

NEEDHAM CENTER + NEEDHAM HEIGHTS PARKING STUDIES

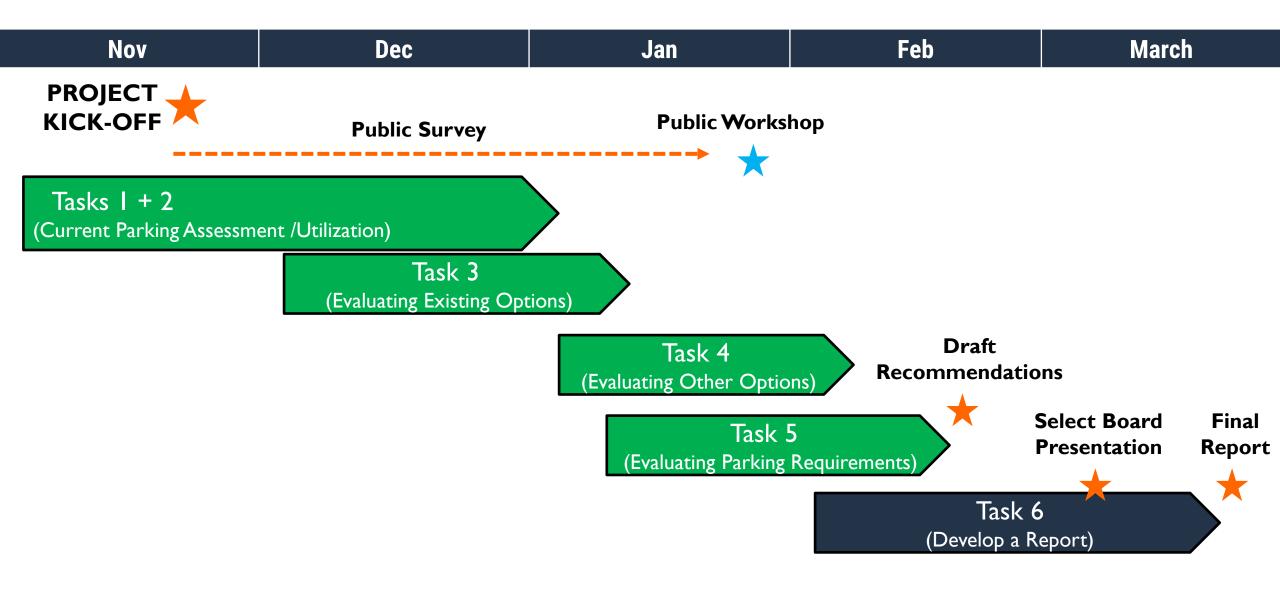
FINAL PRESENTATION-SELECT BOARD





PROJECT OVERVIEW

STUDY SCHEDULE





STUDY GOALS

Document existing parking supply and daily demand

Improve parking
management
system for residents,
employees,
customers, and
visitors

Investigate
efficiency and userfriendliness of
parking meters and
other payment
methods and find
opportunities to
improve

Identify and recommend parking supply efficiencies/ opportunities to unlock parking in areas of higher demand

Identify
opportunities to
better align
policies with the
long-term goals and
growth of the two
areas

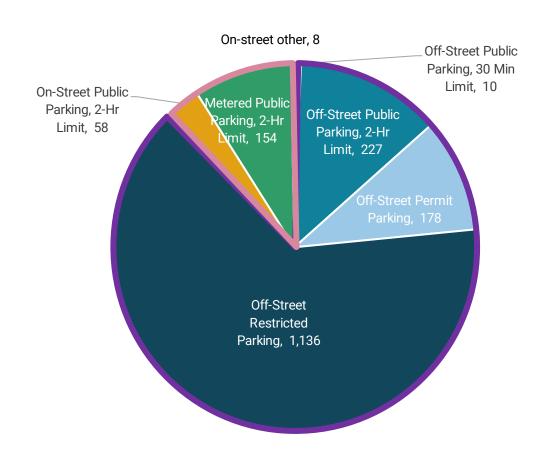
Support the
economies of the
Needham Center and
Needham Heights

Inform decisionmaking for future street improvement projects and zoning updates

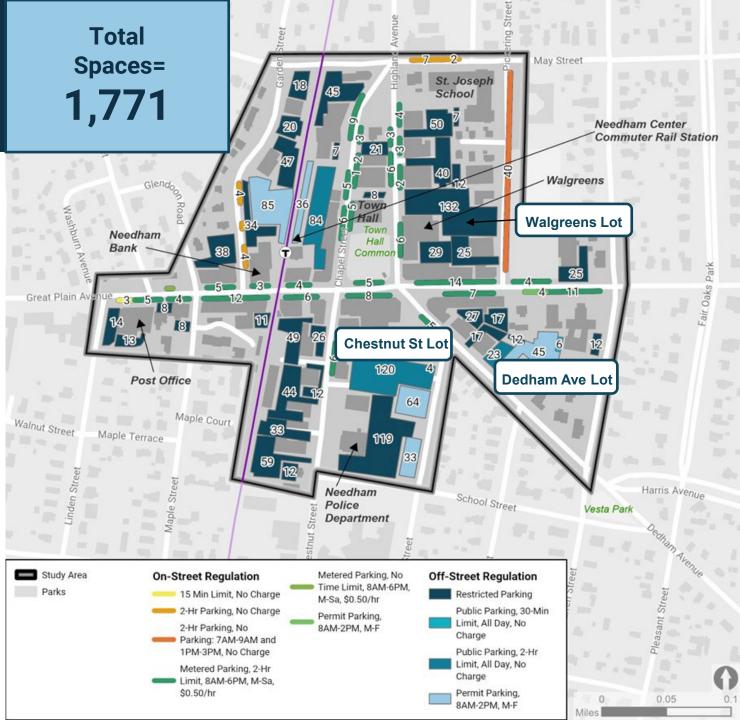


PARKING INVENTORY + UTILIZATION SUMMARY

INVENTORY Needham Center



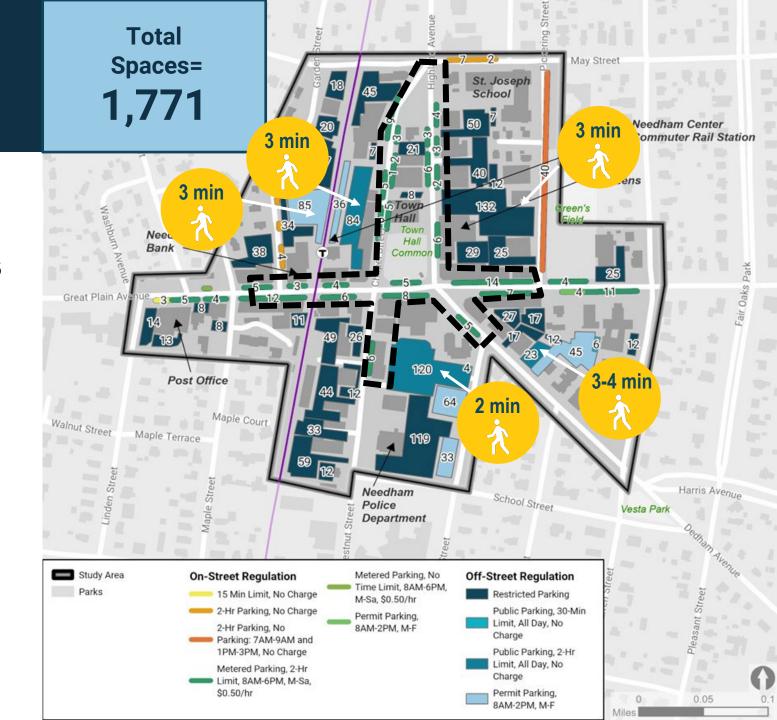
Note- Inventory excludes 11 on-street and 5 off-street spaces that were occupied by outdoor dining at the time of data collection



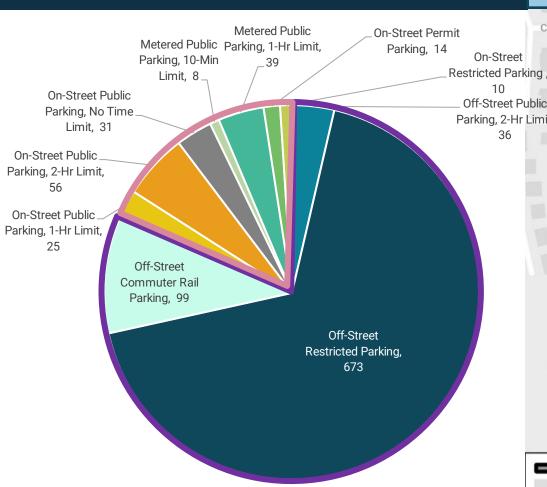
INVENTORY

Needham Center

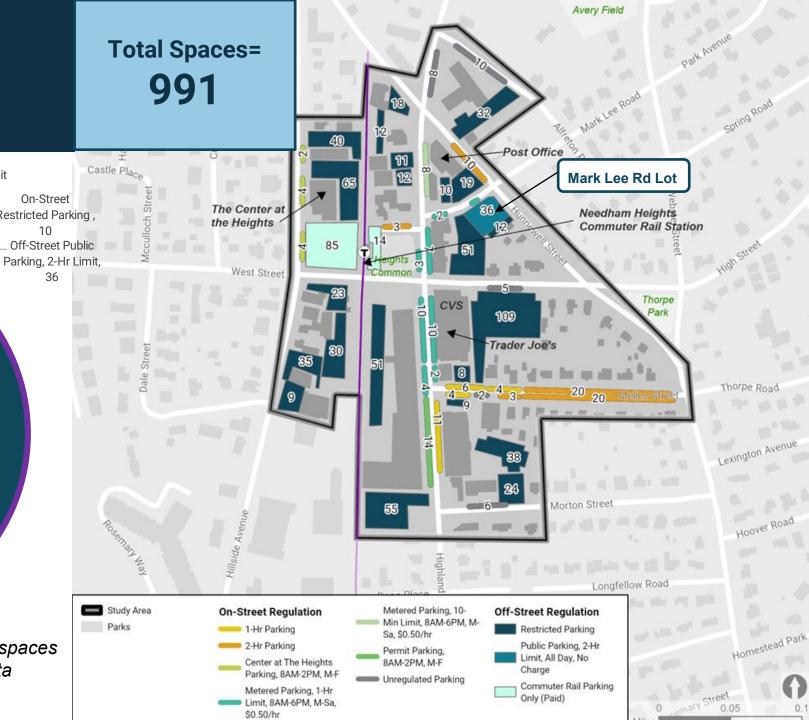
The majority of off-street public parking (237 spaces) is less than a 5-min walk to the Center's core.



