CONNECT 2020

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COLLINGSWOOD HADDON TOWNSHIP Bike & Pedestrian Master Plan

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Prepared For:

ADOPTED September 2020

BOROUGH OF

COLLINGSWOOD

HADDON TOWNSHIP

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Acknowledgements:

The project team would like to recognize and express appreciation to all the individuals who contributed information, attended workshops, took surveys, or otherwise participated in the development of The Connect 2020 Bicycle and Pedestrian Plan. Special thanks to the members of the Steering Committee and Haddon Township and Collingswood Commissioners and staff for their commitment to improvements in biking and walking in our communities. This plan was financed through The Delaware Valley Regional Planning Commission's Transportation and Community Development Initiative (TCDI). The TCDI is a grant program that supports smart growth initiatives that implement the Connections 2045 Plan for Greater Philadelphia. TCDI focuses on linking land use and transportation planning by: Improving the overall character and quality of life; Enhancing the existing transportation infrastructure capacity; Promoting and encouraging the use of transit, bike, and pedestrian transportation modes; Building capacity in our older suburbs and neighborhoods; Reinforcing and implementing improvements in designated Centers; and Protecting our environment.

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ECTIOI **Project Introduction**

Collingswood Borough and Haddon Township

Currently, neither town has any bike lanes. While Collingswood Borough and Haddon Township are both communities feature largely connected inner-ring suburbs of the Camden/Philadelphia sidewalk networks, there are still gaps, with some metropolitan area. They share a traditional sidewalks missing or is a state of disrepair. Also, neighborhood development pattern that encourages crosswalks are faded and lack uniformity in design walkability, featuring mixed-use town centers in and safety standards. Furthermore, there are no close proximity to single and multi-family residential clear indications provided to those biking or walking neighborhoods. According to US Census Bureau data, as to ideal routes to reach important destinations the municipalities are home to a combined population such as public transportation, community assets, of over 28,500 residents and 764 businesses, or regionally significant Circuit Trails, such as the employing 4,991 people. It also features two PATCO Cooper River Trail. Both towns have an above-Speedline stations that connect to jobs, services, average population of disabled residents, females, and attractions in Philadelphia and the region and senior citizens. These are vulnerable populations through transportation connections such as SEPTA, that stand to benefit greatly from improvements to Greyhound, Amtrak, and New Jersey Transit. alternative transportation networks that reduce auto-In recent years, both towns have seen a significant dependence. Providing clear connections of these areas in both municipalities to community assets and rise in property values as new residents and of young families have sought out the walkability and alternative modes of transportation is an essential vibrant downtowns these communities offer, all with aspect in ensuring equitable access to transportation easy access into Center City and other important and recreation for these populations.

regional job centers. However, there remain significant

Of critical importance is Collingswood and Haddon challenges facing pedestrians and bicyclists wishing Township's Haddon Avenue (County Route 561) to reach downtown business districts and other corridor, which functions as the primary business community assets such as parks, community spaces, corridor and connection between the two towns. and public transportation. Haddon Avenue features bustling downtown business There have been a total of 126 combined crashes districts and commercial activity. Haddon Avenue is involving bicycles and pedestrians in Collingwood largely walkable and has a high pedestrian volume and Haddon Township during a five year period and a considerable number of bicyclists based on between 2012-2016. Pedestrian crashes accounted observation. However, some spots are precarious for for 72 crashes, while 56 crashes involved a bicyclist. pedestrians and bicyclists. There were 34 crashes Moderate injuries resulted from 58 of the pedestrian involving bicyclists and pedestrians along Haddon crashes along with three incapacitating injuries and Avenue in the latest five-year period (2012-2016), with two fatalities. Moderate injury resulted from 39 of the 26 resulting in moderate injury and two resulting in an bicycle crashes. Also, rates of residents biking and incapacitating injury. walking to work could be higher. According to the 2016 American Community Survey Data, only 1.9% of Collingswood residents bike or walk to work, while 1.2% of Haddon township residents do. These rates

fall below the state and national averages of 3.4% and 3.3% respectively.

Project Goal

The goal of this Bicycle and Pedestrian Master Plan is to develop a bicycle and pedestrian network that seamlessly links the two communities with a specific focus on travel to, from, and along Haddon Avenue (County Route 561) and to public transportation connections. The study will help the towns to understand better the current challenges to residents of all backgrounds and abilities to identify insufficiencies and missing links in our transportation networks that can be corrected to encourage greater usage of bicycles and walking for recreation and transportation purposes.

The study will create a comprehensive bicycle and pedestrian plan that will meet current and future

demands for alternative and sustainable modes of transportation and connect two suburban towns with transportation and community assets throughout Camden County, Philadelphia, and the Greater Philadelphia Region.

The plan will act as a roadmap for the municipalities and stakeholders to improve existing conditions by developing routes and other improvements that will encourage residents to increase their use of alternative transportation.

The proposed project will help to implement the DVRPC's Connections 2045 key principles by encouraging the alternative transportation modes, of bicycling and walking. Encouraging more people

in these communities to bike and walk will benefit the environment by reducing carbon emissions and improves the overall health of our community's residents by getting them more active. In addition, the project will result in both towns connecting to community assets including parks, community spaces, and the Greater Philadelphia multimodal transportation networks. This will not only allow residents in the project location greater access to the region and to travel within the towns, but also provides greater opportunity for residents and commuters who live out of town to visit or work here creating tourism and economic development that will help expand the economy in our region.

Cross County Connection TMA provided technical live out of town to visit or work here creating tourism support to the municipalities as it related to bicycle and economic development that will help expand the and pedestrian infrastructure as well as educational, encouragement, and enforcement programming Public outreach is an important aspect of any great and activities. This assistance included Geographic community. It must go beyond the obligatory public Information Systems (GIS) analysis and mapping, and meetings that is required. The project team will leadership at community workshops and meetings. be structured inclusively by forming a committee Patrick Farley, AICP, PP, Program Director and Brooke consisting of individuals who represent groups and a lacone, GIS Specialist contributed to the plan. wide range of residents in the communities.

Project Team

Collingswood Borough and Haddon Township put together a team to address the pedestrian and bicycle needs in both towns.

The effort is primarily coordinated by Sandi Kelly of SLK Partners who serves as a project consultant to the Borough of Collingswood and Cassandra Duffey, Director of Community Development for the Borough of Collingswood.

A consultation team led by AECOM was hired to complete the plan and assemble project recommendations. AECOM was supported by Stokes Creative Group who created the project website at www.connect2020sj.com.



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SECTION B **Existing Conditions**

Collingswood Borough and Haddon Township

Collingswood and Haddon Township are two Both towns share a medium-density character of neighboring New Jersey towns, located just a few 5,000 to 8,000 people per square mile that is typical miles from the skyscrapers and historic landmarks of to early Northeastern suburbs. Center City, Philadelphia.

The towns are linked by the Cooper River, which flows along their northern borders, and two critical transportation arteries: Haddon Avenue and the elevated PATCO rail line.

Large green spaces, like Cooper River Park, Newton Lake Park, Knight Park, and Saddler's Woods give the two towns access to natural and recreational



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experiences that make them attractive suburban communities in the South Jersey and Greater Philadelphia regions.

Relevant History

Haddon Township dates its incorporation to the period immediately after the American Civil War, and once encompassed a much larger area. Over time, the township was divided into smaller independent boroughs, of which Collingswood became one in the late nineteenth century.

The towns grew in the early period of American suburbanization, just after the invention and mass production of the first automobiles. Before the Great Depression, both towns had grown to three-fourths of their present-day size.

