



TECHNICAL MEMORANDUM #6: RECOMMENDATIONS

To: Town of Concord
From: Nelson\Nygaard
Date: March 20, 2013
Subject: Concord Parking Recommendations

OVERVIEW

The Town of Concord's Comprehensive Parking Study effort, while primarily focused on parking, is ultimately about understanding the role that parking plays in the overall life of Concord's business districts and associated areas. The Study began with an effort to understand the cacophony of parking issues that Town officials have been trying to address for a number of years. In Concord Center and West Concord, and by the playgrounds, stores, train stations, tourist areas and residential streets, issues surrounding parking abound, with some similarities and many differences.

By looking at parking comprehensively, what this Study uncovered is that parking issues are rarely about parking itself, but are integrally tied with many other factors at play in Concord - values the Town, its residents, stakeholders, businesses and visitors are seeking - economic development, livability, vitality, friendliness and attractiveness. The focus on parking in Concord's commercial centers is closely connected to the viability and success of these centers. Too much parking, too little parking, or inaccessible parking are all deterrents to customer satisfaction and can impact whether or not a customer returns. With several active business associations in Concord, including the Chamber of Commerce, the Concord Business Partnership, and the Concord Indies, small and large merchants have come together to promote economic development and activity in these centers of activity. Therefore, working with the business community, residents, town staff, and other key stakeholders, the recommendations for the Comprehensive Parking Study were developed with the following parking principles in mind:

- Provide convenient parking for **customers/clients**
- Establish clear Town and private **employee parking** areas
- Accommodate **commuter parking** appropriately
- Protect **residential neighborhoods** from spillover

The analysis for the Comprehensive Parking Study included a broad and thorough review of parking supply: how much is there, where is it, how is it regulated, and how well used are the various parking areas at different times of day. The scope of this analysis was broad enough to capture not just where parking is most contentious, but also the surrounding context showing where utilization drops off. It is as important to understand where people are NOT parking, as it is to understand where they are. Supply and utilization analysis was supplemented with several

outreach efforts to get direct feedback about the parking system. Stakeholder interviews, public meetings, and well-responded to online parking surveys helped the project team understand and analyze the quantitative and qualitative data we were seeing, while also framing many of the issues discussed in the Recommendations memo.

The Parking Recommendations laid out in this memorandum build off the other technical memos. Many of the specific recommendations are interrelated and were developed and should be considered in tandem. They include items not obviously parking specific - such as pedestrian improvements - that actually have a big impact on behavior and parking in Concord.

Recommendations have been categorized in this memorandum into the following general categories:

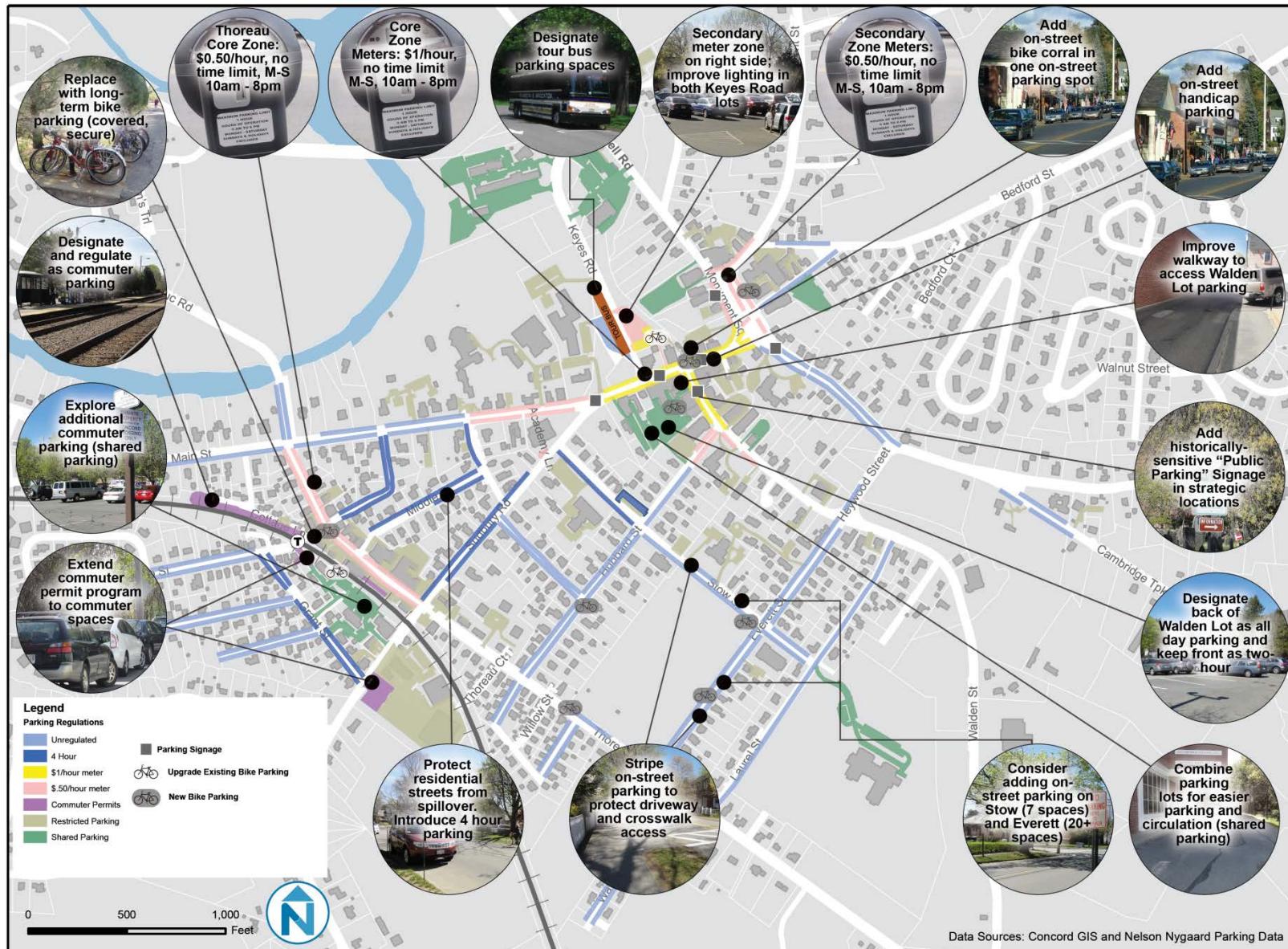
- Parking Management
- Signage and Wayfinding
- Enforcement
- Commuter Parking
- Tourist and Tour Bus Parking
- Recreational Parking
- Zoning and Shared Parking
- Bicycle Parking and Facilities
- Handicapped Parking
- Parking Technology
- Pedestrian Access
- Parking and Transportation Fund

Each category includes a brief introduction, followed by a summary of the issues as defined through this Study. A list of specific recommendations for each category is then presented, and augmented by maps, drawings and graphics as appropriate. Recommendations are broken down further by Concord Center/Thoreau Street Depot or West Concord areas as needed. A summary map of each area shows the cumulative plan based on these recommendations. Lastly, an implementation matrix is being prepared as a separate document, and will outline recommendations by time frame, cost, and potentially responsible party.

CONCORD PARKING MANAGEMENT STUDY | RECOMMENDATIONS

Town of Concord

Concord Center Recommendations Summary Map



CONCORD PARKING MANAGEMENT STUDY | RECOMMENDATIONS

Town of Concord

West Concord Recommendations Summary Map



PARKING MANAGEMENT

Curbside and public parking are among the most important resources in Concord Center, the Thoreau Street Depot, and West Concord. The team's recommendations for regulatory adjustments are based on an analysis and understanding of several factors:

- Data collection results that show consistent availability of general access parking in both Concord Center and West Concord.
- Visitor survey results that indicate that a majority of Concord residents have a preference for longer term options, and more than 80% of the business community prefers on-street time limits longer than one hour.
- Survey results show that people coming to Concord prefer a “park once” strategy.
- Support of Town and Chamber of Commerce goals of promoting local business and fostering a strong economic climate in Concord.

