

EAST MAIN STREET PARKING GARAGES  
Parking Recommendations



- **Analyze the County's parking needs** considering the City's Comprehensive Parking Plan, evolutions in technology, and expected staff growth.
- **Coordinate a master site plan** to reconcile parking needs for the County and development of the 300 and 500 blocks of East Main Street.
- **Present conceptual plans** to the County and community for feedback.
- **Provide a parking solution** that will address Durham County employee and Human Services' customer needs and meet new demand created by the project, incorporating multiple modes of transportation.
- **Create a resilient design** that will meet and adapt to the County's vision of sustainable government and downtown living.

**Today's Objective:** Confirm parking space requirements to meet the County's needs and support the development projects.

1. Review the County's **current parking needs**
2. Analyze the County's **projected growth**
3. Recommend means to **reduce parking**
4. Incorporate the **developer's parking needs**
5. Find potential **shared parking** opportunities
6. Establish an initial target for **total parking need**

## EAST MAIN STREET PARKING GARAGES Existing County Parking Downtown

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Durham County Downtown Parking				
Parking Facility	Visitor Parking	Staff Parking	Fleet Vehicles	Total Parking
Judicial Building Lot/ Deck		47		47
Judicial Building Annex Lot	10	19		29
Administration Complex		18		18
Church Street Deck (Leased)		50		50
<b>North Staff Lot (Liberty St)</b>		<b>162</b>		<b>162</b>
<b>South Staff Lot (Main St)</b>	<b>21</b>	<b>93</b>		<b>114</b>
CJRC Lot	9	36		45
Roxboro Street Parking Deck		44	43	87
<b>Human Services Lot</b>	<b>202</b>	<b>202</b>		<b>404</b>
General Services Lot	2	8		10
Justice Center Deck	624	273		897
Main Library	78	60		138
Detention Center Sally Port		40	5	45
Detention Center		32		32
Justice Center secured space	34			34
<b>Current Parking Inventory</b>	<b>980</b>	<b>1084</b>	<b>48</b>	<b>2112</b>
<b>County Staff Downtown <sup>1</sup></b>		<b>1597</b>		
Staff and fleet parking to remain after removal of 300 & 500 lots		<b>675</b>		
<b>Current Parking Delta</b>			<b>(513)</b>	<b>Deficit</b>

Current County Staff Downtown	
Department	Staff
Board of Elections	6
Budget	7
County Engineering	19
County Manager	18
Criminal Justice Center	43
Emergency Medical Services	128
Finance	25
General Services	50
Human Resources	19
Information Services & Technology	41
Legal	25
Library	35
Public Health Services	219
Register of Deeds	19
Sheriff Department/Jail	433
Social Services (DSS)	445
Soil and Water Conservation	5
Tax Administration	57
Veterans Services	3
<b>Total</b>	<b>1597</b>

- Human services staff are a key consideration in programming the new garages.
- Include capacity for Main Library staff in new garages
- Visitor spaces in the current Human Services lot will be replaced
- Initial assumption is to provide 1 space per employee

RED lots to be removed as part of garage construction

<sup>1</sup> per County Human Resources data in October 2019

EAST MAIN STREET PARKING GARAGES  
**Existing County Staff Downtown**

Downtown County Staff Projections						
Year	Method	County Master Plan		Current Assessment		Master Plan vs Actual
		Staff	Growth	Staff	Growth	Delta
2015		<b>1182</b>		<b>1182</b>		
2019		1296	10%	<b>1597</b>	<b>35%</b>	23%
2025	slower growth	1468	22%	1948	22%	33%
2025	faster growth			2156	35%	47%

- County staff is outpacing previous projections of growth
- Staff have surpassed 2025 projections 6 years ahead of anticipated need
- This project has the only remaining downtown sites for County parking

Slower Growth Projection

**1,948** projected staff  
 - **675** staff spaces to remaining  


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 = **1,273** parking spaces required

