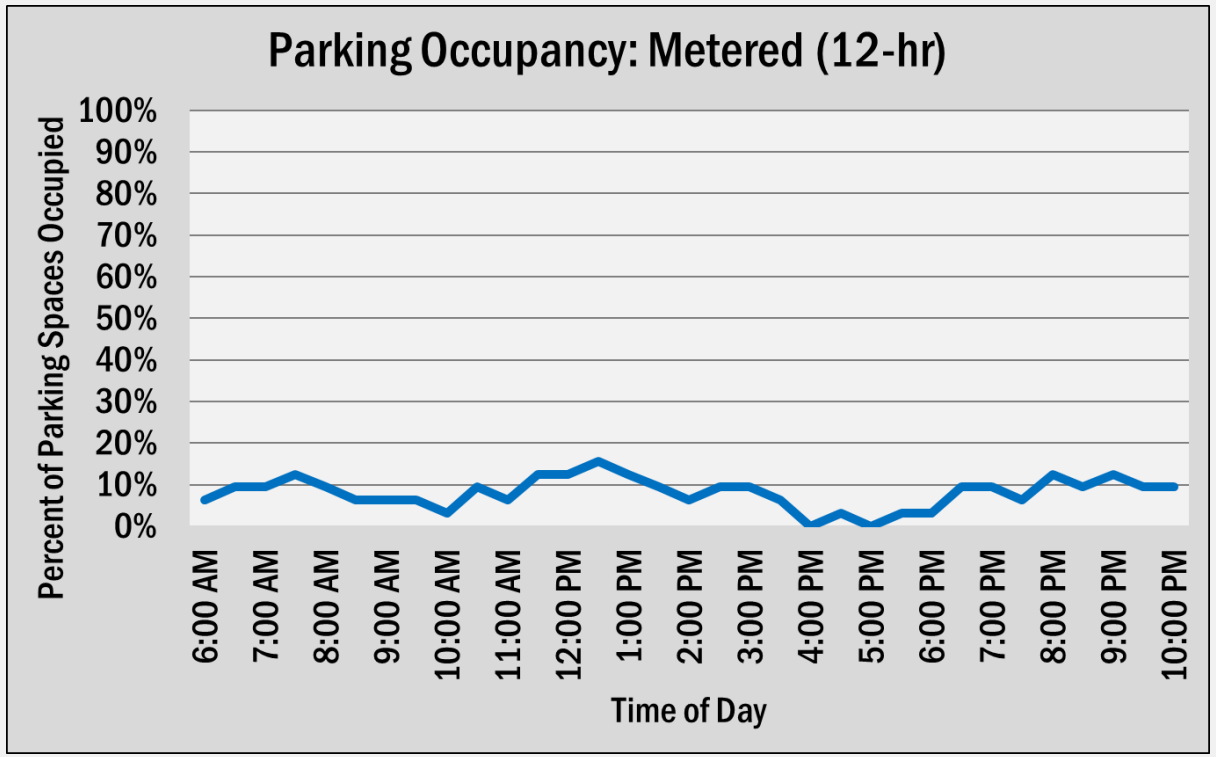
Steady occupancy levels throughout the day

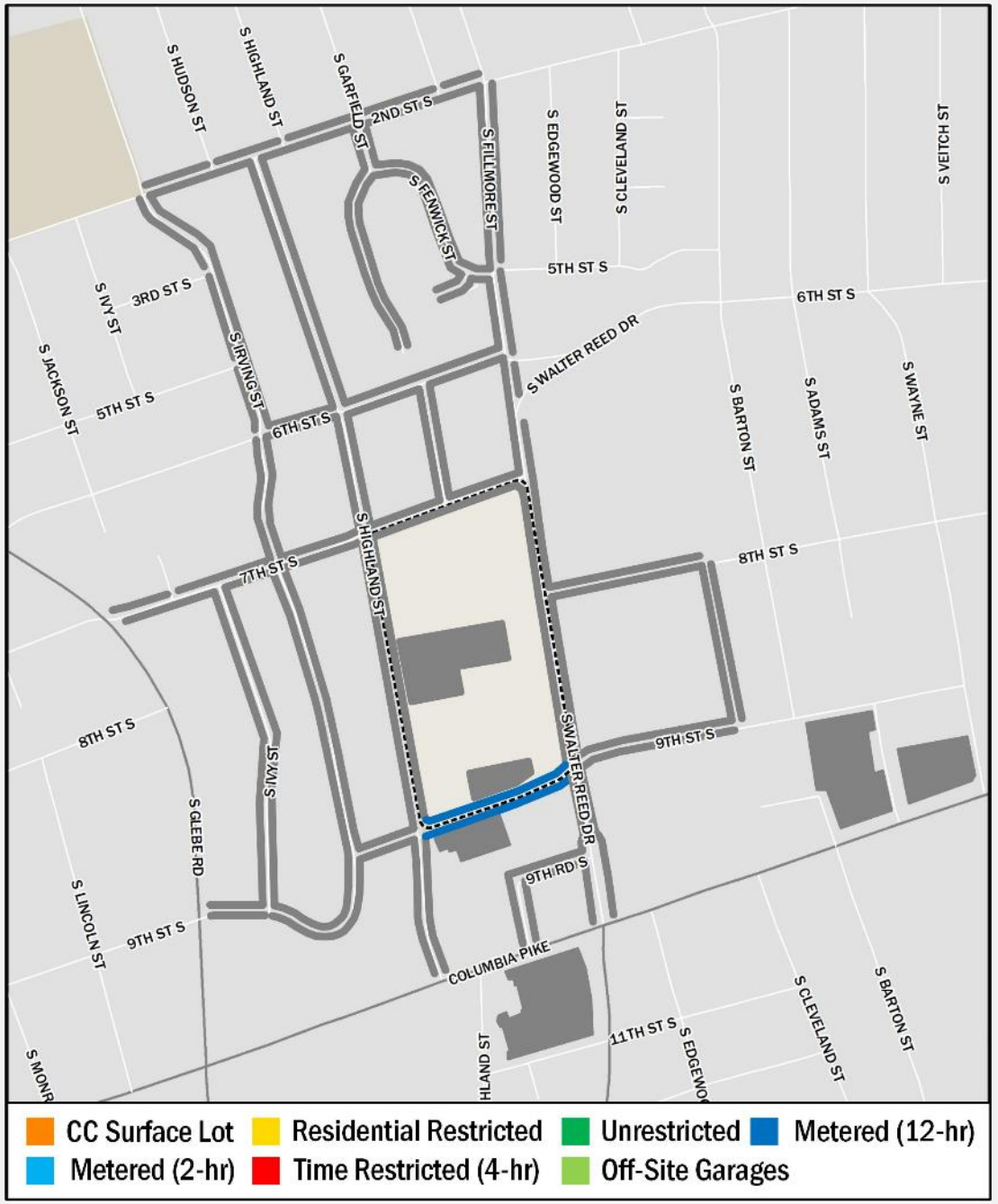


Parking Counts – Metered (12-hr)

Peaks around midday

Very low usage

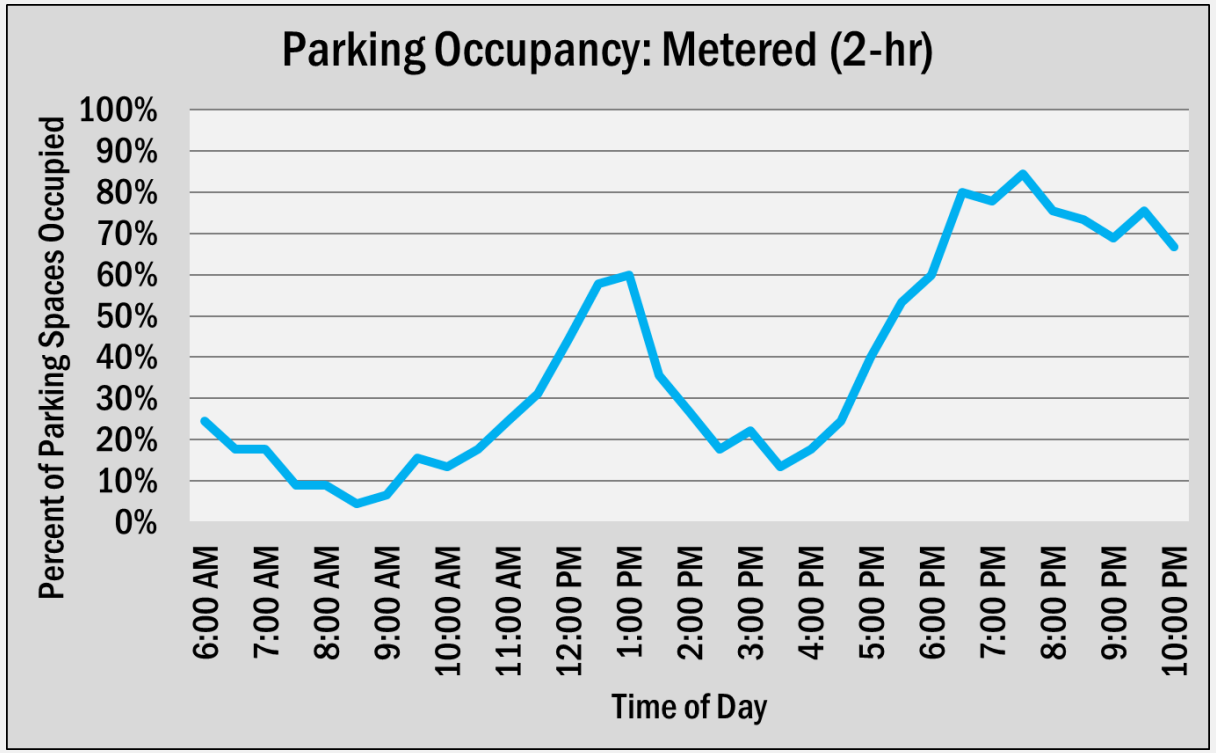


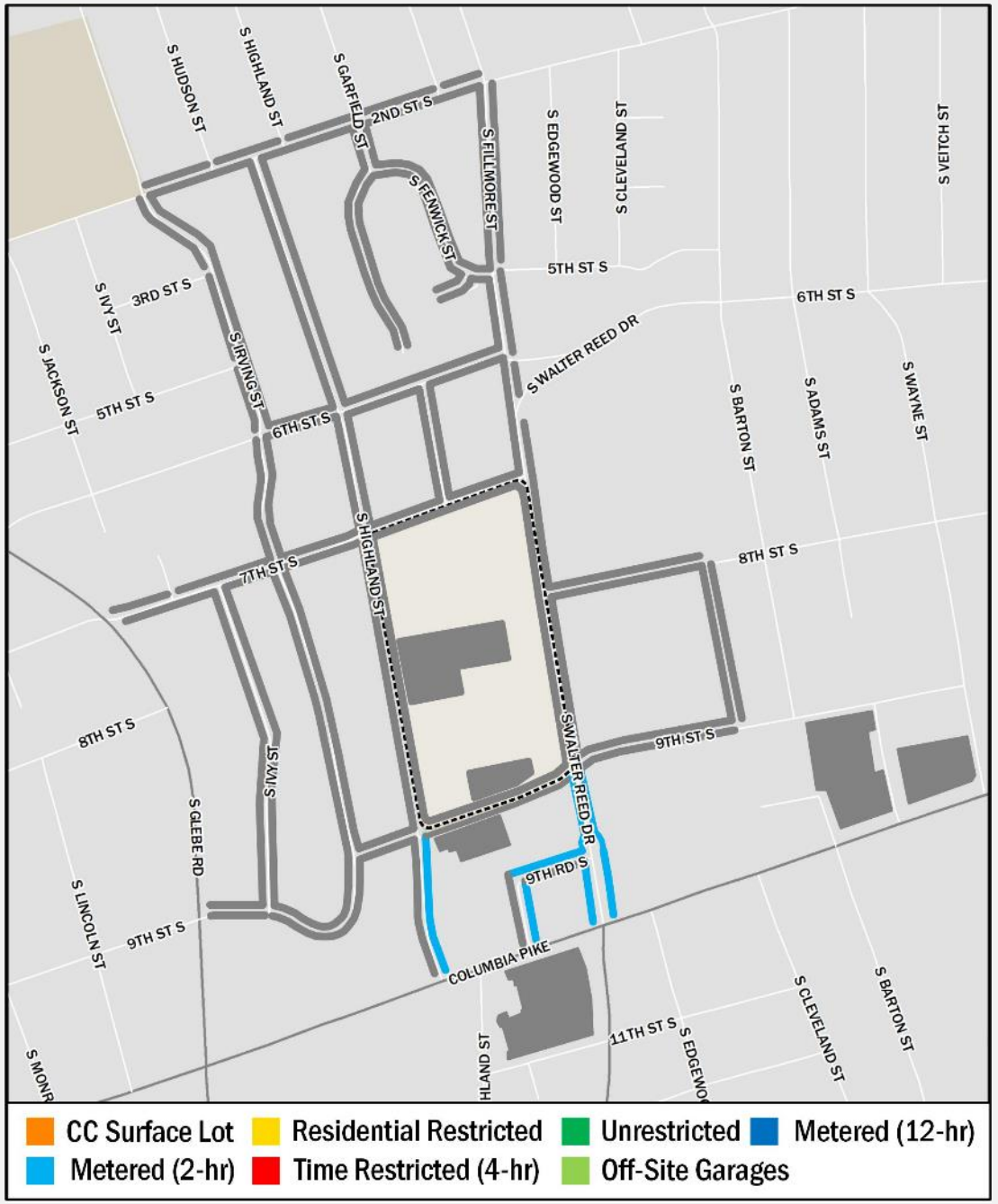


Parking Counts – Metered (2-hr)

Peaks around midday and evening with retail/lunch patterns

Very low usage outside of lunch and evening

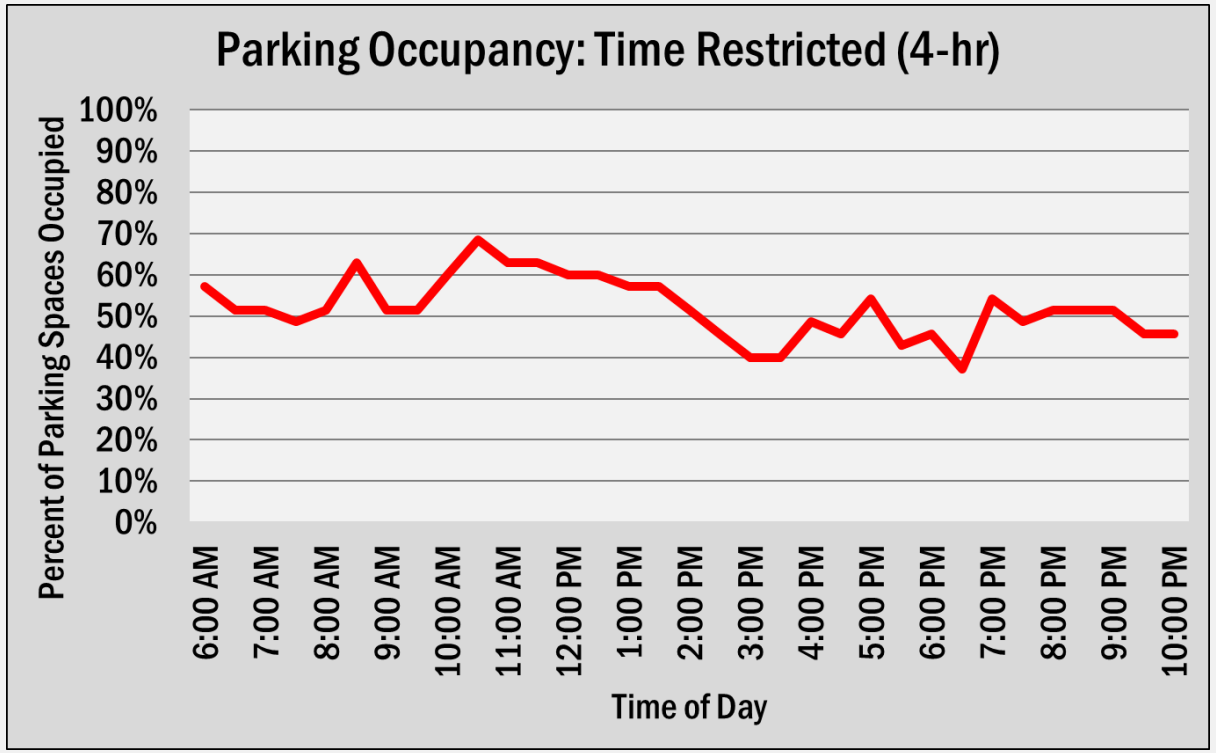




Parking Counts – Time Restricted (4-hr)

Usually over 50% occupied

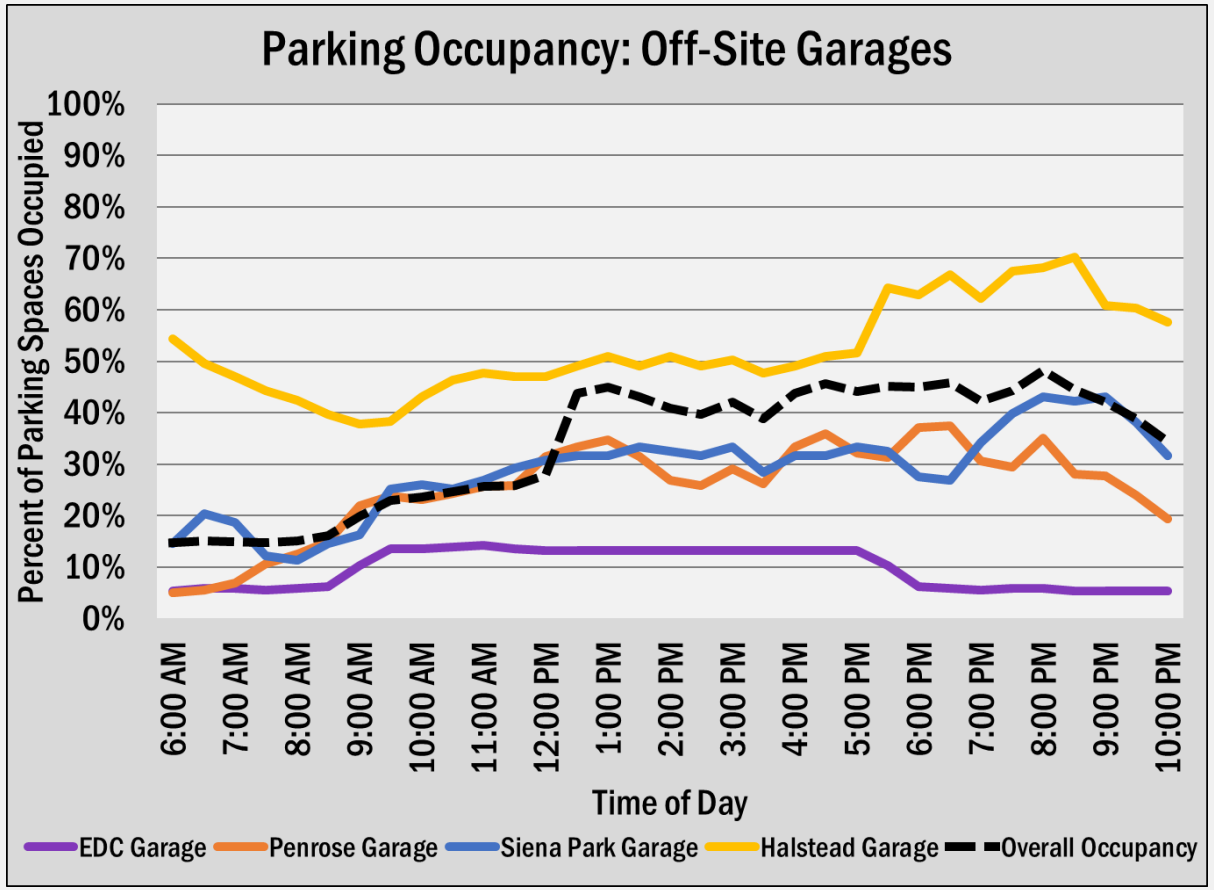
Peak appears to coincide with library midday use and times when CC attracts visitors



Parking Counts – Off-Site Garages

General increase in activity in afternoon/evenings

Difference in each garage based on private vs. public management, location, and other factors

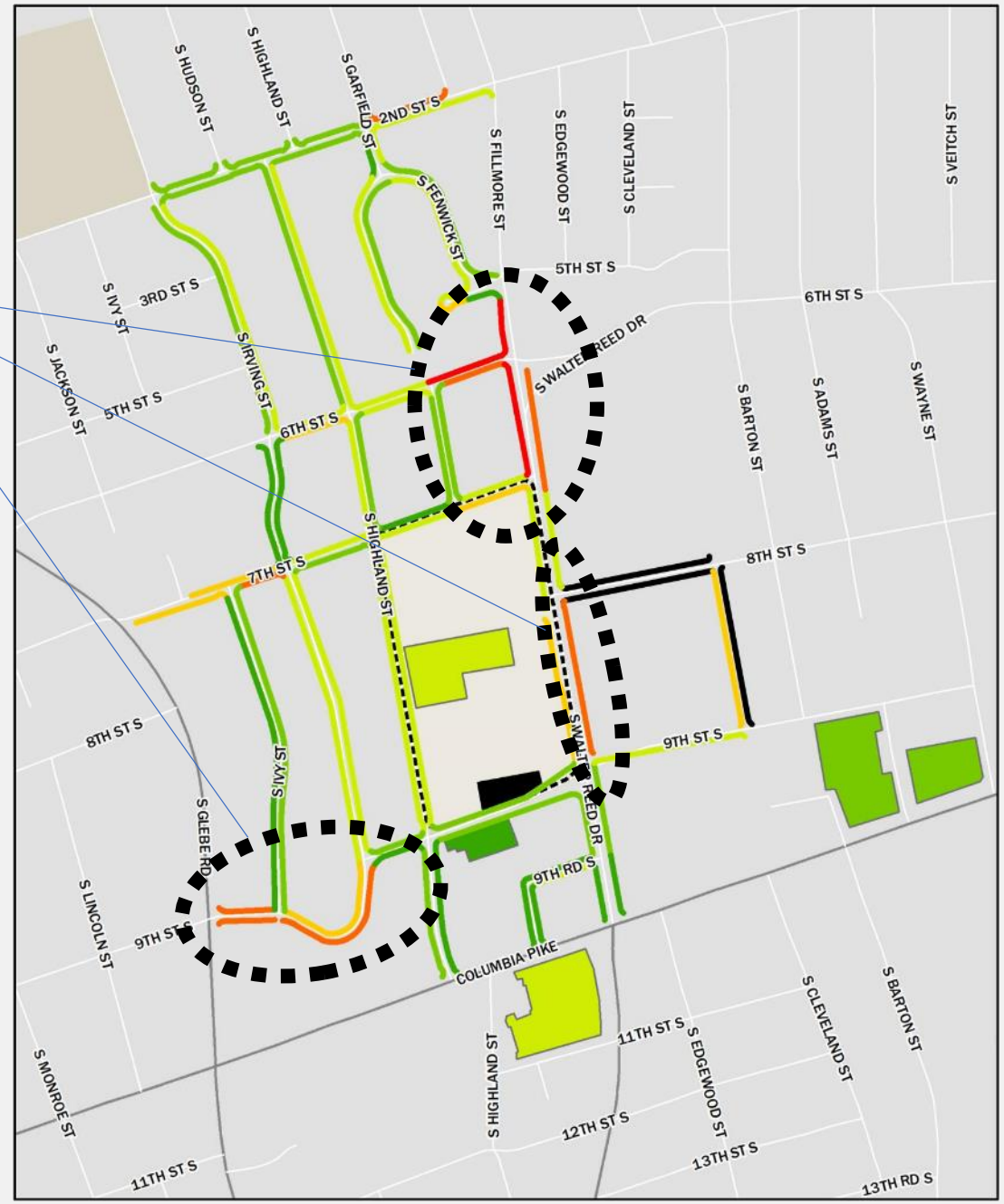


Parking Counts – Morning before Bell

7:30 AM – prior to bell times on CC
Highest usage on-street is on unrestricted or residential permit parking blocks adjacent to multi-family housing and/or houses that don't have driveways