INVENTORY Needham Heights

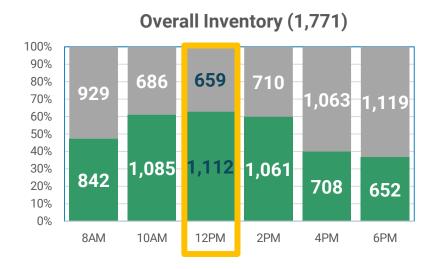


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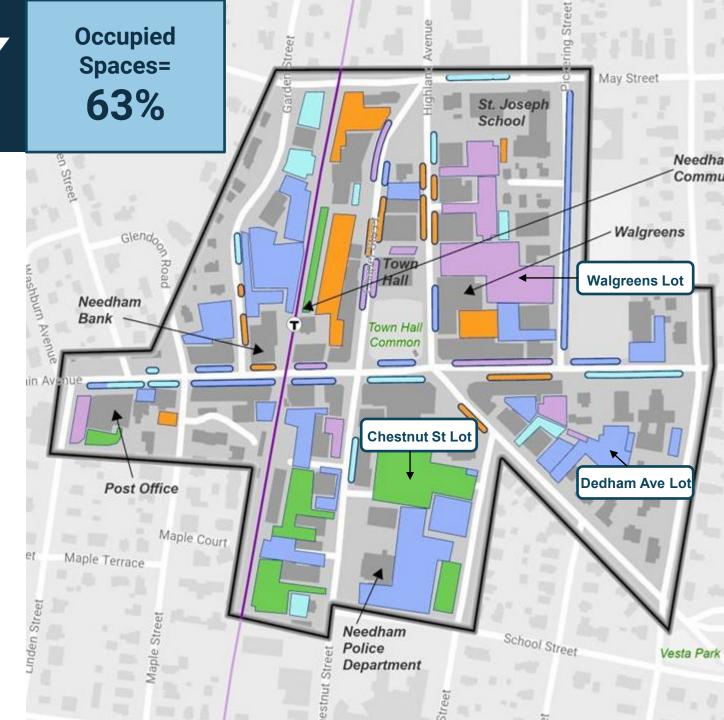


Needham Center- 12PM



659 spaces still available

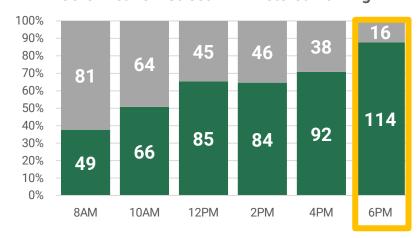






Needham Center CORE- 6PM

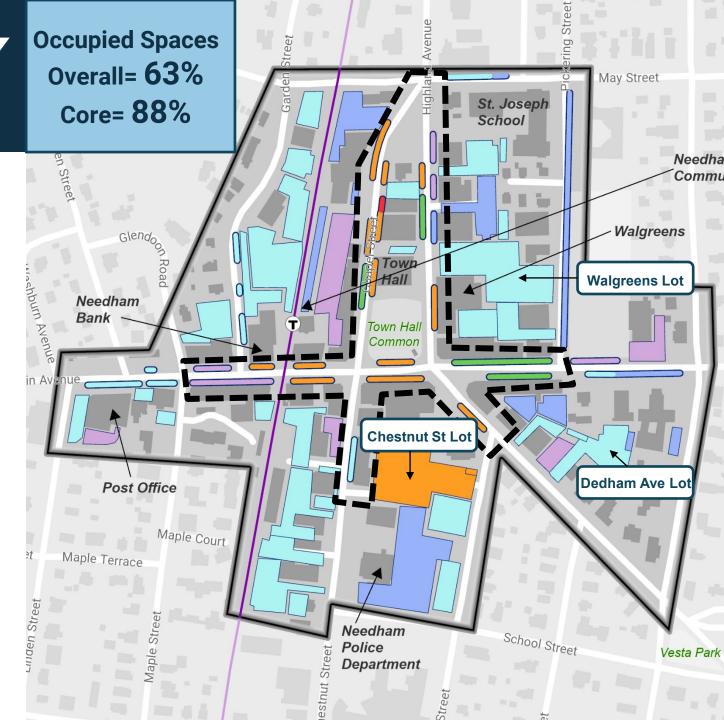
Core Area: On-Street 2-Hr Metered Parking



16 spaces still available

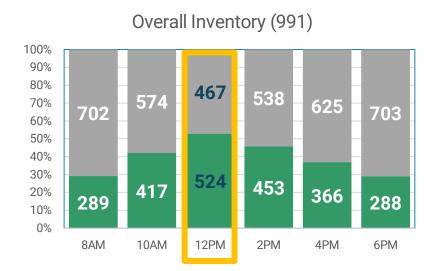
(all within 3-minute walk)





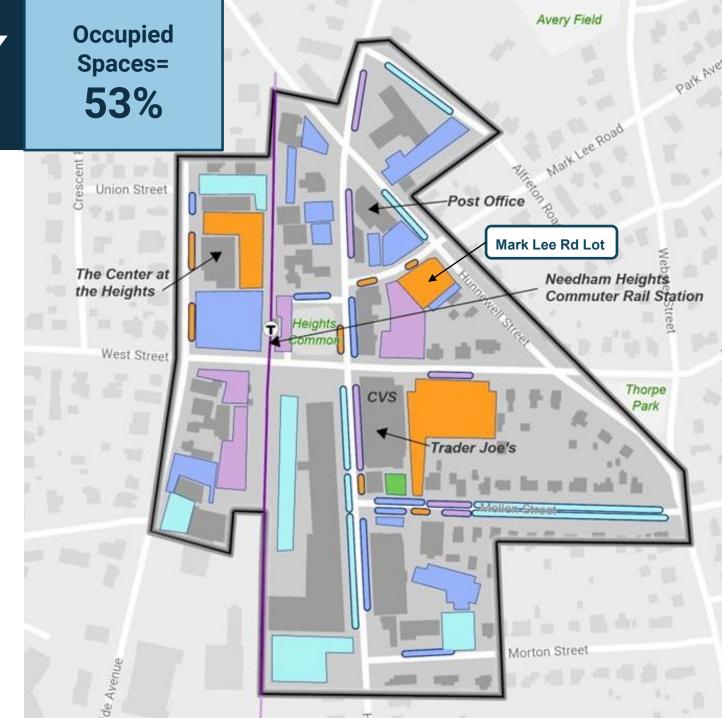


Needham Heights- 12PM



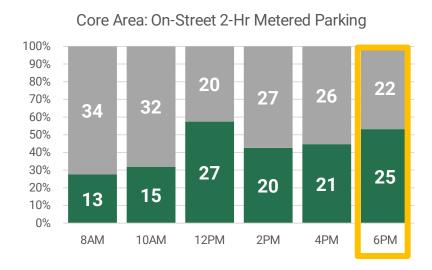
467 spaces still available







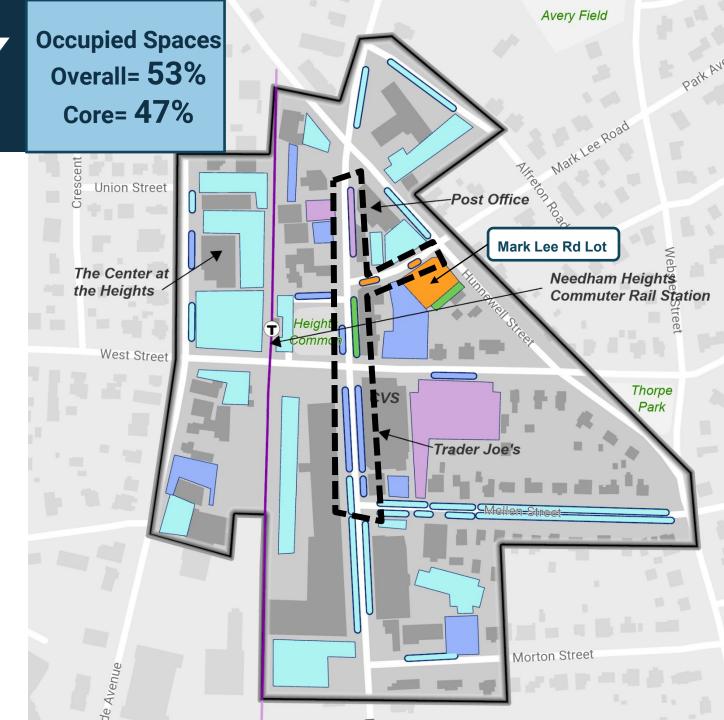
Needham Heights CORE- 6PM



22 spaces still available

(all within 3-minute walk)