Faster Growth Projection

**2,156** projected staff  
 - **675** staff spaces to remaining  


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 = **1,481** parking spaces required

- **Absenteeism**  
Adjust parking ratio based upon workplace trends
- **Public transit**  
Incentivize public transportation options (e.g., GoPass)
- **Flexible work arrangements**  
Promote options such as work-from-home and flexible schedules
- **Support for alternate commuting option**  
Encourage ride-sharing, bike-to-work, and other programs
- **New Technology**  
Anticipate automated parking and autonomous vehicles

*Note: Only 40% of County staff live within the County*

# EAST MAIN STREET PARKING GARAGES

## Potential Parking Reduction Scenario

### Durham County Parking Reductions

**Lower 2025 Projection**

**1273**

**Higher 2025 Projection**

**1481**

County staff absenteeism rate <sup>1</sup>	Public transit utilization / incentives <sup>2</sup>	Flexible schedule utilization / incentives <sup>2</sup>	Ride sharing utilization / incentives <sup>2</sup>	Walk or bike to work utilization / incentives <sup>2</sup>	Automation and autonomous vehicle technology <sup>3</sup>	<b>Total</b>
10.0%	2.2%	6.0%	3.3%	2.1%	0.0%	24%
127.30	28.01	76.38	42.01	26.73	0.00	<b>274</b>
148.10	32.582	88.86	48.87	31.10	0.00	<b>318</b>

1. Effective absenteeism rate based on department feedback to the design team in July 2019 based on position vacancies and paid time off
2. Based on 2018 American Community Survey - Commuter Survey Results (specific to Durham metro area) – population utilizing alternate modes of commuting overlap, therefore percentages shown are lower than actual survey results to avoid over-estimating utilization (i.e., double-counting users)
3. Per National Transportation Association, effective transformation of the parking market based on automated and driverless vehicle adoption is based on a generational sea change in car fleets and ownership, projected sometime between 2035 and 2050.

**Note:** Parking consultant typically recommends no more than 20% parking reduction at this stage of planning

## 2025 High Reduction Scenario

$$\begin{aligned} & \mathbf{1,481} \text{ projected staff } ^1 \\ - & \quad \mathbf{400} \text{ reduced demand } ^2 \\ + & \quad \mathbf{225} \text{ visitors} \\ \hline = & \quad \mathbf{1,306} \text{ parking spaces required} \end{aligned}$$

## 2025 No Reduction Scenario

$$\begin{aligned} & \mathbf{1,481} \text{ projected staff } ^1 \\ - & \quad \mathbf{0} \text{ (no demand reduction)} \\ + & \quad \mathbf{225} \text{ visitors} \\ \hline = & \quad \mathbf{1,706} \text{ parking spaces required} \end{aligned}$$

<sup>1</sup> Based upon the faster growth projection of 35%

<sup>2</sup> Based upon a 27% parking reduction assuming no overlap of commuting populations within the 2018 American Community Survey – Commuter Survey Results

## 2025 Design Team Recommendation

$$\begin{array}{r} 1,377 \text{ projected staff} \\ - \quad 330 \text{ reduced demand} \\ + \quad 225 \text{ visitors} \\ \hline = 1,272 \text{ parking spaces required} \end{array}$$

### Based on 24% parking reduction

- Staff count growth percentage was averaged
- 60% of County staff live outside the County
- Assumes aggressive incentives for alternative modes of commuting
- Represents 0.76 parking spaces per employee<sup>1</sup>

<sup>1</sup> Represents a 9% lower ratio than the Institute of Transportation Engineers' prevailing national standard for government services employees (0.83 spaces per employee)

### 300 Main Street

User	Parking	Comment
Pre-Kindergarten	45	based on staff, walk-up requirements
Affordable Housing	105	1.0 space per unit
Commercial Space	16	4.0 spaces per 1,000 SF