Issues:

- Observed parking utilization indicates clear boundaries of high and low demand. The pricing and regulations should be reflective of these areas of high and low demand, not arbitrarily defined.
- Arbitrary time limits do not enhance customer experience, but rather limit visitors, shoppers, and diners to 1-hour period.
- A variety of regulations within Monument Square make it confusing for visitors and difficult to find short vs. long term parking.
- After the meters turn off at 6pm, on-street parking in Concord Center is full (likely with employees), not allowing customers to access convenient parking.
- A number of survey respondents reported difficulty finding a parking space near the Concord Center Library.

Recommendations:

Parking management recommendations establish clear parking policy that matches and adapts to user demand and are focused on creating parking availability. The Town of Concord has maintained a metered rate structure of \$0.50 per hour, but with 12 minutes free, the price is effectively \$0.40 per hour and \$0.15 per 30 minutes since 2003. High utilization of many prime, metered assets suggests that many Concord patrons would be willing to pay more, and the consistent availability of spaces in off-street lots could accommodate those that are not.

Pricing of parking to be the highest in the areas of greatest demand, lower in the areas of modest demand, and free in the areas of little to no demand helps to best utilize the existing parking resources. Pricing zones can and should be refined through discussion, including extending the boundaries of the higher priced core, combining these into a single pricing zone, and stretching the pricing zone an additional block or so in each direction.

It is recommended that several parking management aspects of paid parking be modified:

- **Time Limits:** All metered spaces should have no time limits. Price alone should regulate how long people stay. If a customer would like to stay in town to patron businesses, then they should be able to park on-street (and pay the meter) or off-street (for free) and spend as little or as much time as they'd like. A customer should not be deterred from coming back to Concord by a parking ticket for staying a few minutes past an hour or two hours.

If the Town does not want to eliminate time limits entirely, extending time limits to four hours is a recommended alternative.

- **Meter Rates:**

In Concord Center, create two meter zones

- The core, or primary zone is the area of highest demand, and hourly rates should reflect the attractiveness and convenience of parking there. Rates in the primary zone should be \$1/hour.
- The secondary meter zone should have the rate of \$0.50/hour. Having two zones helps to maintain availability on each block. The proposed boundaries of the metered zones are suggested on the map below, but are open to refinement.
- The Town should review the impacts of these meter rate changes and monitor/evaluate parking demand patterns on a regular basis.

In West Concord, maintain the existing single meter zone with a rate of \$0.50/hour.

Demand is not high enough to warrant a higher rate or multiple meter zones.

- Concord's "12 minutes free" button maintains ability for quick trips without having to take the time to pay the meter. The Town should keep this meter function active, as it is convenient for customers. Although this "perk" does have a negative impact on meter revenues (with the 12 minutes free button, an individual is really only paying \$0.40 per hour rather than \$0.50), this becomes less fiscally impactful when customers are able to stay for longer than an hour at metered spaces.

- **Meter Hours:** Shift meter hours from 9am - 6pm, Monday thru Saturday to start later (10am) and end later (8pm), Monday thru Saturday in both zones in Concord Center. This is to mitigate the rush to prime on-street parking locations after the meters shut off during evening hours. This span extension is expected to markedly help maintain more available spaces for customers.

In West Concord, alter the hours to start at 10am but still end at 6pm.

- **Weekend Collection:** In Concord Center, maintain Saturday meter collection; do not add Sunday meter collection. Demand is high enough on Saturday to continue the need to maintain availability on-street.

In West Concord, eliminate Saturday meter collection due to low demand; enforce 10am - 6pm hours M-F. Employees should be strongly discouraged from parking on-street on weekends. If needed, four-hour parking time limits could be instituted on Saturdays.

- **Meter Technology:** Keep current McKay meters for the short-term; the meters are in good working order. See Parking Technology section for more information regarding new areas that are to be metered per these recommendations.

- **Specific Regulation Changes:** To address many location-specific concerns, including commuter parking, several changes to on- and off-street regulations are recommended and reflected in the Recommendations Maps at the beginning of this recommendation. Regulations on several streets are recommended to change:

- Thoreau Street between Main Street and Belknap: change from unregulated to secondary meter zone (no time limit, \$0.50/hour)
- Grant Street: From unregulated parking to four-hour time limit

CONCORD PARKING MANAGEMENT STUDY | RECOMMENDATIONS

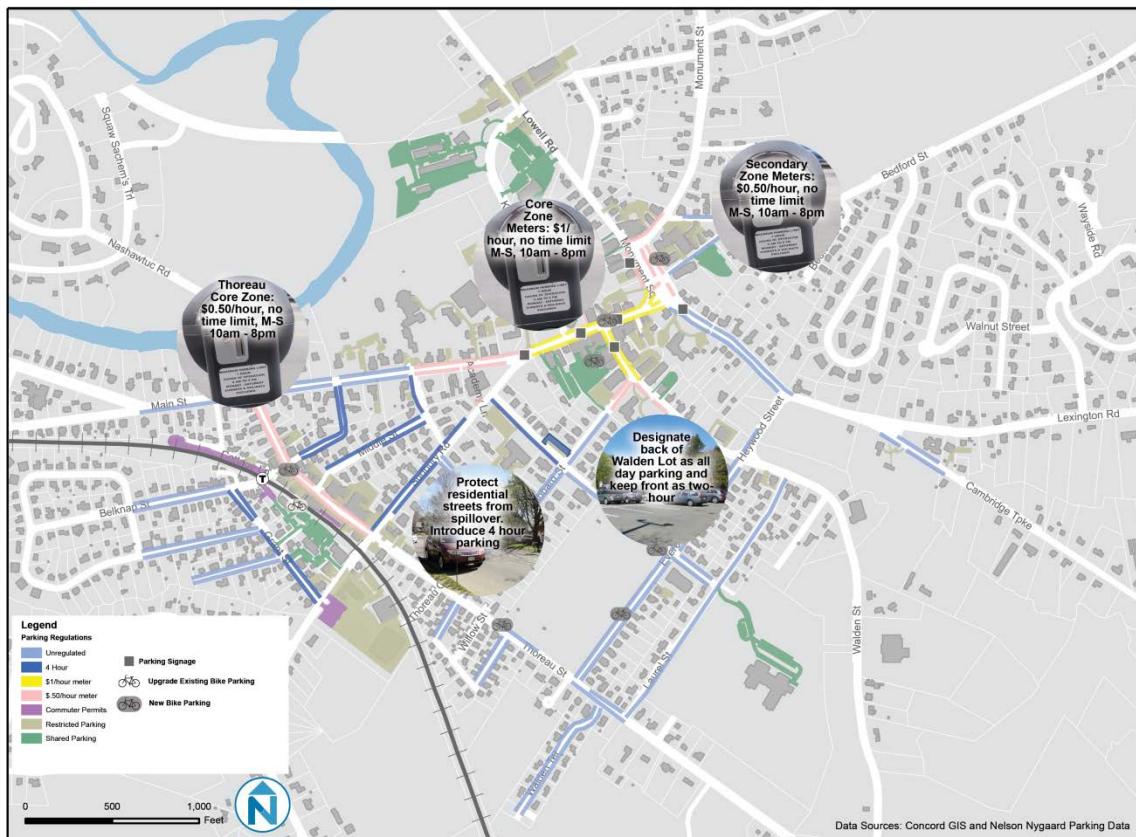
Town of Concord

- Belknap Street, Middle Street, and Sudbury Road from Thoreau Street to Main Street (include other residential streets as needed): Change from one-hour, two-hour, or unregulated to four-hour time limit
- Sudbury Road between Library and Academy Lane: keep southbound side parking; consider eliminating or skewing the road centerline
- Pine Street between Main Street and Central Street: Eliminate on-street parking on one side of street
- Walden Street Lot: Designate the back two rows of parking for unregulated, all-day parking (likely used by employees), and maintain the front rows of the lot as two-hour parking
- Keyes Road Lot: Add metered spaces to the western half of the Keyes Road Lot
- Monument Square: Consider turning off meters in evenings where there is an event at the Town House
- **Electric Vehicle Parking:** The Town is undertaking a separate study/effort to recommend three initial places to charge electric vehicles. Electric vehicle charging stations should be pursued for both public and private spaces.
- **Snow Ban Parking:** The Town of Concord does not currently have the ability to control on-street parking on any Town streets during declared snow emergencies. By not requiring vehicles to vacate major roads, emergency vehicle access can be more difficult and snow removal more complicated. Town Public Works staff currently does a credible job removing snow. However, depending on the timing and circumstances of a specific snow event, this work can be challenging unless the street is cleared of parked vehicles. The Town of Concord should investigate the adoption of a snow emergency ordinance that allows for the restriction of parking on designated streets during declared snow emergencies. This ordinance should also allow the Town the legal ability to remove (tow) vehicles parked illegally during these events. Current capacity in off-street lots and adjacent streets should be considered in the evaluation of which streets would be designated. Specific commuter parking changes are recommended in subsequent sections of this memo, including the addition of 4-hour parking on many residential streets near commuter rail stations.

