Policy/Program Recommendations

Infrastructure projects help create a more walkable and bikeable transportation network by working to improve and retrofit existing street corridors and linking off-road connections. By updating the current policies and programs, the Town can encourage growth and development patterns that create a true multi-modal transportation system.

The following sections summarize a few of the programs and policies affecting walking facilities and activities in the Town and provide recommendations for how to improve the pedestrian environment. It also adds to the toolbox by recommending an additional connectivity enhancement to the development ordinance.

NCDOT Complete Streets Policy Update

The 2020 update to the Mobility and Connectivity Plan was spurred by major updates to NCDOT's Complete Streets Policy. The policy, updated significantly in 2019, applies to NCDOT-maintained roads and places the burden on NCDOT to explain why multimodal facilities are not included in major highway projects. All facilities included in an adopted plan will be paid for if NCDOT undertakes a major highway project. This provides a key source of funding for projects on NCDOT corridors, and prompted the Town to include higher-quality facilities.

Below is the cost share formula for both projects included in an adopted plan (left) and not included in an adopted plan (right).

NCDOT Complete Streets Policy (2019)

"This policy requires NCDOT planners and designers consider and incorporate multimodal facilities in the design and improvement of all appropriate transportation projects in North Carolina ... Consideration of multimodal elements will begin at the inception of the transportation planning process and the decisions made will be documented."

COST SHARE AND BETTERMENT

- Pedestrian Facility
- Bicycle Facility
- Side Path
- Greenway Crossing
- Bus Pull Out
- Bus Stop (pad only)

In Plan	• NCDOT pays full cost
Not in Plan, but Need Identified	• Cost Share*
Betterment	• Local pays full cost

*Exception – NCDOT pays full cost for on-road bicycle facility

Cost Share Formula

Population	NCDOT / Local Share
• > 100,000	80% / 20%
• 50,000 to 100,000	85% / 15%
• 10,000 to 50,000	90% / 10%
• < 10,000	95% / 5%

Betterment

- A requested improvement that exceeds the recommendations from a plan and/or exceeds need identified in the project development process
- Aesthetic materials and treatments
- Landscaping in excess of standard treatments
- Lighting in excess of standard treatments

Town of Chapel Hill Design Manual (2017)

"All development must provide access to publicly maintained vehicular, bicycle, and pedestrian facilities..."

"Pedestrian access - access to a street or dedicated recreation area/space containing a pedestrian way..."

"The provision of sidewalks on both sides of the street is required..."

Pedestrian Policies, Guidelines, and Standards

Chapel Hill's Land Use Management Ordinance (LUMO) requires "streets, public alleys, bicycle circulation systems and bike lanes, pedestrian circulation systems and sidewalks, and bus stop amenities shall be provided and designed in accordance with the design manual." The Town's 2017 update of Design Manual requires developers to provide pedestrian access and sidewalks on both sides of all streets. With these two documents, Chapel Hill establishes what many pedestrian plans across the State and country do not- pedestrian access to all sites and buildings and sidewalks on both sides of every street.

While the Town does not have an official pedestrian plan, Chapel Hill staff carry out many of the programs and initiatives common as recommendations in most pedestrian plans. The Mobility Plan is intended to serve as the Town's primary planning document for pedestrian accommodations, and is accompanied the Sidewalk Prioritization list as well as the standards and policies detailed in the Design Manual and area plans.

Design Manual

The 2017 Chapel Hill *Design Manual* calls for typical sidewalks of minimum 5' width on Local Streets, 6' width on Arterials, up to 10' width on Main Streets based on new typologies outlined in the document. The *Streets and Sidewalks Standard Details* should be updated to reflect these recommendations, to include updated accessible ramp details per NCDOT, and to provide details for new bike facilities including buffered bike lanes and intersection striping.

Intersection Safety

The Town will ensure that all bicycle-pedestrian facilities are designed to the highest safety standards feasible at intersection crossings.

Neighborhood Connectors

In order to increase connectivity for non-motorized transportation, the LUMO should be amended to include a requirement for short ped/bike connections between cul-de-sacs and streets with limited connectivity.

