



Arlington Public Schools  
**Thomas Jefferson Site Evaluation**  
***Parking Supply and Demand Estimates***

Thomas Jefferson Working Group Meeting #5  
*November 5, 2014*



# INTRODUCTION

# Introduction



- Goal of our work: determine a range of parking space needs for a new elementary school and at-capacity middle school
- Also considered expanded middle school
- Parking estimates used for
  - Site planning
  - Cost estimates
  - Community relations

# Introduction



- Start by reviewing parking information
  - Shared at previous Working Group Meetings
  - Community Center survey

# Neighborhood Parking Supply



- On-site: 364 spaces, including 11 ADA spaces
  - Lots west of middle school
  - Community center lot
  - Tennis court lot
  - Shared lot (corner of 2<sup>nd</sup> Street & S. Old Glebe)
  - Kitchen/facilities lot
- On-street: spaces available throughout neighborhood

# How are current parking spaces used?



## 90% of staff drive to school\*

- 96% park in middle school lots
- 1% park in the community center lots
- 3% park on-street

*\*from APS GO! Survey, spring 2014*

## 86% of patrons drive to the community center\*

- 90% parked in community center lots\*\*
- 9% parked on-street
- <1% parked in middle school lots
- <1% parked elsewhere

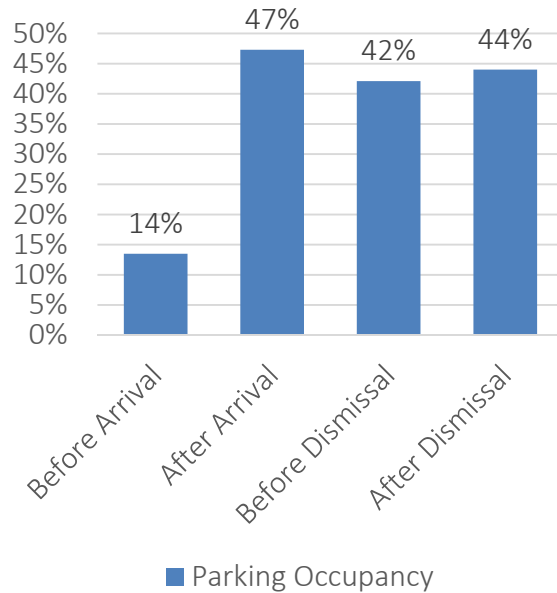
*\*from survey conducted*

*\*\*tennis courts (2%), community center (84%), shared lot (3.5%)*

# Occupancy on a Typical School Day\*



Occupancy of Lots



\*Shows parking before dismissal (~1:30PM) on a typical day







# WHAT HAVE WE HEARD ABOUT PARKING FROM PUBLIC INPUT?





## **Ensure adequate consideration is given to neighborhood impacts of traffic and parking**

- Provide an amount of off-street parking adequate to serve the regular needs of the school/s, theatre, community center and parkland
- Provide adequate parking facilities on-site for shared use between the school and the public at different hours of the day and night



*In your opinion, which are the THREE most critical elements related to parking in considering the viability of locating a new elementary school on the TJ site. (96)*

- Ensure that adequate and conveniently located parking is available for users of the park and community center/theater (57)
- [Consider locating] some of the required parking below or partially below grade (52)
- Provide all required parking on-site (52)



# HOW DO WE DETERMINE PARKING NEED?

# How we determine parking need?



**Parking Supply:** How many parking spaces are there on-site and on-street, immediately adjacent to the school and park?