Below, specific parking management strategies are highlighted for Concord Center and West Concord.

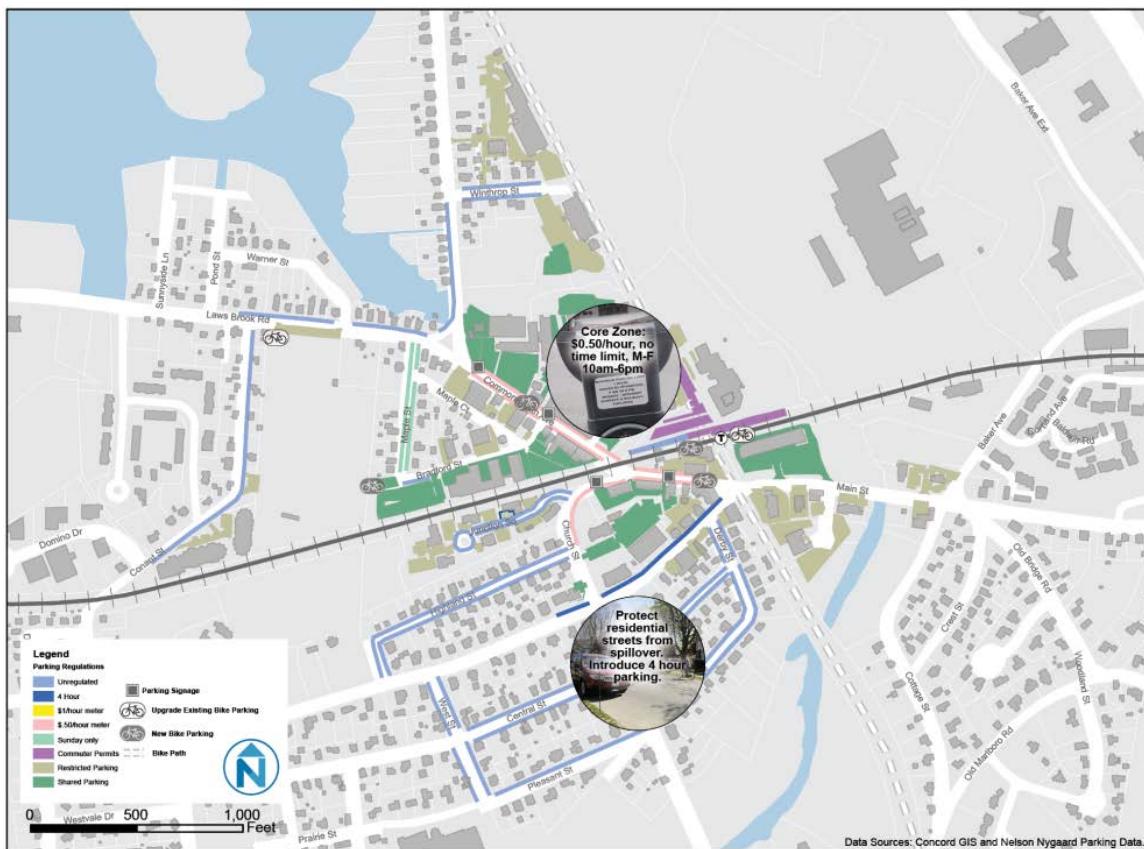
CONCORD PARKING MANAGEMENT STUDY | RECOMMENDATIONS
Town of Concord

Concord Center: Parking Management Recommendations



CONCORD PARKING MANAGEMENT STUDY | RECOMMENDATIONS
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West Concord: Parking Management Recommendations



SIGNAGE AND WAYFINDING

Signage is an important element of parking management, because providing clear identification of parking facilities aids in understanding where it is acceptable to park and where it isn't.

Concord has a healthy visitor and tourist business, and having clear guidance for these patrons, unfamiliar with the area, is a crucial component of their experience.

Existing signage is difficult to understand, both on public and private property. The photos below show existing parking signage that is either hard to read or areas where signage is missing. Off-street lots behind commercial areas are assets for long-term parkers and help avoid cruising for on-street spaces, which contributes to traffic downtown. Increased visibility and wayfinding will encourage the use of currently underutilized off-street lots and maximizes the utility of prime, on-street spaces. Overall, signage should work with enforcement design and policy to eliminate confusion and ensure that all users understand the rules and locations of parking.



Issues:

- Signage directing motorists towards off-street parking is not visible. For example, the signage for the Walden Street Lot is handsome, but not visible or supported by other signage.
- Connectivity from off-street parking to the street must be improved, as attractive pathways often exist, but are not marked.

- Signage within parking lots is unclear or not available. For example, in both the Harvey Wheeler Lot, and the MBTA Commuter Rail Lot, survey respondents have said it is unclear what the “after hours” policy is.

Recommendations:

- Provide visible signage for publicly available parking in West Concord (commuter lot, Church Street lot, behind businesses on Commonwealth Ave, end of Winthrop Street, on-street parking regulatory signage).
- Improve Keyes Road lots signage to be more visible and attractive.
- Improve Walden Street Lot signage to be more visible.
- Introduce historically sensitive signage in keeping with the overall streetscape in Concord.
- Provide signage templates and encourage privately owned and regulated parking lots to post readable signage in appropriate locations to avoid confusion by patrons.
- Re-organize the commuter and public three-hour parking at the West Concord station to be clear, consistent and easy to use and understand. Commuter parking should be consolidated at the eastern end; public parking should be consolidated and expanded at the western end.
- Provide parking information for visitors and tourists before and when they get to Concord.
 - Have a parking map and information available on what parking regulations are (on-street and off-street) on the web, including the [Town website](#), [Chamber website](#), [Concord Indies](#), the Cultural District information, and other websites that visitors may use to get more information about Concord.
 - Provide a Concord Center parking map available at Concord tourism destinations that highlights the Keyes Road and Walden Street lots.
- Consider undertaking a Wayfinding and Signage Study in coordination with key stakeholders in town

Concord Center



West Concord



ENFORCEMENT

While enforcement of parking regulations throughout the Town of Concord is dependable and comprehensive, enforcement practices could be made friendlier and also more effective. Enforcement is time-consuming and labor intensive. In Concord, the meters are inexpensive, and the time limits are difficult to enforce. Parking enforcement operations, while continually necessary, should be designed to work in tandem with updated parking regulations and signage. A successful enforcement program should have to write fewer tickets, because the parking system will engender fewer violations.

Issues:

- Enforcement is relatively successful at governing behavior, but is punitive and has been identified as a deterrent to customers and even residents.
- Enforcement currently occurs at predictable times throughout the day and is reactive to violations rather than proactive to encourage desired parking behaviors.
- Enforcement should focus on ensuring availability of spaces for customer parking.

Recommendations:

In a successful parking system, parking enforcement changes have most to do with ensuring compliance with rules that meet the needs of the users. Ultimately, enforcement should transition to less of a punitive and more of an ambassadorial role, focusing on information provision, especially for commuters and visitors. Enforcement should:

- Vary enforcement hours throughout the day and week so patrons cannot evade regulations, and match new regulatory changes.
- Provide information to violators on printed parking citations, e.g. unregulated, free parking opportunity locations.
- Direct price-sensitive customers to free, long-term parking areas. Carry downtown maps and information to help visitors.
- Work with downtown businesses to ensure adherence to and satisfaction with regulations.
- As front line personnel, monitor impacts of parking management changes, and make recommendations for further adjustments as appropriate.
- As technology upgrades are installed, integrate enforcement & ticketing with upgraded technology.