As transportation technologies changed, the character of both towns also changed. A critical event in their shared history (and for the purposes of this plan) was the widening of Haddon Avenue, which occurred in 1959. This project set the width of this important road that exists today, and reduced the previously-ample size of the sidewalks.

One decade later, the PATCO heavy rail service was opened, with a station in each town, providing high quality transit access to Philadelphia.

Recent global interest in preventing the worst of climate change, minimizing air pollution, improving road safety, and fostering good public health has catalyzed a rethinking of transportation that has been felt throughout the Greater Philadelphia region, and locally in Collingswood and Haddon Township.



The communities of both towns share these values, and feel that improvements can be made. In 2019, this report was commissioned, with support from the Delaware Valley Regional Planning Commission (DVRPC), to help identify how both towns could redesign their street space and transportation infrastructure for the twenty-first century.

Demographics

The population of Collingswood and Haddon Township is predominantly White. Just over 85% of residents identify as White, in contrast to just under 7% who identify as Black, and just under 2% who identify as Asian.

Residents typically earn a comfortable living, with a mean household income of just under \$100,000.

However, these overall numbers belie spatial disparities. In particular, the parts of both towns that lie south and east of White Horse Pike are significantly more racially diverse, and significantly lower income than the rest of their towns. In this area, nearly 30% of residents identify as Black, and the mean household income is below \$60,000.



(Tortiall Press is located where Harrison's is shown in the image)

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Land Use

Like many suburbs in the Northeast, Collingswood and Haddon Township have a residential density consisting mainly of multi-story single-family homes on lots with yards in the front and the back, but not on the sides.

Just over 14,000 residents (50% of the total population) of Collingswood and Haddon Township are Between the two towns, there is a residential density regularly employed. Just over 93.6% of these workers of 6,303 residents per square mile, or 9.85 residents commute to workplaces outside of both towns. The per acre. largest segment of workers, nearly one-fifth, commute There are two large residential complexes; Parkview to Philadelphia.

in Collingswood, and the Haddonview Apartments in Haddon Township.

Nearly 5,500 people are employed within Collingswood and Haddon Township. 83.5% of these Small multi-family or multi-use buildings exist workers commute from outside of the two towns. in modest numbers, primarily along the major Almost eight percent come from Philadelphia, which commercial corridor of Haddon Avenue. Small is the most popular external origin. Just under 1,000 attached buildings with a commercial business on the people—or nearly one-fifth of local employment ground floor and a residence above are common. both live and work within Collingswood and Haddon Township.

Businesses along Haddon Avenue are predominantly small, local-serving operations with few other outlets if any. Other minor retail nodes are sprinkled

throughout the towns, including along Collings Avenue near White Horse Pike, along Cuthbert Boulevard south of Stokes Avenue, and along Crystal Lake Avenue at MacArthur Boulevard.

Commuting Patterns

Just over three-fourths (78.75%) of residents of both towns commute to work primarily by driving. Just over



one-eighth (13.5%) commute to work primarily by transit. A smaller number (2.87%) commute to work primarily by walking or bicycling.

These numbers demonstrate that Collingswood and Haddon Township are highly auto-dependant, despite having been built before the era of mass auto-ownership. It is instructive that while nearly 1,000 people live and work within the two towns, only around 400 are estimated to walk or bicycle to work. This suggests that even for extremely short, regular trips, walking and bicycling is not an attractive option.

Transit Facilities

Collingswood and Haddon Township are both home to stations on the PATCO High Speed Line. The PATCO system consists of an elevated rail line running from Philadelphia to the suburban town of Lindenwold, passing through a cross-section of Camden County, New Jersey.

Although the interior styling of its rolling stock is evocative of commuter rail, PATCO's infrastructure and operations mark it as a heavy rail system. At peak hours, PATCO boasts headways of under eight minutes. The entire system uses exclusive rightof-way and its stations are all either elevated or underground, with fare gates restricting access.

Collingswood is served by the Collingswood Station. Haddon Township is served by the Westmont Station. Both stations are elevated, with enclosed vertical circulation and an open platform. Underneath the rail viaduct are amenities like bicycle parking. Surrounding both stations are substantial park-and-ride lots that only charge for parking for the spaces immediately adjacent to the station. The vast majority of each station's parking supply is free. Both towns are also served by NJ Transit's #451 bus, which runs along Haddon Avenue, paralleling PATCO, before terminating at the Walter Rand Transportation Center in downtown Camden.

Road Travel Patterns

The primary artery connecting Collingswood and Haddon Township is Haddon Avenue (also known as County Route #561), which also runs from the City of Camden in the west to Haddonfield in the east.

Traffic volumes on Haddon Avenue increase eastwards. Counts conducted by the New Jersey Department of Transportation (NJDOT) near the primary retail district of Collingswood found an AADT in the 7,000s, which would classifiy it as a "collector" street. These relatively lower volumes make for a pleasant pedestrian experience. However as the density of commercial activity decreases and the



- perception of road width widens west of Harvard Ave,
- O, the low volumes may also encourage speeding.
- Traffic volumes on Haddon Avenue near the border between both towns, at the large intersection with Cutherbert Boulevard, are significantly higher. Counts at this location found an AADT just under 13,000, classifying the road as a minor arterial.
- Further eastward on Haddon Avenue, near the intersection with Crystal Lake, traffic volumes again appear to increase. Counts conducted found AADT between 13-14,000.
- While there is extensive commercial activity along
 Haddon Avenue in both towns, the character of the retail along the higher volume sections in Haddon
 Township is more auto-oriented, with off-street parking and curb cuts, than the contiguous stretches of small storefronts that can be found in neighboring Collingswood.

The other major artery shared by both towns is Cuthbert Boulevard, which forms much of their common border. Cuthbert Boulevard is a major artery connecting high volume state highways and bridging the Cooper River. Traffic counts within both towns found AADT of over 17,500 south of Haddon Avenue, to over 20,000 north of it, near to the bridge over the river and the junction with Route 70.

There only retail development along Cutherbert Boulevard is of a strip mall character, and the road is seen by local residents as a major obstacle for pedestrians and bicyclists.

In the spaces between these and other surrounding major roads, both Collingswood and Haddon Township have a lattice of local residential streets. Counts conducted on these streets have found that AADT is low, usually under 1,000, giving them a quiet, suburban residential character.

Road Safety

In the five-year period from 2014-2018, 107 crashes between motor vehicles and pedestrians or bicycles were recorded in Collingswood and Haddon Township. 45 of those crashes (42%) resulted in pain, 34 of those crashes (32%) resulted in moderate injuries, one crash resulted in an incapacitating injury, and one crash resulted in a fatality.

The geographic distribution of the recorded crashes identifies several notable hotspots. Chief among them are:

- White Horse Pike, between Collings Ave and Newton Lake

- Haddon Avenue at the intersection with Cuthbert Boulevard



- Crescent Boulevard (Rt. 130) near the intersection with White Horse Pike

The data also show that a significant number of crashes occurred along the length of two roads in particular: Haddon Avenue and Collings Avenue. Both roads feature a dangerous combination of wide vehicle travel lanes and high levels of adjacent activity.

The data clearly demonstrates spatial patterns of crashes in Collingswood and Haddon Township. This demonstrates that efforts to improve traffic safety can make a big difference if focused on just several key problem streets and intersections.

Previous Road Improvements

While Collingswood and Haddon Township have not taken a systemic look at their road network from the perspective of walking and bicycling up until this point, they have pursued isolated projects that have made a positive difference.