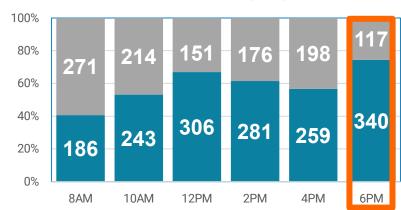




PARKING UTILIZATION- Public Parking

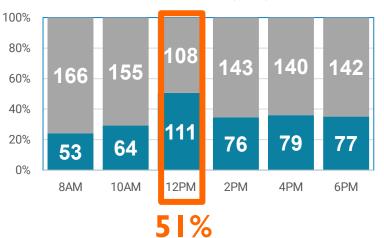
Center

Public Parking (457)



Heights





Public parking never exceeds 74% (Center) or 51% (Heights)





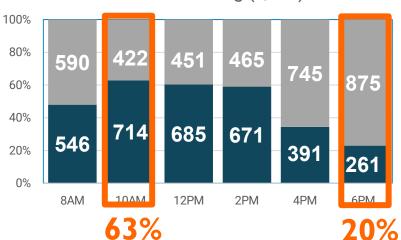




PARKING UTILIZATION- Restricted Parking

Center

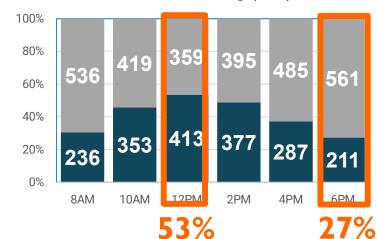
Restricted Parking (1,136)



PARKING FOR
Sudbury Farms
Customers Only
ALL OTHERS
MAY BE TOWED
AT OWNER'S EXPENSE.
Negoshian Towing Service
Newton, MA 617-965-9999

Heights

Restricted Parking (772)



Commuter rail parking is in low demand, particularly in the Center





PUBLIC OUTREACH + STAKEHOLDER ENGAGEMENT



PUBLIC SURVEY (conducted Nov. 23, 2022 - Jan. 19, 2023)

1,049
Responses

Who participated?

Visitors to Needham

Residents of greater Needham

Residents of Center or Heights

Business owners

Employees

7 Commuter Rail riders

6 Hospital workers/visitors

Age Breakdown

18-24

25-44

45-64

65 and over

Prefer not to say



SURVEY RESULTS – Key Takeaways

Needham Center

Improved meters/ technology are a desired town improvement priority

15% of employees park on-street

91% spend less than 2 hours on a typical visit

46% of customers park one or two blocks away



SURVEY RESULTS – Key Takeaways

Needham Center

Needham Heights

Improved meters/ technology are a desired town improvement priority

15% of employees park on-street

More parking is a desired town improvement priority

25% of employees park on-street

91% spend less than 2 hours on a typical visit

46% of customers park one or two blocks away

95% spend less than 2 hours on a typical visit

74% of customers park right out front or on the same block



SURVEY RESULTS – Key Takeaways

Both Areas

1/3 are in favor of paying for parking with an app

General openness to some parking being used for other purposes/ amenities



Proximity to parking is the first influencer in choosing a space

General desire to see improved information/ **signage** about parking options



OPEN HOUSE- Town Hall (January 26, 2023)





Needham Center

Key Comments

- Confusing signage and difficult wayfinding for offstreet lots
- Unbalanced parking- too much parking at Police station and at private lots, not enough public parking
- MBTA Commuter Lot lacks clarity on who can park where
- More focus on non-car transportation, including bike lanes, bike parking, and improving pedestrian experience



OPEN HOUSE- Town Hall (January 26, 2023)



Needham Heights

Key Comments

- **MBTA** lot underutilized post-pandemic
- Trader Joe's lot is always full and dangerous
- Lack of signage, generally
- Walking and biking need improvement



STAKEHOLDER CONVERSATIONS

Needham Center (Feb 1, 2023)

Attendees (House of Pizza, Barre 3, French Press Bakery, Proud Mary's Gifts, Needham Music, Abbot's Frozen Custard, Michelsen's Shoes)

Needham Heights (Feb 2, 2023)

Attendees (Blue on Highland, Koko Fit Club, Café Fresh Bagel, Town Pizza)

Key Comments

- Enforcement varies
- Legal permit parkers getting ticketed
- Limited employee parking passes
- Loading/short-term spaces desired
- Employees occupy prime spaces
- Centralized employee parking desired
 - Mark Lee Road has potential
- Leased spaces need better signage
- Employee permit costs can add up

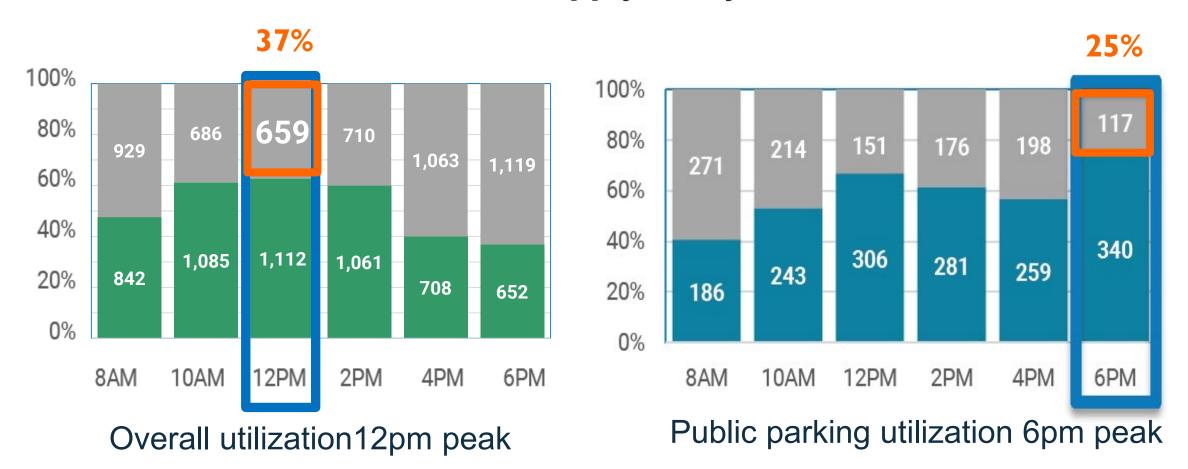


SUMMARY ANALYSIS



SUMMARY ANALYSIS: Parking Supply

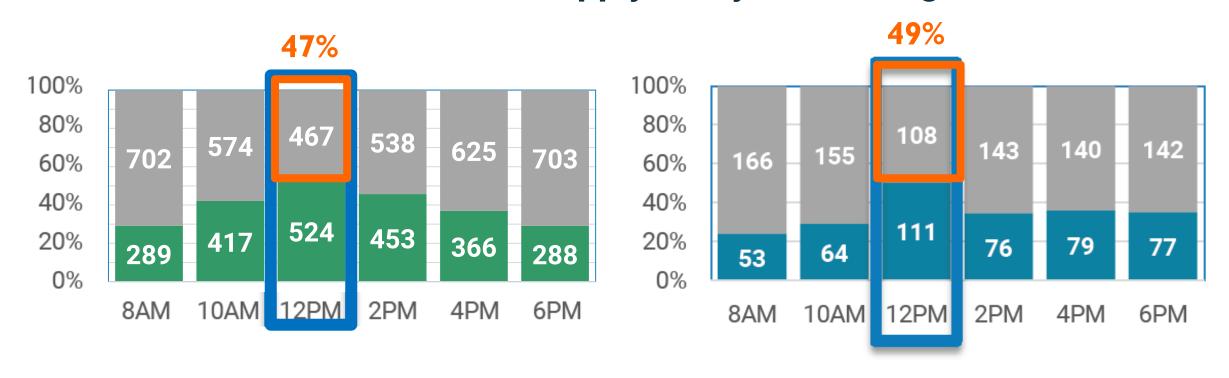
There is excess supply today in the Center.





SUMMARY ANALYSIS: Parking Supply

There is excess supply today in the Heights.



Overall utilization12pm peak

Public parking utilization 12pm peak



SUMMARY ANALYSIS: Parking Supply



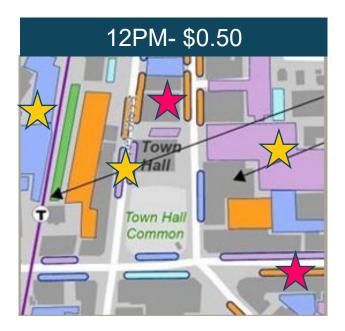
Parkers don't know some lots are available or that they exist





SUMMARY ANALYSIS: Parking Pricing

- Static pricing is **not responsive** to dynamic demand
- Top destinations (like Town Hall) experience low / no availability
- No incentive to use nearby available parking at the same price
- Prime spaces fill up as soon as meters shut off





- ★ Same areas busy all day
- ★ Same nearby areas with availability all day



SUMMARY ANALYSIS: Parking Pricing

Meter prices are low compared to other downtowns of similar size

Average, 2-hour cost			
Belmont (meter)	\$2		
Newton (meter)	\$1.50		
Needham (meter)	\$1		
Wellesley (meter)	\$1 *(minimum 2-hr purchase required because of "low rates")		
Drinks (for 2)	\$25		
Dinner (for 2)	\$100		
Clothing Shopping	\$150		



SUMMARY ANALYSIS: Parking Regulations

- Most on-street spaces have a 2-hour maximum limit which aligns with the vast majority of (surveyed) visitor trips being less than 2-hours
 - Public lots also are generally signed for shorter visits
- Enforcement is mostly chasing workers, not legitimate violators
- At dinnertime, parking regulations are very different than at noon
- Span ending at 6pm results in restaurant workers occupying prime on-street spaces before customers arrive