Residential blocks where houses have driveways have high availability

CC lot just starting to get parkers as people arrive early, prior to bell times



Occupancy – 7:30 to 8:00 AM

- < 10%
- 10% - 25%
- 25% - 50%
- 50% - 70%
- 70% - 90%
- > 90%
- No Parking

Parking Counts – Morning after Bell

9:30 AM – after all morning bell times on CC
On-street parking occupancy near multi-family housing decreases significantly

CC lot gets mostly full

Some on-street parking occurs surrounding CC, notably on 7th Street near the ES

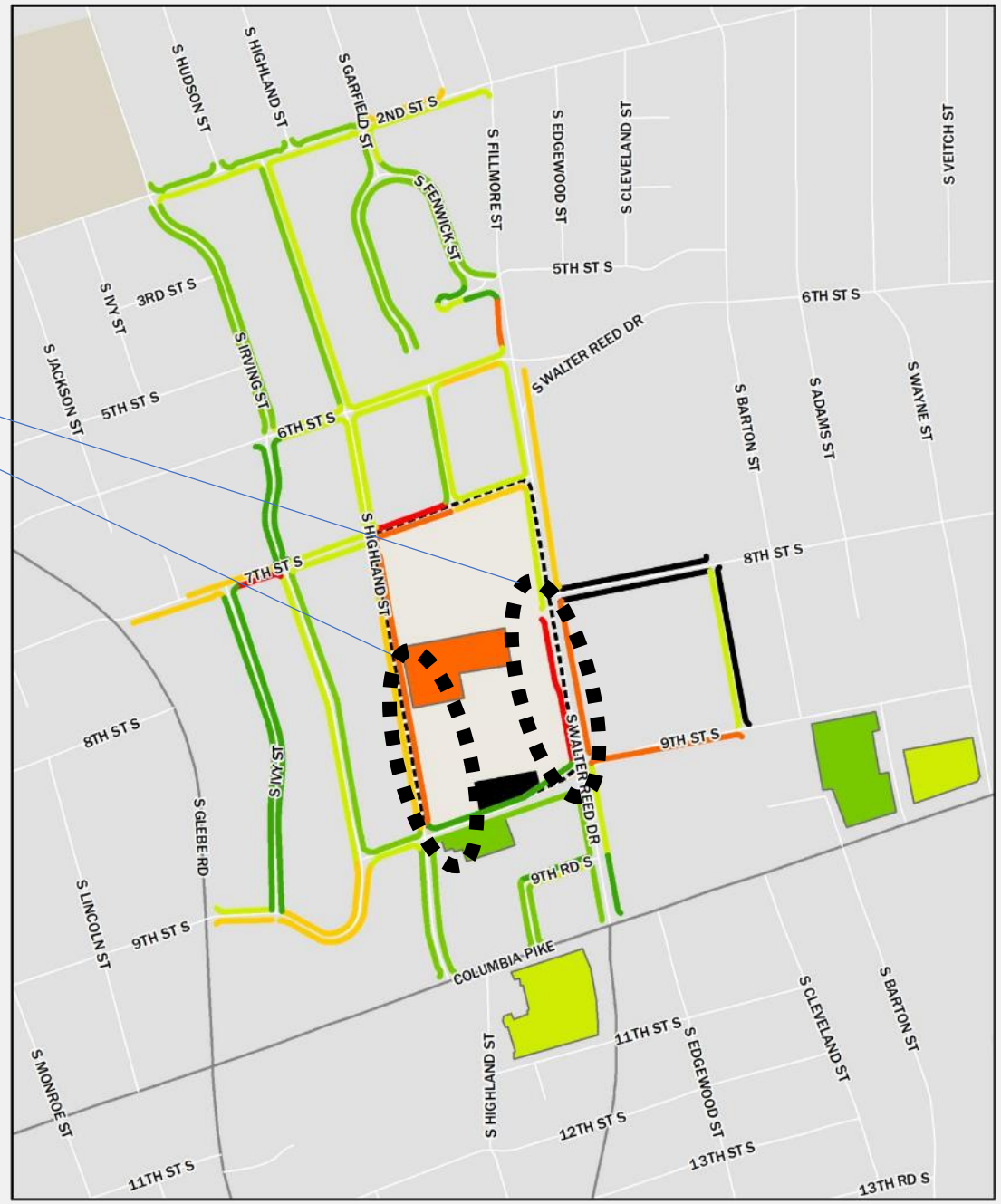
Occupancy – 9:30 to 10:00 AM

- < 10%
- 10% - 25%
- 25% - 50%
- 50% - 70%
- 70% - 90%
- > 90%
- No Parking

Parking Counts – After Library Opens

10:30 AM – Library now open

On-street parking adjacent to southern side of CC gets more occupied (except 12-hour meters)



Occupancy – 10:30 to 11:00 AM

- < 10%
- 10% - 25%
- 25% - 50%
- 50% - 70%
- 70% - 90%
- > 90%
- No Parking

Parking Counts – Before afternoon bell

2:00 PM – Peak of CC lot and surrounding streets

CC surface lot and Highland St adjacent to CC are now practically full

Occupancy – 2:00 to 2:30 PM

- < 10%
- 10% - 25%
- 25% - 50%
- 50% - 70%
- 70% - 90%
- > 90%
- No Parking

Parking Counts – After afternoon bell

4:30 PM – After all CC bell times
Appears that some residential parkers have returned

Significant decrease in on-street parking occupancy surrounding CC, although CC lot itself is still fairly full

Occupancy – 4:30 to 5:00 PM

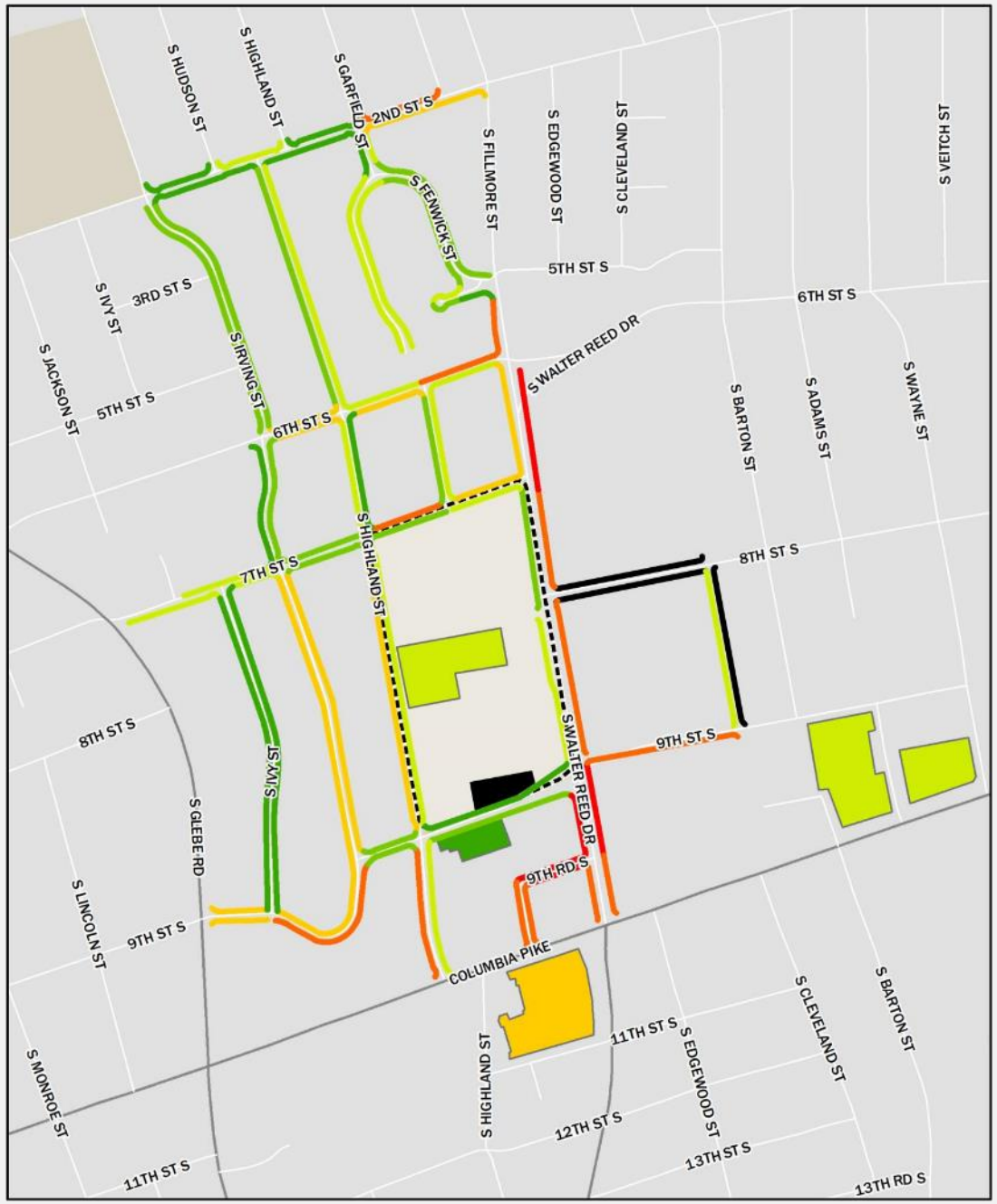
- < 10%
- 10% - 25%
- 25% - 50%
- 50% - 70%
- 70% - 90%
- > 90%
- No Parking

Parking Counts – Evening

6:30 PM
CC lot under 50% occupied

Increase in parking occupancy adjacent to residential buildings

Higher use of parking near Columbia Pike retail



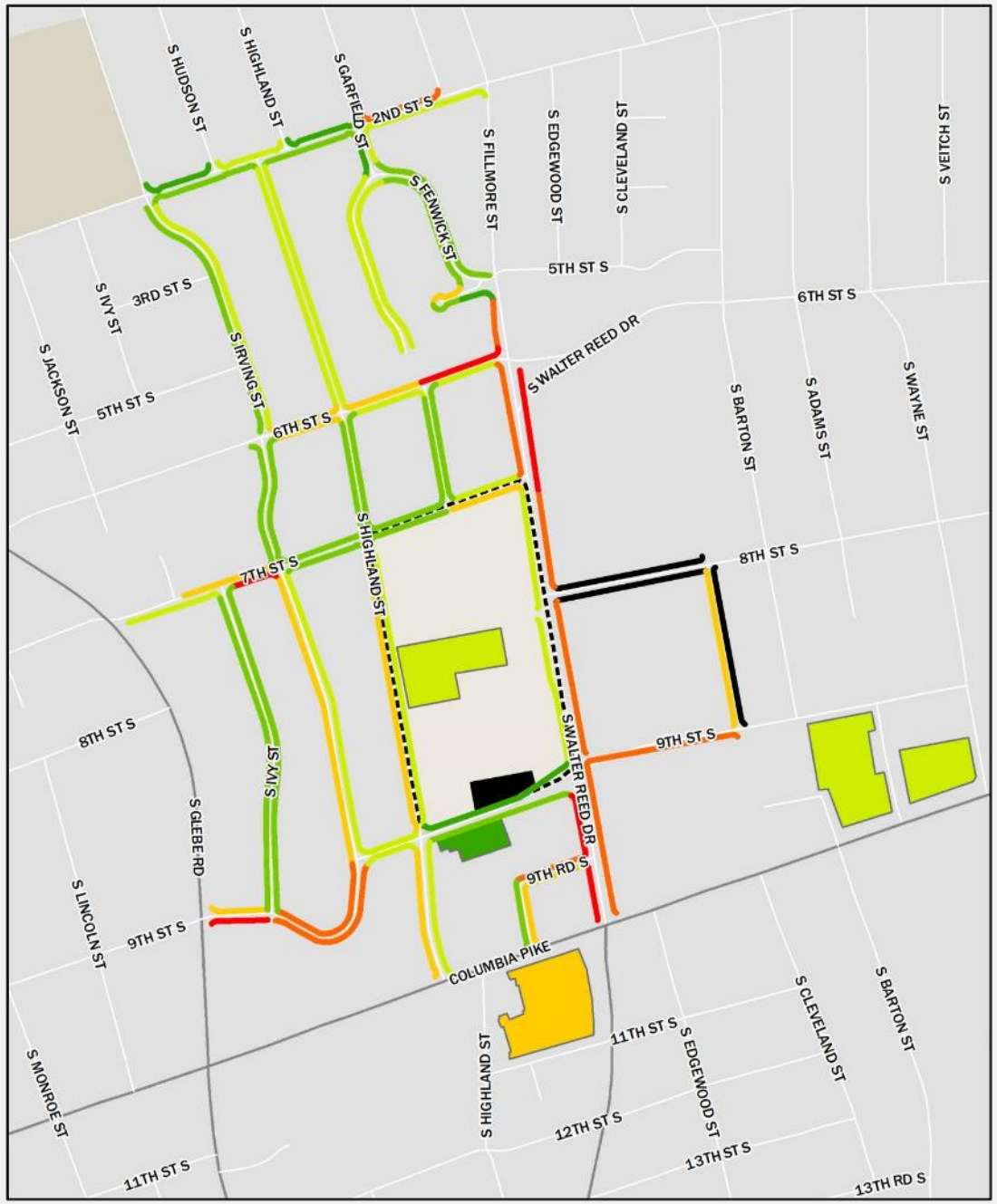
Occupancy – 6:30 to 7:00 PM

- < 10%
- 10% - 25%
- 25% - 50%
- 50% - 70%
- 70% - 90%
- > 90%
- No Parking

Parking Counts – Night

10:00 PM

On-street parking similar to early morning conditions (except for blocks near Columbia Pike)



Occupancy – 10:00 to 10:30 PM

- < 10%
- 10% - 25%
- 25% - 50%
- 50% - 70%
- 70% - 90%
- > 90%
- No Parking

Where do CC drivers park?

Based on the data:

1. The surface lot on the CC
2. On-street parking nearby
   - -CC side of Walter Reed Drive
   - -Both sides of Highland St (except permit parking)
   - -Both sides of 7th Street

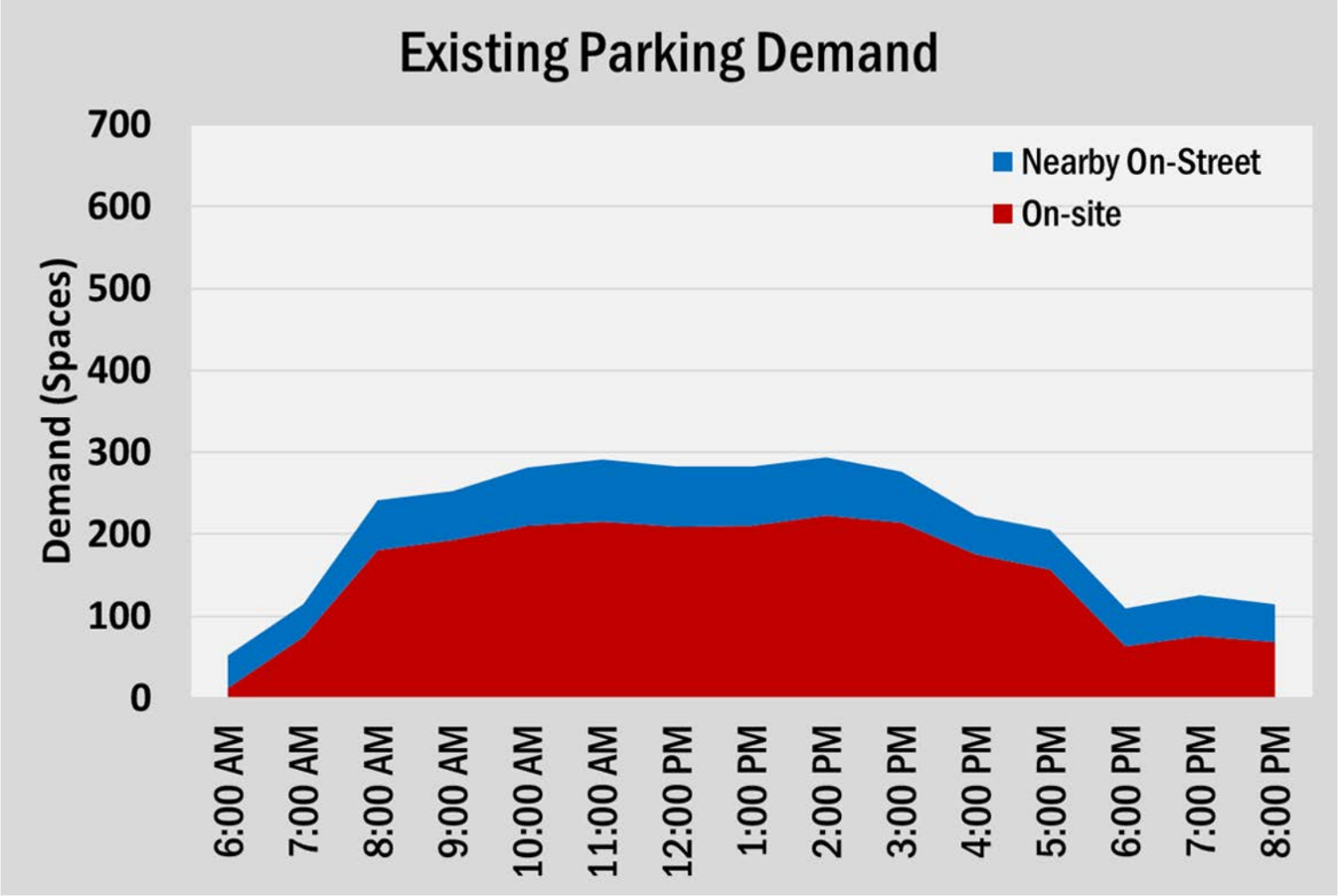
There is likely some non-CC parking on these streets, but we think most vehicles on those blocks are CC-based (at 2pm on a school day).

There are also likely CC-based cars outside the boundary.

Existing Parking Demand

The on-street parking adjacent to the CC has a similar usage pattern as the CC lot itself, indicating that it functions as overspill parking.

The next step was to create a parking model that replicates this curve, which would then be used to project future parking demand.



Parking Demand Components *(at time data was collected)*

Arlington Tech (grades 9-12) 196 students (350 maximum)	Regular school bus transportation is available (1.5 miles+ from school). After-school bus transportation is available to each comprehensive HS for extracurriculars (Tue thru Thu).
Academic Academy (grades 9-12) 50 students	8:00am – 3:10pm
HILT (High Intensity Language Training) Institute (grades 9-12) 66 students	8:00am – 3:10pm
Program for Employment Preparedness (PEP) 55 students	8:00am – 12:30pm
CTE 708 students	Attend part-time from their HS (two periods/day in three blocks). Transportation is provided to/from the CC by bus (in three shifts throughout the school day). Assumed no students parked.
CC Staff *(not counting ACHS or Elementary School)*	Broken out because there is some overlap between programs. This component includes visitors.
Arlington Community High School – Students 207 students (121 adults)	Day program: 8:00am – 2:50pm Evening program: 5:00pm – 9:10pm (Mon thru Thurs)
Arlington Community High School – Staff	Broken out because of different hours. Includes visitors.
Patrick Henry Elementary School 642 students	9:00am – 3:41pm Staff and visitors (assumes no students parked).
Columbia Pike Library	Includes staff and visitors. Counts and analysis based on Wednesday hours (10:00am – 9:00pm).