166 spaces needed for non-County parking

### 500 Main Street

User	Parking	Comment
Market-rate Housing	350	1.4 spaces per unit (pay option to reserve space)
Affordable Housing	200	1.0 space per unit
Commercial Retail Space	72	4.0 spaces per 1,000 SF
Public Parking	28	Remaining from plan layout

650 spaces needed for non-County parking

**Total**                      **816** spaces

**300 Main Street**

User	Dedicated	Shared	Percent Shared
Pre-Kindergarten	15	30	67%
Affordable Housing	105	0	0%
Commercial Space	16	0	0%

**500 Main Street**

User	Dedicated	Shared	Percent Shared
Market-rate Housing	245	105	30%
Affordable Housing	200	0	0%
Commercial Retail Space	72	0	0%
Public Parking	0	28	100%

<b>Total</b>	<b>653</b>	<b>163</b>	<b>20%</b>
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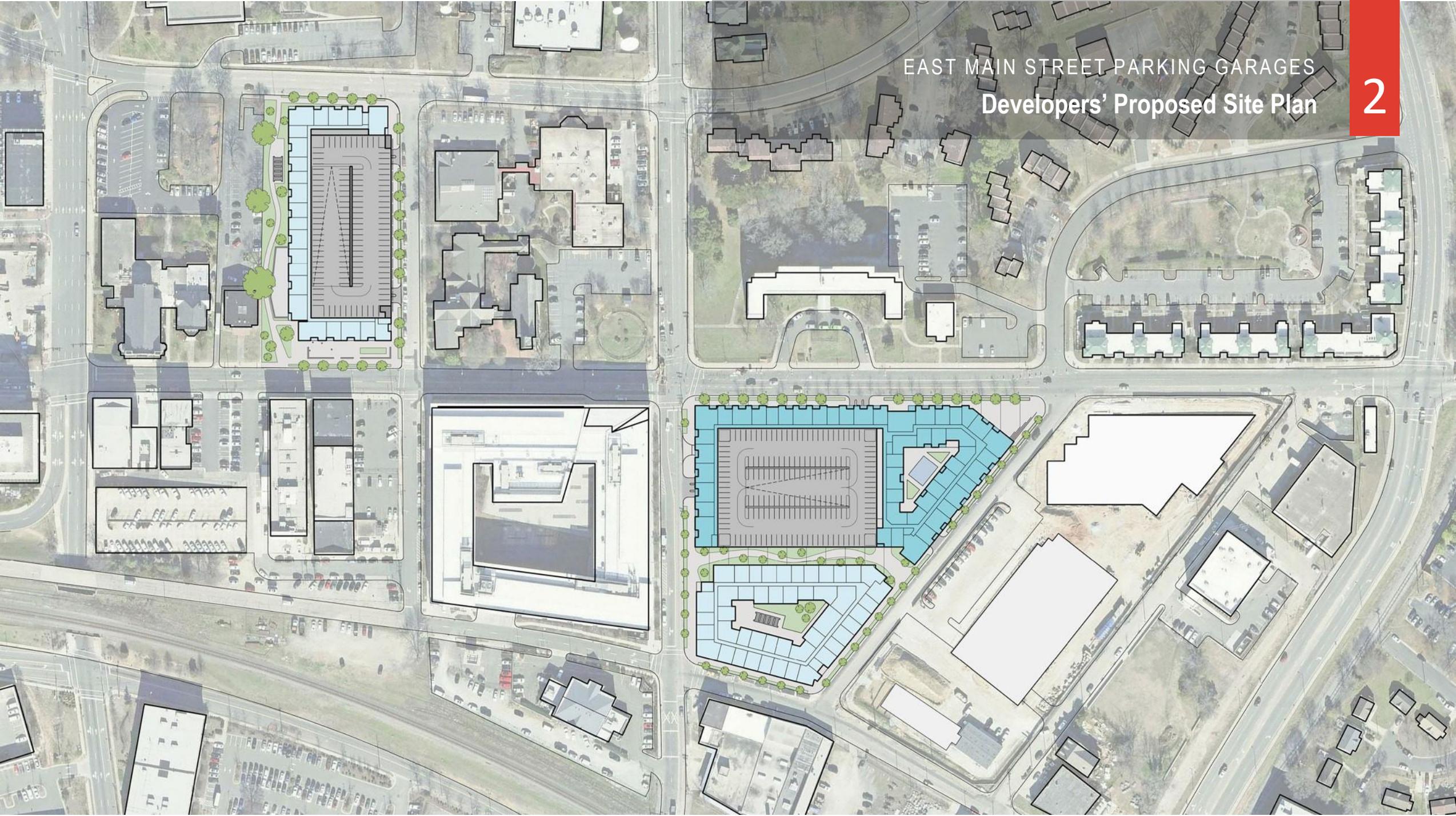
- Shared program parking is limited by the most restrictive program (i.e. the developer’s more limited parking scope)
- Affordable housing cannot share parking per state and federal requirements
- Uses with offset schedule can share parking (i.e., daytime uses vs nighttime uses)
- **20% of the developer parking may be shared with County parking needs in the off-hours**