A popular tool in the box has been the use of bumpouts to reduce pedestrian crossing distance. One bump-out connects a student parking area in Knight Park with Collingswood High School. In both towns, but especially Haddon Township, bump-outs have been built along Haddon Avenue to slow traffic and provide safer pedestrian crossing. In Collingswood, green paint and plasic bollards have also been used to create something akin to a bump-out without the same cost.

The most dramatic effort at traffic calming and pedestrian safety can be found at the western end of Collingswood's business district, where Haddon Avenue splits into narrower lanes around a landscaped median with a fountain.

Existing and Planned Pedestrian and Bicycle Network

In 2016 Camden County Parks Department created the Cooper River Park Vision Plan that recommends many improvements to the pedestrian and trails facilities around Cooper River Park. It addresses many long standing concerns over the access to the waterfront and the condition of the existing highly used trail.

Collingswood and Haddon Township do not have infrastructure that is exceptionally conducive to either walking or bicycling. This is especially true for bicycling. There are no dedicated on-road bicycle facilities within either town and limited trail options, mostly inside of parks.



Sidewalk coverage is far more extensive, however sidewalks tend to be narrow and surface conditions are not always in a state of good repair.

This report represents the leading effort by both towns to plan for a future network of pedestrian and bicycle-friendly paths and junctions.

Additionally, work is being done by higher government bodies. Camden County is well into planning and design for a multi-use path, called The Link (formerly the Cross Camden Connector), that would stretch across the entire county, primarily using existing freight railroad right-of-way. A portion of this project would pass through Collingswood Borough, and just to the south of both towns.

C Public Feedback

Public Process

Infrastructure does not exist in a vacuum. In order to be planned for, built, and well used, pedestrian and bicycle networks require support from the public.

Getting that support requires a back-and-forth between planners and the citizens that they work for from the start of any project. Plans and projects are informed by the expertise of professionals, but they must emerge from the experience and real needs of the public.

In order to tap into that experience, the Connect 2020 plan was supported by an extensive public engagement process. While the overall plan for feedback was interrupted by restrictions resulting from the 2020 COVID-19 pandemic, the amount of feedback received was significant and was integral in shaping the plan's focus, conclusions, and recommendations. The project's meetings and surveys were highly publicized and featured in several publications including NJ Pen, Retrospect, Courier post articles, Town newspapers mailed to every household, and on social media.

Through paper surveys, online surveys, and public meetings, the planning team heard from a diverse array of perspectives from residents of both towns. This section will cover the process that was employed, the main takeaways from the feedback, and the way that the plan's conclusions were shaped by what was said and heard.



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In-Person Engagement

Beginning with the 2019 Collingswood Green Festiva and continuing at the Haddon Township GoGreen Festival, planning staff distributed paper surveys to residents. The project survey contained a number of multiple-choice questions on the front, and several opportunities for short answer statements on the back.

The survey covered a lot of ground. It asked participants to generally rate their comfort with existing conditions for walking and bicycling in Collingswood Borough and Haddon Township. It ask them to explain what limitations they experienced and what types of trade-offs they would be willing to make to improve conditions for walking and bicycling The survey also asked for participants to elaborate of specific locations where they encountered issues.

The paper survey was supplemented by a pair of paper maps of the two towns. Participants were ask to place dots on one map to indicated where they lived, worked, and spent time in the area. On the othe map, participants were asked to place dots indicatin



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al,	they felt unsure walking and bicycling, and where they were afraid of walking and bicycling.
f	The results from the paper maps were compiled by project staff and demonstrated clear geographic trends in how residents moved and how they perceived the safety and comfort of their local transportation environment.
	The project was also presented to the Collingswood Green Team on March 11, 2020.
ked	Online Engagement
o g. on	The public engagement process also included a website, www.connect2020sj.com. At this website, visitors could find information about the project's aims and could contribute feedback. A web-based version of the initial survey was available for completion. The website also included an interactive Wikimap, where
ed	routes, as well as read the notes of others.
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January 2020 Public Meeting in Haddon Townshi

places where they liked to walk and bicycle, where

Public Meetings

The public engagement process reached its most intensive stage with two public meetings, one in each town, in January 2020.

The materials presented at both meetings had three parts. First, attendees were able to view boards that presented some of the findings and research done so far, viewing the plan from abstracted scale. Second, attendees were brought to thinking about the plan from a town-wide scale. They were asked to mark up several maps showing both towns, annotated with data from earlier events and a "Level of Traffic Stress" rating from the Delaware Valley Regional Planning Commission (DVRPC). Finally, attendees were brought down to the smallest scale, viewing three critical intersections on Haddon Avenue, one in each town and a third directly on the border. Attendees spoke with a plan staff member and each other and were invited to leave comments on the specific issues with each intersection.

Steering Committee

From the onset of the planning process, the project team's work was guided by a steering committee which included both residents and representatives from various stakeholder organizations such as governmental agencies, transportation providers, tourism destinations marketing organizations (DMO's), police departments, planning agencies, community organizations, bicycle advocacy groups, schools, and businesses. Steering committee representatives participated in both in-person and virtual meetings and helped to develop project objectives, assisted with public outreach and surveys, and provided in-depth input into the final plan recommendations.

COVID-19 Project Impacts

Due to the COVID-19 pandemic, further plans to meet with the public, the steering committee, and one-onone meetings with specific stakeholders and interest groups were interrupted.



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Steering Committee Representation

- Collingswood Police
- Collingswood Department of Public Works
- Haddon Township Police
- Haddon Township Department of Public Works
- Camden County Division of Environmental Affairs
- Camden County Division of Planning
- Camden County Department of Public Works
- STV
- Camden County Health Department
- Camden County Disability Programs
- NJ Transit
- PATCO
- Visit South Jersey
- Cross County Connection
- DVRPC
- Collingswood Business Improvement District
- Haddon Township Business Improvement District
- Bike Up Collingswood
- Bike Camden County
- Collingswood Green Team & Bike Share
- Haddon Township Green Team
- Collingswood Board of Education
- Haddon Township Board of Education
- Jewish Employment & Vocational Service
- Collingswood Borough Engineer
- Collingswood Community Development
- Bicycle Coalition of Greater Philadelphia
- New Jersey Bike & Walk Coalition
- Rails-to-Trails Conservancy
- East Coast Greenway Alliance
- Circuit Trails Network
- Collingswood Commission
- Haddon Township Commission

The project team pivoted to an online meeting format beginning in April 2020, project staff produced a presentation of draft findings and key recommendations contained in this report. This presentation was given to the steering committee on July 30, 2020, and was presented to members of the public on August 13, 2020.

Following these presentations, a survey asking for responses to the public recommendations (as well as a recording of the public meeting) was launched on the project website.

Public Responses

Public responses over the course of the plan consisted of two parts. The first was in response to the launch of the plan, the initial survey, and the first round of public meetings. These responses are described immediately below, and informed the development of the plan.

The second came virtually, in response to the draft plan findings and recommendations. Those responses are described at the conclusion of this chapter, and informed the precise recommendations found in the final version of the plan.

In-Person Feedback

The results from the initial paper survey were tallied by project staff. In total, 124 people filled out the paper survey.

Respondents were predominantly (90%) local residents. They overwhelmingly (85%) believed that improving conditions for walking and bicycling was "very important" to them.

The surveys confirmed demographic data that found low percentages of residents commute to work by foot or by bike. However, high percentages of respondents reported getting around by foot or by bike for other purposes. 88% of respondents walk for leisure, 76% to go shopping, and 70% to attend local events. 75% of respondents reported bicycling for leisure, and 45% reported bicycling to local shops.