Where street interconnectivity is not provided within new site plans (cul-de-sacs, stubs, dead end streets, etc.), the developer would be required to construct paved paths according to the following:

- The developer shall provide a ten-foot (10') wide public access and maintenance easement along these paths, with the paths in the center of the easements;
- The open space shall be provided between lots (not within lots) to maintain connectivity;
- In low-lying areas, the Planning Director may require that the developer construct a boardwalk;
- Where necessary to cross a stream or creek, the developer shall construct a bridge with a minimum path width of eight feet (8') across the bridge;
- The Planning Director may recommend exceptions within a subdivision that are not reasonably expected to draw a significant amount of pedestrian traffic, such as areas where topographic or natural features would make construction of a sidewalk impractical or a practical alternative is available within 1/8 mile.

Chapel Hill can reduce barriers to connectivity by requiring easements to maintain access for non-motorized travelers on cul-de-sacs and limited connectivity streets. The above photos show developments examples in Apex, NC.

Policies and Procedures for Traffic Calming Measures

The Town's *Engineering Design Manual* was revised in 2017 to include criteria for the application of the following traffic calming measures: stop signs, speed tables, pavement treatments, semi-diverters, mid-block closure, forced turn channelization, traffic circles, chicanes, and chokers. The manual does not include a variety of tools often used to improve pedestrian safety, comfort and reduce exposure. Many of these are highlighted in *WalkBikeNC, North Carolina's Statewide Bicycle and Pedestrian Plan*.

The Town should consider amending the Manual to include additional pedestrian-focused treatments including mid-block crossings and associated crossing beacons, in-street pedestrian crossing assemblies, and raised crosswalks. Design criteria for new treatments should be consistent with standards referenced in the state's plan. In addition, the Town should consider adding policies for fixed signal actuation (vs. pedestrian-actuated signals) and leading pedestrian intervals.

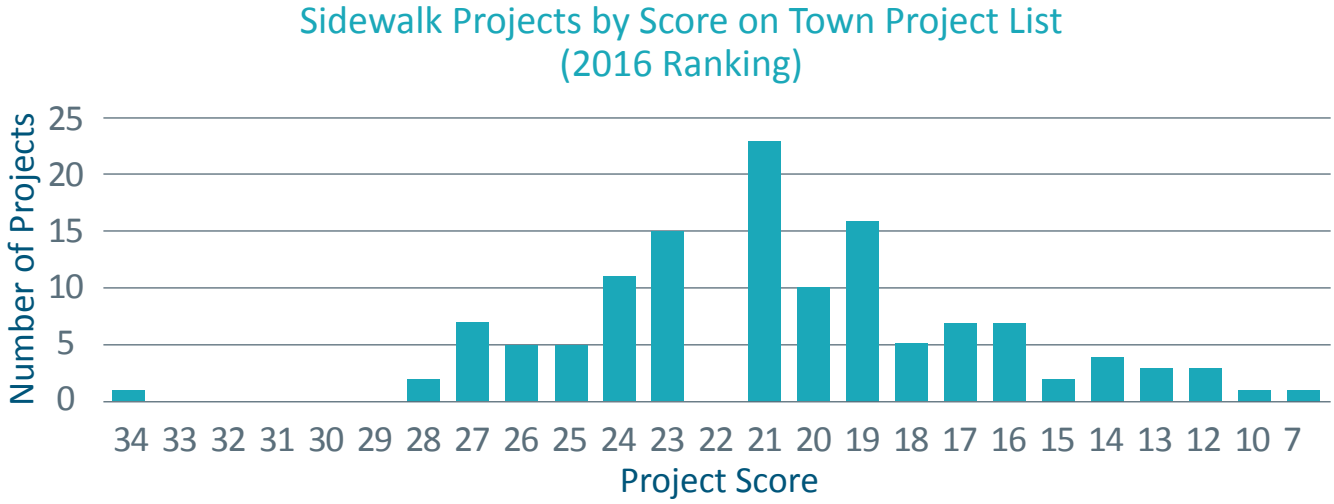
Sidewalk Programs

Reprioritize Sidewalk List

The Town has an existing sidewalk priority list that identifies 92 potential sidewalk projects and ranks them based on a prioritization score. The Town's system develops an overall score out of 36 based on safety, pedestrian, and other criteria in order to determine priorities with limited capital funding options. Typically, sidewalks in the system with high scores fall between 19-27 points, with little room to discern between higher-priority projects.

92 → 158

Increase in Projects on Sidewalk Prioritization List Based on Mobility Plan Evaluation



Sidewalks on the Town project list are clustered making it difficult to discern high priority projects. Additional scoring factors and points related to Focus Areas and Priority Corridors will elevate projects to consider for design and construction.

Additional points are added to the ranking system to bolster projects identified along the Priority Corridors, particularly those in the Town Focus Areas and that can be easily constructed.