***Note:** Final shared parking ratios require more detailed hour-by-hour analysis among all user groups*

- County staff growth in the downtown maintained between masterplan projections and measured growth trends
- County successfully implements **24%** reduction in single-occupant commuting for staff
- Developer shares maximum **20%** of their parking with County in off-hours use
- **1,925** parking spaces required to meet program needs

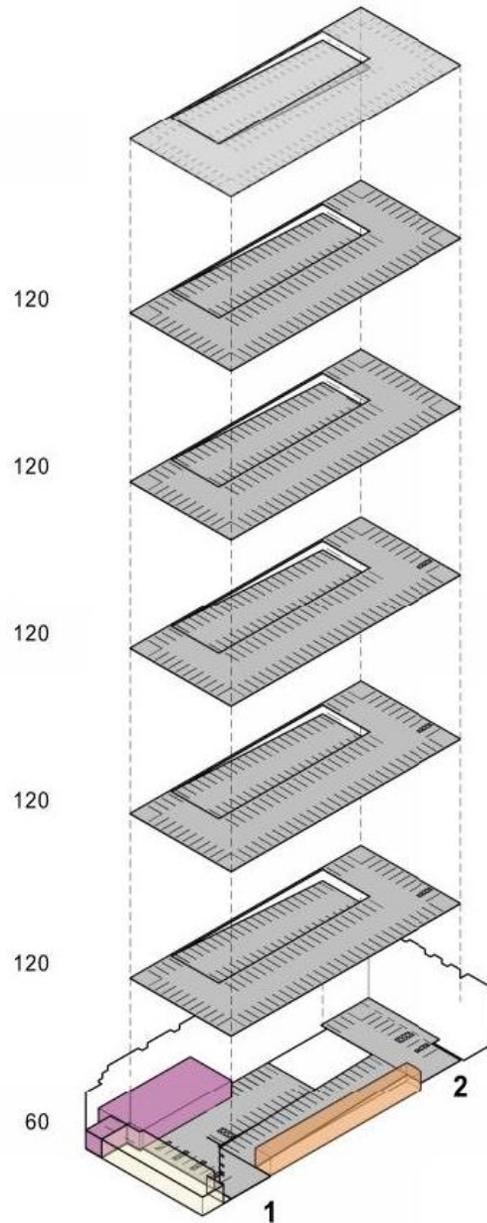
1. Review the **proposed developer plan**
2. Establish the **300 block parking garage capacity**
3. Establish the potential **500 block parking garage capacity and reductions**
4. Outline potential **future adaptability measures** for the parking garages and their up-front costs