For both walking and bicycling, respondents indicated that their primary obstacles were related to road safety and a lack of infrastructure that meets their needs. Half of survey respondents expressed that road safety concerns prevented them from walking more often, and just under half said that poor sidewalk conditions were a barrier. An even greater number -57% -said road safety concerns were an issue for bicycling, while almost half also said they lacked useful routes.

Respondents expressed broad support for a wide variety of safety measures, although none overwhelmingly stood out as winning the public's favor. There was, however, a clear willingness to consider more dramatic changes when warranted. The poorest polling interventions tended to be the most incremental, while the most intense, especially protected bike lanes, received the most positive support. 56% of respondents said protected bike lanes would encourage them to cycle more.

Respondents were also willing to accept common trade-offs in exchange for safety and mobility enhancements for pedestrians and bicyclists. 69% of respondents supported measures that would reduce vehicle speeds, and roughly half supported measures to narrow travel lanes and seasonally close streets.

In part because of the broad nature of the questions asked in these surveys, respondents sent a muddled signal about their openness to various solutions and tradeoffs. A primary takeaway from these responses is that there would be support for a variety of interventions, but that care must be taken to match the scale of solutions with the scale of problems.

Online Feedback

The results from the online survey were tallied by project staff. In total, 372 people filled out the online survey.

Much of the feedback collected online reinforced the feedback collected in person. Online, respondents were predominantly (89%) local residents. They overwhelmingly (84%) believed that improving conditions for walking and bicycling was "very important" to them. Both of these percentages were just 1% below what was recorded with the in-person surveys.

However, online respondents did differ from in-person respondents in meaningful ways. As a general rule, online respondents represented a group of people who had more personal interest in the outcome of the study. 27% of online respondents reported walking to work and 17% reported bicycling to work. These numbers are far higher than what was recorded by the in-person survey or observed from demographic data. It makes sense that respondents to an online survey, which required deliberate action to find and complete, would represent a more engaged and directly-affected group than respondents to an inperson survey who were mostly engaged as they were walking along the street.

Online respondents provided interesting feedback when asked about what obstacles they encounter



The Collingswood and Haddon Township Bicycle and Pedestrian Master Plan will develop a bicycle and pedestrian network that helps to further connect the two communities, with a specific focus on travel to the Haddon Avenue corridor

The front page of the Connect 2020 website

to walking and what remedies they would prefer. Because the online survey did not allow multiple answers for some guestions(in contrast to the inperson survey), it forced respondents to choose the answer that best represented their views.

A plurality (35%) of respondents named poor sidewalks as the major reason they don't walk as often. A smaller number (18%) identified road safety concerns. However, only 22% of respondents put better sidewalks as their top priority for improvement. Instead, 47% of respondents identified traffic calming as the most urgently needed improvement, and a further 17% called for increased traffic enforcement and better crosswalks. It is likely that while a lack of crosswalks most directly prevents people from walking, issues of traffic safety are a far more pressing as a reason why people feel uncomfortable or unwelcome as pedestrians.

When it came to identifying barriers to bicycling, respondents responded similarly, at least at first. A significant plurality (42%) said that a lack of usable routes or facilities prevented them from bicycling more, while a smaller number (28%) indentified safety concerns. However, in terms of remedies, a majority of survey respondents (53%) supported simple striped bike lanes, and more intensive and safer designs, such as buffered and protected bike lanes received smaller shares of the vote. This was in contrast to the results of the in-person survey, but consistent with subsequent answers.

In particular, online respondents rallied strongly behind the idea of narrower travel lanes as their preferred (58%) tradeoff in order to create safer streets. These two points of data demonstrate strong support from online respondents for an initial strategy of narrowed travel lanes and painted bike lanes.

Taken together, the results of both in-person and online surveys suggest that local residents would be receptive to an approach that is both incremental on a broad scale, and aggressive at key locations, where more significant changes can be strongly justified.

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Feedback on Draft Recommendations

Due to the COVID-19 pandemic, feedback for the project's draft recommendations was carried out in a limited fashion and entirely online. The steering committee and a larger section of the general public were briefed on the plan's progress and preliminary conclusions. Subsequent to these meetings, a survey was launched on the project website, and messages were posted on social media to encourage interested members of the community to give feedback.

- In addition to the feedback given live at the two meetings, 22 people responded to the online survey. These respondents provided a crucial 'gut check' to ensure that the plan's direction made sense.
- Respondents also provided key direction in several areas. They provided strong support for raised crossings at important crossings, especially in school zones, where a majority (13) favored that treatment. Another majority (14) favored protected bike lanes on Haddon Avenue. In the long run, virtually all respondents favored moving curbs to create a highquality separated facility on Haddon Avenue. All of this data strongly emphasized the centrality of that road to both towns and the importance of pedestrian and bicycle improvements on it.
- Finally, respondents were asked to provide feedback on several proposed intersection designs. Their input, while broadly positive, was also helpful in identifying which design issues needed further study.

SECTION **Project Recommendations**

Project Goals

Project recommendations were developed based on three key goals from the community feedback: Improve Safety, Accessibility for All, and Balance Needs.

Improve Safety

Streets designed with the most vulnerable users (pedestrians and bicyclists, children and seniors) in mind will be the safest for all users by either separating different modes to reduce conflicts, or slowing all travelers to the same low, safe speed. Our plan proposes both strategies where each is appropriate.

Accessibility for All

Streets and trails must accommodate safe travel for everyone, including those with disabilities. Designing for accessibility not only benefits those with disabilities, limited mobility, or parents with strollers, but helps create a more complete environment for all users.

Balance Needs

The daily life of streets is a constant negotiation between users for limited space. Demands for street space change over time thanks to different values and new technologies. Our plan presents a menu of inexpensive, short-term improvements for streets, as well as a vision for larger, longer-term investments.

Recommendations Summary

The plan recommendations are grouped into different categories based on user type as well as implementation strategy. Many of the recommendations can be achieved as standalone projects - although the intention is that when the recommendations are combined the outcomes are greater than the sum of its parts.

They begin with policy recommendations that will not require any physical infrastructure and lead towards

IMPROVE SAFETY

Streets should be safe for users of all ages, abilities, and modes of travel

ACCESSIBILITY FOR ALL

Streets should be comfortable for users of all ages, abilities, and modes of travel

BALANCE NEEDS

Streets should best meet the needs of all users, from those who live and work along them to those who are passing through

our big ideas which involves considerable physical infrastructure investments.

- Policy Recommendations
- Pedestrian Network Improvements
- Bicycle Network Improvements
- Priority Intersections
- Transit Improvements
- Big Ideas

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Policy Recommendations

Right-On-Red Ban

Right-On-Red Bans are laws or ordinances that Flex zones are an approach to managing road space prohibit the common driving practice of making a right along the curb for uses other than parking. turn while facing a red light.

Road space along the curb can be valuable real When a driver approaches a signalized intersection estate, but many cities and towns do not recognize its where the light is red, it may still be safe for that value. A common default approach is to leave a lane of driver to make a right turn. This is because the driver 7-9 feet from the curb for parking. However, this space only needs to look in one direction—to their left—to can have other uses, which depending on the context, ensure that there is a break in traffic that will allow may prove more valuable to the community. them to make the turn without crashing. However, while these turns may be safe for drivers, they may not Flex zones are a rebrand of what is commonly called be safe for pedestrians. This is because after looking the parking lane. The term emphasizes a wide range left, many drivers neglect to then look right, to ensure of possible uses, which may change over time. Flex there are not pedestrians who are crossing in front of zones may be used for restaurant and bar seating, them or taking advantage of the same break in traffic food truck parking, passenger pick-up and drop-off, to cross the perpendicular street. loading zones, bike or scooter parking, stormwater

Crashes involving right-on-red turns

disproportionately impact pedestrians and bicyclists, and disproportionately inflict injuries upon those groups. Because the matter is an issue of driver convenience versus pedestrian and bicyclist safety, many governments have opted to simply ban the practice. Right turns on red are prohibited by sign at many intersections already, especially those near schools or areas with high pedestrian traffic. Righton-red bans across entire cities and towns costs little, and can mark a shift in driving behavior with significant long term benefits for road safety.