SUMMARY ANALYSIS: Permits

- Permits relatively inexpensive and "lock" purchasers into annual fee
- Annual permit purchase is not a realistic option for part-time workers, resulting in meter-feeding & "rolling"
- Permit process very manual / overhead heavy
- Permits are not available to downtown residents, hurting viability of needed infill housing
- Long-term visitors do not have parking options without a permit





SUMMARY ANALYSIS: Meter Technology

- Meters only accept coins
- Meters don't include **number of minutes in violation**
- Meter parking sessions do not reset upon turnover



SUMMARY ANALYSIS: Parking Enforcement

- Enforcement currently limited to daytime
- Span of enforcement does not match hours of 'parking crunch' (after 6pm)
- Staying overtime (including overnight) is one of the most frequent parking violations
- Number of violations/tickets issued varies daily
- Handheld system PEOs use is glitchy
- Turnover and utilization is not currently tracked with the enforcement system
- Tickets can be paid online



SUMMARY ANALYSIS: Zoning

- Requirements are relatively high
- Waiver requests are frequent, indicating the requirements do not match the market
- Limited options for reductions as of right; lengthy review process required
- Although some flexibility exists, it is limited
 - Parts of Needham Center/Heights do not fall into these areas

Observed Needham residential parking demand	0.9 cars /unit
Residential zoning requirement	1.5 spaces /unit

Land Use	Needham Requirement	ITE Projection	Comparison
Residential	1.5 spaces/unit (lower for affordable)	1.15 spaces/ unit ¹	Higher
Office	1 space/300 sf	1 space/ 420 sf	Higher
Medical Office	1 space/200 sf	1 space/ 310 sf	Higher
Retail	1 space/300 sf	1 space/ 515 sf	Higher
Restaurant	1 space/3 seats, (more for takeout)	1 space/ 5 seats	Higher



SUMMARY ANALYSIS: Multimodal Network

- Car-centric infrastructure but some to support walking and bicycling
 - Sidewalks mostly complete but some areas & crosswalks need improvement
 - Crosswalks needed near the Dedham Ave and Chestnut St lots

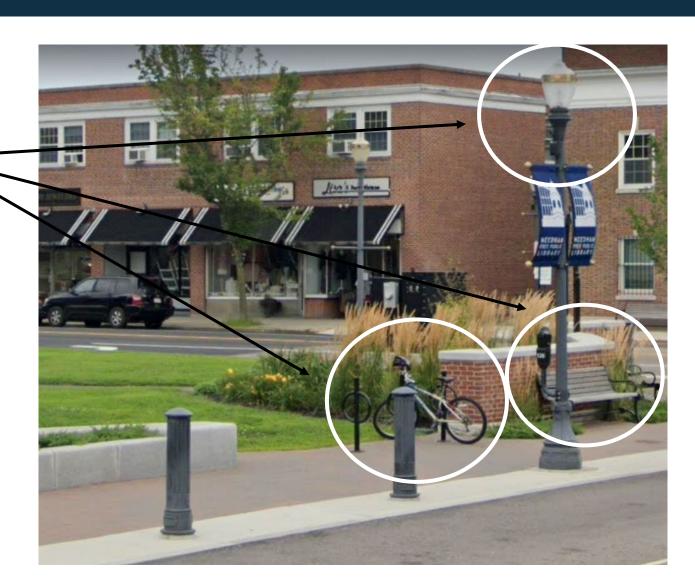






SUMMARY ANALYSIS: Multimodal Network

- A range of amenities improve the pedestrian experience
- Sharrow markings are present but dedicated bike lanes are preferable
- Bike racks are present but aren't always convenient





SUMMARY ANALYSIS: Key Findings

Ample vacancy at peak

Vacant spaces hard to find

Pricing does not match demand

Few long-term spaces

Misdirected enforcement

Hard to walk to remote parking



DRAFT RECOMMENDATIONS

DRAFT RECOMMENDATIONS

- Performance-based pricing
- Permits
- Shared parking district
- Long-term parking
- 5 Enforcement
- 6 Create more active curbs
- Improve parking signage and wayfinding

- 8 Payment technologies
- Introduce flexibility in zoning
- Parking supply opportunities
- 11 Multimodal improvements
- Bike parking infrastructure
- 13 Clarity of regulations







What is it?

- Adjusting price and/or time limits (up/ down) to match demand
- Extending the operating time of the meters into the evening when on-street parking demand increases
- Lengthening time-limits
 (rely on fees to generate turnover, instead)

CASE STUDY- Beverly, MA

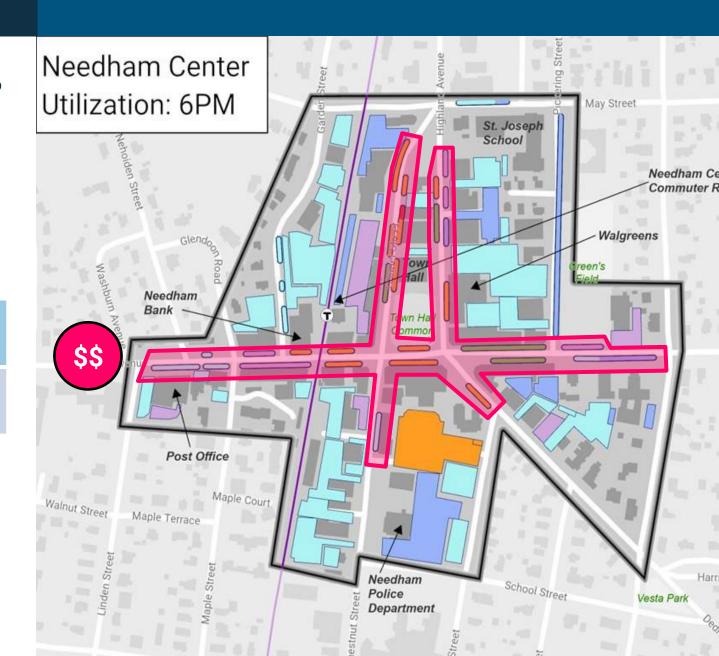


NEEDHAM CENTER: PRICING TODAY

How would it work in the Center?

- Extend the meters to 8pm to along Chestnut St/ Highland Ave
- Remove time limits

Existing Meter Price Structure	Existing Time Limit
\$\$ (All meters)	2-hours (Until 6PM)

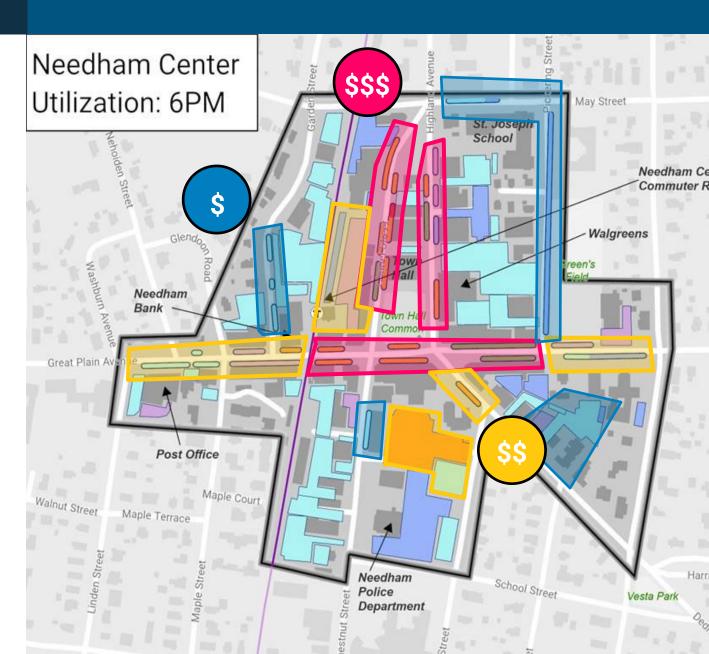


NEEDHAM CENTER: PROPOSED

How would it work in the Center?

Tiered pricing

Recommended Meter Price Structure	Recommended Time Limit
\$\$\$ (Prime)	None (Until 8PM)
\$\$ (Secondary)	None (Until 8PM)
\$ (FREE)	None (Until 8PM)

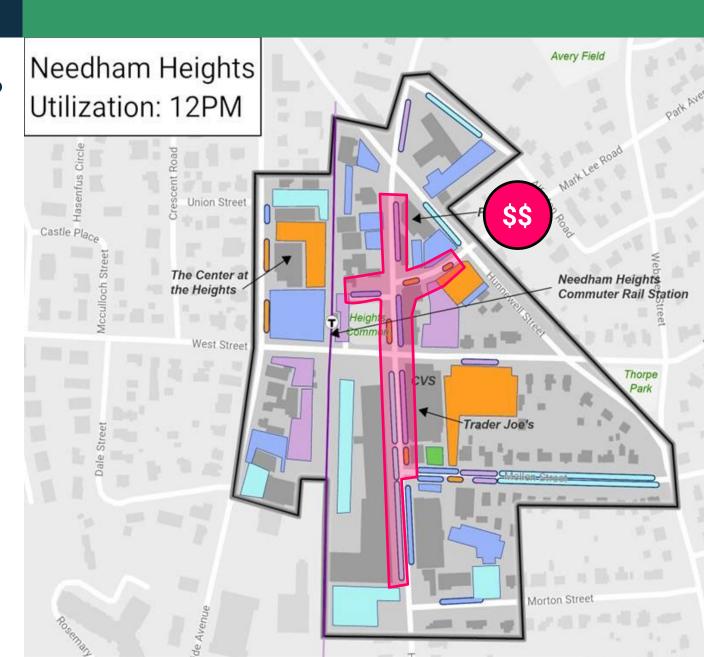


NEEDHAM HEIGHTS

How would it work in the Heights?