EAST MAIN STREET PARKING GARAGES  
Developers' Proposed Site Plan





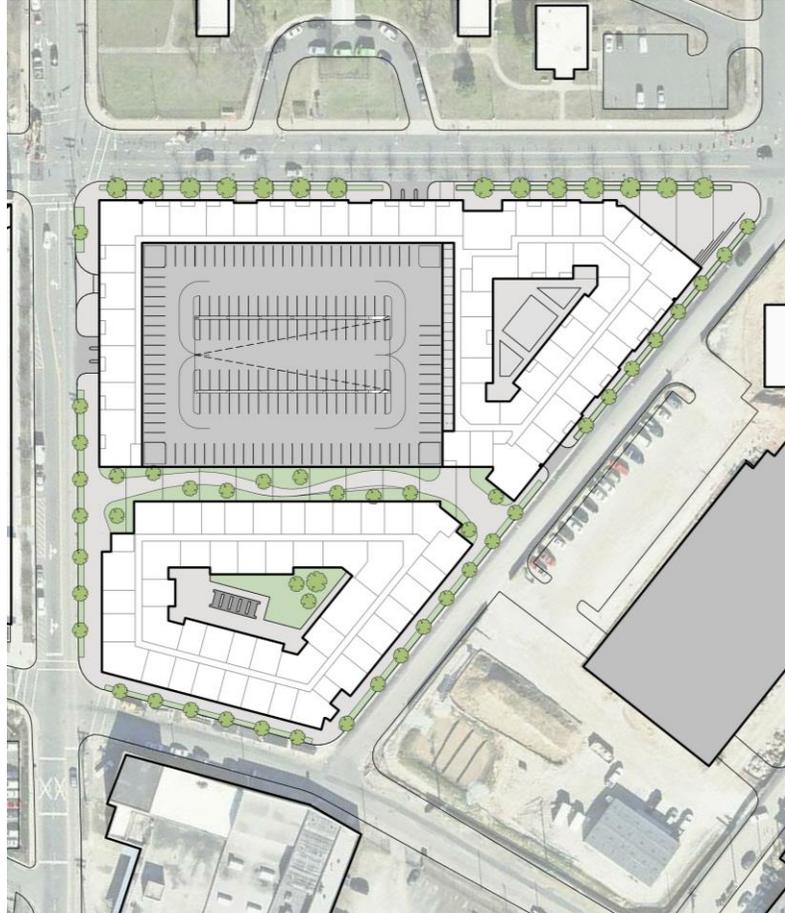
Note: Plan is based on developer proposal



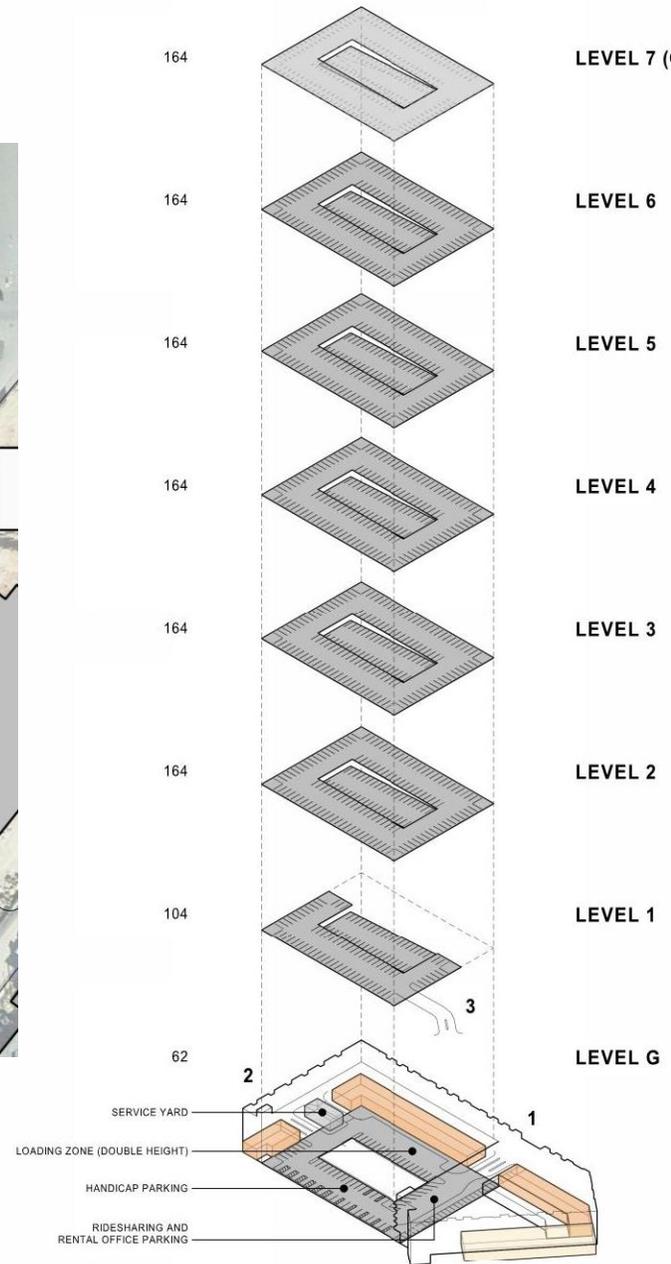
## EAST MAIN STREET PARKING GARAGES 300 Block Planning