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Flex Zones

- infrastructure, transit stops, and more, in addition to the typical use of parking. Flex zones can be cheap
- or expensive, depending on what uses are chosen for them, but they can have significant positive effects for local businesses who may better use the curb space, and local business districts who may benefit from a more attractive and active streetscape.

Education and Advocacy

Many municipalities partner with local agencies and non-profits to provide bike and pedestrian safety, awareness, and skills training.

Potential road users of all types, particularly youth, may not be fully aware of the rights, responsibilities, and safest practices for the mode they wish to use.

Partnering with local stakeholders and advocacy groups to establish regular bike basics training at community centers, senior centers, and schools can help fill this knowledge gap. So too can a public service or media campaign highlighting the rights and responsibilities of cyclists and pedestrians when interacting with cars.

Local Transportation Management Associations (TMAs) can be a tremendous resource for this type of education and advocacy. Cross County Connection is the Transportation Management Association for southern New Jersey's sevencounty region: Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, and Salem. The organization's mission is to improve the quality of life in southern New Jersey through transportation solutions. The organization accomplishes this mission by promoting and facilitating the use of sustainable transportation modes such as car/vanpooling, public transit, bicycling and walking. Many of its bicycle and pedestrian safety education programs are provided free of charge to South Jersey municipalities and counties.



Below is a summary of available programs:

- Street Smart NJ is a pedestrian safety awareness campaign aiming to educate pedestrians and motorists on traffic laws and change behaviors that lead to pedestrian crashes and fatalities. Cross County Connection works with local municipalities and their police departments to prepare and conduct campaigns in locations where pedestrian safety is a concern.
- Cross County Connection partners with NJDOT to conduct its Safe Routes to School (SRTS) program. The goal of the SRTS program is to enable and encourage children in kindergarten through 8th grade to safely walk and bicycle to school. Cross County Connection's SRTS program improves children's health by encouraging physical activity and promoting the use of travel modes that reduce traffic congestion and harmful vehicle emissions around schools. Cross County Connection's SRTS program includes numerous educational and awareness activities at schools.
- Cross County Connection creates and provides numerous bicycle and pedestrian safety publications, including postcards, posters, brochures, and multi-page guides, that municipalities and counties can use as part of their own safety education programs. These materials can be displayed and distributed at locations such as libraries, bike shops, and local stores. Anywhere that will reach local residents and visitors.

Re-evaluate the Bike to School Policy

When safe connections exist, biking to school can be a major benefit to student's health and well-being, as well as a way for students to safely get to school quickly without their parents having to navigate pickup and drop-off.

Students are not currently allowed to bike to elementary school per school district policy. Ironically, this rule forces some children to rely on cars to get to school, increasing the danger of roads near schools.

This plan recommends many improvements to both school zones and bike facilities in the towns. These improvements will change the quality and safety of biking for the better, and the school district bike policy should be reconsidered as bike safety improves.

Complete Streets Policy

Complete Streets are streets designed for all users so anyone of any ability type and mode can safely Transportation challenges for seniors and persons get where they want to go. The State of New Jersey with disabilities can be associated with their patterns has a complete streets model ordinance that can be of living. Many Americans retire in place, meaning in modified and adopted at the municipal level. In the fall the same community and many times the same home of 2019, Collingswood has adopted a Complete Street they lived in before retirement. If seniors or persons Policy. New model ordinance language was released with disabilities are unable to drive themselves, or to by the state in the spring of 2020. Haddon Township afford a personal vehicle or transportation assistance has not yet adopted a complete streets policy. The due to fixed incomes, they can become isolated plan recommends that Haddon Township adopt a without affordable transportation options. Isolation, Complete Streets policy and Collingswood Borough in turn, can lead to greater health problems that should update their existing Complete Streets policy ultimately require more costly interventions. This to incorporate new model guidance. is why the network of sidewalks needs to focus on improving access, especially along key connections.

As part of adopting a complete streets policy each town should have all of the appropriate stakeholders such as planning and zoning and borough staff following a project review checklist. In addition to town staff, a complete street committee should be formed in each town to help implement the plan and enforce the complete street policies. The committee would be charged with:

- Support the implementation of Connect 2020 Bike The long term goal of Connect 2020 is to make all of and Pedestrian Master Plan elements Collingswood and Haddon safe and accessible for pedestrians of all ability levels. Unsafe, inaccessible, • Identifying projects and plans that should incorporate complete streets principals or non-existent pedestrian infrastructure can not just be a hindrance for people with different levels of • Maintain a project review checklist ability, it can also force them into taking alternative • Public engagement routes that are unsafe.

- Internal educational and training for municipal staff, planning and zoning boards, elected officials, and residents
- Identifying and applying for funding opportunities
- Updates of the Connect 2020 Plan (recommended interval is every 5 years)

Pedestrian Network Improvements

No matter which mode you choose to move around in either town, at some point in your journey you will be a pedestrian. Moving as a pedestrian on our streets is the foundation of the transportation system. Yet pedestrians are the most vulnerable road users, because they have the least amount of physical protection in the case of a crash. The improvements recommended in this section of the plan look to build on the project goals of improving safety, providing

accessibility for all, and balancing the needs of all users in the limited physical space that we have.

- Create a Network of Pedestrian Priority Corridors
- Improve Intersection Crossings
- Improve Access to Schools

Sidewalk Condition and Accessibility Audit



More work is needed to understand existing accessibility gaps. This plan recommends conducting a pedestrian accessibility audit for both towns. The audit should focus on ADA compliant crossings, sidewalk width and condition, lighting and wayfinding, and connection to accessible loading/parking. The audit should focus first on prioritizing accessibility gaps in and around Haddon Avenue and the other Pedestrian Priority Corridors, but consider long-term plans for accessible crossings throughout the towns. The towns should consider a proactive response to cracked or uplifted sidewalks and pursuing grants for sidewalk installation or widening in Pedestrian Priority Corridors.

Pedestrian Priority Corridors

Pedestrian Priority Corridors

The Plan recommends establishing a network of streets within the towns that connect high-priority community assets like schools, parks, community centers, and commercial corridors. These are the streets where all modes merge to share the last leg of their voyage from the street to the door of where they are trying to get to, and are the most vulnerable.

This network should be where Collingswood and Haddon Township should prioritize near-term pedestrian improvements All homes within the study area should be within a quarter-mile walk to the Pedestrian Priority Network.

Intersection Improvements

There are hundreds of intersections in the project area, but relatively few include visible, high quality treatments connecting all sides. Not all intersections may need the same level of treatment since the character of the roads that lead into them are often different. But all places where people cross need to have a baseline level of safety and visibility.

To address this, this plan creates a hierarchy of intersection crossings, ranging from lowest to highest activity level: Baseline Pedestrian Intersection, Pedestrian Priority Corridor, and Key Haddon Avenue Crossing.