- Extend the meters to 8pm to Highland Ave
- Remove time limits

Existing Meter Price Structure	Existing Time Limit
\$\$ (All meters)	2-hours (Until 6PM)

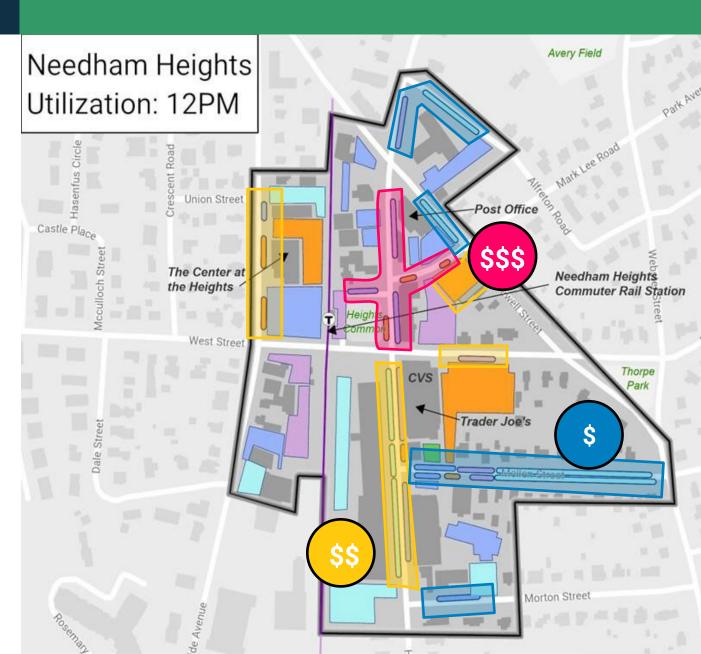


NEEDHAM HEIGHTS

How would it work in the Heights?

Tiered pricing

Recommended Meter Price Structure	Recommended Time Limit
\$\$\$ (Prime)	None (Until 8PM)
\$\$ (Secondary)	None (Until 8PM)
\$ (FREE)	None (Until 8PM_



What is it?

- Allow paid users to park in permit spaces to maximize utilization
- Create some long-term spaces that do not require permits
- Expand to downtown residents
- Continue to monitor and adjust pricing, as needed, depending on demand

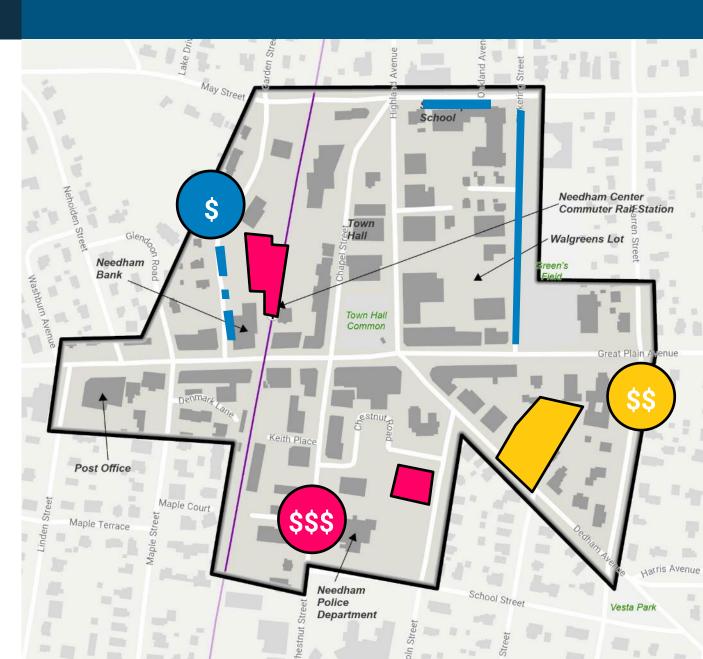
It's Time.



parkingclerk@CityofMelrose.org

How would it work in the Center?

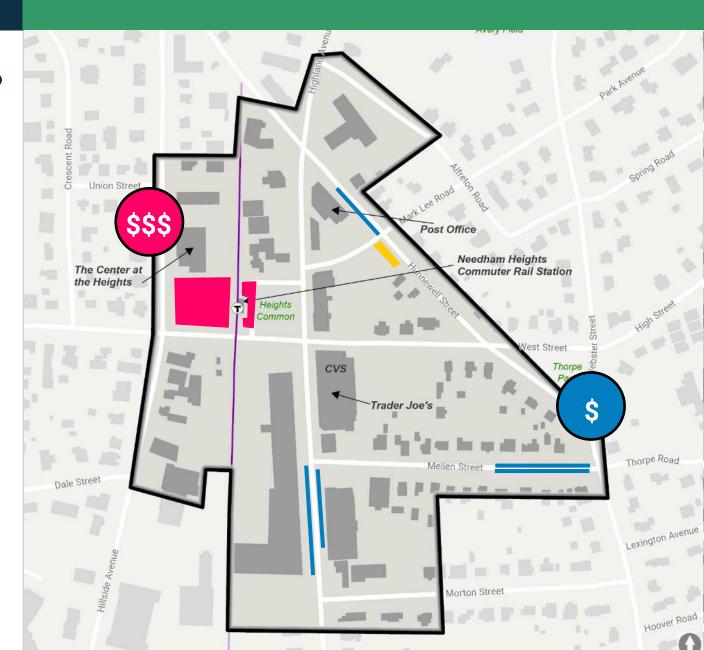
Recommended Permit Price Structure	Recommended Time Limit
\$\$\$ (Prime)	None
\$\$ (Secondary)	None
\$ (FREE)	12-hour



NEEDHAM HEIGHTS

How would it work in the Heights?

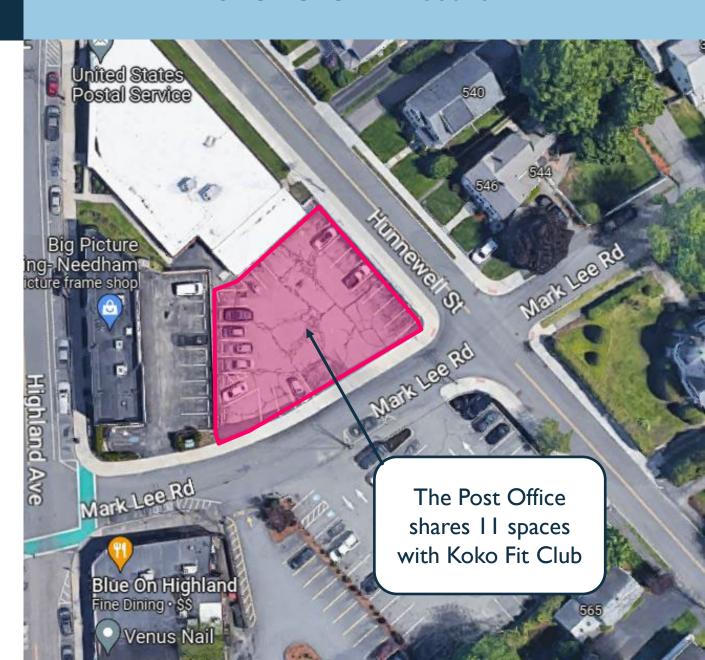
Recommended Permit Price Structure	Recommended Time Limit
\$\$\$ (Prime)/MBTA operated	None
\$\$ (Secondary)	None
\$ (FREE)	12-hour



CASE STUDY- Needham

What is it?

- Town works with property owners to open currently restricted but underutilized parking to public
- This can be for select groups (i.e., employees) or at select times (i.e., after businesses close for the day)
- Town can offer improvements and/or revenue-sharing to include in public parking system.

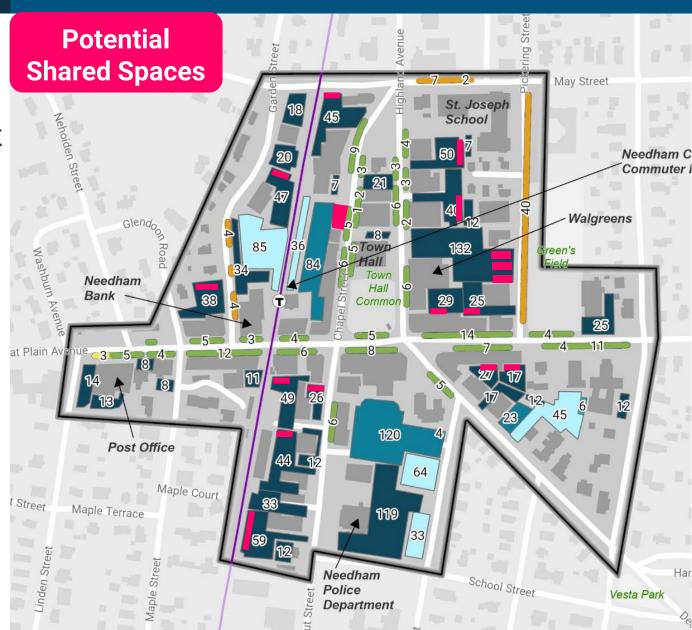


NEEDHAM CENTER

How would it work in the Center?