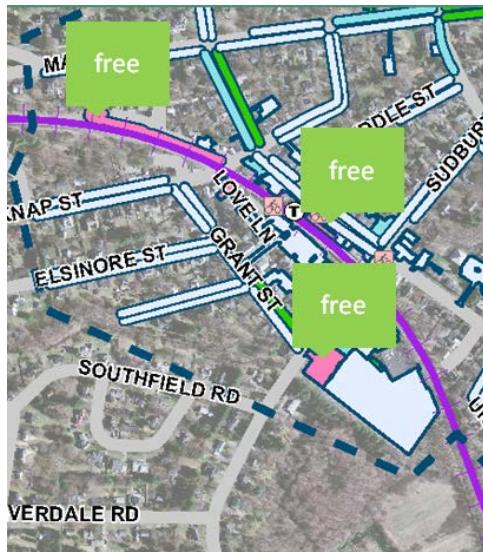
COMMUTER PARKING

Concord Center and West Concord both have commuter rail stations that are easily walkable to and from their respective commercial activity centers. Both stations are in Zone 5 and are two miles apart, making it comparable for commuters to use either station (although residents agree that crossing Route 2 is a barrier). Yet, commuter parking at Thoreau Street Depot and in West Concord has been a source of conflicting regulations and community concern.

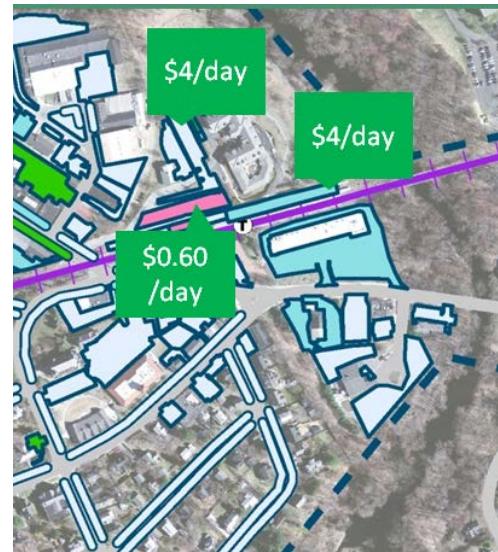
Many regulatory and pricing decisions have been driven by outside factors or individual decisions about particular lots. The large parking lot at Thoreau Street Depot is privately owned; most of the parking in West Concord is co-owned by the Town and the MBTA.

Parking utilization analysis, backed up by community acclimation, clearly shows that at least as regards commuters, parking pricing works to impact behavior. Commuter parking in Concord Center is free and experiences near complete utilization. West Concord commuter parking is much more abundant but either permitted to residents or available at a \$4/day cost. The residential permitted spaces are parked full while the daily pay spaces (MBTA) lie empty. The table below shows the current number of spaces, regulation, and peak weekday utilization of each commuter lot. It is clear that the higher the price, the lower the utilization, and the closer the walking distance to the station, the higher the utilization.

Concord Center



West Concord



Issues:

- Commuter parking is provided in a number of facilities with varying ownership and management arrangements.
- Commuter parking in Concord Center is fully subscribed. Some parking areas in Concord Center, like Cottage Lane, are ad-hoc and unregulated.
- There are underutilized parking, including private facilities, lots near the Concord Center station that could accommodate commuters.

CONCORD PARKING MANAGEMENT STUDY | RECOMMENDATIONS

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- West Concord resident-permit commuter parking is fully subscribed. MBTA daily parking spaces are underutilized.
- There is some commuter spillover into the residential neighborhoods at both stations, but particularly in West Concord. Presumably, this is because commuters are trying to avoid paying the \$4/day for MBTA spaces.

Existing Commuter Parking Supply and Peak Utilization

Location	# of Spaces	Regulation/Price	Weekday Utilization (peak)
Concord Center			
Crosby's Market	56	First-come, first-served. Free.	100%
Depot lot (Thoreau Street)	20	First-come, first-served. Free.	100%
Cottage Lane	45	First-come, first-served. Free.	98%
Love Lane	16	First-come, first-served. Free.	100%
West Concord			
MBTA (at tracks)	52	\$4/day	93%
MBTA (back of lot)	115	\$4/day	34%
Resident permits	41	\$75/six months, equivalent of \$0.60/day. Residents only.	66%

Recommendations:

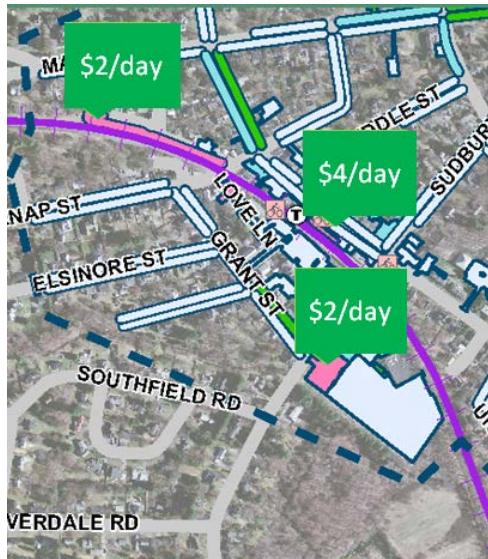
- The Town of Concord should take a proactive role in managing and accommodating commuter parking, which requires working with private property owners and the MBTA.
- Expand the existing resident commuter parking permit program to Concord Center:
 - Require permits at Crosby's Market lot (resident preference, shared revenues with Crosby's)
 - Install daily pay spaces at Depot lot (\$4/day, share revenues with the Depot owner)
 - Require permits on Cottage Lane (work with the MBTA and neighborhood)
 - Require permits in Love Lane lot (share revenue with owner)
- Investigate additional shared parking arrangements, such as Concord Crossing
- Create signage that specifies Cottage Lane as commuter parking Monday through Friday, 6am - 6pm or similar
- Balance demand between Concord Center and West Concord stations
 - Increase resident permit fee in West Concord (~\$1/day)
 - Subsidize MBTA parking spaces (keep \$4/day in front; make spaces in back \$1-2/day)

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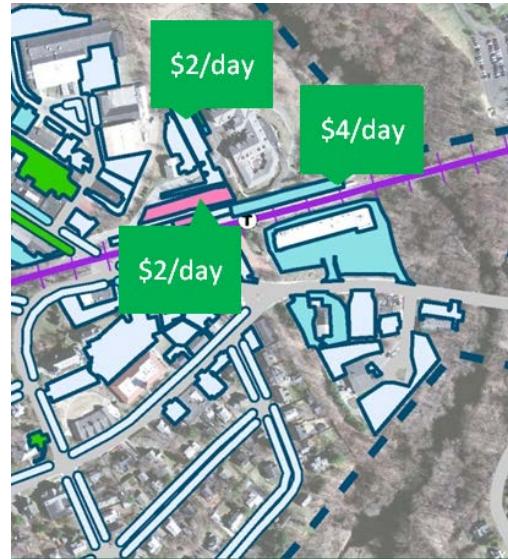
Proposed Commuter Parking Regulations

Location	# of Spaces	Proposed Regulation
Concord Center		
Crosby's Market	56	Monthly permit (Concord resident preference).
Depot lot (Thoreau Street)	20	Daily pay spaces.
Cottage Lane	45	Monthly permit (Concord resident preference).
Love Lane	16	Daily pay spaces.
West Concord		
MBTA (at tracks)	52	Daily pay spaces.
MBTA (back of lot)	115	Daily pay spaces.
Resident permits	41	Residents only. Monthly permits.

Concord Center



West Concord



The table below shows the impact on parking revenue if rates are changed to reflect demand. This table includes parking on public, private, and MBTA-owned property. For private and MBTA property (denoted using an * below), the potential daily revenue assumes that 40% goes to the Town and 60% goes to the MBTA or private property owner (or could negotiate 50%/50% with private property owners).