Crosswalk Inventory for Major Streets



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Baseline Pedestrian Crossings

Baseline Pedestrian Crossings are local neighborhoods streets that feed into the larger street network. They need to be visible and accessible. Based on community feedback, the minimum treatments here should include:

- ADA compliant curb ramps
- Adequate lighting
- Painted crosswalk markings

Pedestrian Priority Corridors

Pedestrian Priority Corridors are where pedestrians are concentrating, and this level of use requires additional treatments to support all users. These additional treatments include wayfinding and even higher visibility at crossings. Based on community feedback, the minimum treatments here should include:

- ADA Complaint curb ramps
- Lighting and wayfinding
- Continental/Zebra crossing markings
- Stop bars for vehicles

Key Haddon Avenue Crossings

A handful of intersections in the towns need a specialized set of treatments due to the volume of people using them to access essential destinations like PACTO stations, and community facilities. These crossings are along Haddon Avenue, at Browning, Garfield, Collings, Frazer, Stiles, Chestnut, and Maple.

The minimum crossing treatments should include:

- ADA compliant curb ramps
- Painted/textured crossings
- Pedestrian crossing/beacon at unsignalized crossings
- Pedestrian-focused signal timing adjustments at signalized intersections
- Raised intersections where appropriate

BASELINE PEDESTRIAN INTERSECTION



PEDESTRIAN PRIORITY CORRIDOR



KEY HADDON AVE CROSSING



sets up a larger framework for connecting families throughout the towns to safe routes to school. On a more micro level, improvements should radiate school travel is.

SCHOOL ZONE: blocks surrounding the school capturing all possible directions



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The irregular shape of school zones around existing schools is based on irregularities in the street grid as well as the assigned drop-off and pick-up circulation plans for each school. This often means that parents might approach schools from different directions based on pick up or drop off timing. For those walking or biking to the schools the improvements need to reach the nearest adjacent intersections in all directions.



School Zones



Bicycle Network Recommendations

Feedback from our in-person and online surveys indicated that many residents and visitors to both towns like to ride their bicycles. The existing bicycle infrastructure for both towns is centered around recreational use and is concentrated at Cooper River Park and Newton Lake Park. The design and use of bicycle infrastructure is often dictated by the level of comfort or stress of the user when biking. This is particularly true for the young or those who are not automatically comfortable riding bikes. The primary target for improvements to the bicycle network are riders that are classified as "interested but concerned." This classification is based on a Portland, Oregon study that segmented the bike riding population into four distinct groups. The largest group—over 40% of the population—is "interested but concerned." The study found that this group is the easiest to capture if basic improvements are made to the bicycle infrastructure.

Categorization of Bike Riders from NACTO Equitable Bikshare Means Bike Lanes (2016)

THE MAJORITY OF PEOPLE WILL RIDE WITH PROTECTED BIKE LANES

Of the total population



Our feedback showed that there were three primary trip types for riders. The first is along the existing recreational bike facilities within each town at Cooper River Park in Newton Creek Lake. The second is an errand run or visit to a town business, using a bike as a quick way of travel. The third destination is outside of the boundaries of the two towns, to utilize the ever-growing regional trail network. From this, three priorities emerge for a local bicycle network:

- Connect to Existing and Proposed Regional Trails
- Create a Priority Bike Network of North-South and East-West connections through and to the edges of the towns
- Install Bike Parking and Other Amenities throughout Collingswood and Haddon

Connect to Regional Trails

High-quality trails already exist along Newton Lake and the Cooper River, but they are currently disconnected from nearby neighborhoods and parks. The proposed Camden Cross County Link Trail will add a much needed connection from the Cooper River Trail down Browning to Knight Park, but will largely bypass the rest of the project area. The proposed Priority Bike Network will complete the loop between both trails, Haddon Avenue, and local neighborhoods.

Priority Bike Network

The bike network is split into north-south and eastwest connections. For some key connections, multiple alternatives are presented in this plan. The goal is to provide key details and potential trade-offs between different options in order for key decision-makers to select the preferred alternative. Bike facilities should be provided so that all areas of the towns are within a third of a mile of a bike facility.

Regional Trail Network



Priority Bike Network

Bike Facility Types Definitions sourced from NACTO



BICYCLE BOULEVARDS

Bicycle boulevards are streets with low motorized traffic volumes and speeds, designated and designed to give bicycle travel priority. Bicycle Boulevards use signs, pavement markings, and speed and volume management measures to discourage through-trips by motor vehicles.



Buffered bike lanes are conventional bicycle lanes paired with a designated buffer space separating the bicycle lane from the adjacent motor vehicle travel lane and/or parking lane.



CONVENTIONAL BIKE LANES

Bike lanes designate an exclusive space for bicyclists through the use of pavement markings and signage. The bike lane is located adjacent to motor vehicle travel lanes and flows in the same direction as motor vehicle traffic.



SAFE INTERSECTION CROSSING MARKINGS

Designs for intersections with bicycle facilities should warn of possible conflict between bicyclists (and other vulnerable road users) and vehicles by heightening the level of visibility and denoting a clear right-of-way.



PROTECTED BIKE LANES

One-way protected bike lanes are bikeways that are at street level and use a variety of methods for physical protection from passing traffic. A one-way protected bike lane may be combined with a parking lane or other barrier between the bike lane and the motor vehicle travel lane.



SHARED USE PATHS

Shared use paths are a type of trail designed to be part of a transportation system, providing off-road routes for a variety of users. The primary users of shared use paths are bicyclists and pedestrians, including pedestrians using wheelchairs.

Bike Facility Types and Space Requirements

Different types of bicycle facilities require varying amounts of width to support them. The graphic below shows six different types of bike facilities, roughly increasing in width needed from left to right.

The graphic below describes the minimum widths needed to support on-street bike facilities. Trade-off between parking lanes, bike lanes, and travel lane widths would be required for any streets narrower than 44 feet. The majority of the streets in the Project Area are even narrower than that and are less than 28 feet wide.

Understanding Trade-offs — Separation vs. Slowing

Separating cyclists from cars with their own dedicate space is most effective when there is an opportunity for a physical barrier between modes, like a painted buffer, flexible bollards, or a curb. Where space is constrained on narrower roads, there may not be an opportunity to add significant buffers. Without buffer some streets can feel less safe with bike lanes, since the travel lanes feel wider to drivers, and they are inclined to increase speed.



W	In certain circumstances, a preferable alternative to providing dedicated, buffered bike facilities is to slow down all traffic to a speed safe for all modes. Streets can effectively be slowed down by a combination of the following strategies:
fs	 Add parking to one side—effectively turning it into a yield street.
15	Add speed humps (bike friendly).
ot	Neck down intersections.
8	Lower the speed limit.
	Raised crosswalks.
ed /	Collingswood and Haddon Township have a number of two-way streets that do not have adequate width for two cars to pass each other at normal speeds. These "yield streets" can act as unintentional slow streets, because they force drivers to proceed with extreme caution due to the lack of space
rs, e	for maneuvering. While these streets are rarely purposely designed today, where they exist, they can be celebrated for their inherent safety.

Bicycle Facility Space Requirements

Analysis of what can physically fit on each street.

• Most streets in the priority bike network are 22'-30' wide curb-tocurb.

Takeawav: Most streets would require significant changes to accommodate any bike lanes.

Street Typologies

Streets in the towns can be subdivided into three different types. These types are based on street widths determined from the analysis of minimum width needed for bike facilities.

Type 1 Facilities — Over 44' Wide

Type 1 Streets are mainly the major corridors in the towns. Haddon Avenue and Cuthbert Blvd both fall into this category. Type 1 streets are the only locations where dedicated bike facilities could be possible without removing parking or travel lanes.

Type 2 Facilities — 30' - 44' Wide

Type 2 Streets include streets like Collings, Park, and Emerald. These streets could potentially fit bike lanes in both directions, but parking would have to be removed, potentially making the streets feel wider than they currently do.