New Sidewalk Prioritization Criteria

- Focus Area (3 pts)
  - Within Town Focus Area – 3 points
- Priority Corridors (5 pts)
  - Segment of Priority Corridor—5 points
  - Within Priority Corridor ¼-mile Buffer – 3 points
  - Extends Existing Link to Priority Corridor—1 point
- Constructability (5 pts)
  - In ROW, no/minor physical constraint – 5 points
  - May require ROW/easement, moderate physical constraint – 3 points
  - Requires ROW, major physical constraint – 1 points

Microgap Program and Funding

In some cases, gaps in the sidewalk network may be only short segments, less than 500 feet in length. Whether sidewalks were not built on both streets for a corner lot or individual lots in a subdivision were never developed, these small gaps are often easier to fill by Town field staff in the Public Works Department, without need for design or major site preparation. The Town is recommended to establish a line of funding in the annual operating budget, with initial funding of $50,000 to $100,000, to fund microgap sidewalk projects and sites identified for easy/quick installation of small sidewalk gaps.

ADA Accessibility

To meet accessibility requirements and goals of the Americans with Disabilities Act (ADA) and better serve the nearly 14% of the population estimated to have a disability (U.S. Disability Statistics 2015), an ADA Transition Plan is currently being conducted by the Town. By inventorying curb ramps at over 80 intersections in Downtown Chapel Hill, recommendations for annual funding and implementation strategies are being developed for improving curb ramps, crosswalks, and sidewalk segments. The Town has allocated $50,000 annually for several years to improve ramps and curbs across the Town's network. Based on needs, the Town should:

- Maintain the annual budget item to address the improvements identified in Downtown;
- Continue data collection for other portion of the town using the GPS/GIS application developed for the Mobility Plan and
- Designate an ADA Coordinator in the Town
- Initiate a method for citizens to make ADA improvement request
- Plan upgrades for the spot improvements and projects to create accessible routes recommended in the plan
- Continue to monitor, assess and repair deficient facilities and reexamine progress to determine the need for less or more funding.

In addition, strategies are woven throughout the Mobility Plan including upgrading several ADA compliant greenway paths in key areas, filling sidewalk gaps, decreasing bicycle sidewalk riding, and providing accessibility to transit stops.

Bicycle Policy and Programs

While the Chapel Hill Bike Plan was adopted less than 3 years ago, the level of dialogue over bike facilities has been raised across the nation with numerous cities across North America planning, implementing, or piloting more visible or protected bikeways and treatments, including cycle tracks, protected bike lakes, and green paint applications in conflict areas. Residents who would consider cycling more, commonly referred to as "interested but concerned," are more likely to use protected facilities and the types of facilities where riders of all ages and abilities can feel comfortable because of physical separation from traffic.

The new and improved bikeways come with greater cost than the bike lanes or sharrows that were commonplace in most of NC communities' first bike plans. Some communities are choosing to roll out new facility types through pilot projects to get citizen input. There have been mixed results, ranging from excitement and praise to "bikelash" from drivers where vehicular lanes are reallocated. With citizens requesting bike share programs, bike parking, and additional amenities, elected officials are asking how these investments will benefit their communities beyond providing recreational facilities and quality of life.

These items were not addressed in detail in the Bike Plan and therefore are discussed here to help update the 2014 document in terms on policies, programs, and facility types.

Chapel Hill Bike Plan Vision:

"Chapel Hill is a community where biking is a safe and convenient everyday choice."

Recommended Steps to Start a Bike Parking Program

Step 1

Set up online mechanism for bicycle rack request and advertise to property owners. Identify areas of need for new bike parking and supplemental parking for existing properties. Determine rack type and design. Create a mechanism for funding racks such as a crowdfunding campaign or allocation from the Town budget.

Step 2

In the first year, target a minimum installation of 50 racks through a bulk purchase and 1 additional bike corral by request. Upon installations, advertise and promote rack installations to the public and encourage private entities to submit online requests. Geolocate parking and add to GIS mapping on Town website.

Step 3

Perform review of bicycle parking through parking counts, recorded by locations in GIS file. Quantify additional parking needs through program review and private requests.