- **120 spaces per typical level**  
ground floor has reduced parking
- 660 spaces in a 6-level design  
**780 spaces in a 7-level design**
- 15 dedicated spaces for pre-kindergarten
- 105 spaces for affordable housing
- 16 spaces for commercial space
- **644 spaces for County staff**  
including up to 85 for Main Library staff

# EAST MAIN STREET PARKING GARAGES 500 Block Planning



Note: Plan is based on developer proposal



- **164 spaces per typical level**  
ground floor has reduced parking
- 986 spaces in a 7-level design  
**1,150 spaces in an 8-level design**
- 245 dedicated spaces for market-rate housing
- 200 spaces for affordable housing
- 72 spaces for commercial retail
- **225 spaces for Human Services visitors**
- **408 spaces for County staff**

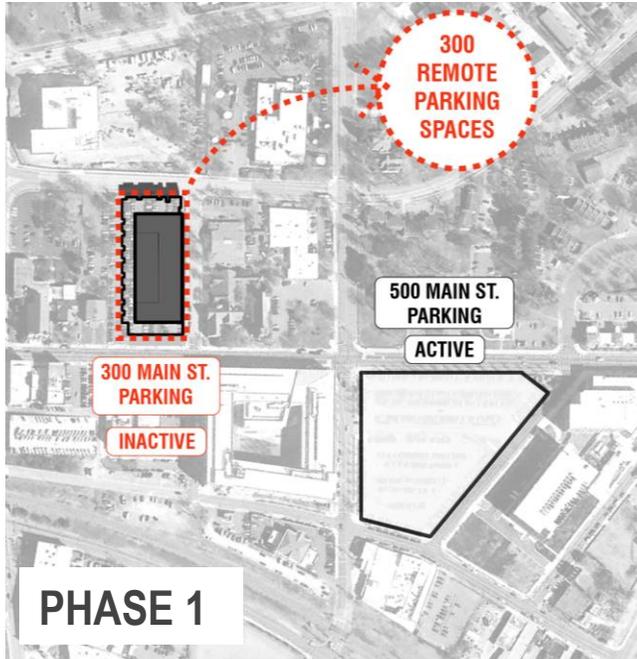
- Up to 40% of commutes via private autonomous fleet vehicles, and over 80% of vehicles on the road expected to be capable of **autonomous driving by 2040**
- Autonomous vehicles will self-drive and park, **requiring up to 80% less space** for the same number of vehicles (or conversely parking *up to 80%* more vehicles in the same space)
- Future changes in function require **planning for different floor heights** than a typical parking garage either by adding height or later removing and replacing levels.
- The garages may see **25% - 40% of increased construction cost** if the design anticipates these future changes.
- Future life safety requirements and impacts for future adaptations are unknown