Type 3 Facilities — Under 30' Wide

Type 3 Streets make up the majority of the Project Area and are typically "yield streets". Accommodating two-way bike facilities on these streets would require significant trade-offs on both parking and travel lanes, and a "slowing" approach is usually recommended.

Tradeoffs

Pictured below is a Type 2 30' wide two-way street in the study area. Parking is allowed on one side of the street and there are 11' wide travel lanes. Adding a bike lane to this type of street would require the removal of on-street parking. While this would provide separate facilities for bike riders, the removal of parking might change the drivers perception of the lane's width and encourage faster speeds.









Typical Sections by Street Type

Type 1 - Over 44' Wide

Can accommodate the minimum dimensions of parking, travel lanes, and bike lanes inside the existing width.

Type 2 - 30' to 44' Wide

Can accommodate the minimum dimensions of travel lanes and bike lanes but could not accommodate parking on both sides.

Type 3 - Under 30' Wide

Typically a "yield street" and can not accommodate the minimum dimensions of any bike lanes inside the existing width without removing parking or travel lanes.

East-West Connections

Proposed bike connections are split into north-south and east-west links. These are streets where the plan should prioritize safe access for cyclists, either through dedicated facilities or creating "slow streets."

Proposed east-west connections were selected based on public feedback and on analyzing what routes actually traverse the full length of the project area. Haddon Avenue is the most direct route through the towns, but also includes the most vehicle, truck, pedestrian, and business activity in the towns. It is discussed in greater detail on the next pages.

Hierarchy of East-West Connections

Type 1 Connections:

- Haddon Ave (County)
- MacArthur (Local)

Type 2 Connections:

- Emerald Ave (Local)
- Park Ave (County)

Type 3 Connections:

- Maple Ave (Local)
- Atlantic Ave (Local)



Shared Streets

Maple/Emerald and Atlantic/Park were considered as alternate pairs to a bike route on Haddon. They are both narrow streets that could not accommodate dedicated bike facilities, and both would require a detour from the center of activity to continue west of Cuthbert Boulevard. It is recommended to focus on measures to slow these streets and convert them to bicycle boulevards.

MacArthur Boulevard

MacArthur Boulevard ranges from 34 to 44 feet wide and is a key connection between other proposed trails and the Haddon Township Middle/High School complex. There is opportunity to create bike lanes to better support getting cyclists safely to school.



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Haddon Avenue Bike Lane Options

Haddon Avenue - Existing Cross Section





Priority Connection - Haddon Avenue

Haddon Avenue is the spine of both Collingswood Borough and Haddon Township. Any improvements must balance the needs of residents, businesses, and visitors of all modes. It is also a county road, where travel lanes must be a minimum of 11 feet wide to carry NJ Transit buses. The plan considered a range of options for separating or slowing down on Haddon Avenue. Existing utilities and drainage make moving curbs an expensive option, so two concepts are shown here that provide different levels of protection and separation for modes while keeping existing curbs in place.

The first option narrows travel lanes to 11' wide and using the remaining street width to accommodate a 5' unprotected bike lane. It has the benefit of providing a dedicated space for cyclists that does not remove parking, but it is unprotected and may have modified designs to work with the existing bump-outs in Haddon Township.

Public feedback showed an interest in protected bike lanes, particularly along busy streets. The second design concept maximizes protections and separation by removing parking on one side of the street It would provide significantly more protection to cyclists, but would impact business loading and parking. The asymmetrical street section would also impact all of the bump-outs currently along Haddon Avenue.



Haddon Avenue Bike Lane Options

Haddon Avenue - Adding Bike Lanes

Haddon Avenue - Maximize Protection

46' WIDE CURB-TO-CURB

Haddon Avenue Bike Lane Options







VIEW CIRCA 1938

VIEW UNDER CONSTRUCTION

1959 WIDENING OF HADDON AVE

The existing curb-to-curb width of Haddon Ave is the result of a street widening project in the late 1950s. The decision was made to take approximately five feet of sidewalk from each side of the street and widen the travel lanes for vehicles. Although the reasons for widening may have addressed the concerns and mobility in the 1950s, the needs of today are different. When the opportunity comes to reconstruct the street in the future, there is a chance to change the current condition.

The next two concepts for Haddon Avenue move the current curb location to better meet the mobility needs of today and the project feedback. These concepts would require a much longer lead time, design, and cost compared with concepts that leave the curb where it is today.

The first concept keeps all existing parking and travel lanes and puts raised bike lanes between the parked cars and the sidewalk. The vertical separation creates a safer situation for bicycles without removing parking.

The second concept reclaims the pre-1959 sidewalks and creates an additional five to six feet of sidewalk width on each side of the street. The new curb-tocur dimensions would be 36'. Without separation of modes, the only safe way to accommodate bicycles would be to slow down Haddon Avenue. Instead of providing separate bike facilities, the road would be narrowed and traffic calmed, leaving the opportunity to widen sidewalks by 5 feet. The narrow lanes and on-street parking will help traffic calm, but additional treatments will need to be used. Raised crosswalks, textures, bump-outs at key intersections, and increased visibility at intersections can create a safe environment for bikes to share the street. Expanding the width of the sidewalks on Haddon Avenue also address the segments of the existing sidewalk that do not meet minimum widths for ADA accessibility.





Haddon Avenue Bike Lane Options

Haddon Avenue - Move the Curbs - Separate

Haddon Avenue - Move the Curbs- Widen Sidewalks

North-South Connections

North-south bike connections will play an essential role in connecting neighborhoods to existing trails and to Haddon Avenue. There are very few streets that cross Haddon Avenue, so those should be a priority for safely crossing all modes.

Type 1 Connections:

Cuthbert (County)

Type 2 Connections:

- White Horse Pike (State)
- Browning (County)
- Collings (County)

Type 3 Connections:

- Woodlawn (Local)
- Cooper (Local)
- Chestnut (Local)
- Crystal Lake (Local)
- Maple (Local)



Cuthbert Boulevard

Community feedback showed the greatest interest in implementing bike facilities on Cuthbert Boulevard. This major road has enough width to provide protected bike facilities through much of the corridor. Even where pinch points exist, there is room enough for separated bike facilities to prevent bikes from having to merge into traffic. The intersection of Haddon Avenue and Cuthbert Boulevard creates an opportunity for a protected intersection where two dedicated facilities come together. It is discussed in more detail in the next section.

The Link and connections to Newton Creek Trail

The proposed Link trail will create a high-quality facility along Browning to Collings and on to E. Atlantic Blvd. Shared streets should branch off of that to connect directly to the Newton Creek Trail at Bettlewood.

Bike facilities should also extend along Collings up to the intersection of Collings and Haddon Avenue. Alongside Knight Park, the trail could mimic the alignment of the section of the Link on the other side of the park, providing a two-way offstreet facility.

Between Collings and Newton Lake Drive, White Horse Pike is both wide enough and buildings are set far enough back from the roadway to accommodate a sidepath. This would close the gap between The Link and Newton Creek Trail. The intersection of Collings and White Horse Pike is covered in the next section.

Shared Streets

Type 3 connections like Woodlawn, Cooper, Chestnut, Crystal Lake, and Maple are too narrow for separate bike facilities without major tradeoffs. Traffic calming elements like speed humps, curb bump-outs, and raised intersections are a better fit for streets that currently do not feel safe due to speed.





Source: NACTO



Source: NJ School Zone Design Guide

Install Bike Amenities

The second Community Workshop and web survey included a question about improving bike amenities in the towns. Respondents were most interested in seeing improvements to bike parking and to bicycle wayfinding and signage.