CONCORD PARKING MANAGEMENT STUDY | RECOMMENDATIONS

Town of Concord

Impact of Proposed Commuter Parking Regulations

Location	# of Spaces	Current Daily Rate	Potential New Daily Rate
Concord Center			
Crosby's Market*	56	\$0	~\$2 (\$40/month permit)
Depot lot (Thoreau Street)*	20	\$0	\$4
Cottage Lane	45	\$0	~\$2 (\$40/month permit)
Love Lane	16	\$0	~\$2 (\$40/month permit)
West Concord			
MBTA (at tracks)*	52	\$4	\$4
MBTA (back of lot)*	115	\$4	\$1
Resident permits	41	\$0.60	~\$2 (\$40/month permit)
Daily Revenue (if 100% utilized)		\$185	\$285

TOURIST AND TOUR BUS PARKING

Concord attracts tourists year-round, with seasonal peaks in the spring and fall. The many historic, recreational and protected sites around Concord both independently and collectively attract local, regional, national and international visitors. Many visit Concord Center as well. While Concord has several groups that work to attract and manage the tourist trade, there is little integration into the parking management system. Most Concord residents are aware of the current parking options and regulations but parking is likely more confusing for out-of-towners. Wayfinding tools and providing parking information are also particularly important to improve tourist access.

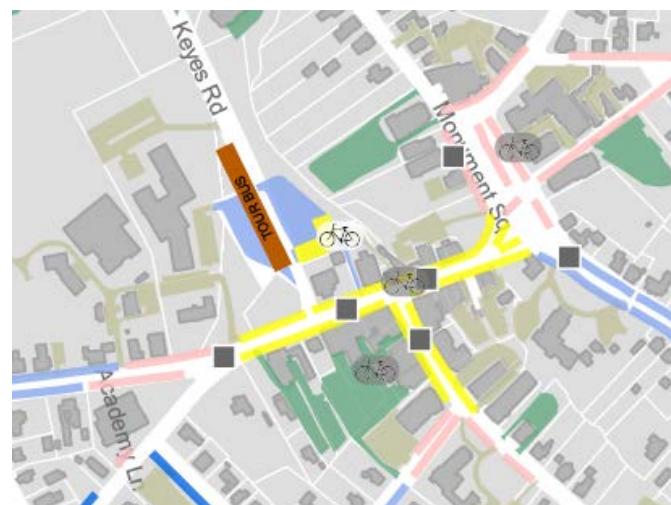
Issues:

- Little to no parking information is available to tourists considering coming to Concord, or for their use before they arrive in town.
- One-hour on-street time limits are restrictive to tourists, and longer-term parking can be difficult to locate for those unfamiliar with the area.
- Concord does not have a policy, or designation of where tour buses can pick-up, drop-off, and park. Tour buses often drop-off passengers in the middle of Main Street, double parking and causing back-up.
- Signage and wayfinding is a tourist issue.
- Many bicyclists come to Concord, even as tourists, and little accommodation or direction is provided them.

Recommendations:

The Town of Concord and its business partners can implement several easy measures to benefit tourists and tour buses before and when they arrive in Concord.

- Establish a more formal partnership with tourist and business groups to provide information and in town accommodations for tourist needs.
- Establish tour bus drop-off and parking sites in Concord Center.
 - Have a designated tour bus drop-off location on Keyes Road.
 - Paint or sign spaces on Keyes Road and/or in Keyes Road lot for tour bus parking.
- Provide tourist and tour bus parking information on the Chamber website.
- Consider a no idling rule
- Guide tourists with long-term parking information for both centers.
- Include parking when marketing Concord as a designated Mass Cultural District.
- Add bicycle parking and directions from regional facilities
- Provide signage from Concord historical/visitor destinations to Concord Business Districts



RECREATIONAL PARKING

Many stakeholders and residents have reported that the parking situation around Emerson and Rideout Playgrounds gets very busy around game times, particularly in the evenings. Parking clusters near field entrances and many resident complaints are focused on blocking streets, and especially driveways.

Issues:

- There is spillover parking from the recreational areas onto adjacent neighborhood streets.
- Visitors to the playgrounds drive quickly and recklessly.
- There is little delineation of where drivers can and cannot park around the fields, and people often park blocking private driveways.

Recommendations:

In Concord Center, the Town should consider some (not all) of these options:

- Monitoring/enforcement of parking at busy times around the playground to prevent speeding traffic and parking in illegal areas
- Formalizing parking by adding signage allowing/preventing parking on block faces around playground
- Striping around driveways and "do not park areas", e.g. fire hydrants and crosswalks, adjacent to facilities (as shown on the next page)¹
- Adding sidewalks around the playground on Thoreau and Everett Streets. Access from the parking to the playground is not ADA accessible, and adding paved sidewalks would help people in wheelchairs, pushing strollers, and others

We note that despite the many protestations about parking at the playground areas, many residents did not seek specific changes. The recommendations primarily relate to a formalization of the parking that exists and reinforcing, through signage and pavement markings, the areas where either parking is not allowed, including clearly marking driveways. Although not widely supported during public meetings, we believe the Town should also consider adding allowing parking on both sides of adjacent streets where applicable, generally on streets with > 30' width, such as Everett Street (between Thoreau and Walden) and along Thoreau Street adjacent to the field. This includes Stow Street, where Town drawings indicate that there are at least six spaces to be striped opposite the playground side of the street. Signage and street markings should reflect this parking supply. Each of these would need to be designed carefully, with driveways marked as shown on the figures below. As noted, most residents attending the public meetings were not supportive of this idea, so the Town would need to work closely with adjacent residents to implement any changes.

In West Concord,

- The parallel spaces in the Rideout Lot should be designated as formal parking.
- Users of the fields should be provided information about additional parking options along Conant and Bradford Streets.

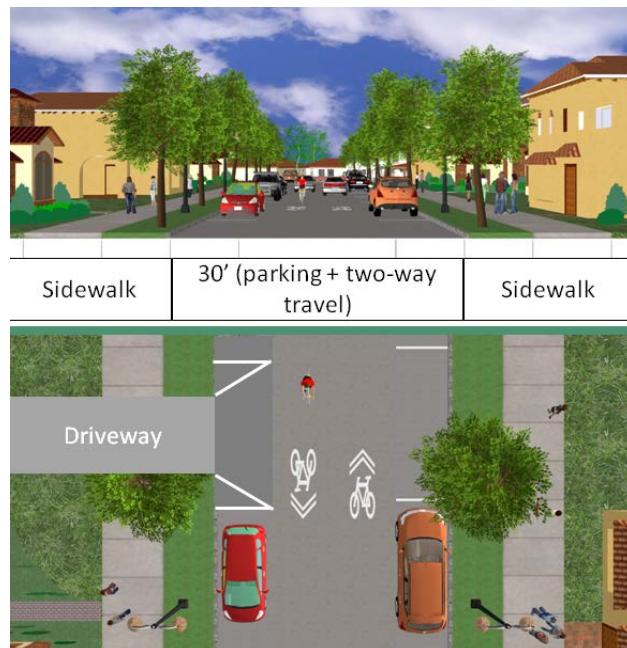
¹ Participants at the public meetings were supportive of this idea; however, this would still necessitate public outreach.

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- The lot to the north of the playground should be re-striped to make more efficient use of the space.

Emerson Field On-Street Parking: Curb to Curb Width



If pavement parkings were to be added on surrounding streets, they could look similar to this sketch on Everett Street below:



ZONING AND SHARED PARKING

In many cases, Concord has upheld its zoning code as it relates to parking, which has resulted in an observed surplus of parking spaces in town. The results of this Comprehensive Parking Study show that many of these spaces are underutilized, with the result that valuable assets (land, parking, economic development potential, open space) sit unfulfilled in Concord's business districts. This existing surplus of parking spaces gives the Town an opportunity to absorb significant development, as shown in the Technical Memorandum on Shared Parking.