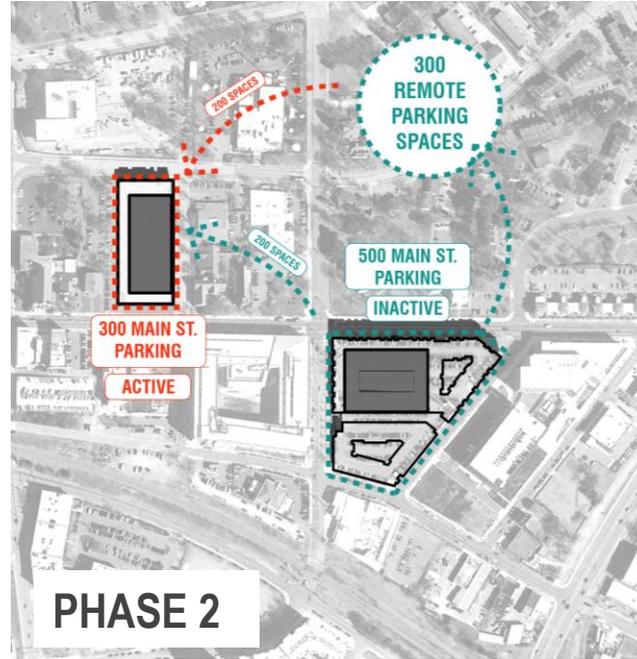
- **The 500 block garage is the best opportunity** for future repurposing
- **The south bay can be converted** in the future to residential or other non-parking function
- **The north bays can be more densely parked** with a higher capacity than the current layout. (The 300 block can also be restriped for much higher parking capacity.)
- **County can create other functions downtown** in the future by replacing older parking facilities downtown and shifting parking assignments

1. Review the potential **construction sequence** for building the garages
2. Establish need for **temporary “swing space”** for remote parking during construction
3. Review **total timeline** for displacement and construction

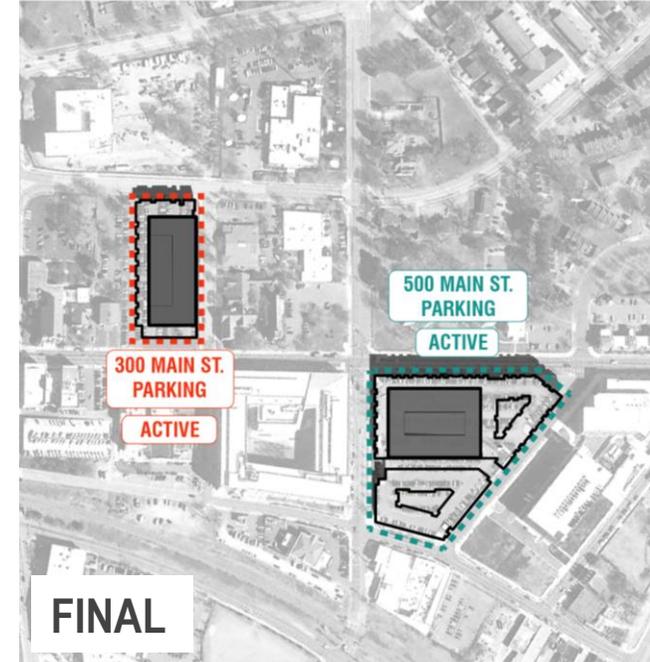
# EAST MAIN STREET PARKING GARAGES Sequential Construction Phasing



- 300 block inactive (need 300 spaces)
- 500 block active (200 staff & 200 public spaces)
- Remote lot (provide 300 spaces)



- 300 block active (200 staff + 200 public)
- 500 block inactive (need 200 spaces)
- Remote lot (provide 300 spaces)



- 300 block active
- 500 block active