- Town could approach owners and offer in-kind improvements to make it safer
 - Increase lighting at rear
 - Paint high-visibility crosswalks
 - Re-stripe to improve flow
- Options:
 - Walgreen's Lot
 - Back row of private lots





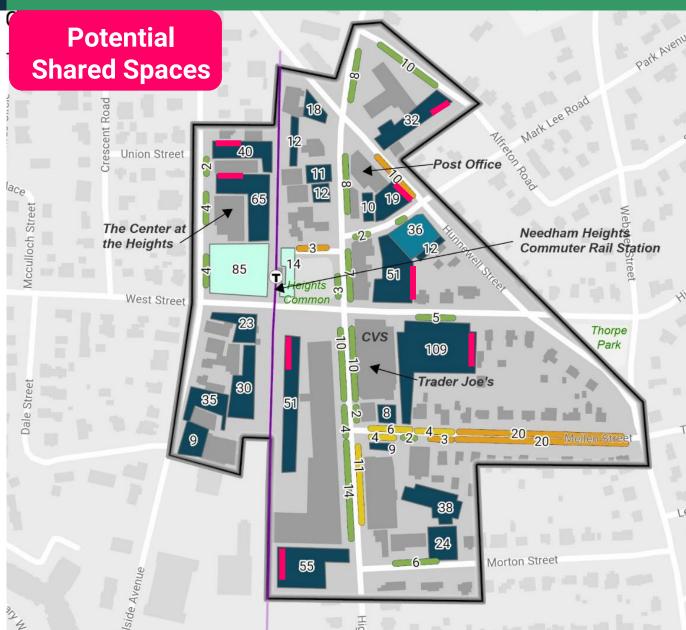
SHARED PARKING DISTRICT

NEEDHAM HEIGHTS

How would it work in the Heights?

- Town could approach owners and offer in-kind improvements to make it safer
 - Increase lighting at rear
 - Paint high-visibility crosswalks
 - Re-stripe to improve flow
- Options:
 - Starbucks Lot
 - Back row of private lots





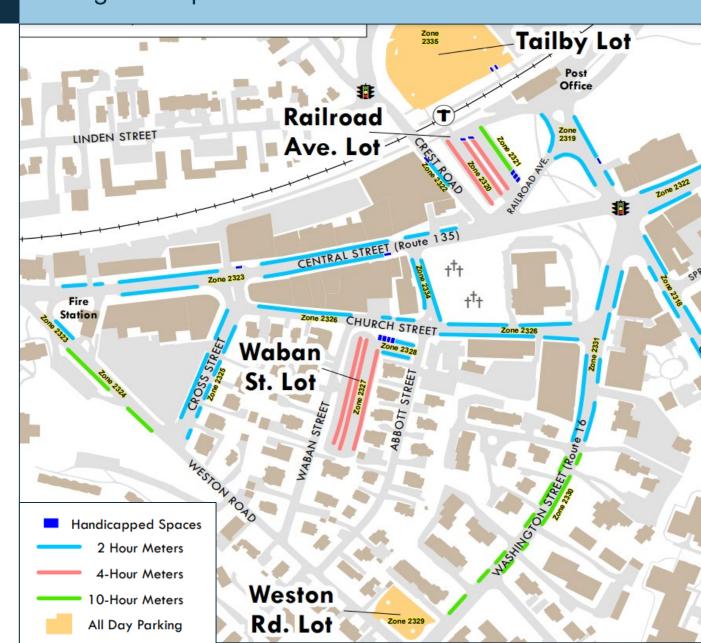
LONG-TERM PARKING

CASE STUDY- Wellesley, MA

Long-term spaces are located farther from the center

What is it?

 Designating areas of existing on- or off-street facilities to accommodate long-term parkers (i.e. employee, business owners, residents)

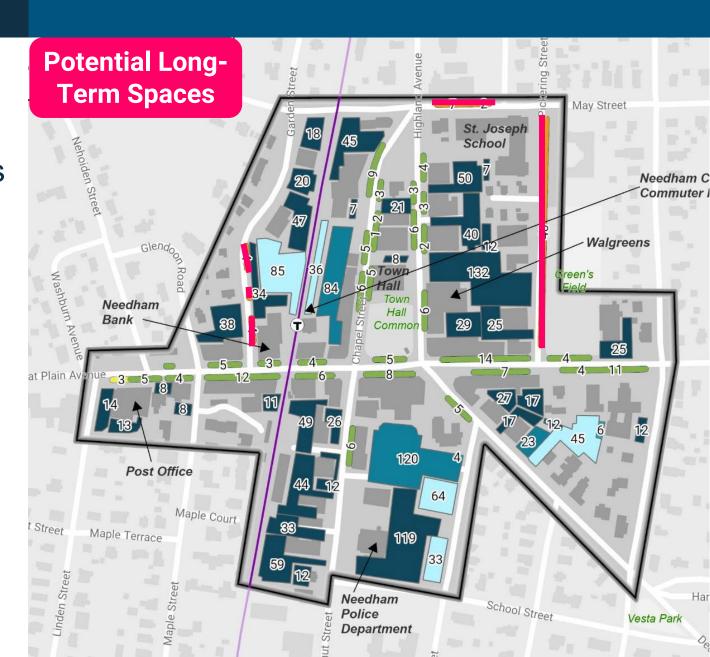


LONG-TERM PARKING

NEEDHAM CENTER

How would it work in the Center?

 Designating portions of existing (underutilized) on-street spaces to host long-term parking without a permit needed

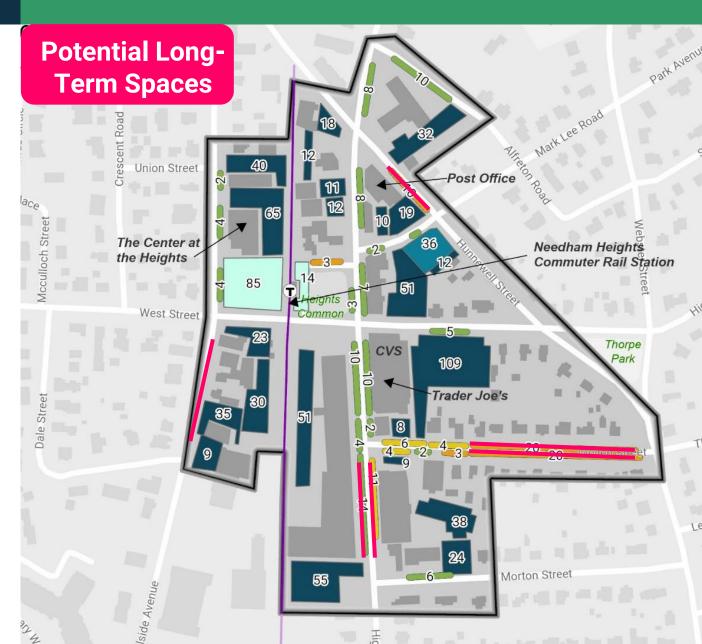


LONG-TERM PARKING

NEEDHAM HEIGHTS

How would it work in the Heights?

 Designating portions of existing (underutilized) on-street spaces to host long-term parking without a permit needed



ENFORCEMENT

What is it?

 Retrain focus on educating drivers, not penalizing them

For Center and Heights...

- Adjust hours to peak span (10am-8pm)
- Focus any double-staffing on noon & evening hours
- Upgrade systems, Incorporate License
 Plate Recognition (LPR)
- Consider first ticket free / information provided as policy

CASE STUDY- Pittsfield, MA

The City recruits young parking ambassadors to support enforcement and teach visitors how to pay for parking

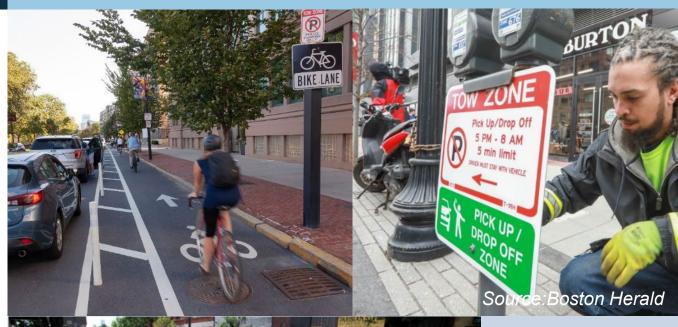




What is it?

- Designating centralized, onstreet parking spaces for:
 - Uber/Lyft/DoorDash
 - Pick-up/Drop-off
 - Loading zones
 - Bike parking
 - Taxi stands
 - Valet parking
- Converting parking spaces to bicycle lanes, bus stops, bicycle parking, EV parking, etc.

CASE STUDY- Boston, MA





NEEDHAM CENTER

How would it work in the Center?

 Introduce new uses for spaces in areas with high turnover







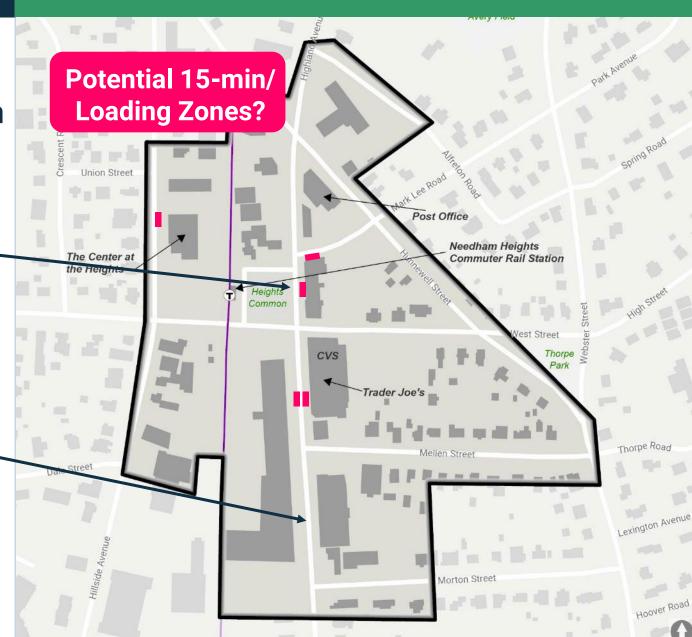
NEEDHAM HEIGHTS

How would it work in the Heights?

 Introduce new uses for spaces in areas where parking can be utilized nearby







FOR BOTH AREAS

CREATE MORE ACTIVE CURBS

If parking space became something else...