As further evaluated, with high parking minimums for individual land uses, Concord's existing zoning code can hamper development. Most of Concord's required parking minimums are higher than national suburban standards typically indicate. There is flexibility built into the code via special permits, which offer room for interpretation, analysis, and exemptions, but there still are limitations, and a lack of clarity.

The Town's zoning code has a variety of regulations, and most are above these observed rates and national standards. For example, the existing code requires:

- 3.33 to 4 spaces built for every 1,000 square feet of commercial/office
- 4 spaces built for every 1,000 square feet of retail store, personal service shop, or bank
- 2 spaces per residential dwelling unit

Meanwhile, on-the-ground observations of parking demand in Concord indicate that in Concord Center, the general peak parking generation rate is 1.67 spaces per 1,000 square feet of land use. In West Concord, the peak parking generation rate is 1.50 spaces per 1,000 square feet. Since Concord has high minimum parking requirements, much of this required provided parking goes unused. This opens up the opportunity to build infill or new types of development with certain types of regulations to better utilize existing resources.

To continue to accommodate off-street commercial parking needs the Town should consider pursuing shared parking agreements for currently underutilized, prime, restricted access lots, and updating its zoning code with new language for shared parking, plus other zoning reforms (specific zoning/land use recommendations forthcoming after zoning reviews).

Issues:

- There are many underutilized private parking lots in Concord Center and West Concord.
- Concord zoning requires the building of more parking than is observed to be needed.
- The existing zoning code has a limited shared parking policy.
- Additional parking supply, a reduction in driveways, improved circulation, and enhanced pedestrian connections and safety are possible by combining adjacent lots.

Recommendations:

Concord's zoning code should be updated as relates to parking, as the current zoning has led to an overabundance of parking in its centers. In Technical Memorandum #3: Zoning Code, several best practices and opportunities are outlined that could be implemented in Concord. The list below includes a list of zoning code updates and recommendations that could be incorporated into zoning overlays for the Concord Center/Thoreau Street Depot and West Concord downtown areas.

- **Convert minimums to maximums:** Concord's parking minimums are higher than or at least as high than national suburban standards. Observed parking demand shows that

Concord has a more than sufficient supply of parking to satisfy demand, and that its actual parking generation rate is lower than both zoning and ITE standards. Current zoning requires a certain amount of parking to be built per square footage of land use. The result is that either development does not happen due to physical or fiscal constraints, or development gets built in a way often driven by the need to provide parking.

Parking minimums should either be eliminated entirely or converted to parking maximums within the business districts. These minimums can be converted to parking maximums, allowing for the market or a negotiated process to determine the amount of parking needed for a given development. For projects less than 10,000 square feet, minimum parking requirements can be eliminated altogether. Combined, these zoning initiatives will help to promote the types of development projects in Concord supporting village-oriented growth that complement the existing network. This Comprehensive Parking Study provides a base of information by area of parking supply, demand and utilization, and can be updated as needed to provide the context to inform any coming development.

- **In-lieu fees:** Concord's special use permits, and the exceptions allowed by the Planning Board, can result in developments that build less than the required amount (by zoning) of parking. As a means of reducing the amount of private parking built, many communities allow developers to build less than the required or desired number of spaces by making a payment (annual or one-time) in-lieu of providing parking to the municipality. These funds can help support the overall parking system, or be "banked" towards the future provision of parking by the Town. In order to implement in lieu fees as part of zoning, the Town should develop a rate schedule for an in-lieu fee option.
- **Change of use:** Existing zoning requires that when a building undergoes a change of use, if the new use requires more parking, then the number of spaces should be increased to meet the new minimum requirements. This provision can restrict the ability of the market to react to changing demands. For smaller properties, this is an even more onerous requirement. The Town should consider removing change of use parking requirements for uses under 20,000 square feet. In addition, Concord's code should be updated to encourage flexibility (including shared parking with uses within 1,000 feet), rather than require new minimums.
- **Shared parking:** Concord's current shared parking code language allows for multiple uses to share parking. The code allows for a 50% reduction in the spaces required for educational, religious, lodge and club, indoor amusement, and restaurants to be jointly shared with banks, offices, retail stores, repair shops, service establishments, and other uses not normally used or open during similar hours.
 - The language on shared parking should be broadened to cover all uses, including residential.
 - Provisions in zoning to allow for reductions in parking supply for a mix of uses onsite should be better defined or reference the shared parking methodology.
 - Zoning should allow for shared parking between properties to discourage the improvement of existing lots and reduce the growth in parking. Proximity provisions (parking must be within 1000 feet, not 600 feet in the current code) can be included.
 - Zoning should allow, and set up guidelines, for combining offstreet parking facilities between multiple properties.

- **Curb cuts:** The current curb cut code only applies to residential districts and limits a shared curb cut to serve no more than three lots. The curb cut provision should be updated to include commercial districts. Reducing the number of, width, and frequency of curb cuts helps to promote walkable, safe streets. Further, design standards should be established and include that the sidewalk should be level across the driveway, which necessitates a slower-speed raised entry/exit, as opposed to a dropped curb. Although similar standards are adopted by CPW, this should be included in the Town code.
- **Bicycle parking:** Concord's zoning code does not include any requirements for bicycle parking. Bicycle parking requirements should be included in relation to the scale and type of development (not tied to vehicular parking requirements), as well as bicycle rack standards included.

Shared (Combined) Parking Facilities

Encouraging and allowing the combination of parking facilities would help to improve circulation, efficiency, and ease for drivers. With two adjacent, but separate parking lots, each lot will have separate ingresses and egresses, resulting in more curb cuts, breaks in the sidewalk, and points of vehicle-pedestrian conflict. Within the lots, usually striping and circulation efficiencies can be gained when lots are combined. Also, many uses in downtowns have peak demand at different times of day.

The Comprehensive Parking Study identified several opportunities to combine parking facilities and improve efficiencies. There is opportunity in Concord Center to merge the back of the Walden Street Lot with two adjacent private lots behind Fritz and Gigi's and the Colonnade Building. Going further, if the Post Office sorting operations are moved or reduced, additional space would be available there (provided agreements can be reached with the USPS).

The images below show examples of what shared parking design could look like. The top row images show Walden Street lot as it exists today, with the public parking as one large lot, plus two private lots with separate entrances. The first shared parking configuration consolidates the ingresses and egresses and the parking within the three lots. The second image consolidates all lots, including the post office, and closes the vehicular entrance on Walden Street. This area can be transformed into a walkable pedestrian path and plaza.

Walden Street Lot Existing



Walden Street Lot With Shared Parking

Walden Street Lot Parking Lot Designations and Ingresses/Egresses



Walden Street Lot With Shared Parking (including Post Office)

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In West Concord, reconfiguring and connecting the West Concord Post Office and adjacent parking lots behind Commonwealth Ave would result in less confusion and gained efficiencies. Some of these lots are expected to be reconfigured/connected with the 50 Beharrell Street project. Reconfiguring and connecting the Bradford Street and adjacent parking lots behind Commonwealth Ave would also be beneficial. A reconfiguration, and opportunity to share parking at non-peak times, would benefit the West Concord Shopping Plaza Lot. The images below show examples of lots that could be consolidated and re-striped.

Beharrell Street Lots near Post Office: Opportunity for re-organization and consolidation. Employee parking in back and customer parking in front.



Lots behind Commonwealth Avenue and at the Bradford Mill development are separated and could be combined to maximize efficiency and minimize confusion of who can park where.



West Concord Shopping Plaza Layout: Dual curb cuts and striping layout is inefficient. Can be consolidated using one-way aisles and angled parking to reduce length of spaces and aisles widths. Potential opportunity to help redevelop in exchange for the Plaza to share parking with surrounding uses.



BICYCLE PARKING AND FACILITIES

Concord as a town already is a great bicycling community – with an abundance of recreational and commercial destinations, adjacent residential neighborhoods, and connections to regional bicycling facilities. However, there are few bicycle treatments and infrastructure in Concord Center and West Concord. When cyclists arrive in Concord Center or West Concord, there is some bicycle parking available. Anecdotal and visual evidence has clearly shown an undersupply of bicycle parking in Concord, as shown below.