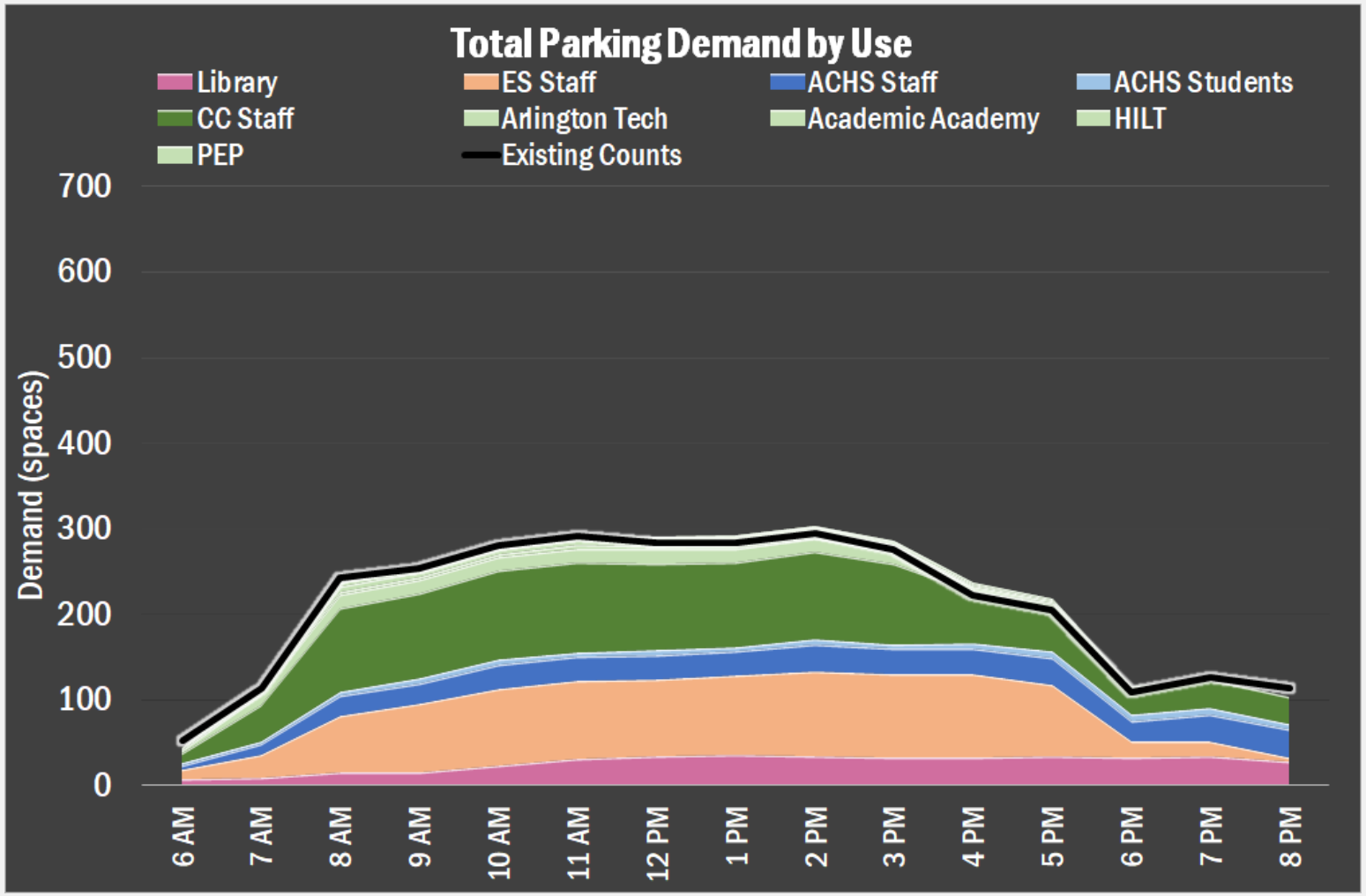
Parking Model

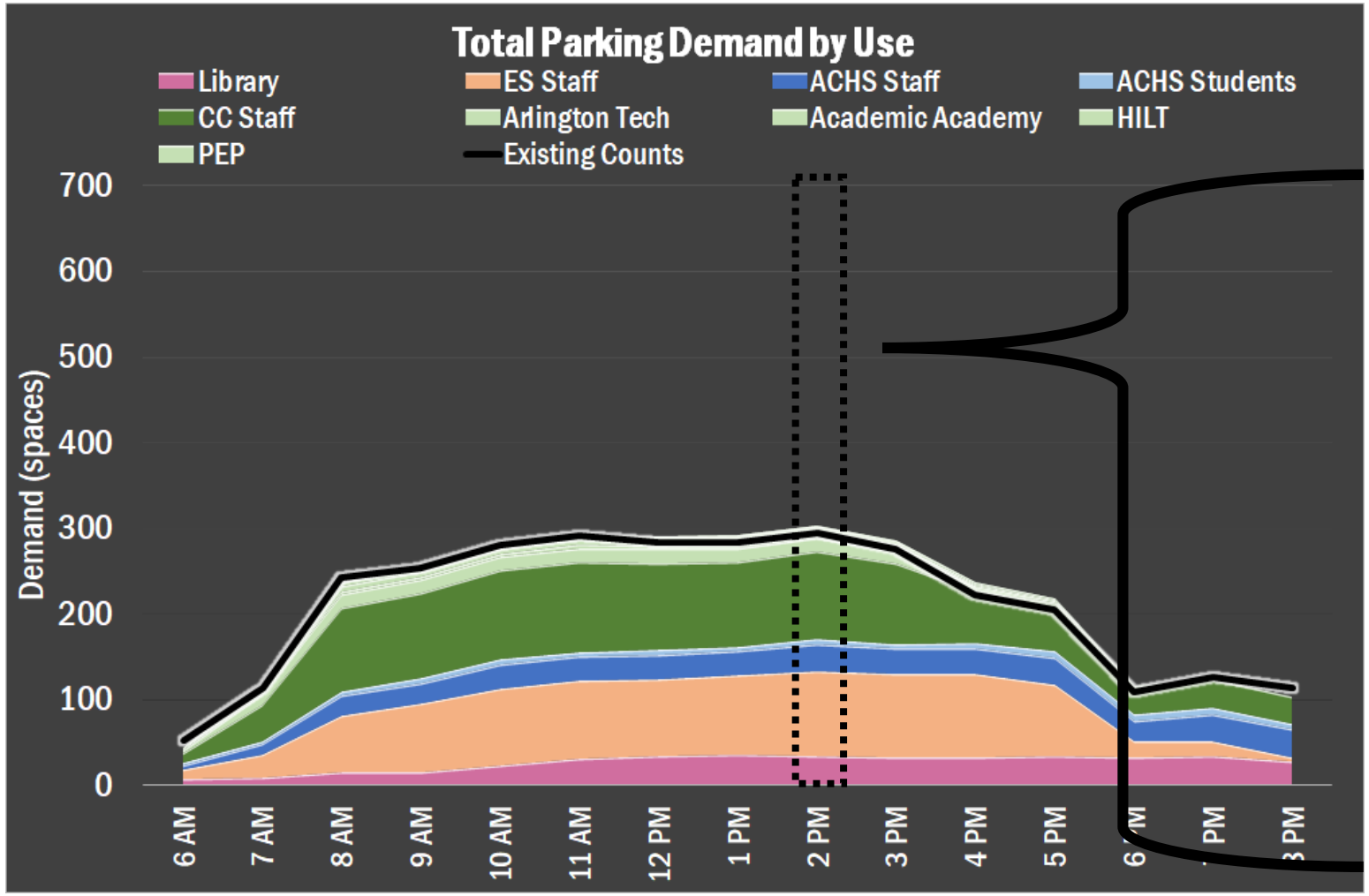
The parking model is broken down by CC user-types with distinct profiles.

Model gets close to replicating existing counts

- Overestimates slightly, but we're okay with that

Major component is school staff – 76% of parking demand.





Parking Demand (at 2pm)

CC Students (not including ACHS) 31

CC Staff (not including ACHS and ES) 102

ACHS Students 9

ACHS Staff 31

Elementary School 99

Library 35

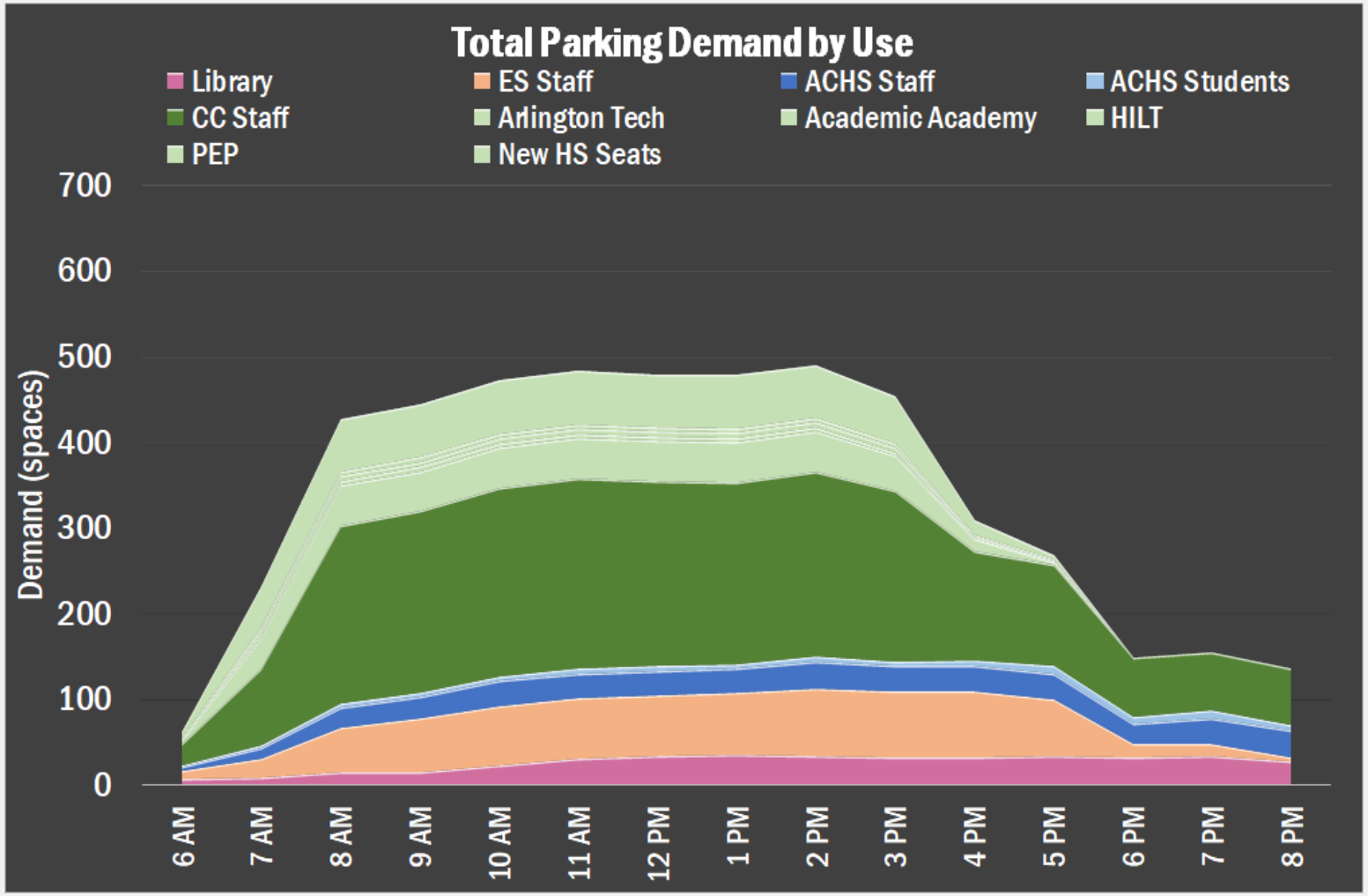
Future Parking Model

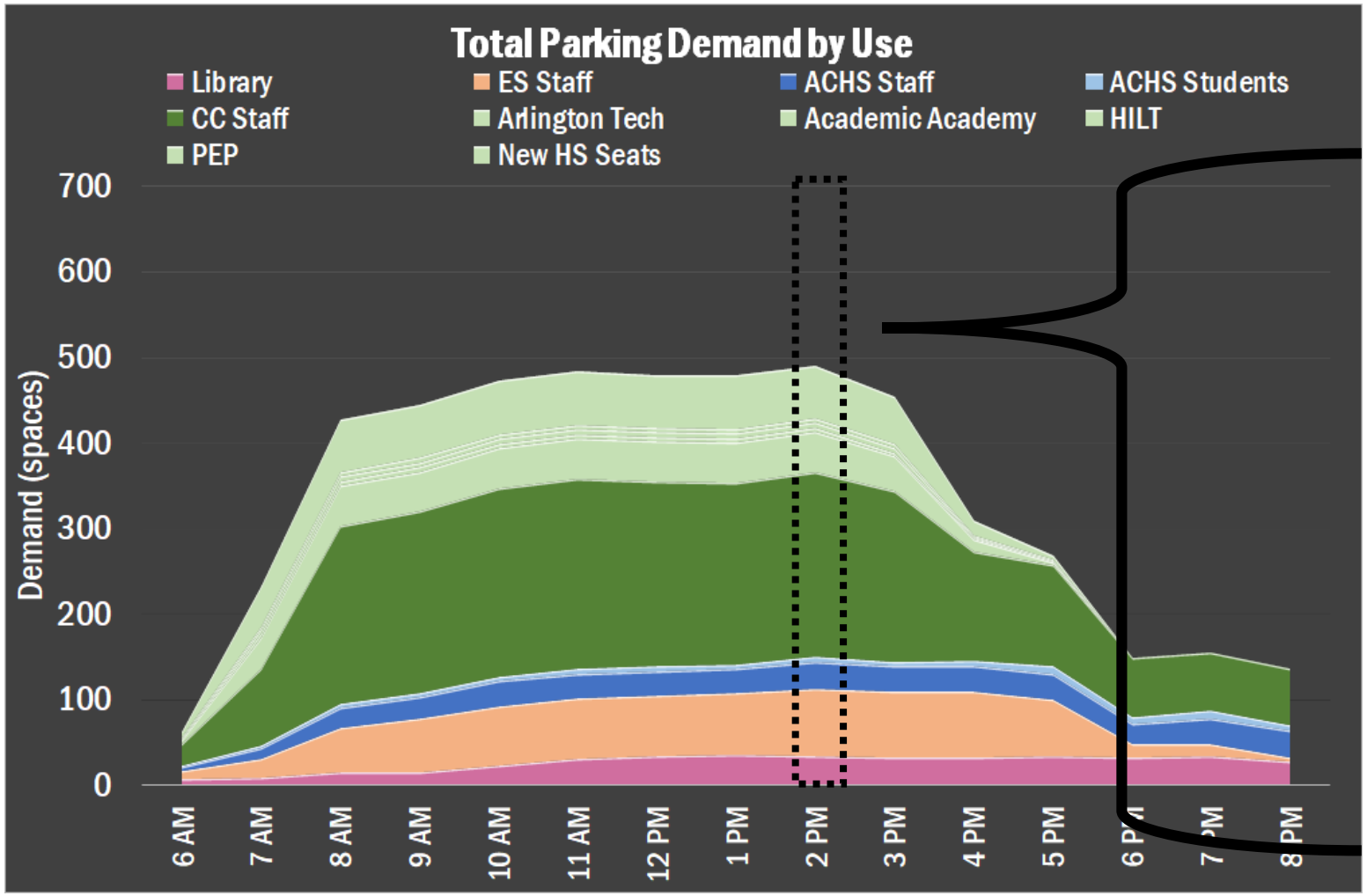
When we plug in the numbers from the CCWG near-term program into the model, we get the following curve:

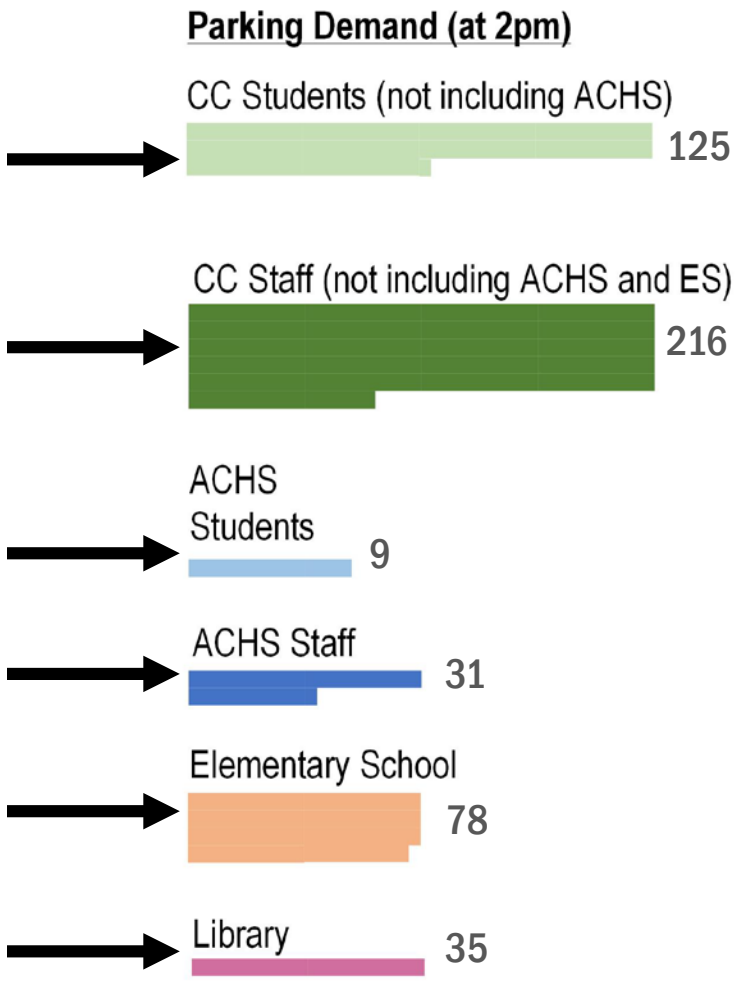
Future demand peak: 494 spaces
(Existing demand peak: 307 spaces)

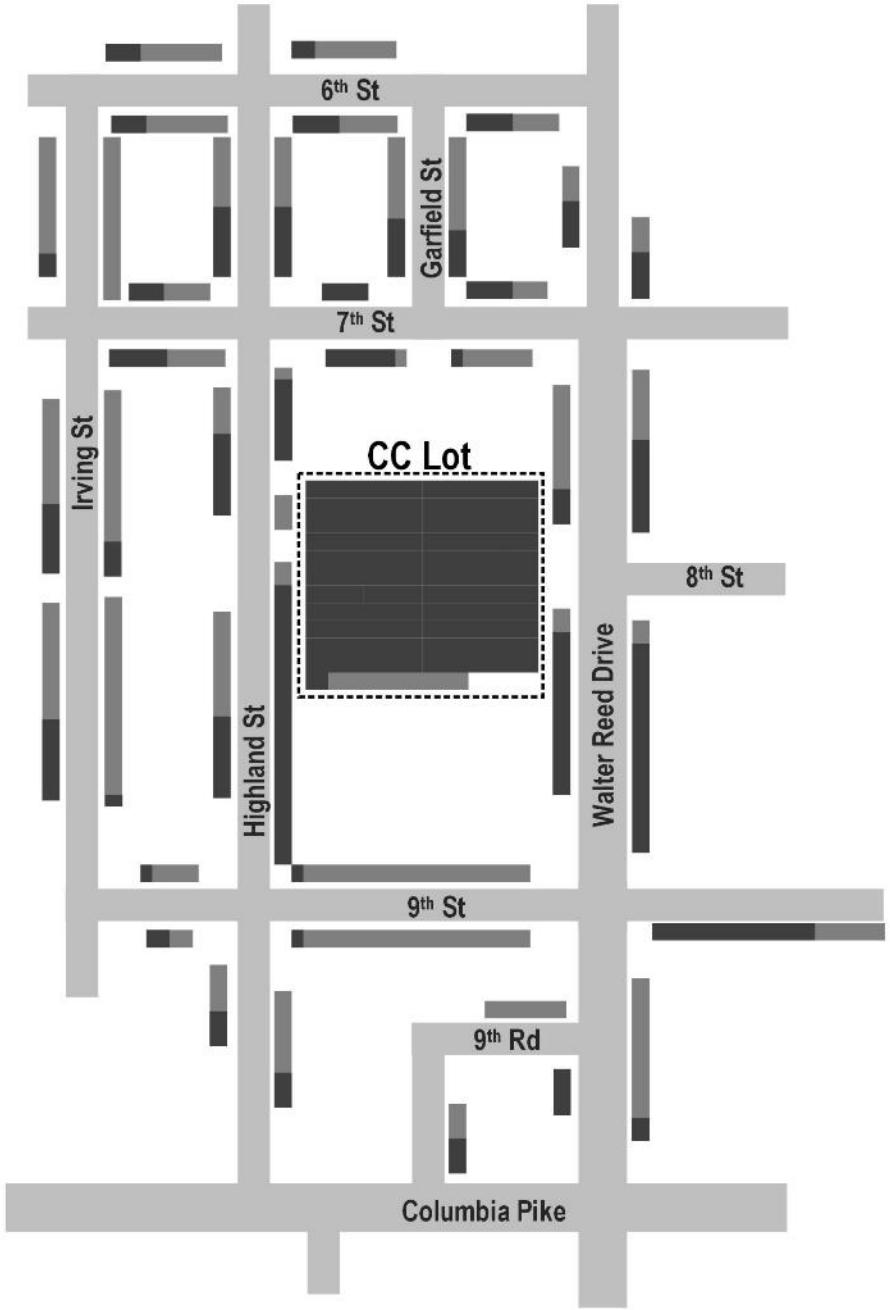
Increased demand comes mainly from the significant increase in HS students and overall CC staff due to the increase in HS students from both the Arlington Tech growth and the new 800 students.

Staff is 66% of demand
Student drivers are 27% of demand




Total Parking Demand by Use
Library
ES Staff
ACHS Staff
ACHS Students
CC Staff
Arlington Tech
Academic Academy
HILT
PEP
New HS Seats
Demand (spaces)
700
600
500
400
300
200
100
0
6 AM
7 AM
8 AM
9 AM
10 AM
11 AM
12 PM
1 PM
2 PM
3 PM
4 PM
5 PM
8 PM


Parking Demand (at 2pm)
CC Students (not including ACHS)
125
CC Staff (not including ACHS and ES)
216
ACHS Students
9
ACHS Staff
31
Elementary School
78
Library
35



Parking Spaces

- Represents 1 parking space
- Empty Spaces
- Parked Spaces

Parking Demand (at 2pm)

CC Students
(not including ACHS)

CC Staff
(not including ACHS and ES)

ACHS
Students

ACHS Staff

Elementary School

Library

Parking Spaces

- Represents 1 parking space
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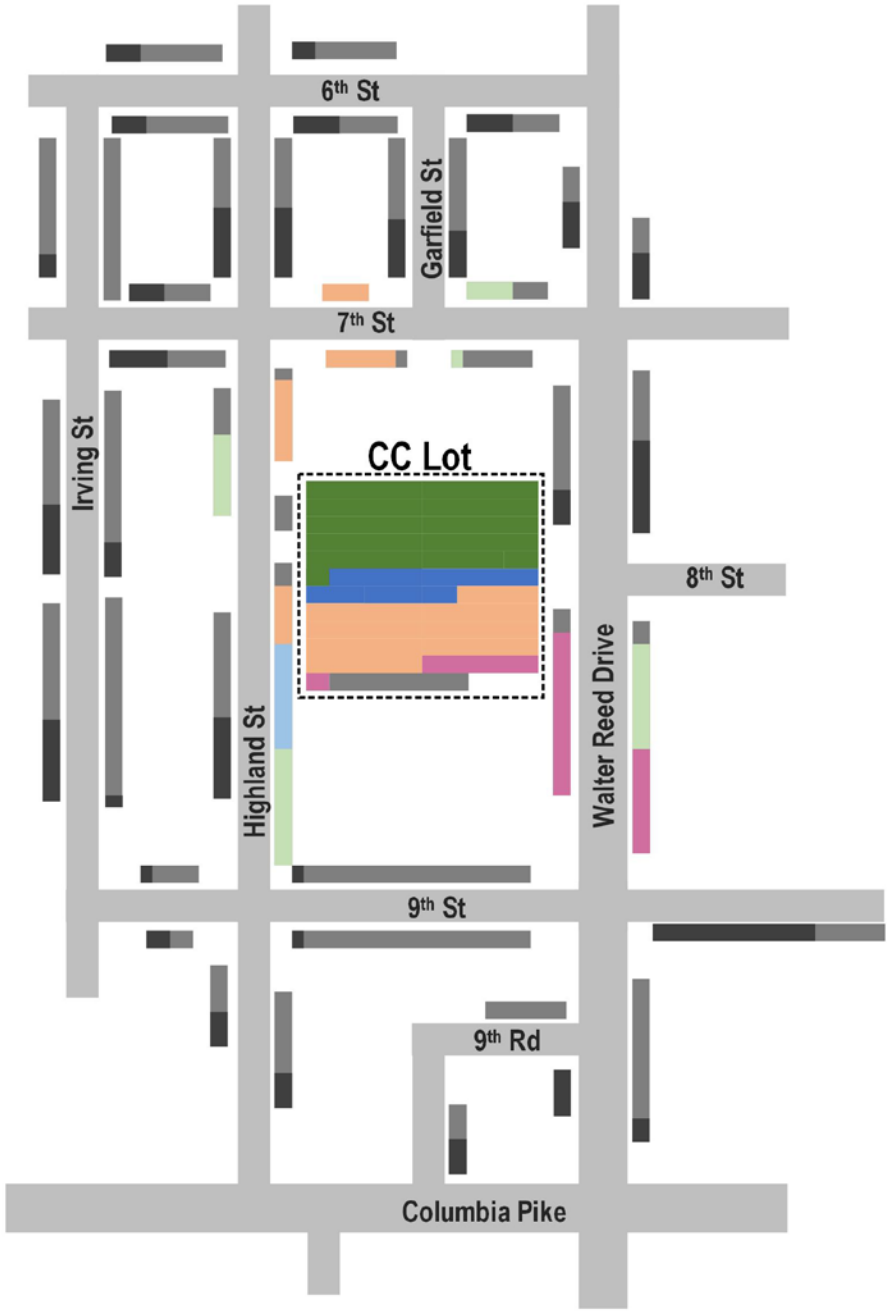