Bike Parking Program

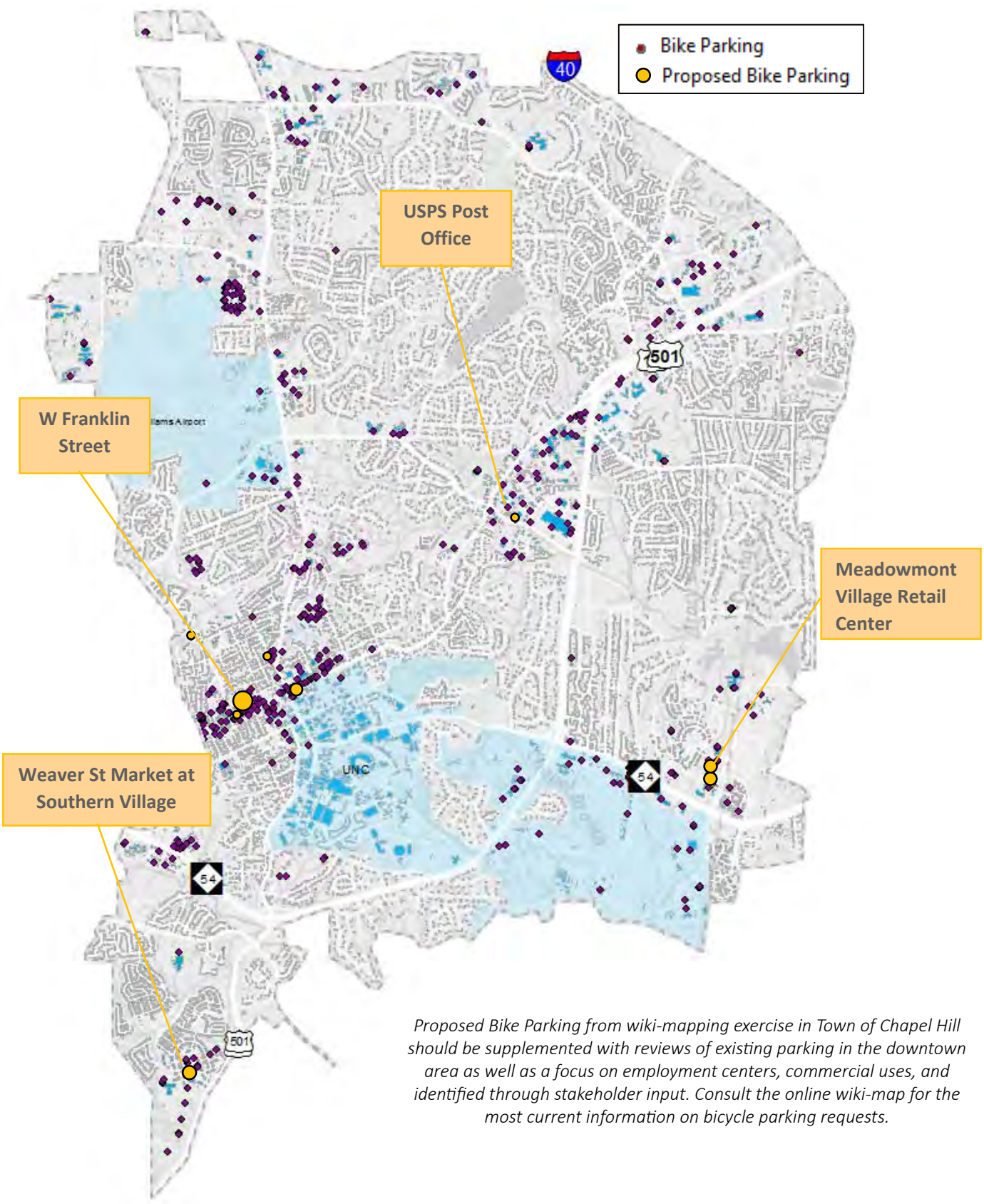
Program Development - To increase parking and create a more bike-friendly town, Chapel Hill should implement a program to provide and expand bicycle parking at existing destinations. In the short term, additional bicycle parking can be provided by assessment of needs and direct outreach, such as:

- Visual observation – Utilize the Town's Meter Parking Patrol to assess the number and location of bikes parked due to lack of legal parking on racks.
- Land use – Review employment centers, commercial uses, high density residential housing, and transit stops to determine needs in those areas.
- User input – Ask cyclists (through clubs, advocacy groups, or online surveys) to identify the most-needed locations. Residents identified numerous locations through the wiki-mapping exercise.

In the long-term, a public-private partnership is recommended for meeting the bicycle parking need at existing locations in Chapel Hill. Individuals attending the Transportation Management Plan trainings can receive information about requesting racks. The requester performs the installations, but suitable racks and siting assistance are provided by the Town through the program. This can be paired with a Bicycle-Friendly Business incentive program. Inverted U-Racks or Bicycle Corrals are recommended and branded versions are available from vendors.