**Parking Demand:** How many parking spaces will be used on a typical school day?

**How many spaces are needed on-site compared to the existing number of spaces?**

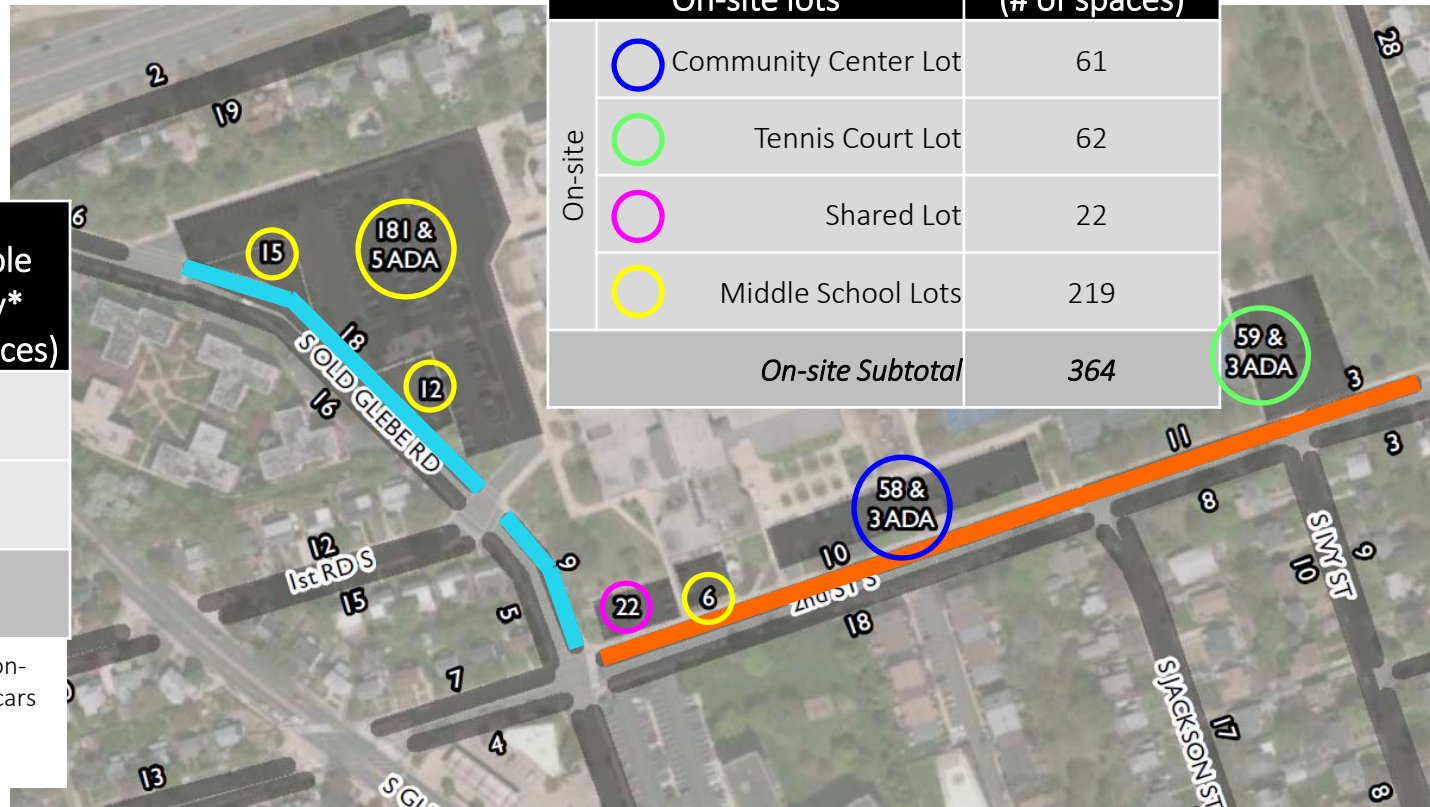
# Parking Supply



How many spaces are there currently on-site and on adjacent streets?

On Street		Available Supply* (# of spaces)
On-street	Old Glebe Street	12
	2nd Street	6
<b>On-street Subtotal</b>		<b>18</b>

\*Assumes up to 85% occupancy of on-street spaces and does not include cars that currently park during a typical school day



On-site lots		Current Supply (# of spaces)
On-site	Community Center Lot	61
	Tennis Court Lot	62
	Shared Lot	22
	Middle School Lots	219
<b>On-site Subtotal</b>		<b>364</b>

# Parking Demand



How many cars would park at a new elementary school and an at-capacity middle school?

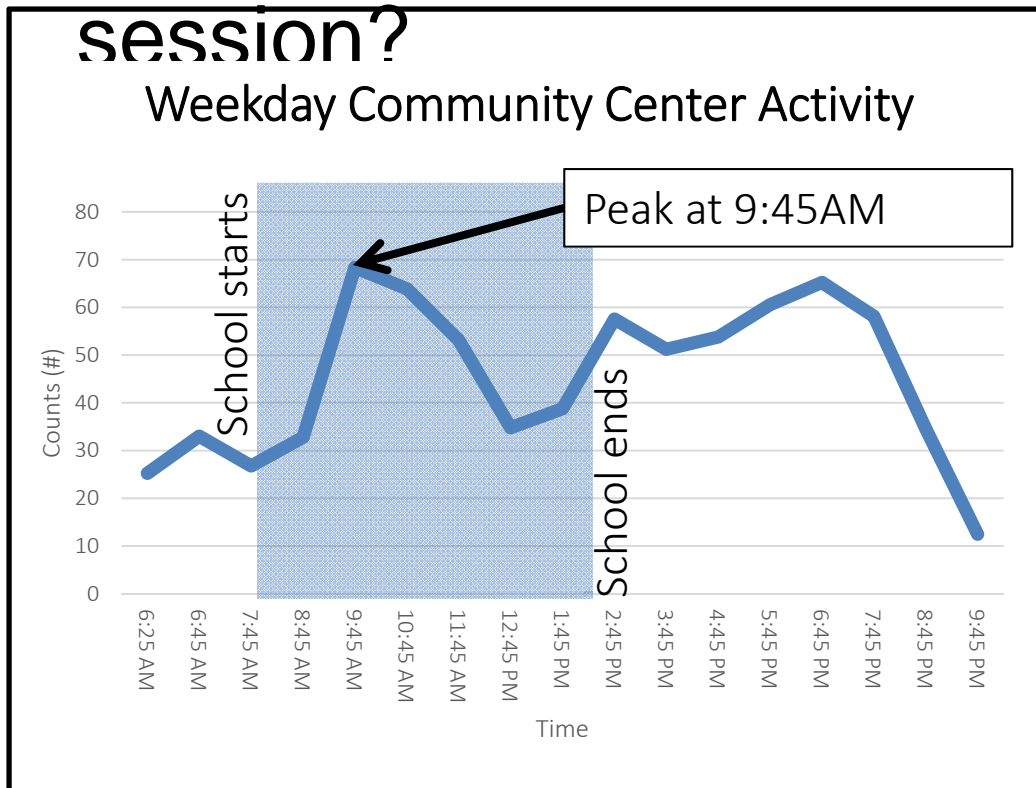
	TOTAL
Middle School (982 students)	154
Elementary School (725 Students)	104
TOTAL	258