Future Changes to Parking Demand Components *(per CCWG report, near-term)*

		New HS 800 students
Arlington Tech (grades 9-12) 196 students (350 maximum)	▶	Increase to 600 students
Academic Academy (grades 9-12) 50 students	▶	Increase to 200 total between the three programs
HILT (High Intensity Language Training) Institute (grades 9-12) 66 students	▶	
Program for Employment Preparedness (PEP) 55 students	▶	
CTE 708 students	▶	No change
CC Staff *(not counting ACHS or Elementary School)*	▶	Demand increased in proportion to student population
Arlington Community High School – Students 207 students (121 adults)	▶	No changes
Arlington Community High School – Staff	▶	No changes
Patrick Henry Elementary School 642 students	▶	Replaced with Montessori program with 502 students
Columbia Pike Library	▶	No changes

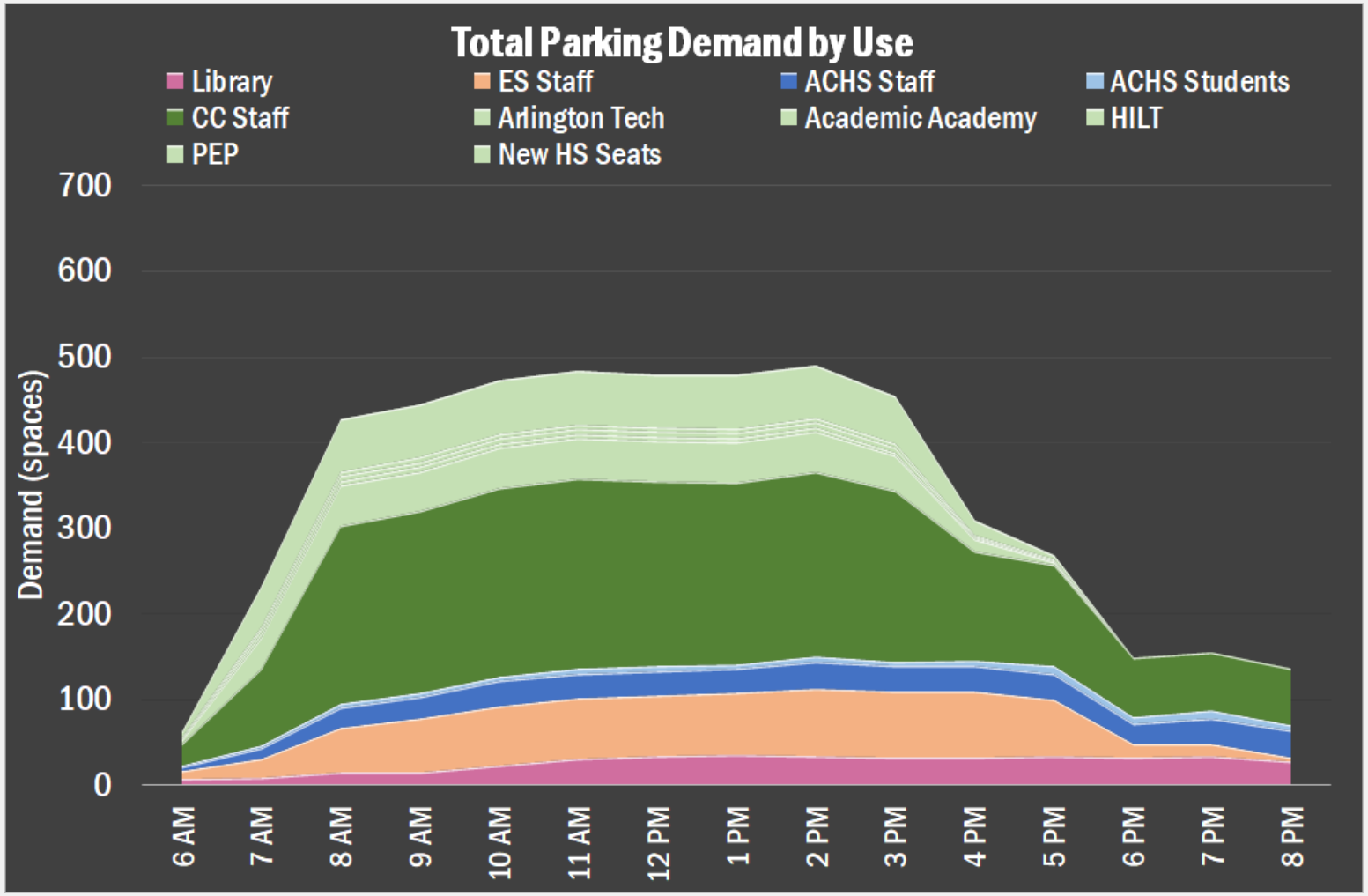
Future Parking Model

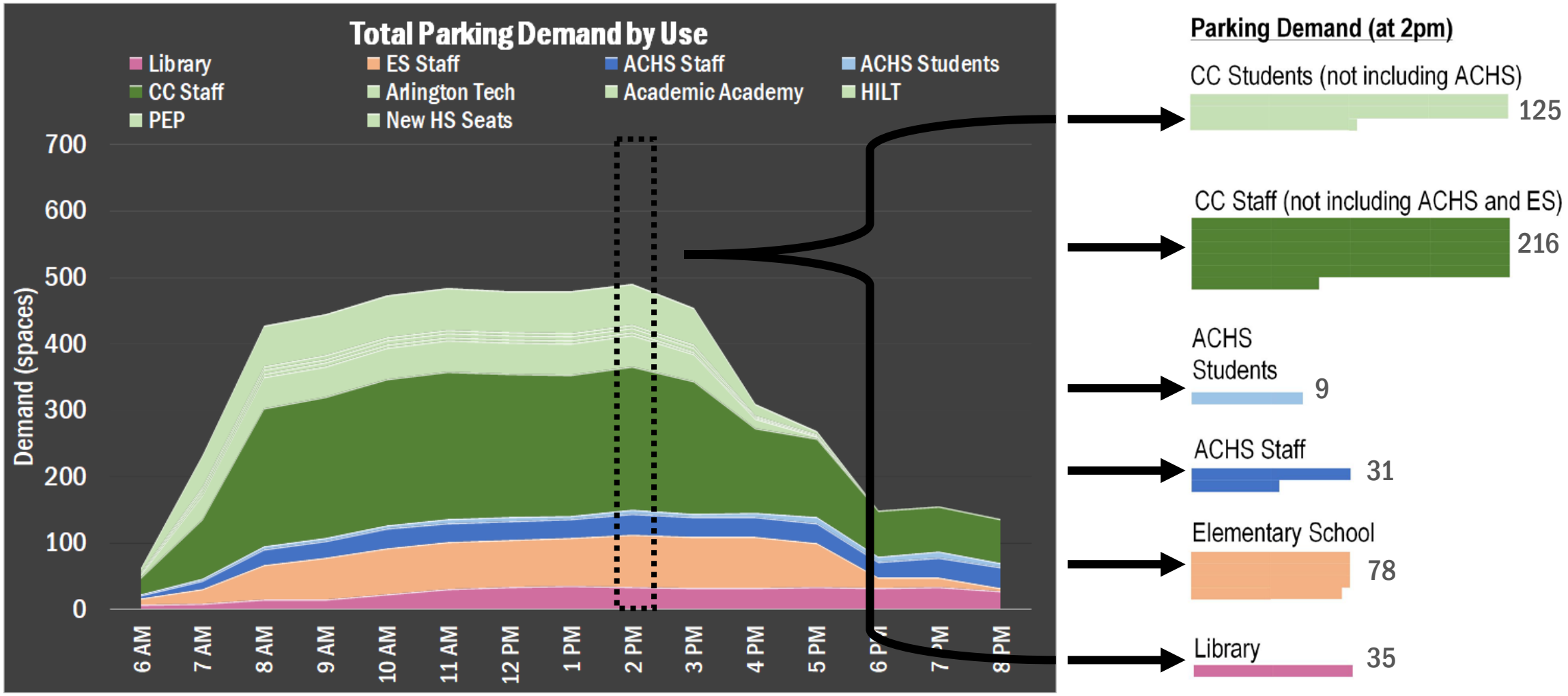
When we plug in the numbers from the CCWG near-term program into the model, we get the following curve:

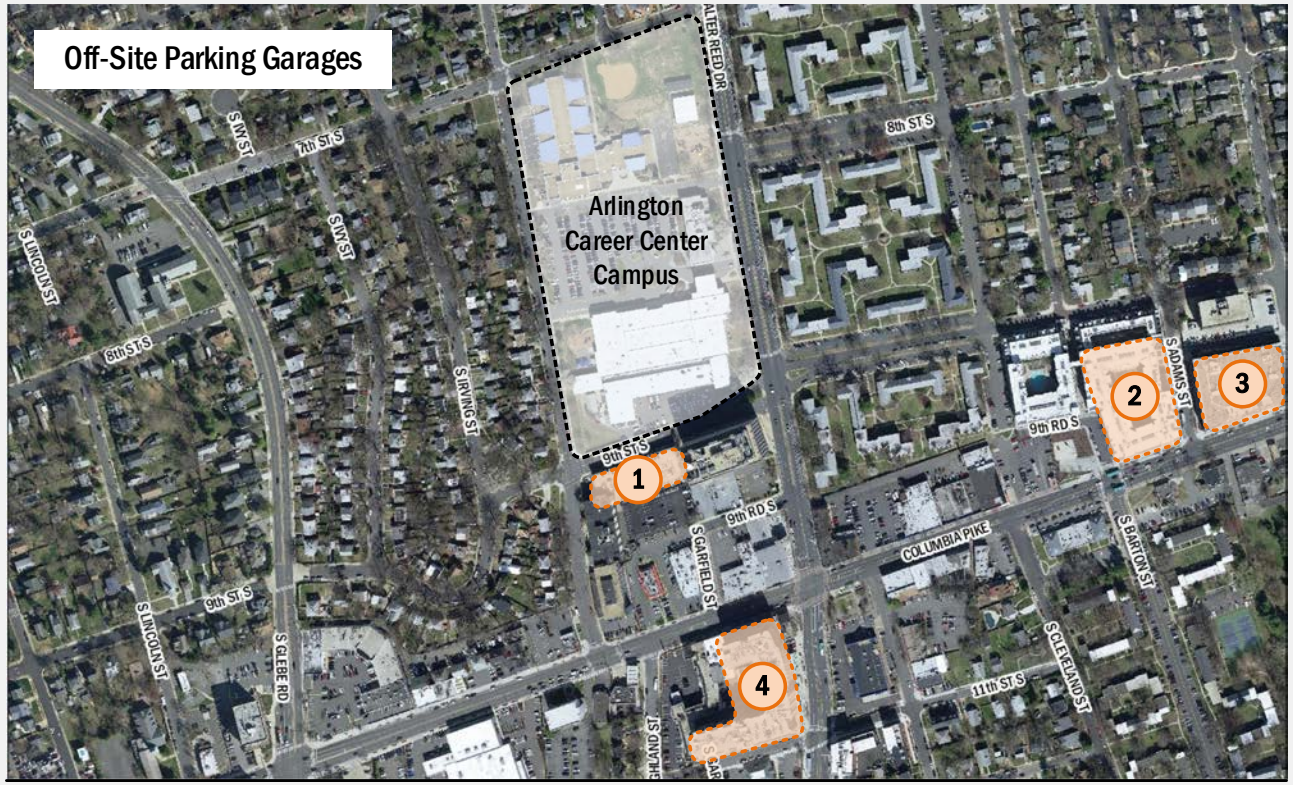
Future demand peak: 494 spaces
(Existing demand peak: 307 spaces)

Increased demand comes mainly from the significant increase in HS students and overall CC staff due to the increase in HS students from both the Arlington Tech growth and the new 800 students.

Staff is 66% of demand
Student drivers are 27% of demand




Total Parking Demand by Use
Library
ES Staff
ACHS Staff
ACHS Students
CC Staff
Arlington Tech
Academic Academy
HILT
PEP
New HS Seats
Demand (spaces)
700
600
500
400
300
200
100
0
6 AM
7 AM
8 AM
9 AM
10 AM
11 AM
12 PM
1 PM
2 PM
3 PM
4 PM
5 PM
8 PM
Parking Demand (at 2pm)
CC Students (not including ACHS)
125
CC Staff (not including ACHS and ES)
216
ACHS Students
9
ACHS Staff
31
Elementary School
78
Library
35



Total Projected Future Demand: **560 spaces**

Total unoccupied spaces in off-site garages identified: **620 spaces**

Actual amount of off-site spaces that could be used by CC demand (due to constraints and other arrangements): **150-200 spaces**

Garage	1. ECDC Garage	2. Penrose Garage	3. Siena Park Garage	4. Halstead Garage
Parking Supply	302 spaces (not public)	320 public spaces	123 public spaces (excludes monthly pass area)	151 public spaces (non-residential)
Peak demand during school day	43 cars	115 cars	41 cars	77 cars

Major Design Alternative decisions

Where will the parking be?

- How much on-street parking can be used with minimal conflicts?
- How much do we use the off-site garages? How many spaces are available for APS use (e.g. they aren't reserved for zoning minimums)?

How do we handle student parking?

- Do we discourage parking by not providing students parking?
- Do we designate student parking to limit potential conflicts with other parkers?

Parking Demand (at 2pm)

CC Students (not including ACHS)

CC Staff (not including ACHS and ES)

ACHS Students

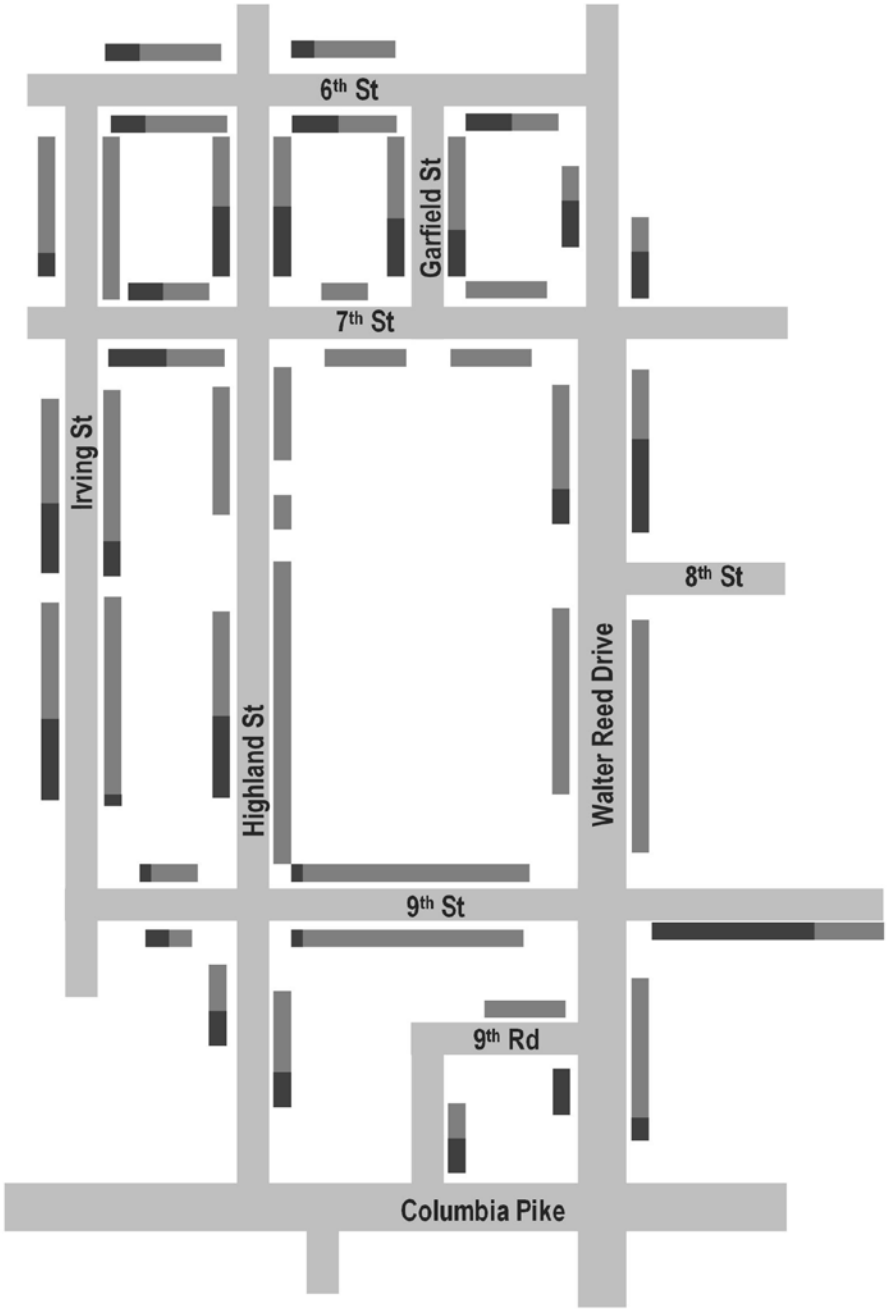
ACHS Staff

Elementary School

Library

Parking Spaces

- Represents 1 parking space
- Empty Spaces
- Parked Spaces



Off-Site Supplies

(with peak demand during school-day)

ECDC Garage

Penrose Garage

Siena Park Garage

Halstead Garage

One example (to get us started)

What if we:

- Met the TDM targets we discussed earlier
- Accommodated the remaining student demand on-street, on blocks directly adjacent to the CC (including changing the long-term metered parking so students could use it)
- Built a small lot on site for ADA parking, visitors and other reserved uses
- Used the ECDC garage to park uses that may not be on the CC long-term
- Obtained access to 150 to 200 spaces in the off-site garages

Parking Demand (at 2pm)

CC Students (not including ACHS)

CC Staff (not including ACHS and ES)

ACHS Students

ACHS Staff

Elementary School

Library

Parking Spaces

- Represents 1 parking space
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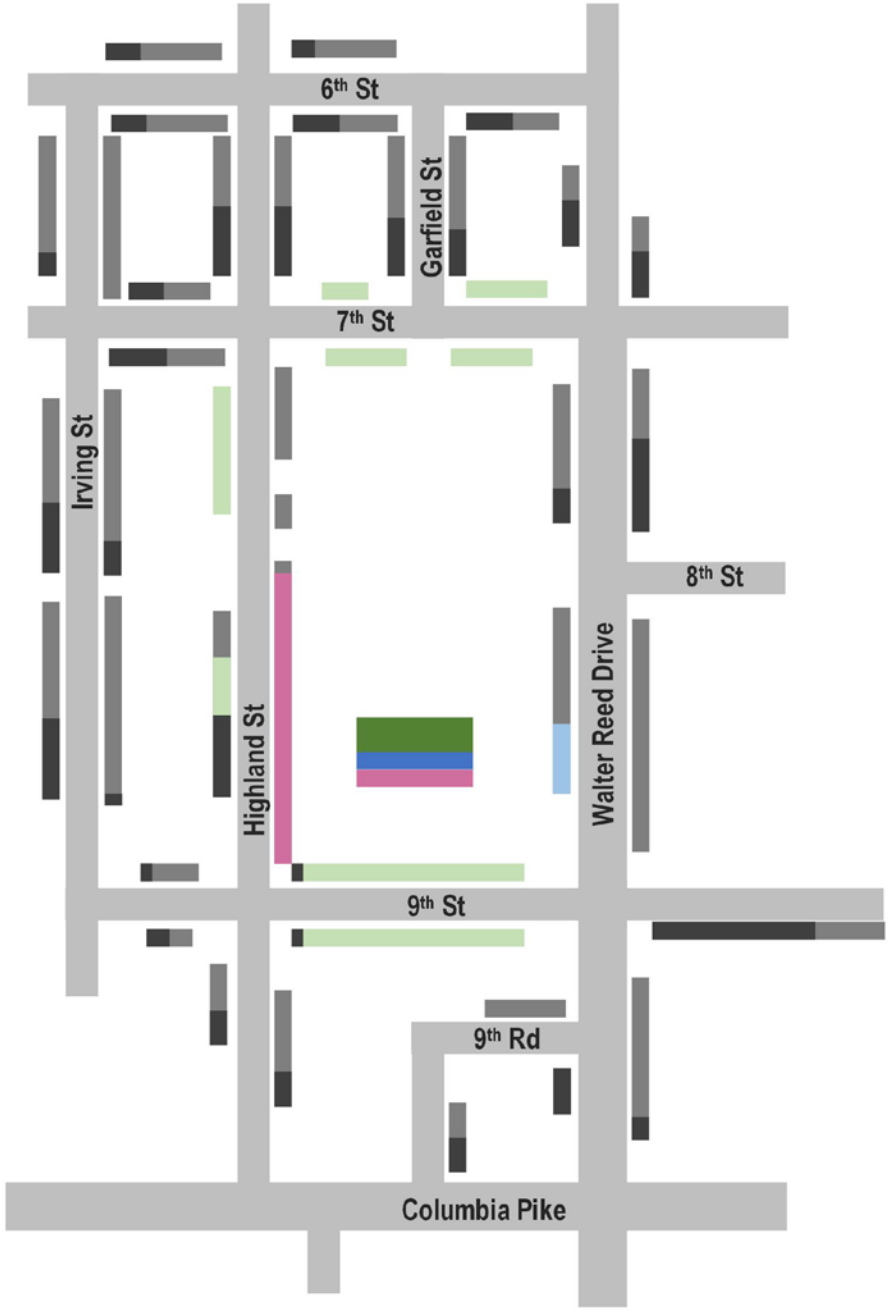


Off-Site Supplies

(with peak demand during school-day)

ECDC Garage

Penrose Garage

Siena Park Garage

Halstead Garage

TDM Reductions

Appendix:
Detailed Traffic Analysis

Existing Analysis

Break down of existing demand:
⇛ Elementary School
⇛ High School
⇛ Library

Results of existing analysis:
⇛ Near site
⇛ Surrounding site
⇛ % of traffic to/from CC

What did it tell us?
⇛ Existing areas of concern

Near-term Future Analysis

Changes to CC populations and breakdown of future demand:
⇛ Elementary School
⇛ High School
⇛ Library

Calculation of future demand:
⇛ Projected traffic demand
⇛ Demand model

What did it tell us?
⇛ Future areas of concern

Takeaways

Factors that could affect traffic:
⇛What's the program?
⇛Pick-up/drop-off locations
⇛Location/amounts of parking

Study Area Intersections

Study area extents:

- North: 2nd Street
- South: Columbia Pike
- East: Walter Reed Drive
- West: Glebe Road

Study intersections: 13

Counts collected:

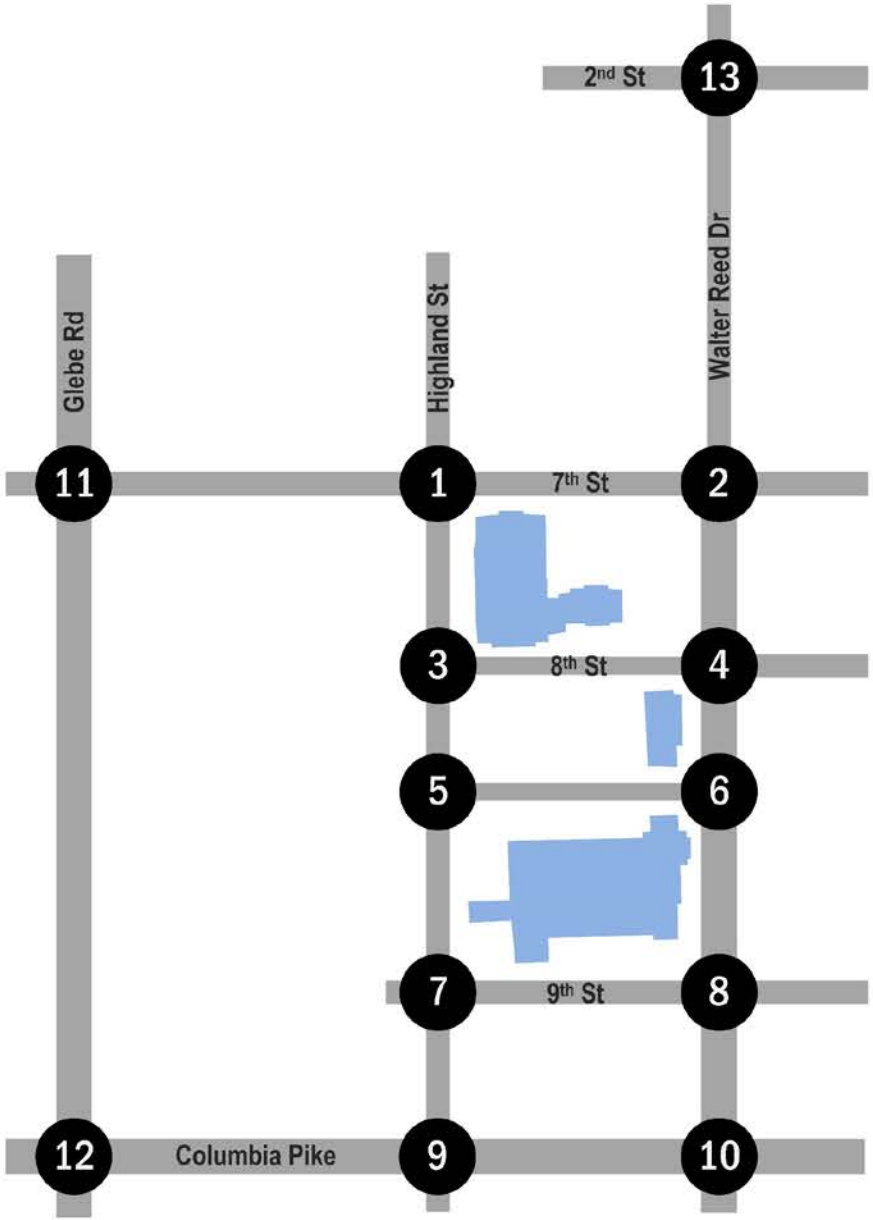
- On a Wednesday (Spring 2018 & 2019)
- 6:30-9:30AM and 2:00-7:00PM

Periods analyzed:

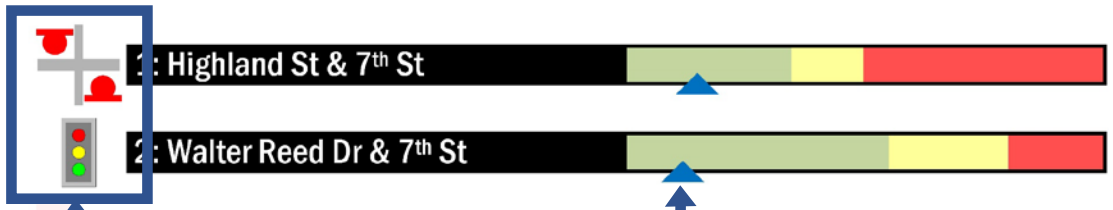
AM Peak: 7:45 to 8:45 AM

PM Dismissal Peak: 3:15 to 4:15 PM

PM Commuter Peak: 5:00 to 6:00 PM



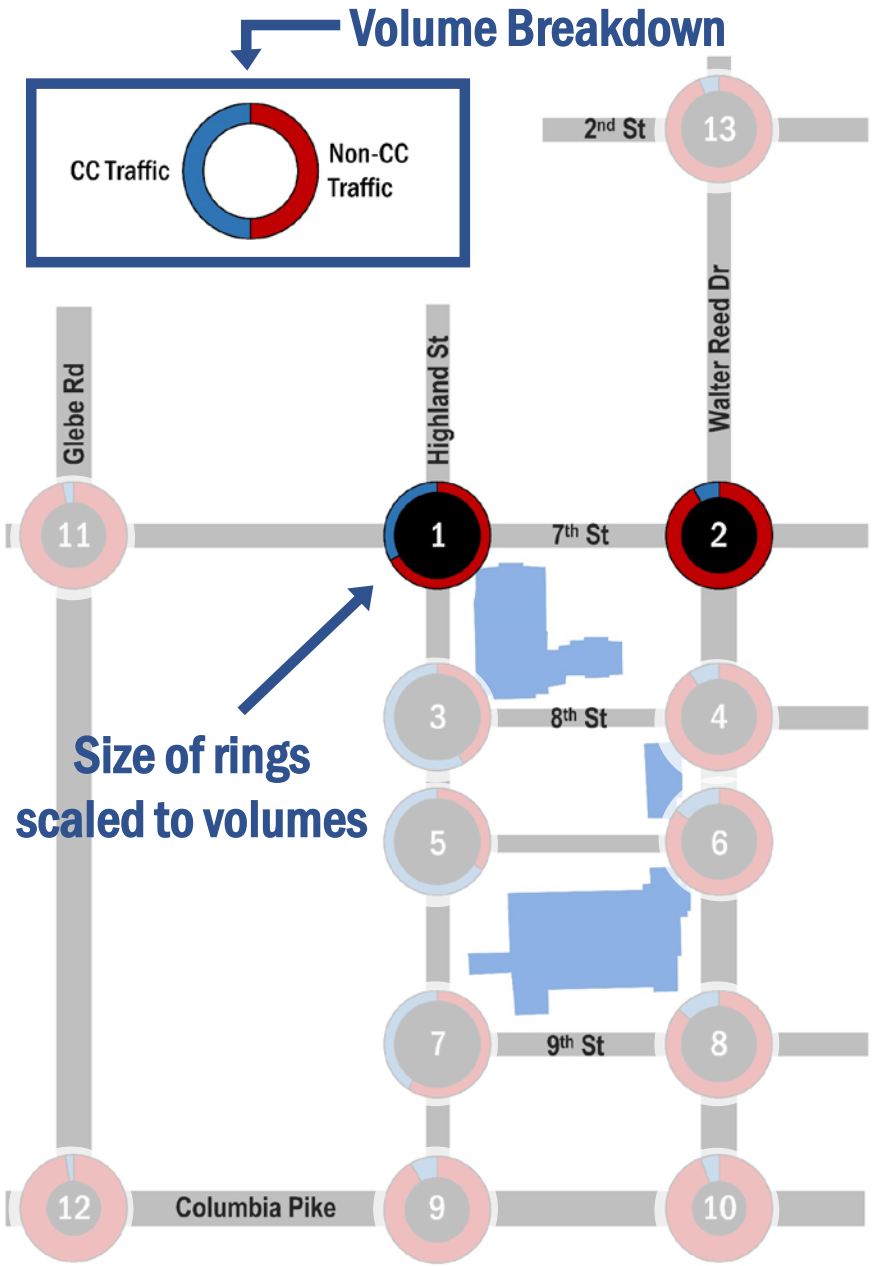
Existing Traffic Conditions: Key



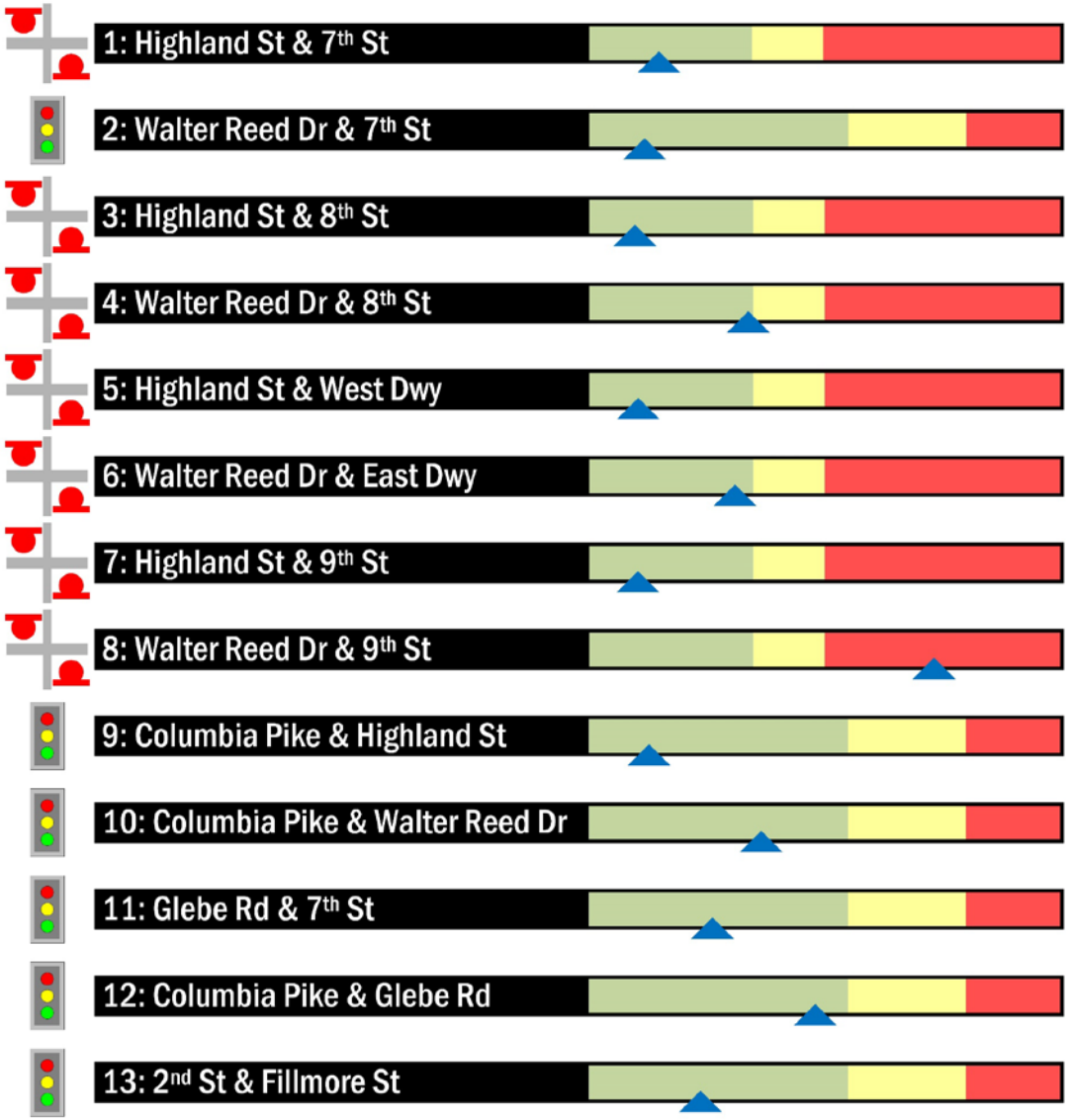
Two-Way Stop Control
OR
Signalized Intersection

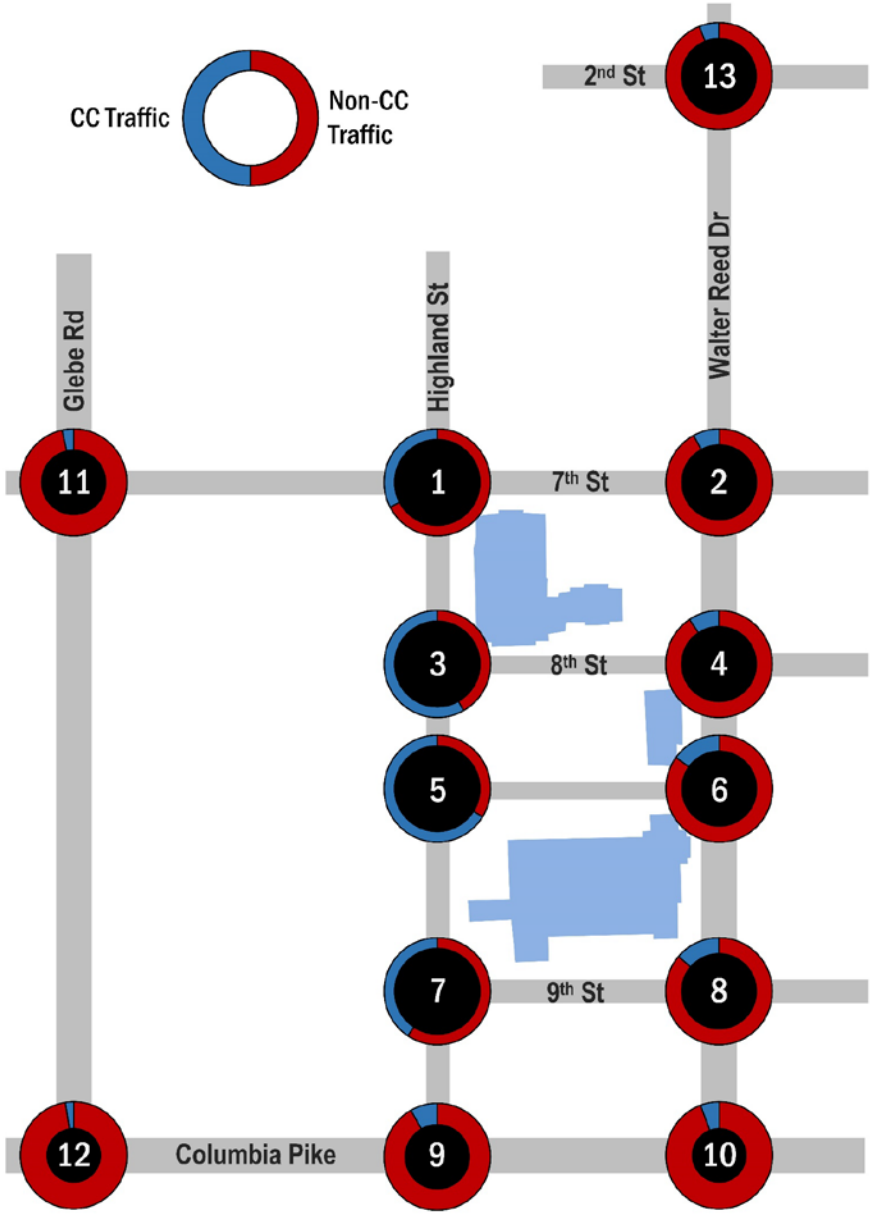
Existing Delay
(highest of three hours analyzed)

- **Two-Way Stop Control:**
  Worst approach delay
- **Signalized Intersection:**
  Overall intersection delay