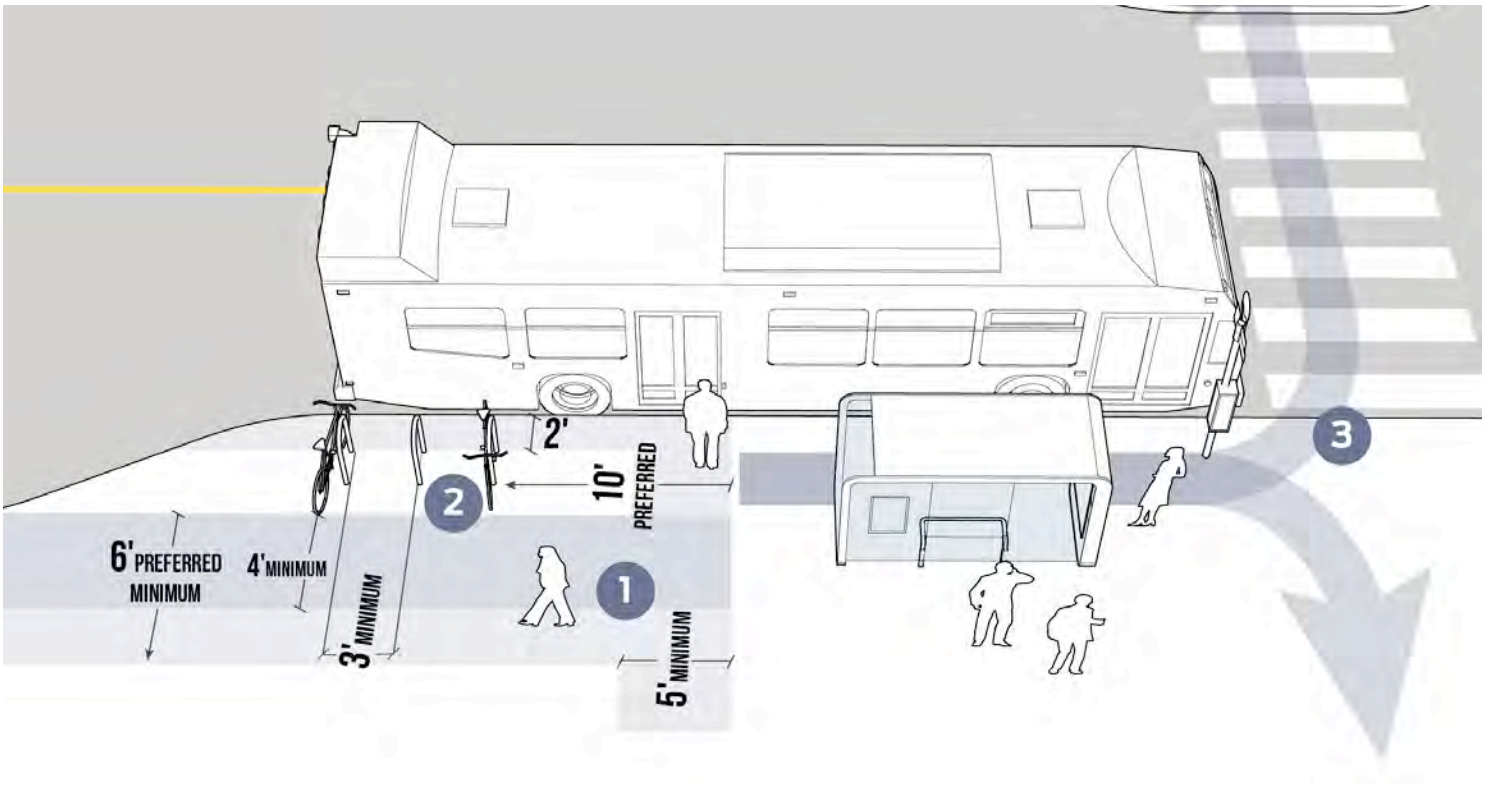
Typically, rack installations can be challenging and are limited by siting constraints, not by the number of racks. If the program is popular and a competitive process for siting racks is required, Town staff should prioritize installations where there are large numbers of illegally parked bikes and places that have received high numbers of citizen requests.

Bicycle Corrals expand downtown and business district parking. This corral in Raleigh, NC is regularly full on weekends and during special events.