Street	Peak Utilization	Parking available
Great Plain Avenue	12 pm: 47 6 pm: 64	96
Chapel	12 pm: 25 6 pm: 33	37
Highland	12 pm: 16 6 pm: 20	24
Highland Avenue (Heights)	12 pm: 30	69

If parking space became something else...

Street	Peak Utilization	Parking available	Parking utilization w/ one lane of parking removed*
Great Plain Avenue	12 pm: 47 6 pm: 64	96	12 pm: 97% 6 pm: 133%
Chapel	12 pm: 25 6 pm: 33	37	12 pm: 135% 6 pm: 178%
Highland	12 pm: 16 6 pm: 20	24	12 pm: 133% 6 pm: 167%
Highland Avenue (Heights)	12 pm: 30	69	12 pm: 87%

If parking space became something else...

Street	Peak Utilization	Parking available	Parking utilization w/ one lane of parking removed*	Potential Spillover w/one lane parking removed (90% occupancy)
Great Plain Avenue	12 pm: 47 6 pm: 64	96	12 pm: 97% 6 pm: 133%	12 pm: 4 6 pm: 21
Chapel	12 pm: 25 6 pm: 33	37	12 pm: 135% 6 pm: 178%	12 pm: 9 6 pm: 17
Highland	12 pm: 16 6 pm: 20	24	12 pm: 133% 6 pm: 167%	12 pm: 6 6 pm: 10
Highland Avenue (Heights)	12 pm: 30	69	12 pm: 87%	12 pm: 0

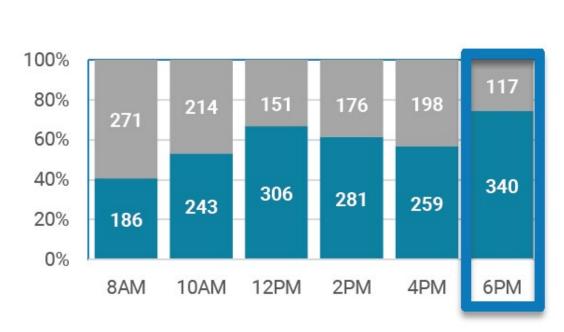
Total:

12 pm: 19

6 pm: 48

FOR BOTH AREAS

If parking space became something else...



Public parking Utilization: Needham Center

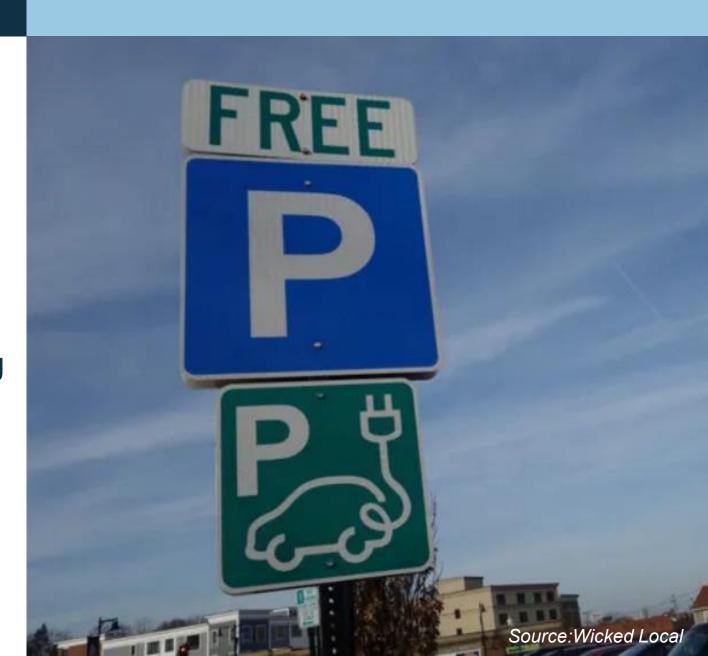
Street	Parking utilization w/ one lane of parking removed*	Potential Spillover w/one lane of parking removed
Great Plain Avenue	12 pm: 97% 6 pm: 133%	12 pm: 0 6 pm: 16
Chapel	12 pm: 135% 6 pm: 178%	12 pm: 7 6 pm: 15
Highland	12 pm: 133% 6 pm: 167%	12 pm: 4 6 pm: 8
Highland Avenue (Heights)	12 pm: 87%	12 pm: 5

IMPROVE PARKING SIGNAGE AND WAYFINDING

CASE STUDY- Dedham, MA

What is it?

- Improve clarity of signage at (and directing to) public lots. Improve clarity of existing permit parking signage (by type, zone, time in effect)
- Information available on the parking system – everywhere!
- (Eventually) develop an overall, streamlined parking signage system that is clear and recognizable

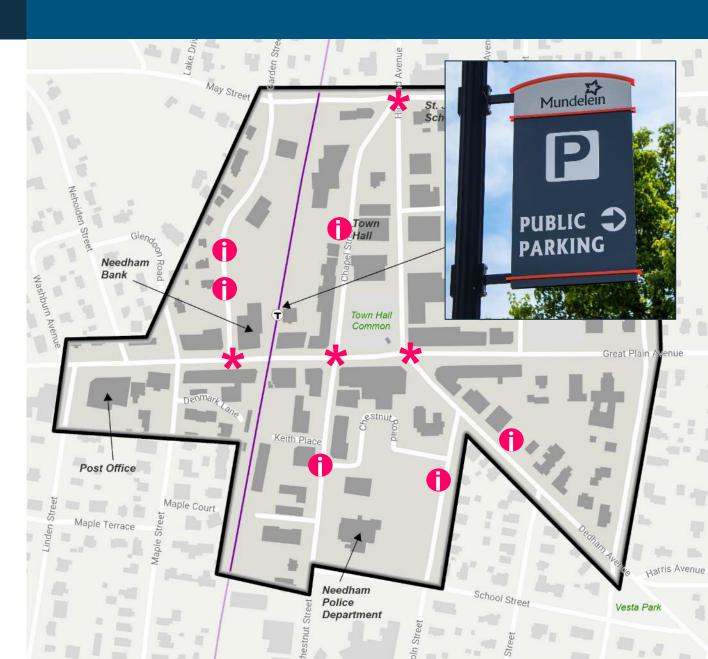


IMPROVE PARKING SIGNAGE AND WAYFINDING

NEEDHAM CENTER

How would it work in the Center?

- ★ Establish signage that is highly visible and clearly directs to public parking from key intersections
- Have clear signage at the entrance of public lots, including
 - Price to park
 - Time limits
 - Hours of operation
- Develop a map of public parking facilities for the Needham website, parking tickets, distribution by merchants, etc.

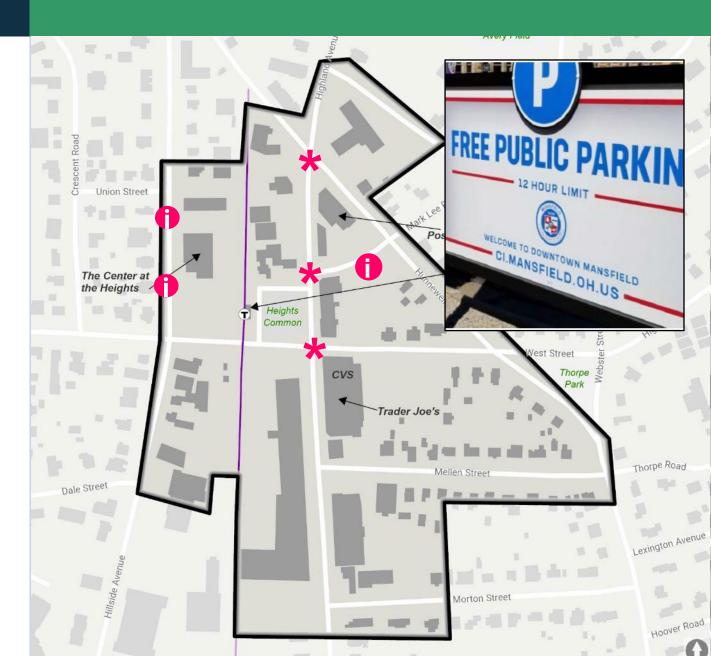


IMPROVE PARKING SIGNAGE AND WAYFINDING

NEEDHAM HEIGHTS

How would it work in the Heights?

- ★ Establish signage that is highly visible and clearly directs to public parking from key intersections
- Have clear signage at the entrance of public lot, including
 - Price to park
 - Time limits
 - Hours of operation
- Develop a map of public parking facilities for the Needham website, parking tickets, distribution by merchants, etc.



PAYMENT TECHNOLOGIES

PROS/CONS FOR CONSIDERATION

What is it?

- Upgrade meters and kiosks to allow for:
 - Credit card payments
 - Coins and bills
 - Pay-by-smartphone features
 - Extending time limits
 - Allow virtual permits
- Transaction data can be shared with parking enforcement/mgmt.
- Consider LPR for enforcement/ permits

Feature	Meters	Kiosks	
Capital cost per space	\$\$	\$\$\$	
Operating cost per space	\$\$	\$\$\$	
Maintenance/ Lifespan	More units to maintain/long	Less units to maintain/ long	
Convenience/ User-Friendliness	Right at space – Convenient Limited screen options	Large screen – more info More options - confusing	
Ease of revenue/ Data collection	More units to track	Less units to track	
Sidewalk Impact	Higher	Lower	

INTRODUCE FLEXIBILITY IN ZONING

CASE STUDY- Somerville, MA Zoning Ordinance Mixed-Use Reduction Table

What is it?