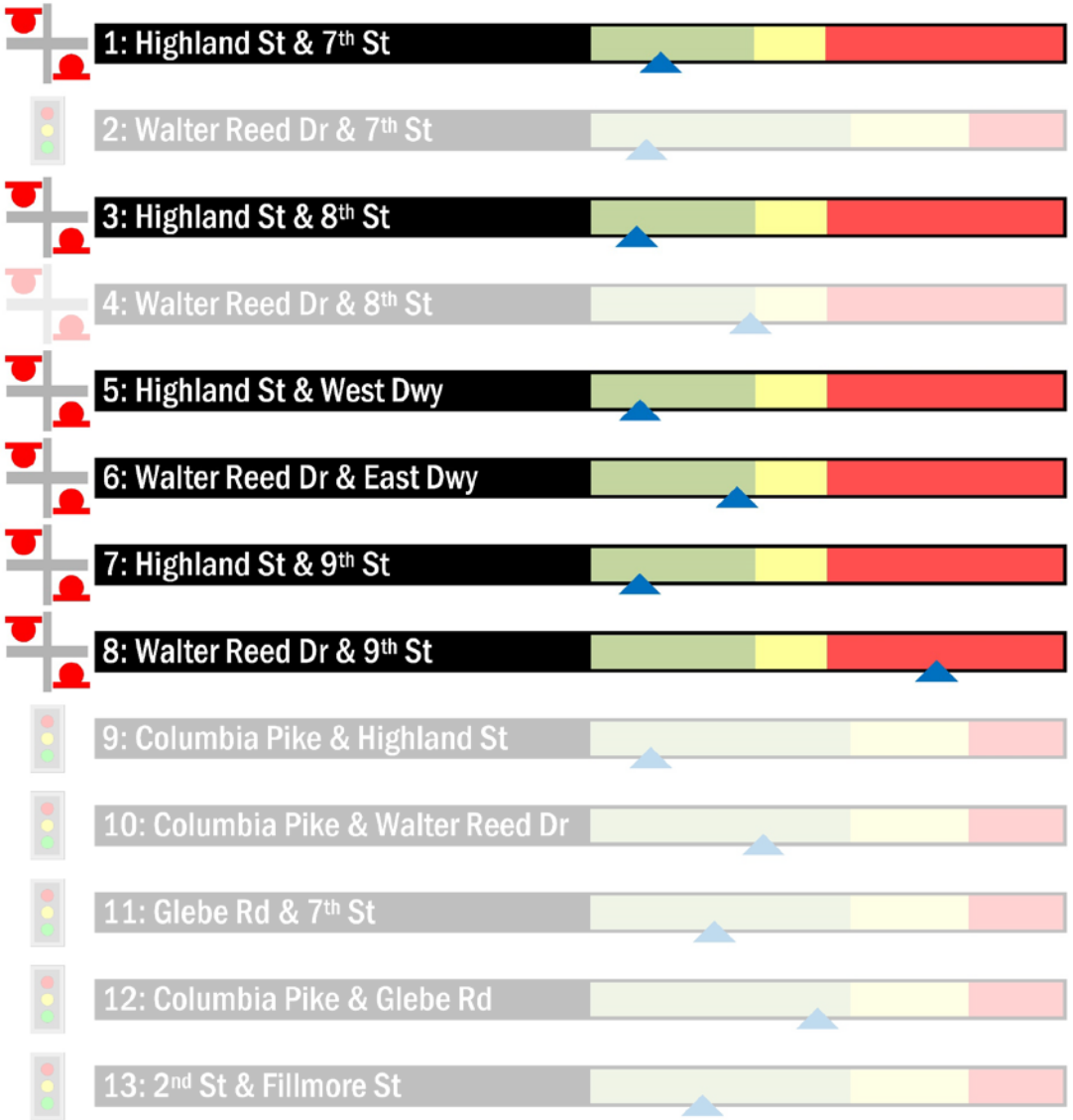


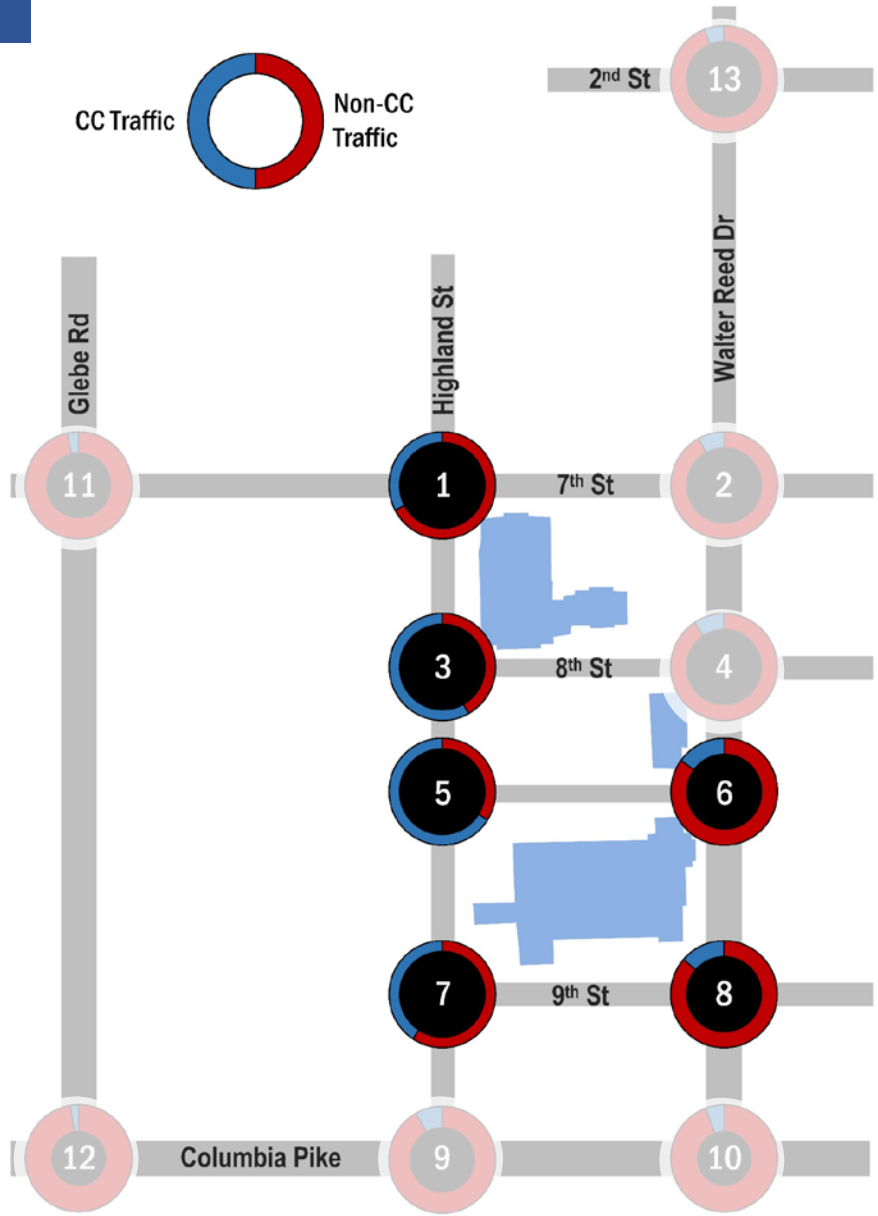
Existing Traffic Conditions



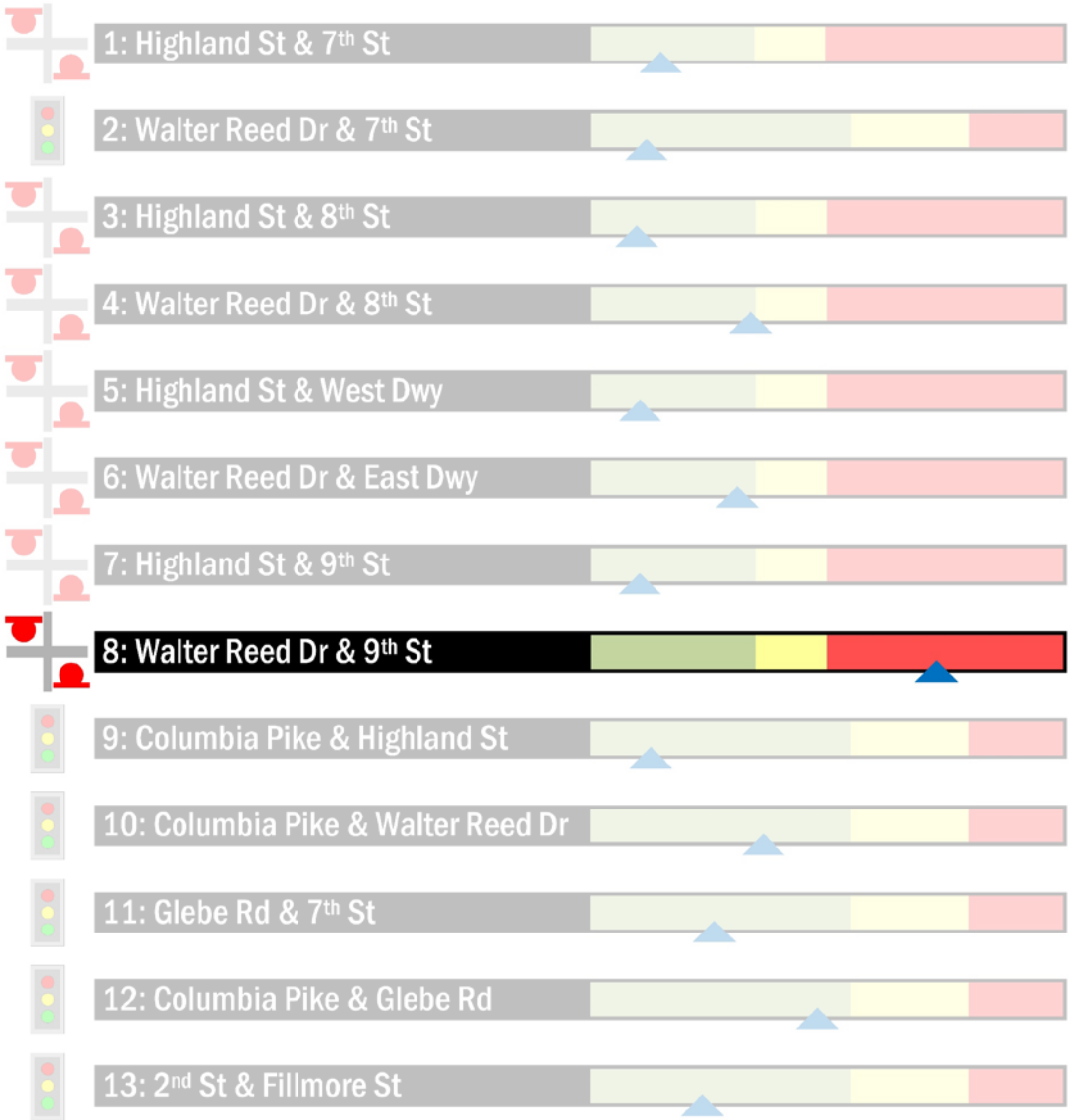


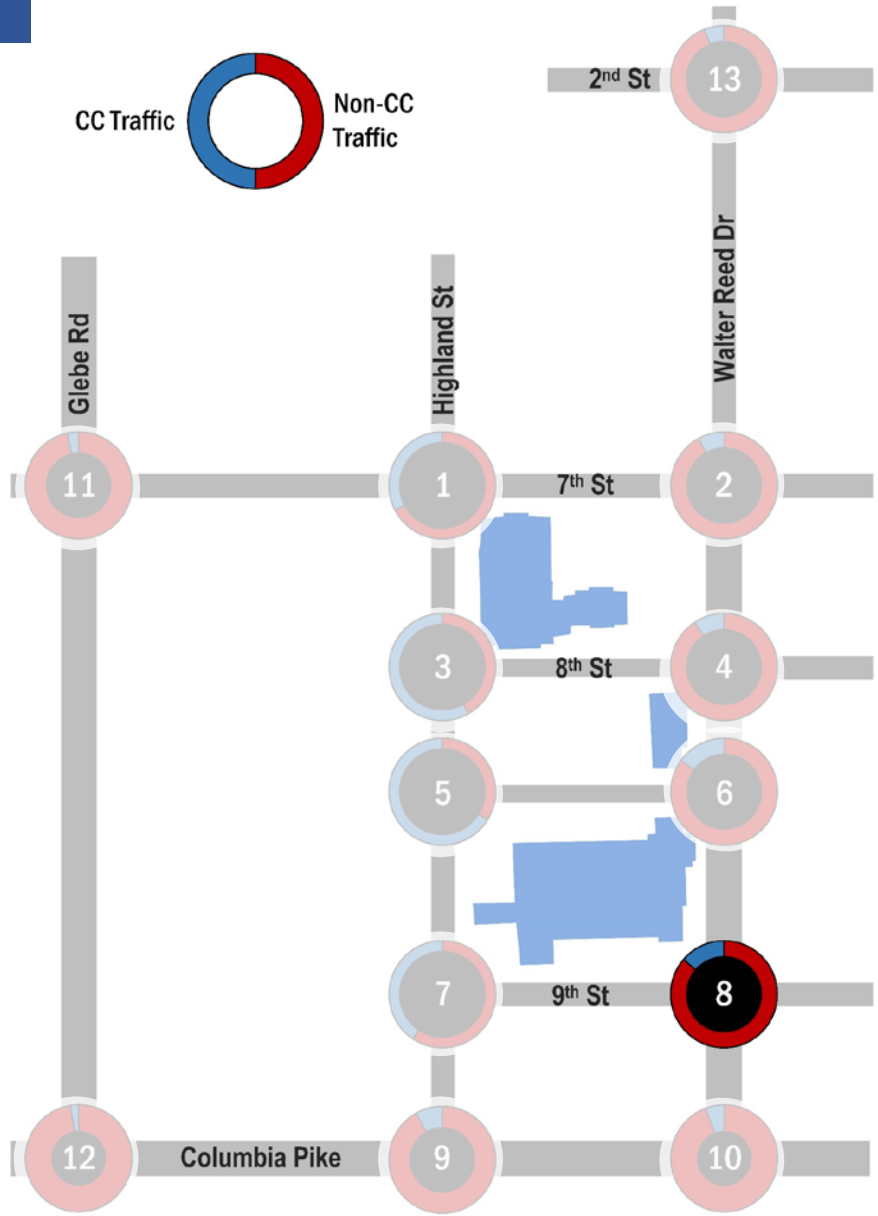
Existing Traffic Conditions: >15% CC Volumes





Existing Traffic Conditions: Areas of Concern





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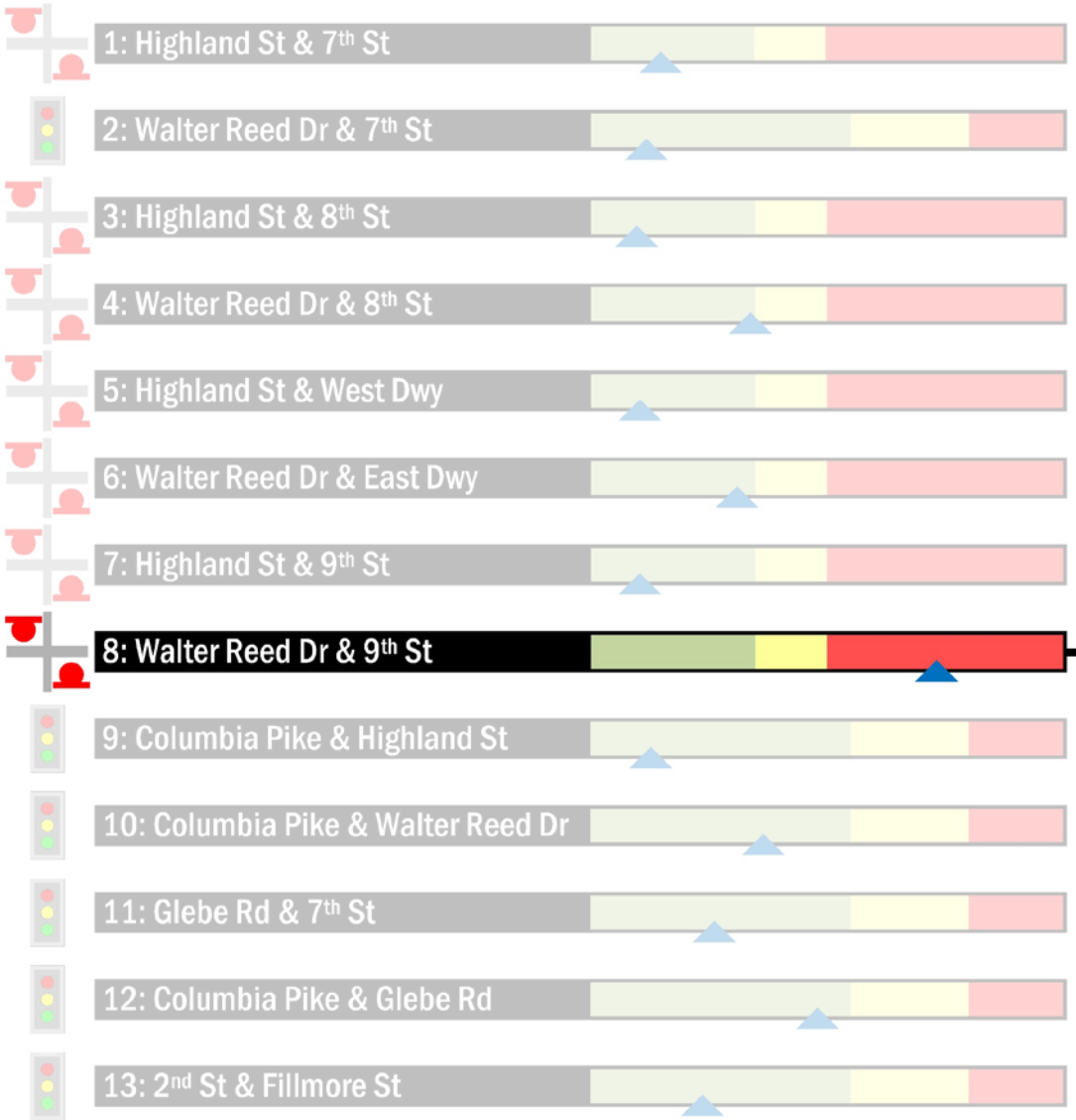
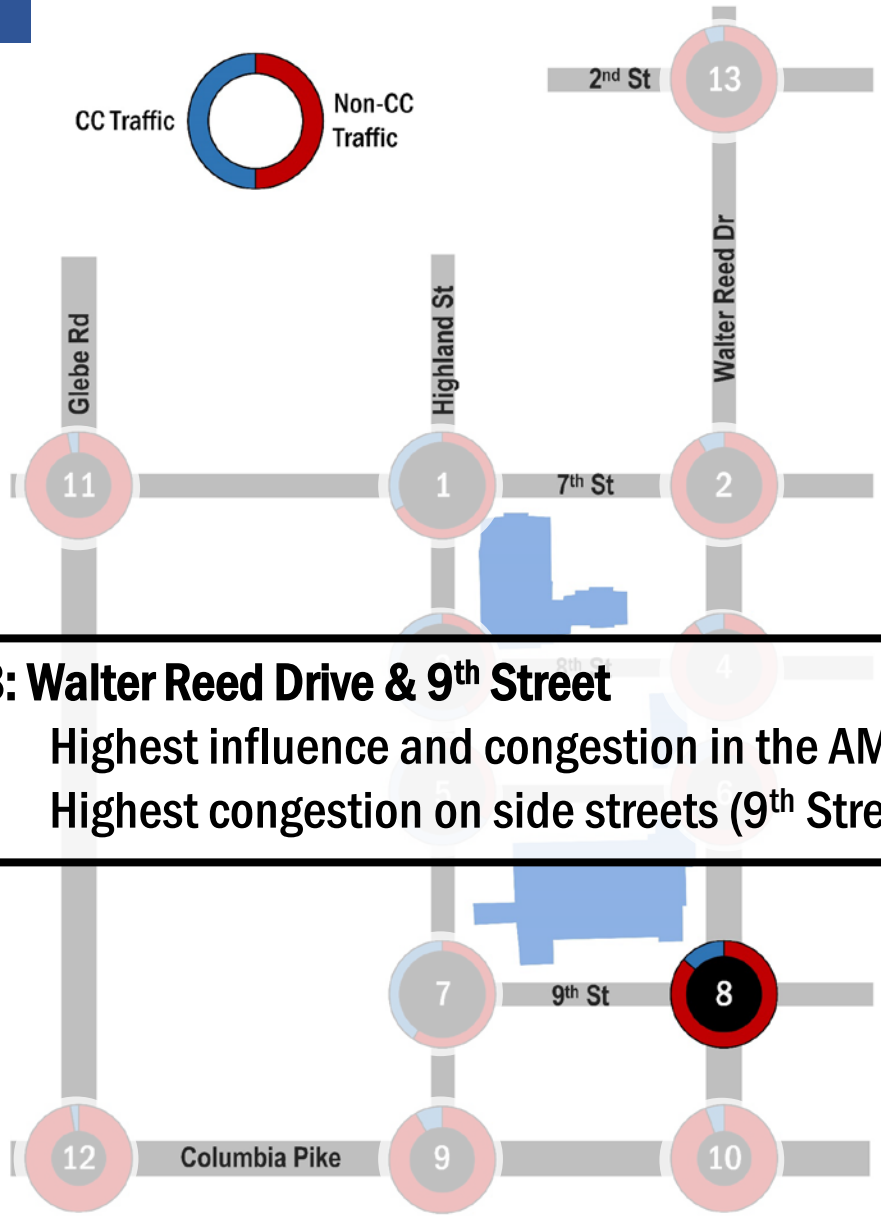
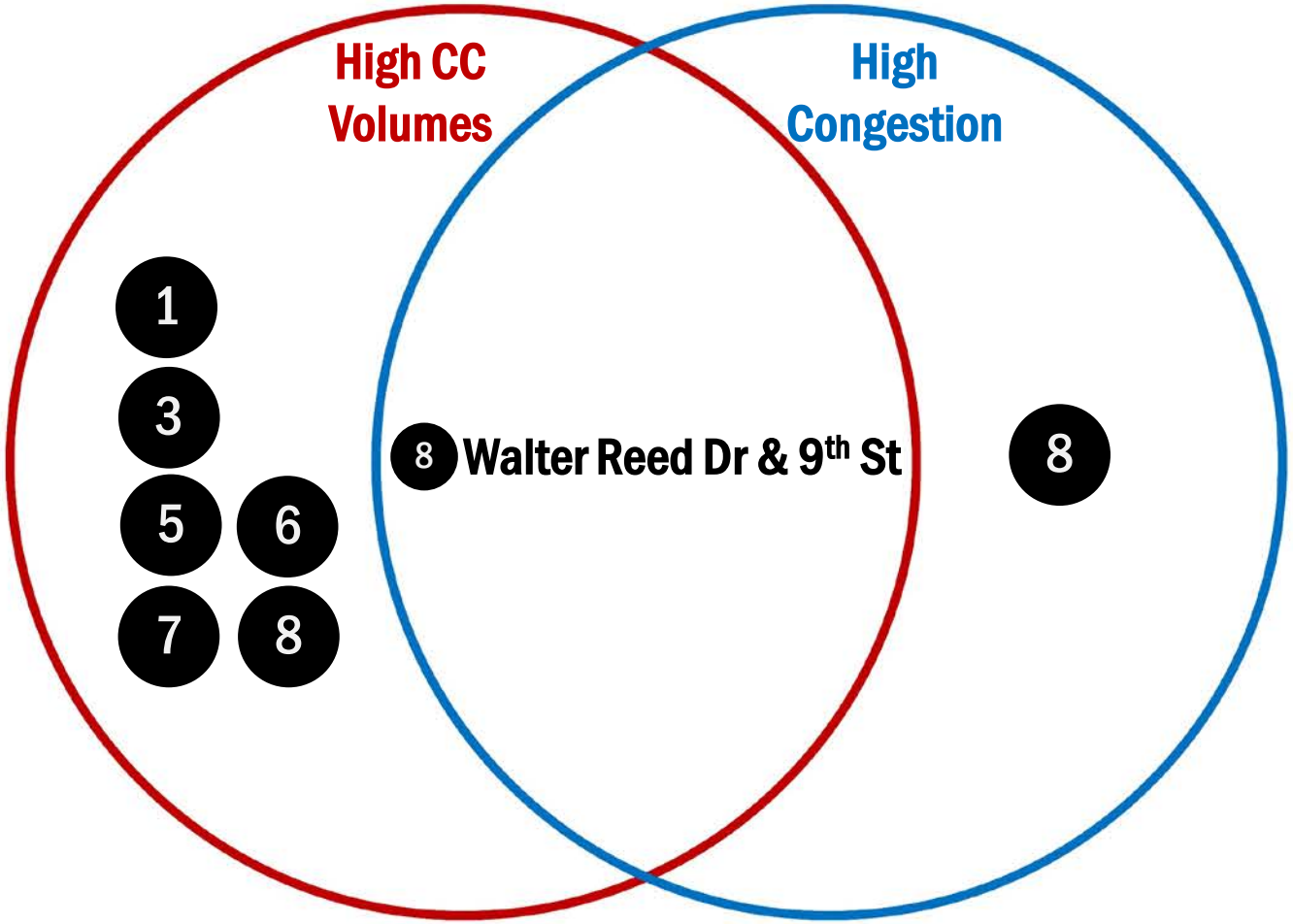


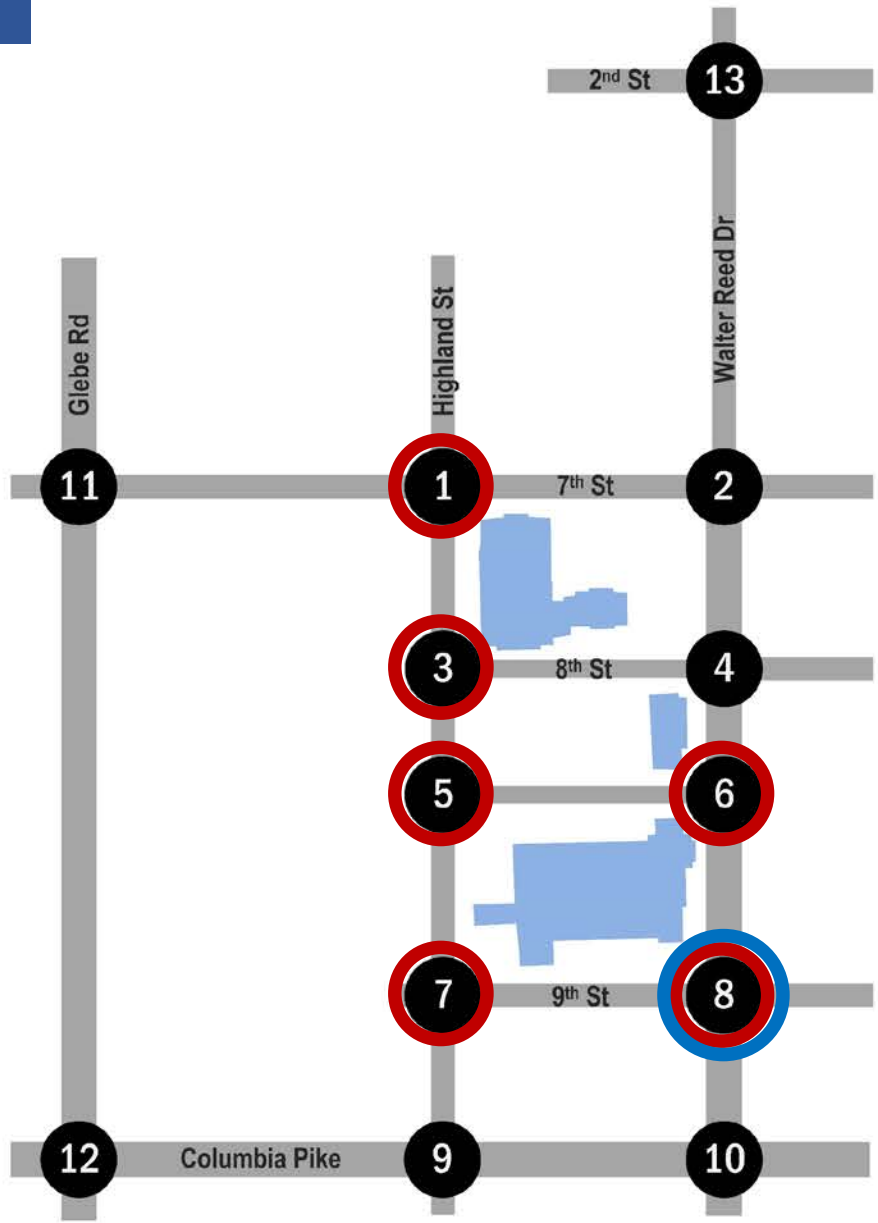


8: Walter Reed Drive & 9th Street

- Highest influence and congestion in the AM
- Highest congestion on side streets (9th Street)

Existing Traffic Conditions: Areas of Concern





Existing Traffic Demand Components *(at time data was collected)*

Arlington Tech (grades 9-12) 196 students (350 maximum)	Regular school bus transportation is available (1.5 miles+ from school). After school bus transportation is available to each comprehensive HS for extracurriculars (Tues-Thurs)
Academic Academy (grades 9-12) 50 students	8AM to 3:10PM
HILT (High Intensity Language Training) Institute (grades 9-12) 66 students	8AM to 3:10PM
Program for Employment Preparedness (PEP) 55 students	8AM to 12:30PM
CTE 708 students	Attend part-time from their HS (2 periods/day, in 3 blocks). Transportation is provided to/from the CC by bus (in three shifts throughout the school day). Assumed no students drive.
CC Staff (not counting ACHS or Elementary School)	Broken out because there is some overlap between programs. This component includes visitors.
Arlington Community High School – Students 207 students (121 adults)	Day program: 8AM to 2:50PM Evening program: 5PM to 9:10PM (Mon thru Thurs)
Arlington Community High School – Staff	Broken out because of different hours. Includes visitors.
Patrick Henry Elementary School 642 students	9am to 3:41pm Staff and visitors (assumes no students parked).
Columbia Pike Library	Includes staff and visitors. Based on ITE Trip Generation estimates