Proposed Bike Parking from wiki-mapping exercise in Town of Chapel Hill should be supplemented with reviews of existing parking in the downtown area as well as a focus on employment centers, commercial uses, and identified through stakeholder input. Consult the online wiki-map for the most current information on bicycle parking requests.

Bike Parking at Transit - Bicycling is a great way to complete the first and last mile connection to transit. Transit users are often faced with two options: leave the bike at their station or bring it aboard with them. Providing welcoming, secure bicycle parking facilities helps transit riders feel at ease leaving their bicycle, gives them a designated place to securely lock their bicycle, and expands the catchment area for transit station use. The figure below shows guidance for placement of short-term bicycle parking at a typical transit stop.



Guidance for placement of bicycle parking at a typical transit stop. (Source: NACTO Transit Street Design Guide)

With the planned implementation of Bus Rapid Transit (BRT), the Town can update their design guidelines to require increased bicycle parking at major transit stations, park-n-rides and transit stops. In addition to requirements for covered short-term racks (Type I), cyclists using could be better accommodated with provisions for long-term storage (Type II) at park-n-ride locations. Bike stations provide secure, weather-protected bike storage. Access to bike stations can be integrated with transit fares, online apps, or other types of subscription cards.

Example of Bike Parking Station which provides secure, sheltered long-term bicycle storage for transit users.

Type of Facility	Example	Long Term	Short Term
Major transit facility/ BRT/LRT Station	Proposed expansions of Southern Village & Eubanks Road	5% of auto parking, min of 8	Minimum of 6 covered spaces
Auxiliary Park-n-Ride (300-500 spaces)	Southern Village (390) Eubanks Road (395) Jones Ferry (443)	4% of auto spaces for lots <400 or min of 8 3% of auto spaces of lots >400	Minimum of 14 covered spaces
Standard Park-n-Ride (100-300 spaces)	Carrboro Plaza (145)		Minimum of 8 covered spaces
Transit Stops		N/A	Minimum of 6 spaces

Proposed Revisions to Development Code - The following changes are proposed to existing bike parking ordinance:

- Include parking minimum requirements for transit stations, transit stops, and park & rides
- Increase multi-family residential bike parking to 1 per 2 units (previously 4) based on recent experience with new development
- Specify minimum required spacing between short-term bike parking racks at 24/36" and clear space between racks an any adjacent wall to 36" to add clarity.

Bike Share

With the expansion of bike share programs around the world and in the Triangle area, Chapel Hill aspires to bring a bicycle share system to the community. Bike sharing is a public transportation system which allows users to pick up a bicycle for use and drop it off at any other bike station within the system's service area.

The benefits of an effective bike share systems include:

- Encouraging active transportation and health through physical activity
- Increase in equitable and affordable access to transportation by eliminating an initial barrier of purchasing a bicycle
- Serving the "first and last mile" of a transit trip as an extension to bus or rail services
- Reducing the share of single occupancy vehicles
- Reducing physical space needs for parking facilities

Chapel Hill has already issued a request for information from bike share vendors to help determine the feasibility of such a system in the Town.

Other systems though, are launching or already operating in the Triangle, so the Town will need to consider the potential for coordination and interoperability. The decision should take into account payment methods, system boundaries, station location and sizes, and transit connections.

Coordination with the City of Raleigh or UNC-Chapel Hill could encourage a regional bike share system and provide cost savings with a shared vendor.

These rental bikes in Gainesville, Florida, are similar to the bike share program bikes used by Duke University. (Lauren Johnson/WUFT.org)

System	Vendor	Size	Status	Subscription	Fare
Local					
UNC-Chapel Hill	Social Bicycles	100 bikes	Launch pending	TBA	TBA
City of Raleigh	Beweegen	300 bikes 30 stations	Spring 2018	Annual: $80 Students: $50 Daily : $8	First 30 minutes free $4/half hr additional Reduced rates to students
Others					
Charlotte	B-Cycle	200 bikes 25 stations	Existing	Annual: $65 Students: $15 Daily : $8	First hour is free $4/half hr additional
UNC Wilmington	Gotcha Bike	70 bikes 7 stations	Existing	$25	First hour is free $2/half hr additional
Atlanta, GA	Social Bicycles	500 bikes 50 stations	Existing	$15-20/month students: $25/semester	First 60-90 free (based on subscription) $8/hr additional
Greenville, SC	B-Cycle	40 bikes 10 stations	Existing	Annual: $60 Students: $15 Daily : $5	First hour is free $4/half hr additional