- Introduce by-right options to rightsize parking. Provides flexibility of relief for small retail uses, limited reductions available for multi-story buildings, and small change-of-use developments
- Reductions in residential required parking are appropriate in mixed use, transit-oriented village settings, like Needham Heights and Needham Center
- Revise regulations to match across the study areas

Time of Day	Comm.	Evening Comm.	Resi.	Total
6AM- 9AM	(X) * 25%	(X) * 0%	(Y) * 100%	= row sum
9AM- 7PM	(X) * 100%	(X) * 50%	(Y) * 65%	= row sum
7PM- I I PM	(X) * 25%	(X) * 100%	(Y) * 100%	= row sum
HPM- 6AM	(X) * 0%	(X) * 25%	(Y) * 100%	= row sum

DRAFT

How would it work in Needham?

- Consider eliminating or significantly reducing parking minimums
- Allow reductions for mixed-use developments
- Consider parking maximums
- Expand off-site parking allowances
- Expand transportation demand management
- Formalize the in-lieu fee program

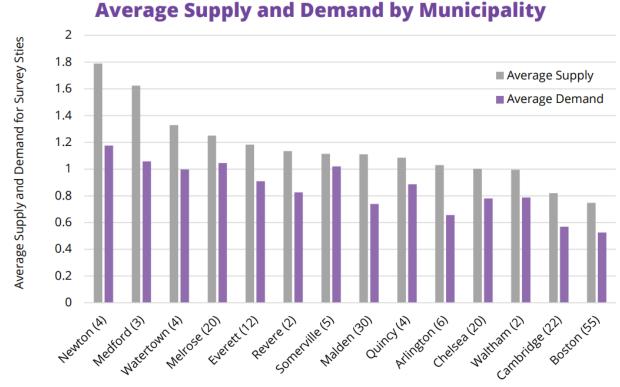


Figure 5: Average Supply and Demand by Municipality, Perfect Fit Parking Study (n=189)

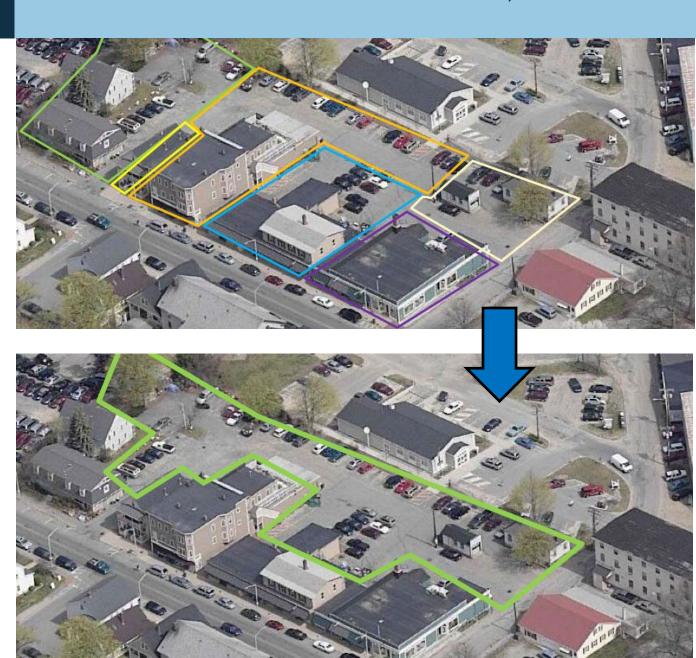
Numbers in parentheses indicate the number of sites surveyed in each municipality.

PARKING SUPPLY OPPORTUNITIES

CASE STUDY- West Concord, MA

What is it?

- Identifying opportunities to improve the access or utilization of existing supply through lot consolidation, removing redundant aisles and increasing supply
- Like shared parking, provide inkind incentives to participate
- Ensure zoning rights are preserved



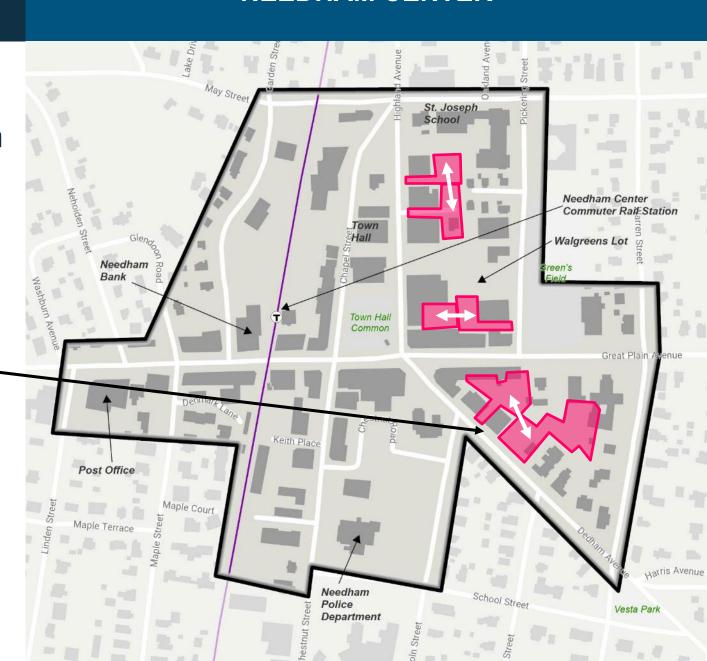
NEEDHAM CENTER

How would it work in the Center?

 Remove minor barriers between lots to increase access and utilization of existing facilities



Remove fence and create vehicle flow between both lots, and more direct pedestrian access to Great Plain Ave



PARKING SUPPLY OPPORTUNITIES

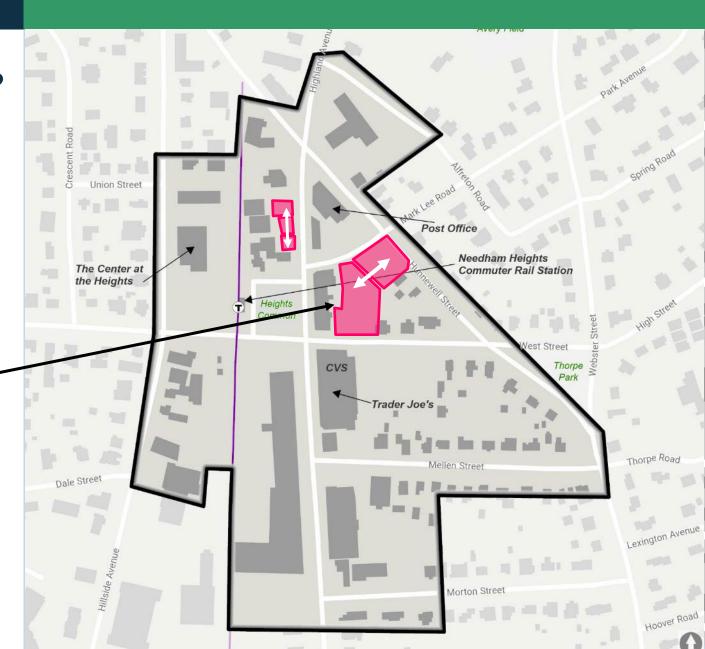
NEEDHAM HEIGHTS

How would it work in the Heights?

 Remove minor barriers between lots to increase access and utilization of existing facilities



Remove median and create flow between both lots



MULTIMODAL IMPROVEMENTS

CASE STUDY- Bourne, MA

What is it?

- Improving the infrastructure and amenities that support walking or biking to incentivize not driving/parking as an option to visitors. This includes:
 - Improving the conditions/ user experience of existing parking facilities
 - Improving connections
 between parking facilities to
 central destinations



MULTIMODAL IMPROVEMENTS

How would it work in the Center?

- Improve crossing to Chestnut St lot
- Increase clarity of access to Dedham Street lot
- Better advertise bike parking areas





NEEDHAM CENTER



MULTIMODAL IMPROVEMENTS

NEEDHAM HEIGHTS

How would it work in the Heights?

- Install crosswalk at Mellen Road
- Better advertise where bike parking is available
- Establish a sidewalk on south side of Mark Lee Road





BIKE PARKING INFRASTRUCTURE

What is it?

- Installing bike racks in visible and accessible places near destinations to encourage their use
 - This could mean replacing a car parking space with bicycle parking

CASE STUDY- Somerville, MA (top) NYC (bottom)





BIKE PARKING INFRASTRUCTURE

FOR BOTH AREAS

How would it work in the Center?

 Installing signage and bike racks recommended by Association of Pedestrian and Bicycle Professionals (APBP) more frequently, throughout



INVERTED U also called staple, loop

POST & RING



WHEELWELL-SECURE

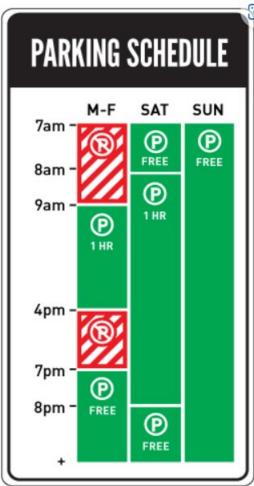


CASE STUDY- Framingham, MA

What is it?

- Including time span of regulation (i.e., 8 AM – 9 PM)
- Improving the clarity of language on signage where regulations are combined or overlapping (e.g., Loading Zone vs. 15 minute?)
- Establishing signage that provides direction during snow events





Sample schedule used in various cities with complicated regulations

CLARITY OF REGULATIONS

FOR BOTH AREAS

How would it work in the Center?

Clarifying language (examples below)

Proposed Dedham Lot permit area sign









7 days a week?



Free parking after 2?



At what times/days?

DRAFT RECOMMENDATIONS

- Performance-based pricing
- Permits
- Shared parking district
- Long-term parking
- 5 Enforcement
- 6 Create more active curbs
- Improve parking signage and wayfinding

- 8 Payment technologies
- Introduce flexibility in zoning
- Parking supply opportunities
- 11 Multimodal improvements
- Bike parking infrastructure
- 13 Clarity of regulations