Expanding bicycling can reduce the need for vehicle parking, and greatly contribute to the health and vitality of Concord's business and residential districts. Adding more bicycle parking - the appropriate type in visible places - is critical to meet the needs of Concord's cyclists, and particularly to keep them coming back into town. Already in Concord Center and West Concord, there are many types of cyclists - from families, to commuters, to elite cyclists, that all need a safe and secure place to park their bikes.

Issues:

- In Concord Center, there are several short-term racks, but not always in the most convenient locations.
- In West Concord, there is very little available bike parking and a high demand for more parking, particularly at West Concord Station.
- A general lack of on and off-street bicycle facilities and markings.

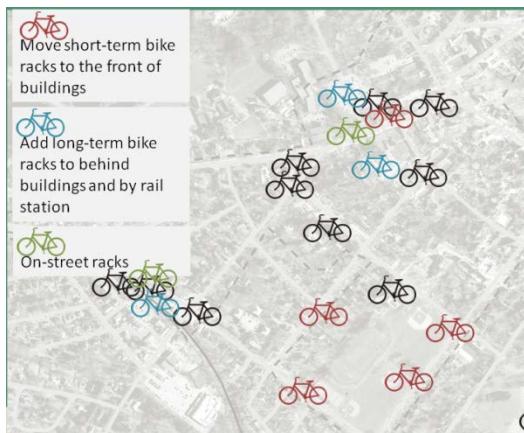
Recommendations:

- Bicycle parking and access need to be integrated into the business districts.
- Build upon initial work prepared by the Town of Concord to add more racks in West Concord and bike lockers at West Concord train station. Add bike parking in locations that complement the Bruce Freeman Trail. The HDC should be engaged to discuss potential improvements.
- Use only Association of Pedestrian and Bicycle Professionals (APBP) compliant racks, and appropriate types for short and long term bike parking. Using artful or historical bike racks are encouraged, but only if they are APBP compliant.
- Signage and directions connecting bicyclists from regional trails and Concord destinations to Concord's business districts. The team observed more limited usage of

Concord Center bike racks. Wayfinding to existing Concord Center bike racks would increase access to the commercial districts for non-local riders passing through.

- During non-winter months, install an on-street bike corral in both Concord Center and West Concord, converting an existing on-street parking space to bicycle parking.
- Consider encouraging bicycle rentals in Concord Center and create a bike map to tourist destinations.
- Bicycle parking should be required per zoning in all new developments within the study area.
- Evaluate and rank potential on-street bicycle opportunities, designated bicycle routes, and implementing bicycle lanes, sharrows, and cycletracks if appropriate.

Concord Center Bicycle Parking



West Concord Bicycle Parking



On-Street Bicycle Corral



HANDICAPPED PARKING

Concord's existing zoning code specifies that handicapped parking in public facilities should be provided in accordance with the rules and regulations of the Architectural Access Board of the Commonwealth of Massachusetts Department of Public Safety. The code also states that handicapped spaces shall be located nearest to the entrance to the use or building served.

As with most, if not all, Massachusetts towns, on-street handicapped parking is designated either by the Town or by request. In commercial districts, on-street handicapped parking is often located adjacent to curb cuts and crosswalks. In residential districts, on-street handicapped spaces are usually requested by residents and designated in front of that person's home.

The Parking Management recommendations are designed to foster and create parking availability throughout the Concord Center/Thoreau Depot and West Concord business districts. Working properly, changes in pricing, regulations, time limits, and hours of operation should result in spaces being typically available near most destinations. Also, in Massachusetts the law allows vehicles with proper Disabled Parking authority to disregard most - but not all - public meter fees.²

Issues:

- There are no on-street handicapped parking spaces in Concord Center or West Concord.
- There is no documented process for the public to request handicapped parking spaces.

Recommendations:

- Institute a simple request policy for designating on-street residential handicapped spaces that includes a review of:
 - Parking availability and utilization
 - Physical accessibility
 - Proximity to pedestrian crossings
 - ADA compliance
- Work with key stakeholders to determine appropriate location(s) for on-street handicapped spaces in Concord Center and West Concord.
- As part of initial implementation of parking management changes, on-street handicapped spaces could be added near the intersection of Main and Walden Streets and on Commonwealth Avenue near Bradford Street.

² For more details, visit <http://www.mass.gov/rmv/medical/parkingFAQ4cus.htm>.

PARKING TECHNOLOGY

Concord currently employs a fairly standard approach to parking technology, with limited variety of uses. The technology works well with the existing parking management system, but as parking management expands and evolves, investments in added parking technology will become more worthwhile. Concord should develop a long-term strategy to replace the current meter heads with smart meters or pay stations, mostly for ease of customer use.³ However, because of good working order of the current meter technology, an immediate change is unnecessary, and may not be cost effective. Additional technology integration such as pay by phone, or even in-car meter parking should be considered as technology advances. The Technical Memorandum on Parking Technology includes more information on technology types and general applicability.

Issues:

- Current meters only accept quarters, restricting ability to pay
- The text and regulations on meters is often difficult to read due to cloudy plastic casing.
- Meter poles clutter the sidewalk and make snow removal more challenging.

Recommendations:

- Upgrade or reprogram the existing McKay meters to implement the change in hours, time limits and price in the Parking Management Recommendations.
- For added areas of regulation, employ reserve McKay meters to the extent possible. Lease or purchase pay stations in parking facilities and Monument Square as appropriate.
- Develop a capital plan to phase in smart meter heads and/or pay and display kiosks throughout Concord based on fiscal analysis. An initial emphasis should be placed on Concord Center. The Town should avoid having too many different payment mechanisms, as this becomes more difficult to manage and more confusing for the parker.
- Meet with parking technology vendors and other municipalities that use various technology to determine which technology vendors are best for Concord
- Integrate license plate recognition and pay by phone technology into new technology for smart meters and pay stations
- Purchase hand held enforcement devices that communicate with upgraded meters and pay stations
- Consider utilizing in-car meters for commuters & resident parkers.

³ The Town should not expect that they can exchange their current meter heads for cash back, although it may be possible to donate them.

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Smart Meters



Multi-Space Pay and Display



In-Car Meters



Pay with Cell Phone



PEDESTRIAN ACCESS

Concord Center and West Concord are generally blessed with walkable, connected town centers, organized near MBTA stations and adjacent to pleasant residential streets. However, there are hidden, and not-so-hidden areas in both centers which act as pedestrian barriers, effectively becoming points which pedestrians, and even parkers avoid. These points are seen to affect parking utilization and availability, and it is important to understand that these barriers have different affects on different user groups. Customers are most likely to want to park close, or in view of their destination. Employees may be willing to park further away, but may have concerns about safety and visibility. Tourists need clear direction as motorists, and once parked, as pedestrians to featured locations. Commuters typically find the shortest walk from where they can park to the train station.

In general, systematic improvements and funding are necessary to implement the physical changes identified below. Many of the overall recommendations in the Comprehensive Parking Study will raise additional funds -higher meter rates, eliminating time limits, payment in lieu of fees, commuter parking - as a byproduct of updating the parking system. Capturing some of this additional revenue to design and construct physical improvements is one of the best uses of this revenue in terms of impact on the business districts.

Issues:

- Excessive intersections, long crossings, and gaps in the pedestrian infrastructure are barriers to accessing destinations and parking supply, and do not help promote a “park once” strategy.
- Several intersections are perceived as unsafe for both pedestrians and cyclists.
- Lighting, accessibility, and signage are all components of pedestrian access.