- Includes parking for both staff and visitors
- Based on counts of existing parking at the middle school, County zoning and data collected at other County elementary schools.

# Parking Demand



How many cars park associated with the community center while school is in session?



Lot	# Cars Parked at 10 AM
Community Center Lot	58
Tennis Court Lot	23
2 <sup>nd</sup> & Old Glebe Lot	14
<b>TOTAL</b>	<b>95</b>



# Parking Demand



What is the total parking demand of a new elementary school, *at-capacity* middle school, and community center?

Use	# Cars
Middle School (982 students)	154*
Elementary School (725 Students)	104*
Community Center (10AM)	95
TOTAL	353

***\* Arlington County Zoning requirements are 156 spaces for an 982-student middle school and 115 spaces for an 725-student elementary school***

# Parking Space Needs



## Assumption

All scenarios assume that sufficient, convenient parking is provided to meet the expected demand for each use

develop a range of parking needs using different answers to the following two questions:

## Variables

On-site/on-street	Are the total number of spaces located on-site only or a mix of on-site and on-street?
Transportation Demand Management	How can TDM affect the number of staff that drive to school?

# Scenario A



## Variables

On-site/on-street	Mix of on-site and on-street with a max of 85% occupancy of on-street spaces
Transportation Demand Management	10% reduction in staff parking demand

**Number of spaces needed on-site:**  
**306 total spaces (or 58 fewer spaces)**

# Scenario B



## Variables

On-site/on-street	Mix of on-site and on-street with a max of 85% occupancy of on-street spaces
Transportation Demand Management	No reduction in staff parking demand

**Number of spaces needed on-site:**  
**335 total spaces (or 29 fewer spaces)**

# Scenario C



## Variables

On-site/on-street	All on-site
Transportation Demand Management	10% reduction in staff parking demand

**Number of spaces needed on-site:**  
**324 total spaces (or fewer 40 spaces)**

# Scenario D



## Variables

On-site/on-street	All on-site
Transportation Demand Management	No reduction in staff parking demand

**Number of spaces needed on-site:**  
**353 total spaces (or fewer 11 spaces)**

# Summary (new elementary school and an at-capacity middle school)



## Number of spaces needed on-site:\*

Scenario A (On-Street & TDM)	Scenario B (On-street & No TDM)	Scenario C (On-site & TDM)	Scenario D (On-site & No TDM)	<i>RANGE</i>
New Elementary School & at-capacity Middle School				
-58	-29	-40	-11	-58 to -11

\*compared to the existing 364 spaces



# A look ahead to expanded middle school – Parking demand



What is the total parking demand of a new elementary school, *expanded* middle school, and community center?

Use	# Cars
Middle School (982 students)	194*
Elementary School (725 Students)	104*
Community Center (10AM)	95
TOTAL	393

***\* Arlington County Zoning requirements are 206 spaces for an 1300-student middle school and 115 paces for an 725-student elementary school***

# A look ahead to expanded middle school



## Number of spaces needed on-site:\*

Scenario A (On-Street & TDM)	Scenario B (On-street & No TDM)	Scenario C (On-site & TDM)	Scenario D (On-site & No TDM)	<i>RANGE</i>
New Elementary School & expanded Middle School				
-15	+11	+3	+29	-15 to +29

\* compared to the existing 364 spaces



# **HOW DOES THIS AFFECT SITE DESIGN AND PARKING-RELATED PROGRAMS?**

# How do assumptions and public input affect site design?



- Sampling of parking management strategies
  - Reduce demand: TDM program
  - Support convenient parking for school staff: designated school spaces during school hours
  - Protect on-street parking for residences: Residential Parking Permit Program

# How do assumptions and public input affect site design?



- Consider how to balance through site design
  - Conveniently located parking
  - All parking on-site: On-street parking for shorter term use
  - Structured parking?