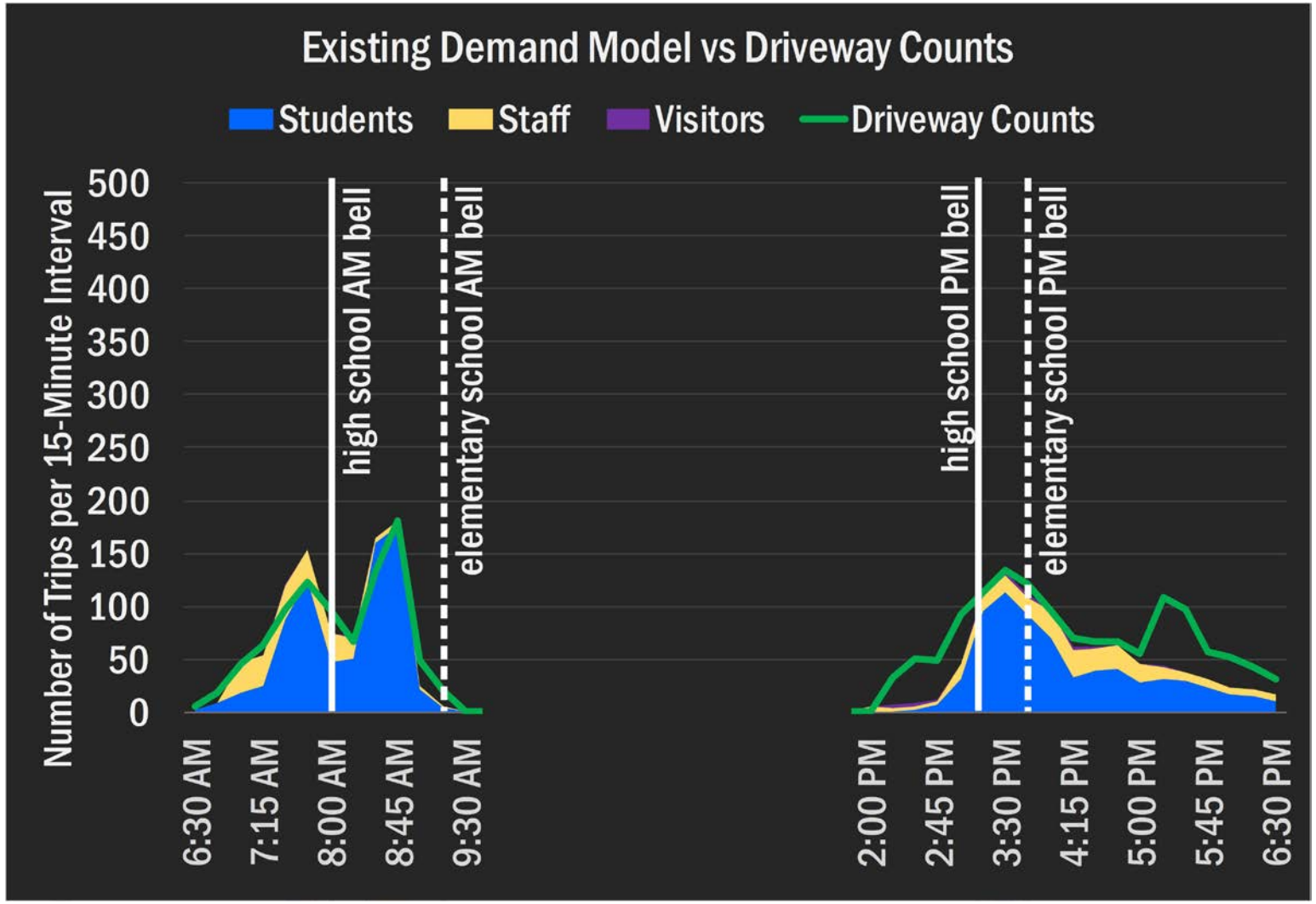
Vehicular Demand Model

Based on:

- APS Go! Survey Data
- Existing bell times
- Existing student and staff populations

Model gets close to replicating existing demand patterns:

- Generally consistent at peak periods
- Overestimates in places, but not all vehicular demand uses the driveways (pick-up/drop-off areas located off-site)



Future Changes to Traffic Demand Components *(per CCWG report, near-term)*

		New HS 800 students
Arlington Tech (grades 9-12) 96 students (350 maximum)	▶	Increase to 600 students
Academic Academy (grades 9-12) 50 students	▶	Increase to 200 total between the three programs
HILT (High Intensity Language Training) Institute (grades 9-12) 66 students	▶	
Program for Employment Preparedness (PEP) 55 students	▶	
CTE 708 students	▶	No change
CC Staff (not counting ACHS or Elementary School)	▶	Demand increased in proportion to student population
Arlington Community High School – Students 207 students (121 adults)	▶	No changes
Arlington Community High School - Staff	▶	No changes
Patrick Henry Elementary School 642 students	▶	Replaced with Montessori program with 502 students
Columbia Pike Library	▶	No changes

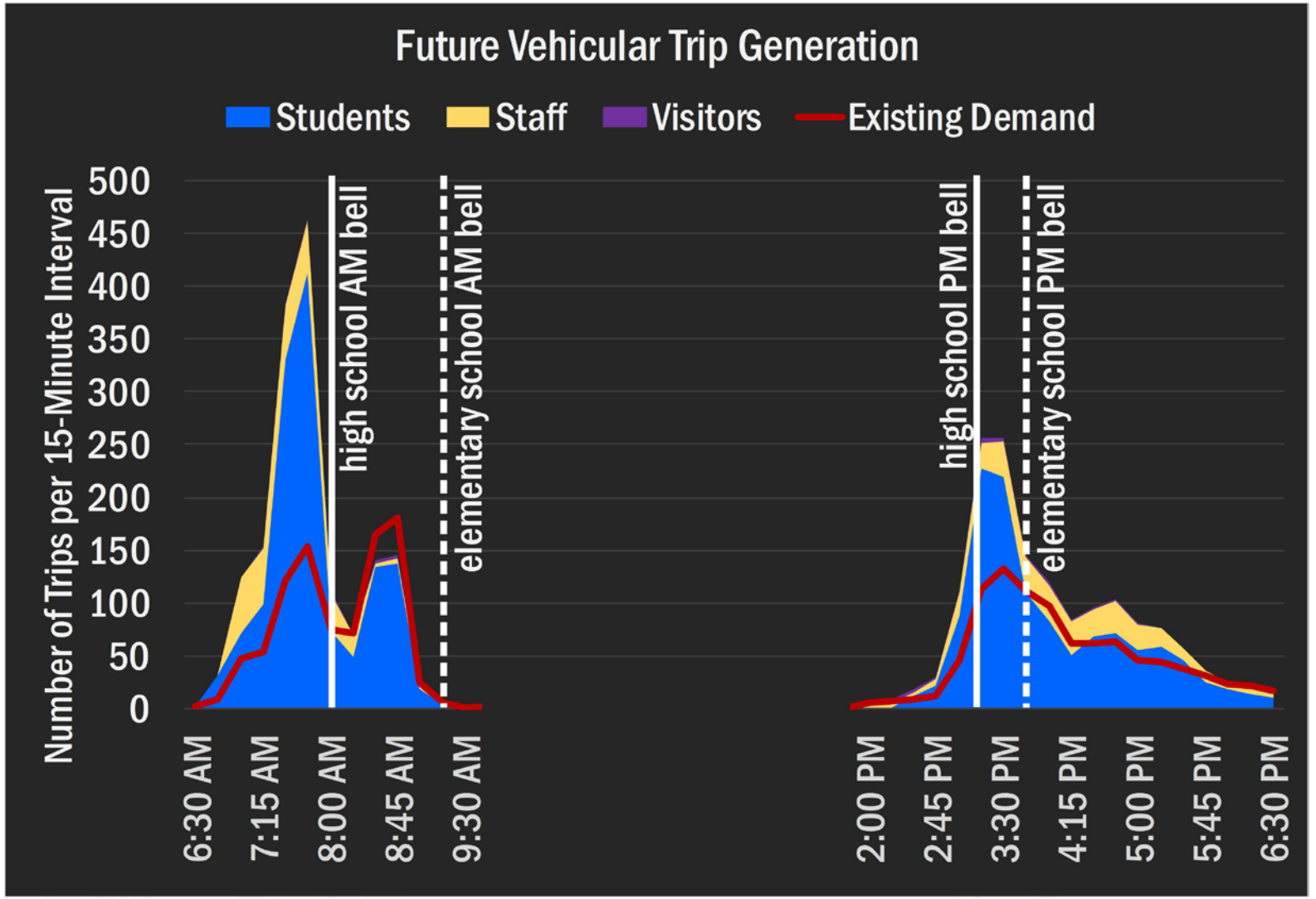
Future Demand Model

Assumption (for now):

- The 800 future HS students will behave most like current Arlington Tech students

AM Peak: 1138 veh/hr (+492)
PM Dismissal Peak: 891 veh/hr (+323)
PM Commuter Peak: 478 veh/hr (+130)

The major driver of the increased peak vehicular demand is the significant increase in HS students and the resulting increase in pick-up/drop-off and parking activity by both students and staff



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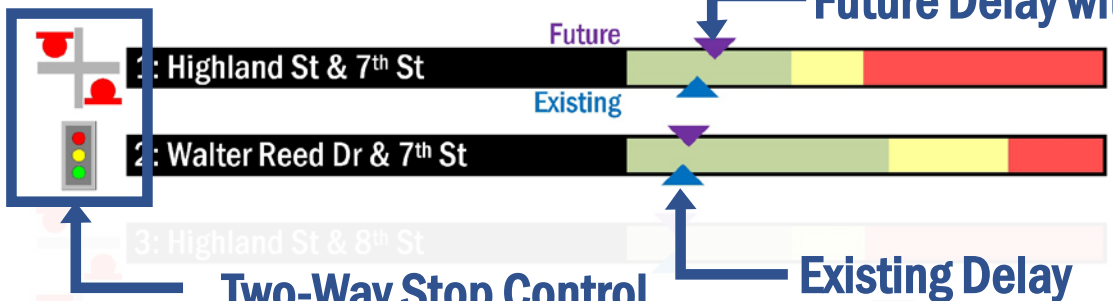
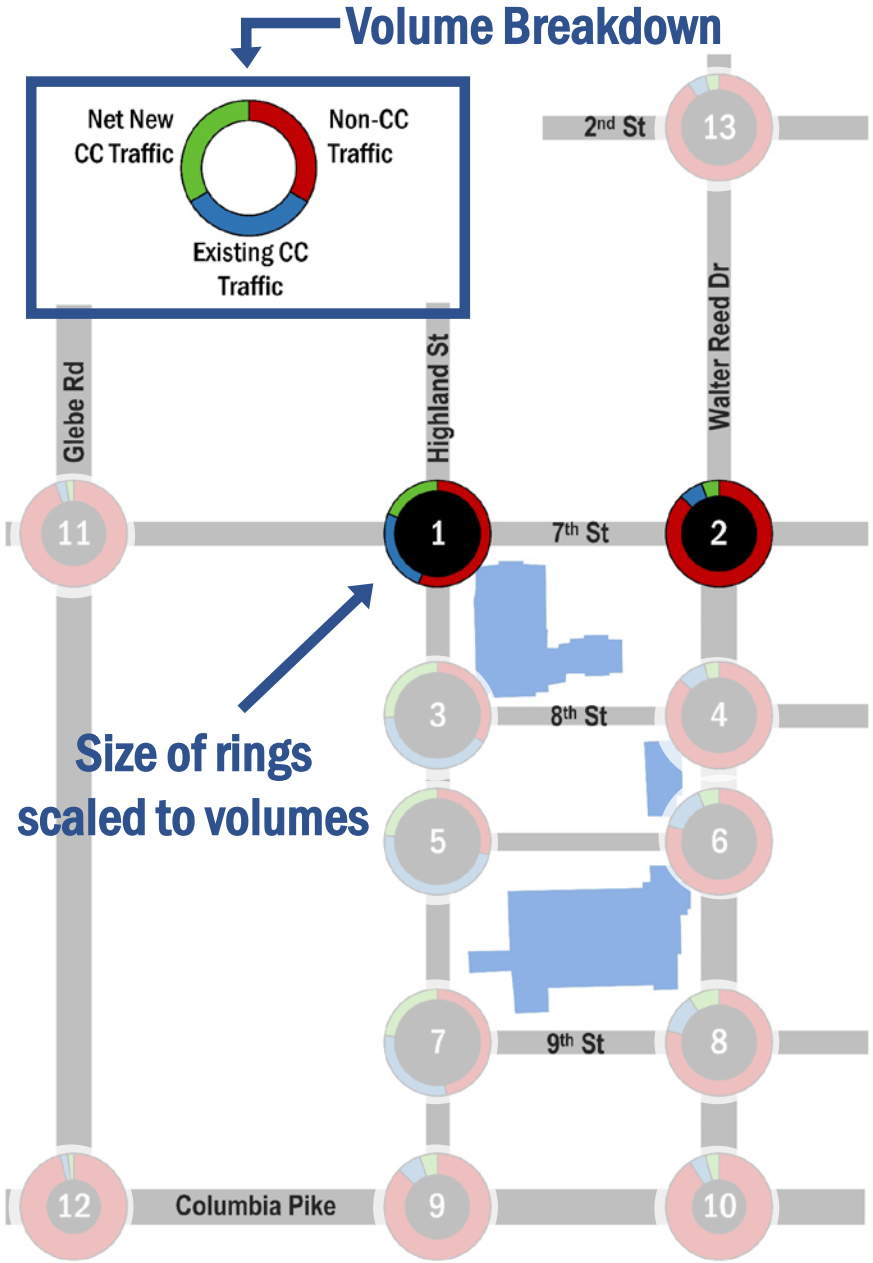


Two-Way Stop Control
OR
Signalized Intersection

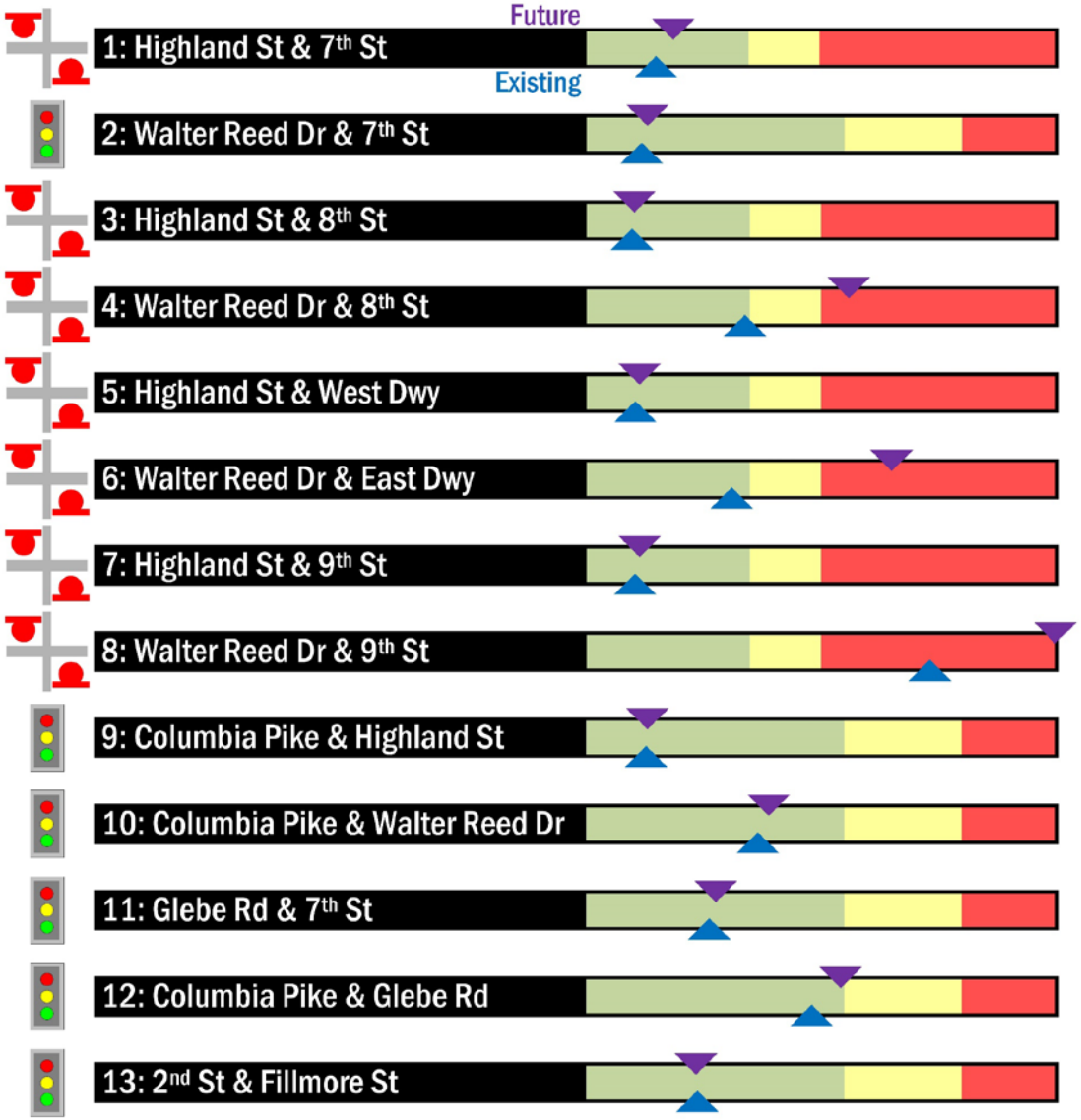
Existing Delay
(highest of three hours analyzed)

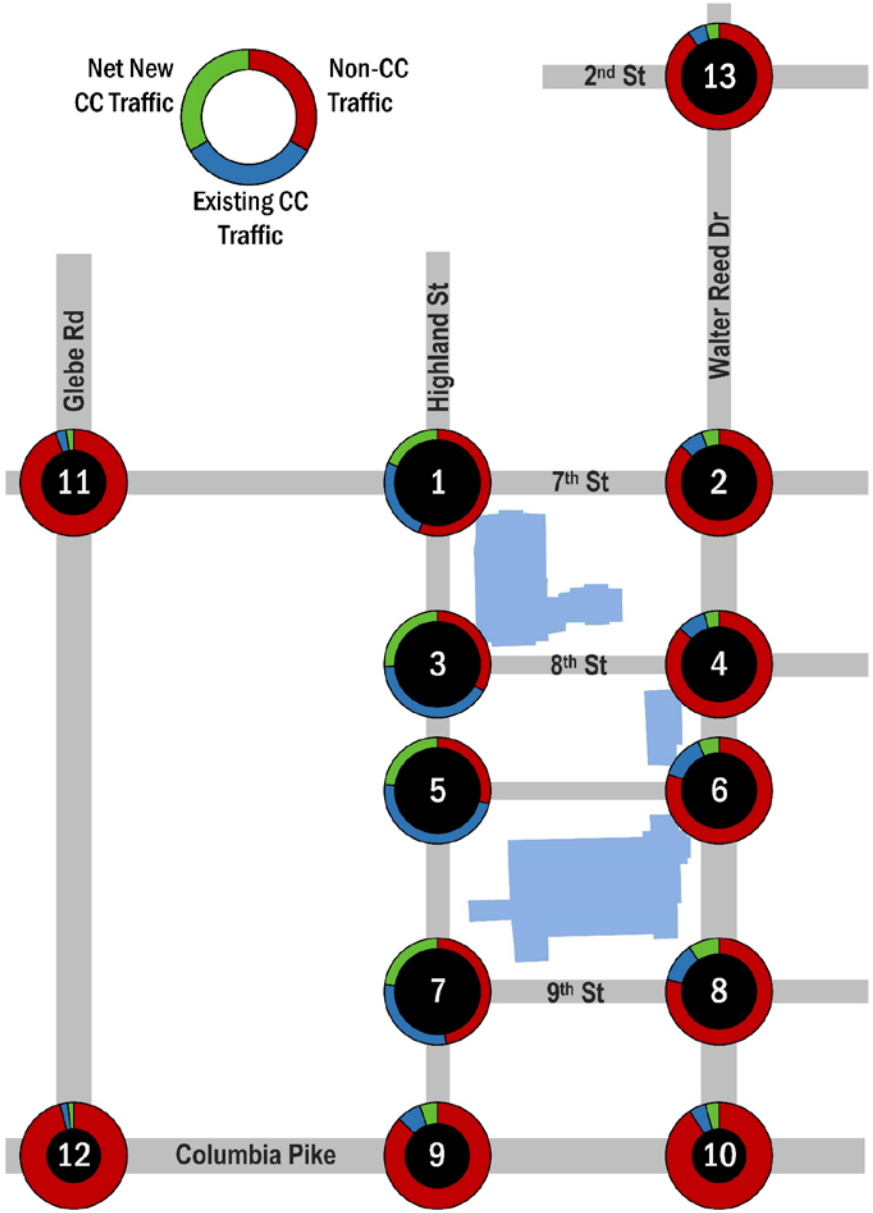
- **Two-Way Stop Control:**
  Worst approach delay
- **Signalized Intersection:**
  Overall intersection delay