Recommendations:

- Utilize existing accessibility audit in Concord Center/West Concord to review sidewalks, crossings, pedestrian ramps.
- Improve lighting in Keyes Road lots and Walden Street lot. These are very dark at night and employees and patrons avoid parking in those lots. Upgrade ingress/egress in the Walden Street Lot to accommodate pedestrians.
- Better sidewalks/pedestrian safety in West Concord
 - Crossing over railroad tracks in West Concord: narrow intersection, complete sidewalks on approach to tracks, and provide better crosswalks (this is not an intersection realignment, just improvements at and around this intersection)
 - Improve commuter lot access to shops and signage to designate commuter and public spaces
 - Connect the Harvey Wheeler parking lot with steps to Commonwealth Avenue; continue pedestrian connection across Commonwealth Avenue to sidewalk near commuter rail (this may require further review for accessibility compliance)
 - Eliminate excess curb cuts in West Concord
 - Main St @ Colonial, Fire Station, Dunkin Donuts
 - Between Concord Teacakes and Twin Seafood
 - At Gas Station near Nashoba Bakery

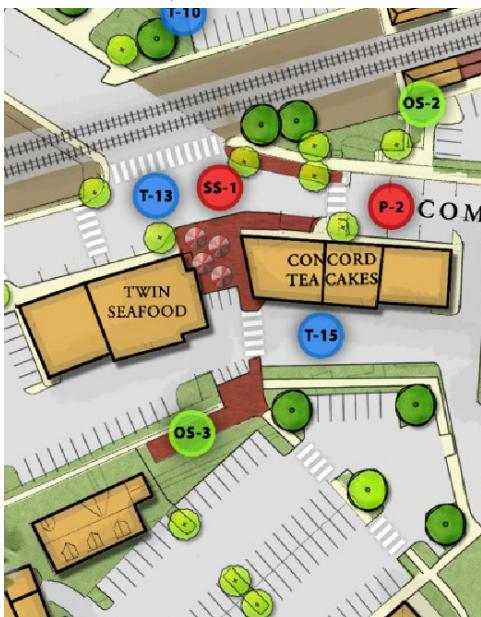
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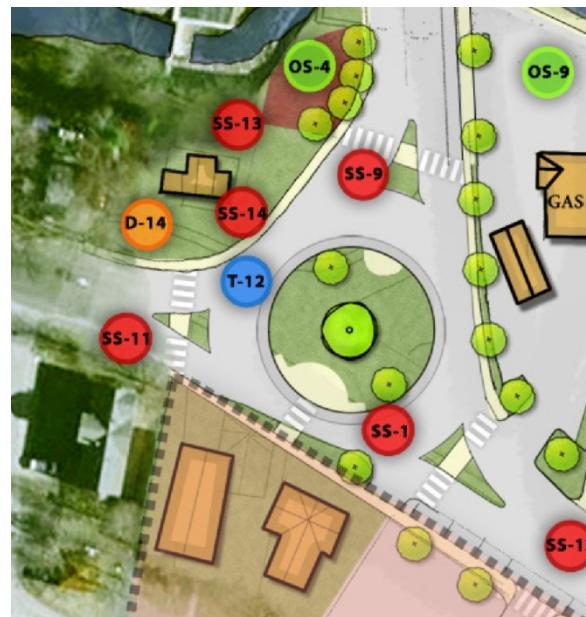
- At Nashoba Bakery
- Improve parking lot at south end of 55 Winthrop Street to be a more attractive place to park and reach Commonwealth Avenue shops (note that this is private lot)
- Improve intersection at Commonwealth and Laws Brook Road to encourage safer and more convenient circulation patterns through Town
- Review the width and layout of Hubbard Street by the Post Office in Concord Center, eliminating the grass area, and widening the sidewalk and the street.
- When the commuter rail pulls into station in West Concord, gates close and remain closed, causing backups on Main Street and Commonwealth Ave. Adjusting the station location could reduce the gate closing from inbound trains (although a costly undertaking).

Several of these pedestrian improvements areas are shown below:

Harvey Wheeler Crossing
(West Concord Graphic Master Plan)



Intersection Connectivity
(West Concord Graphic Master Plan)



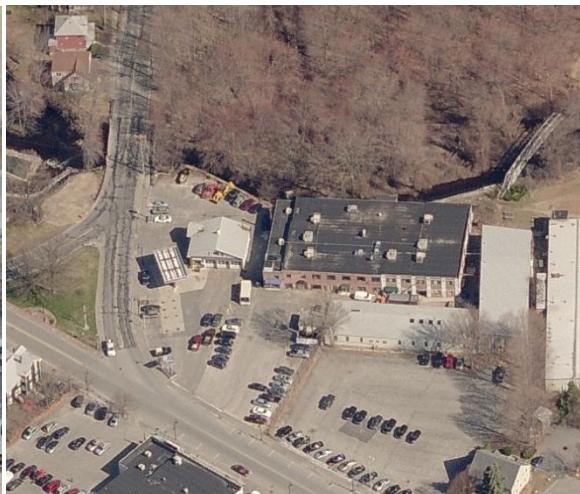
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West Concord Railroad Crossing



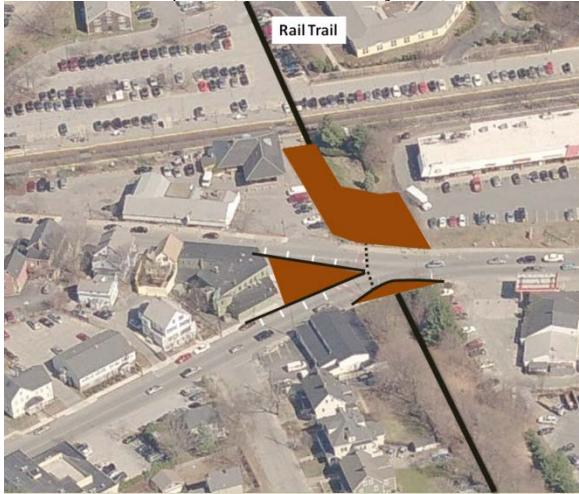
Eliminate Excessively Wide Curb Cuts



Walden Street Lot Access



Pedestrian Island Options (outside the Ninety-Nine)



PARKING AND TRANSPORTATION FUND

The Parking System in Concord should use pricing as the best and primary tool to engender the driver behavior it seeks, while re-enforcing overall economic development and livability goals. Parking pricing and associated revenue generation does not exist for its own sake. Many of the overall recommendations of this Parking Study are not directly tied to parking provision, but to the overall transportation and streetscape system in the Study Areas. All changes, including the basic parking management changes, will require some measure of additional funding. Several, such as the intersection improvements, and long-term shared parking arrangements require substantive funding, while others that are programmatically based require ongoing funding streams.

In many cases, additional revenues from the meter fees, citations, commuter permit program and other additional revenue sources, such as in-lieu of parking fees, could fund public improvements that benefit Concord's transportation infrastructure. If parking revenues seem to disappear into the General Fund, where they may appear to produce no direct benefit for downtown businesses, there will be little support for parking policies that may ultimately benefit business, such as increased permit fees, upgrading parking meters, or adjusting regulations. When Concord's merchants and residents can clearly see that the monies collected are being spent for the benefit of their centers, on projects that they have helped to choose, they become willing to support parking policies that generate revenue for the Town. If experience from other cities is any guide, many will become active advocates for the concept.

To develop support for parking regulation changes, and to build support for charging fair market rates for permits, it is crucial to give local stakeholders a strong voice in setting policies for the Town, deciding how Concord parking revenues should be spent, and overseeing Concord investments to ensure that the monies collected from employees and customers are spent wisely.

Potential uses for Parking and Transportation Fund revenues include:

- Landscaping and streetscape greening
- Parking, transit, pedestrian, and bicycle infrastructure and amenities, including intersection improvements
 - Pavement markings by playgrounds
 - Bicycle facilities, including racks and other infrastructure
 - Sidewalk connectivity
 - Intersection improvements
 - Accessibility upgrades
 - Enhanced streetscaping
- Increased frequency of trash collection
- Street cleaning, power-washing of sidewalks, and graffiti removal
- Additional parking enforcement
- Marketing and promotion of Concord's merchants
- Parking technology
- Additional programs and projects as recommended by Town stakeholders and approved by the Board of Selectmen

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A number of different organizational structures can be used to establish and oversee a Parking and Transportation Fund. The fund can be managed by a quasi-public entity, similar to a Business Improvement District. Alternatively, the fund can be established as simply a financial entity (somewhat like an assessment district), which would require by ordinance that parking revenues raised within Concord Center and West Concord be spent to benefit where the monies came from. Under this arrangement, the fund would be managed and housed within an existing Town department.