- Acceptable Conditions
- At/over Capacity
- Failing



Future Traffic Conditions





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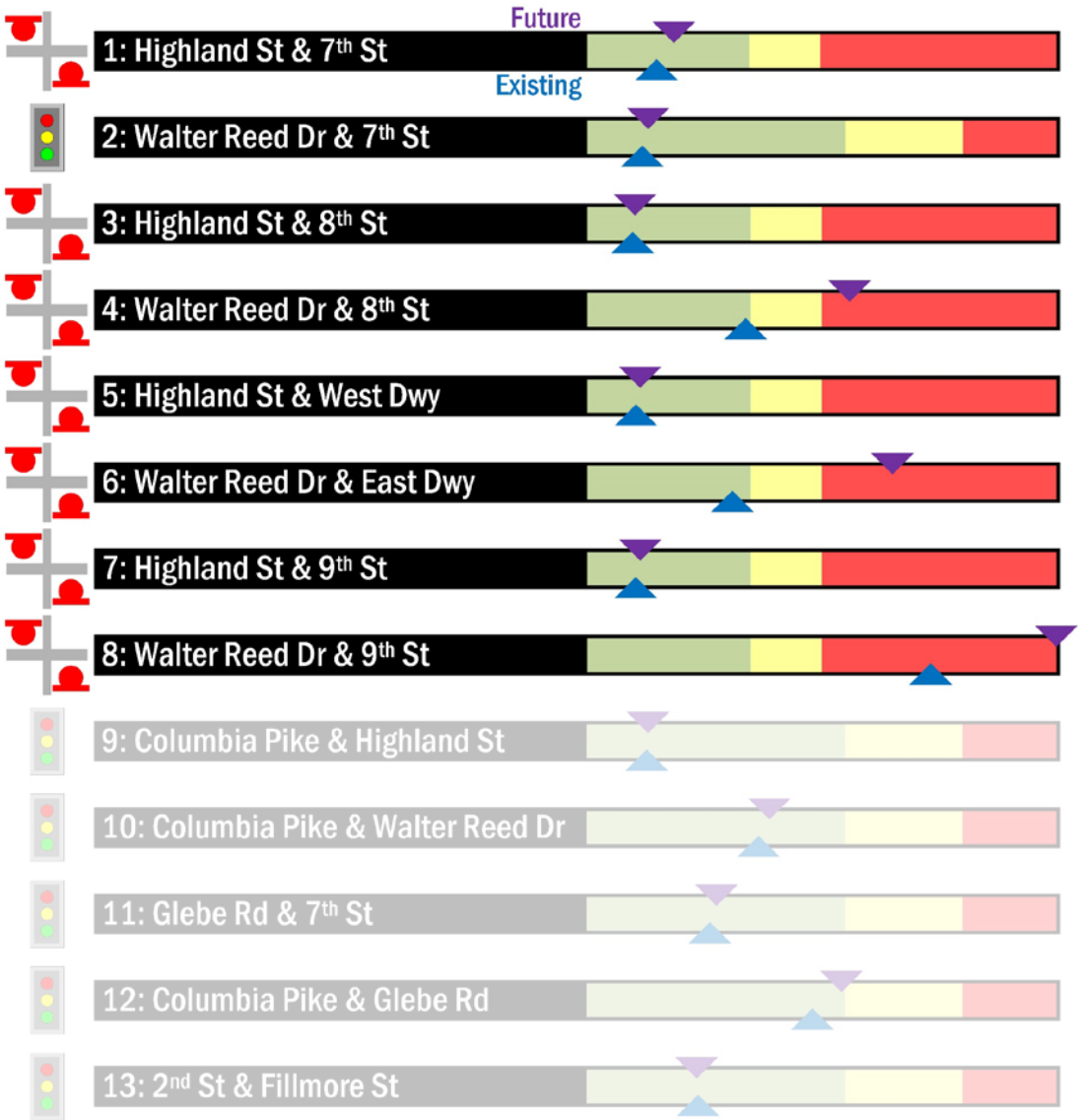
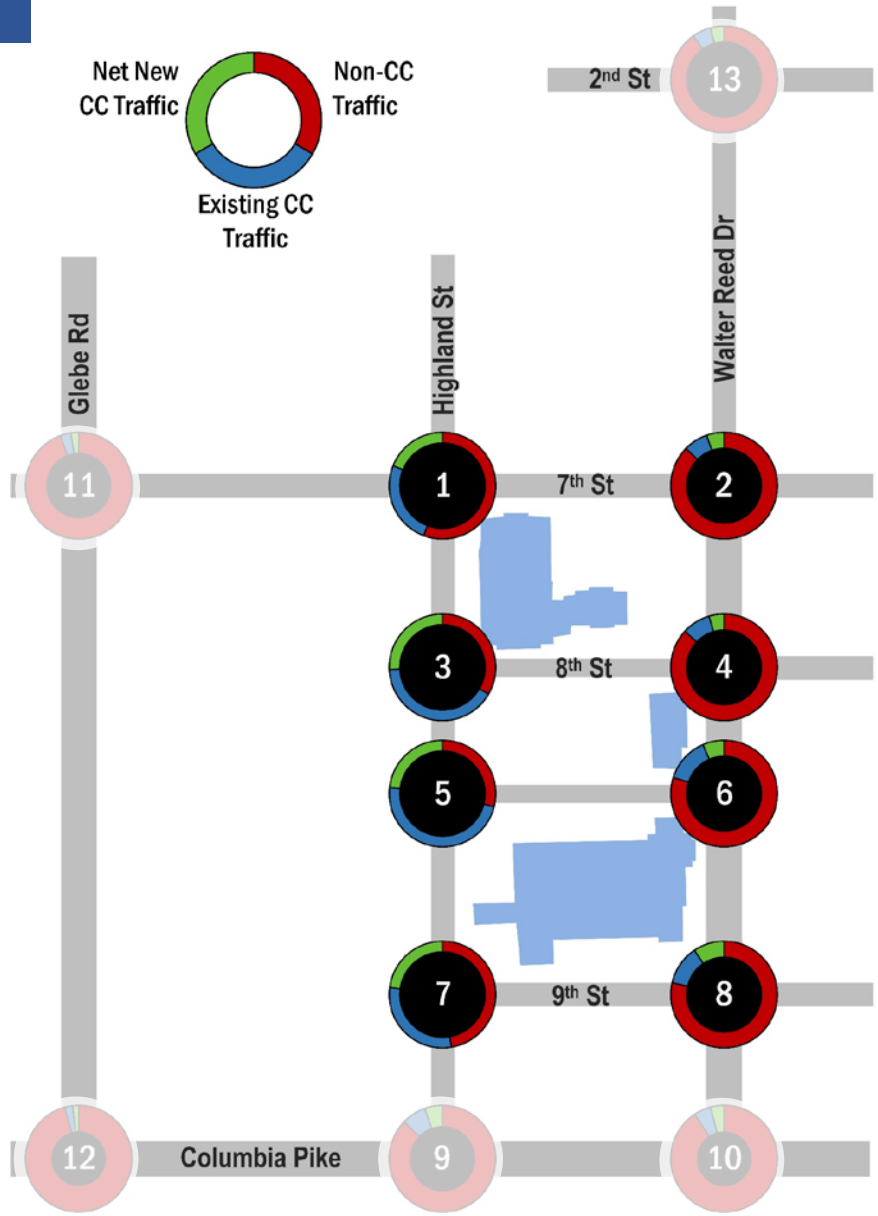
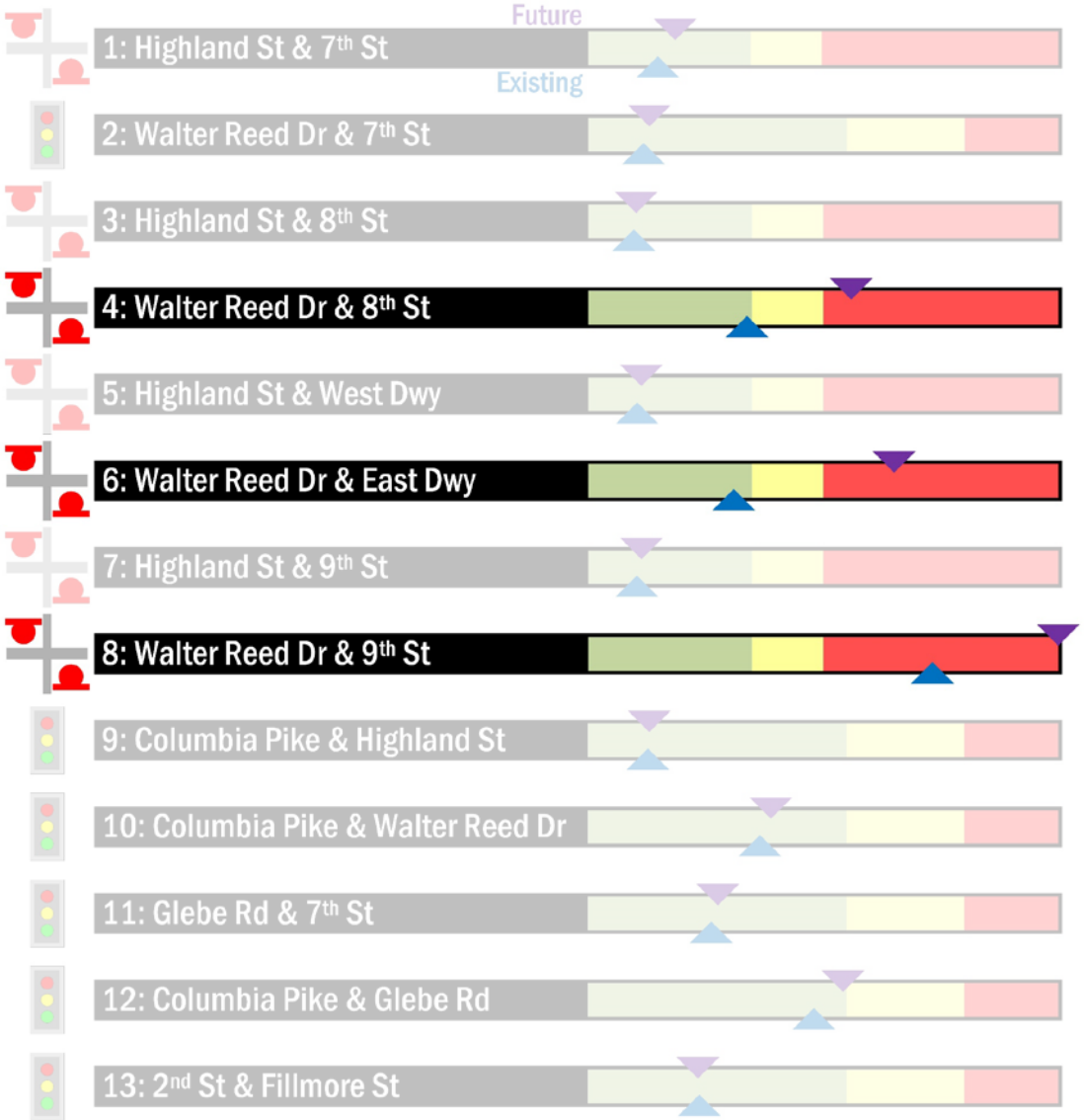
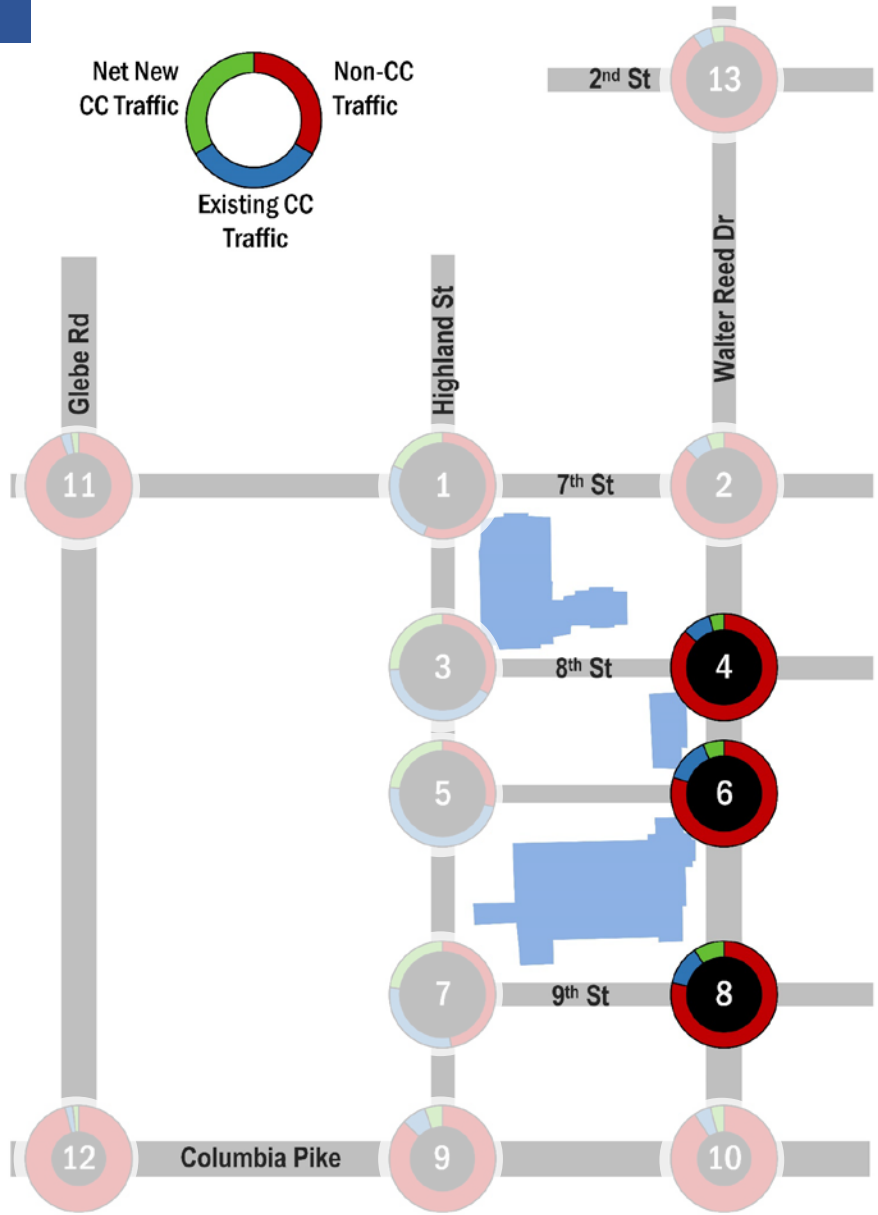




Future Traffic Conditions: Areas of Concern





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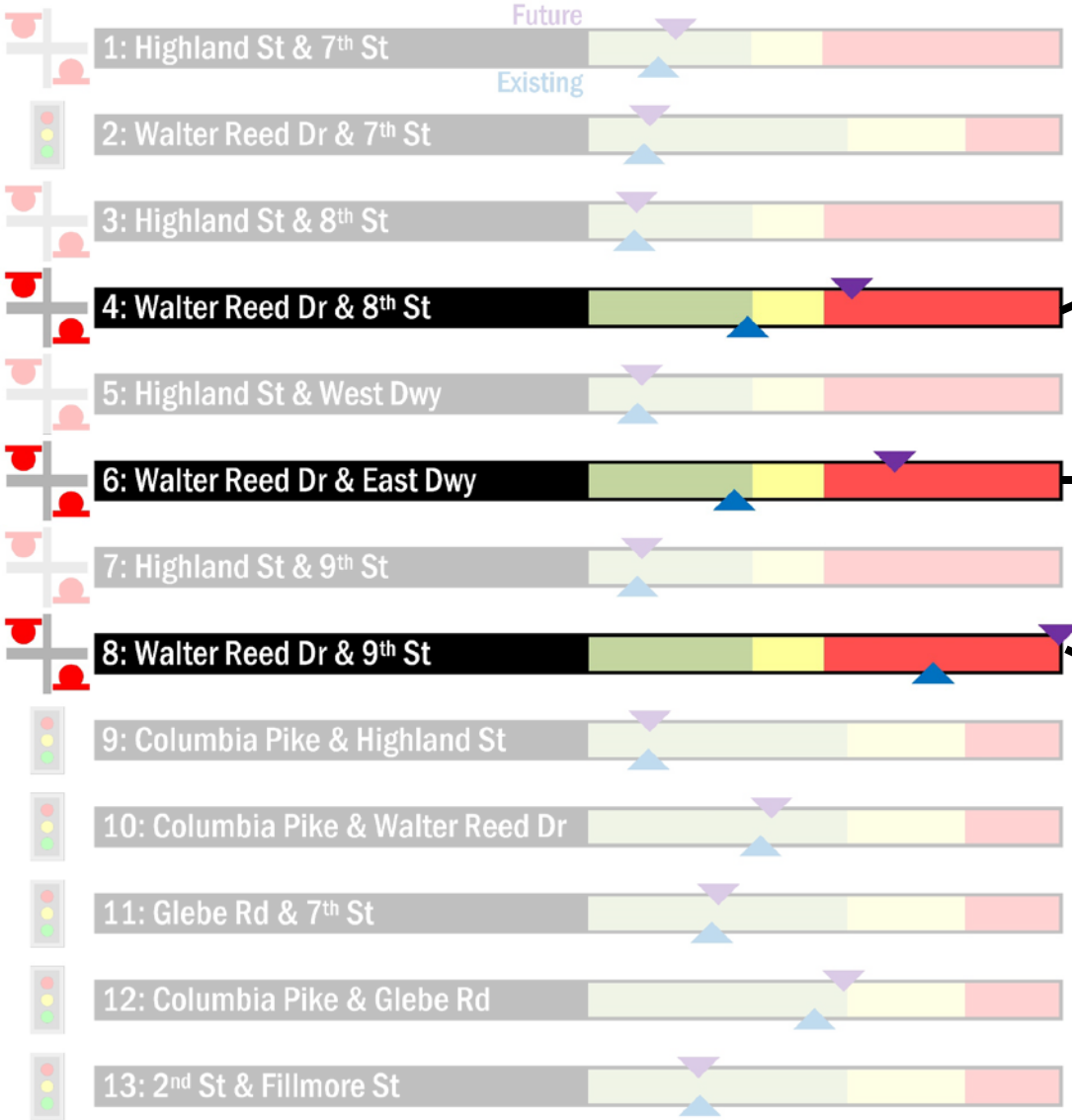
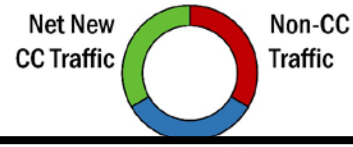




4: Walter Reed Drive & 8th Street

- Highest influence and congestion in the AM
- Highest congestion on side streets (8th Street)

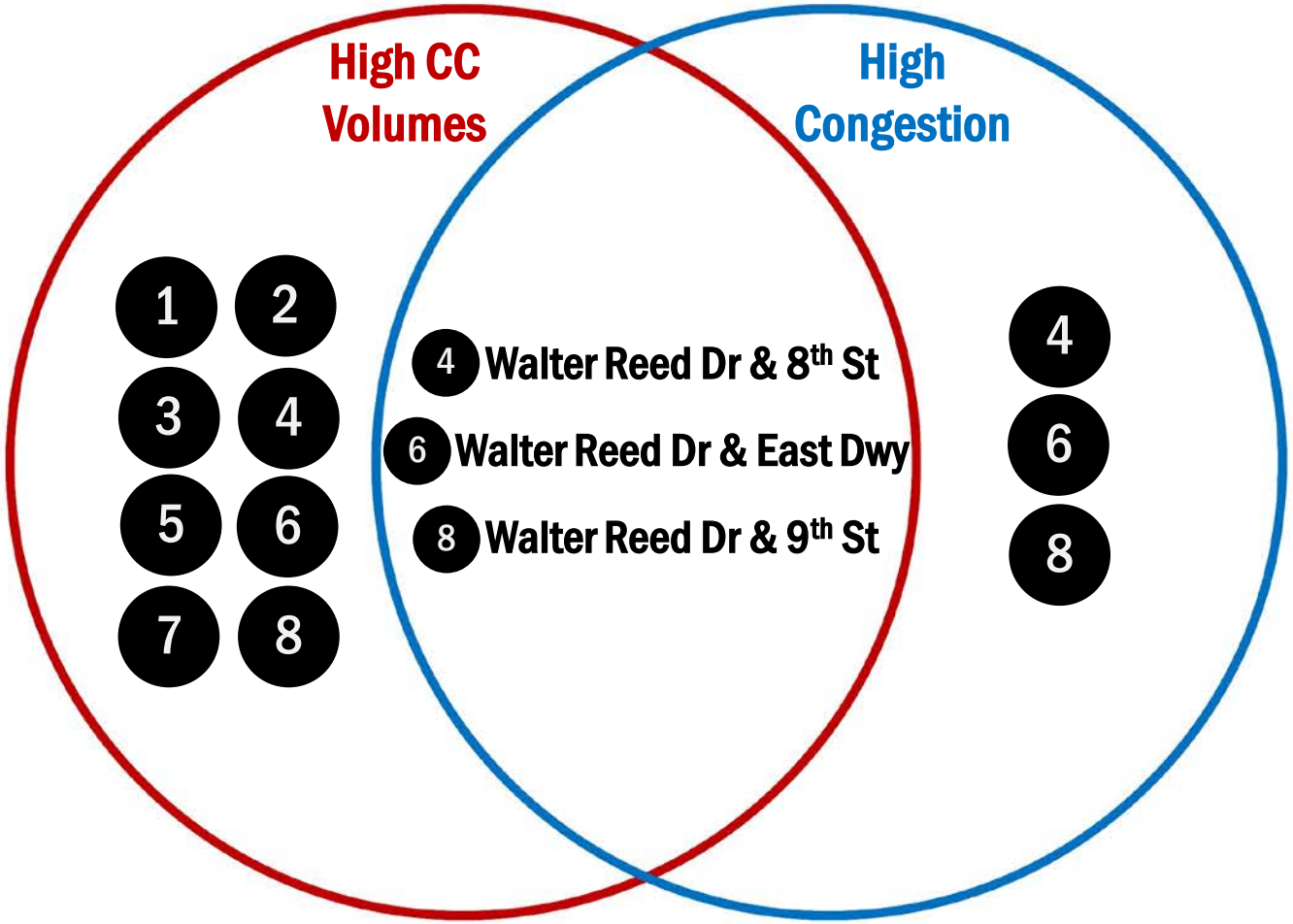
6: Walter Reed Drive & East Site Driveway

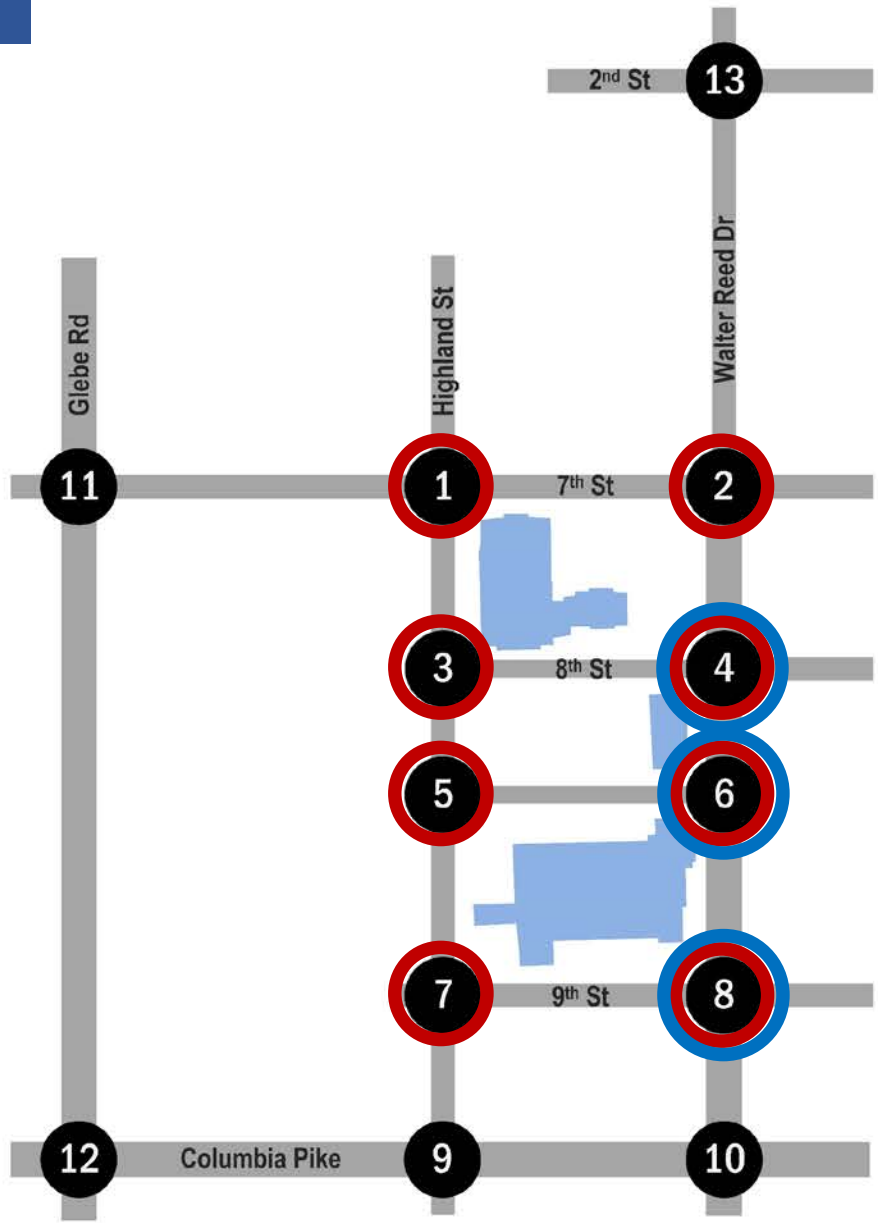
- Highest influence and congestion in the AM
- Highest congestion from traffic exiting CC

8: Walter Reed Drive & 9th Street

- Highest influence and congestion in the AM
- Highest congestion on side streets (9th Street)

Future Traffic Conditions: Areas of Concern





Major Design Alternative Decisions

Factors that affect traffic:

1. The programs on site and population levels

2. Pick-up/drop-off area locations
   - This could change primary routes around the site
   - Depending on locations, could affect surrounding intersections for the better or worse

3. Amount of on-site parking
   - This will affect the distribution of traffic throughout the area (less concentration around the site)