Bicycle Parking

There is a wide variety of potential bike parking solutions that range from cheap and temporary to full, weatherproof structures. In the short term, key sites along the bike corridors should be assessed to provide bike corrals in the parking lane. Removing one parking space would allow room for dozens of bikes and would keep cyclists from having to lock to trees, poles, or other less safe items. In the long term, consider locations for covered bike parking at major community nodes like PACTO stations, Haddon Avenue, Knight Park and the Circuit Trails.

Bicycle Wayfinding and Signage

The Plan proposes an entire new network of bike lanes and bike-friendly streets. This should be paired with appropriate signage and a clear wayfinding plan. This includes pavement markings, standard bike signs, and specialty signs to direct riders to key resources like the Circuit Trail and the Link. Meeting attendees expressed frustration with the lack of signage to key trails outside of the Borough and Township as well, so wayfinding improvements could be more impaction as part of a county-wide strategy.





Intersection Concepts

Intersections are the places where most conflicts occur. According to the National Highway Traffic Safety Administration (NHTSA), in 2017, 43% of urban bicyclist fatalities occurred at intersections. Many of the major intersections in the project area have large turning radii, or even slip-lanes, that make it easy for drivers to make fast, sweeping turns. This design creates a dangerous situation for everyone moving through the intersection - walking, biking, or driving.

The design approach for each intersection featured in the plan is guided by feedback received during the planning process. The underlying issues of safety, separation, signage, and crossings need to be addressed. Intersections should focus on the safety of all users with additional consideration on delay, queuing, user expectations, motorized traffic volumes and speeds. Sight distances need to sufficient for all users at approaches and nearby driveways. When there is room there should be protection or safer interactions between separated bike lane users and turning movements. These need be intuitive, so signs and markings should easily guide and prompt safe behaviors.

There was early consensus that three of the intersections along Haddon Avenue needed further study. The intersection at Collings Avenue features a dramatic skewed geometry in the heart of Collingswood business district. Cuthbert Boulevard, where both towns meet, was a near-unanimous concern, given the crash data and discomfort from the public over safety at the intersection. Finally, in Haddon Township the intersections of Crystal Lake and Maple Avenues were studied, because they feature a unique arrangement of two busy streets in close proximity to the Westmont PATCO station.

Outside of Haddon Avenue, the plan looks closer at four additional intersections that highlight issues and arose from our public feedback. Each intersection offers its own set of design and safety concerns that need to be addressed. The following section of the plan looks at each of these intersections in greater detail, offers a conceptual design that can be phasedin, and looks to balance the needs of people moving through the intersections and nearby homes or businesses.

Phase 1: Paint, Planters, and Signals

All of the conceptual intersection designs can be started with temporary or low-cost materials and keep existing drainage and curbs in place. Paint and temporary barriers can provide an cost effective way to test the design ideas in the plan before deciding on a final condition.

Phase 2: Curbs, Stormwater, and Street Furniture

After a successful period at Phase 1, funding can be pursued to create a permanent condition. There is an opportunity to remain at Phase 1 until one or more of the streets in question at the intersection is slated for reconstruction. This often provides an opportunity to achieve the permanent condition without having to secure separate funding.





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Intersection: Haddon Avenue and Collings Avenue

Haddon Avenue and Collings Avenue meet at a skew in the heart of the Collingswood central business district. The intersection shares an awkward signal phasing with North Collings Avenue and is a very popular pedestrian crossing.

Issues identified:

- High-speed right turns from Collings Ave to eastbound Haddon Avenue
- Awkward street alignment with Collings Ave on either side of Haddon Avenue creates signal phasing that can be hard to navigate.
- On-street parking often sits within the sightlines of crosswalks making it dangerous for drivers and pedestrians to see each other.
- Nearby restaurants and businesses have very narrow sidewalks that limit any outdoor dining or shopping.

Reduce Turn Speed

The radius of street corners largely dictates the speed that vehicles feel comfortable turning the corner. Minimizing the size of the corner radius can reduce turning speeds, and encourage drivers to pause and look in both directions before making a turn.

Increase Sightlines

Visibility is the foundation of safety at any conflict point. The recommended design facilitates more eye contact between all street users, ensuring that everyone can navigate the space safely. Sightlines can be improved by designing for lower speeds, creating separation between on-street parking, and by painting crosswalks that remind users to watch for potential conflicts.

Expanded Sidewalks

Extending the curb to expand sidewalks around the intersection visually and physically narrows the roadway, creating a shorter crossing for pedestrians and slowing traffic. This also increases the available space for street furniture, outdoor dining, or other amenities.

Conceptual Site Plan

1

2

3

5

Additional crosswalks are added so both sides of approaching streets have pedestrian access. The crossing are supported by clearly marked pavement restricting parking within 20' of a crosswalk.

Expanded sidewalk areas will reduce crossing distances, provide better sightlines for pedestrians, and add approximately 3,000 square feet of sidewalk to this intersection alone

Flex zones allow for on-demand loading/ unloading, curbside pickup, outdoor seating, and bike facilities as needed

Collings Avenue is pulled in to meet Haddon Avenue at right angle. This creates a better sightline for cars and slows down right turns.

The realigned intersection would require re-phasing the signals so traffic entering from North Collings Ave can be safely accommodated.



Intersection: Haddon Avenue and **Cuthbert Boulevard**

Haddon Avenue and Cuthbert Boulevard is one of the busiest and most dangerous intersections in Camden County. Existing left turn lanes on all sides and the auto-oriented uses at three of the corners create a challenge in creating a safer intersection.

Issues identified:

- There are two through travel lanes that guickly merge into one. This is on each leg of the intersection.
- Right turns on red and large turning radii create high speed turns across existing crosswalks.

Conceptual Site Plan

- All existing left turn movements and stacking are accommodated in the proposed design. Existing driveways can also be accommodated.
- The setback between the motor vehicle lane and the bikeway makes people on bikes more easily visible to turning drivers than in a conventional intersection.
- 3 Corner islands anchor the design, extending the protected bike lane's separation as far into the intersection as possible and tightening the corner's turn radius.
- The setback creates a waiting zone for turning cars, where drivers can yield to bikes after starting to turn but before crossing the path of oncoming bicycles.
- Protected intersections also provide shorter, safer crossings for people walking. With low-speed vehicle turns and room for accessible pedestrian islands, people on foot and using personal mobility devices get many of the benefits of curb extensions.

Reduce Turn Speed

The radius of street corners largely dictates the speed that vehicles feel comfortable turning the corner. Minimizing the size of the corner radius can reduce turning speeds while also allowing for delivery trucks and emergency vehicles.

Create separated space for bikes and pedestrians

The speed and volume vehicles demand separation of bicyclists and pedestrians and a reduction of conflict points. The conceptual design creates a protected intersection designed to create a safer space for all users, including drivers.

What is a Protected Intersection? (Source: NACTO Don't Give Up at the Intersection)

Protected intersections have been implemented across North America. This design keeps bicycles physically separate from motor vehicles up until the intersection, providing a high degree of comfort and safety for people of all ages and abilities. This design can reduce the likelihood of high speed vehicle turns, improve sightlines, and dramatically reduce the distance and time during which people on bikes are exposed to conflicts. A study in New York found that protected intersections had fewer vehicle-bike conflicts than even a dedicated turn lane with a dedicated bike signal phase.



5





Intersection: Haddon Avenue and Crystal Lake Avenue/Maple Avenue

Crystal Lake Avenue and Maple Avenue intersect with Haddon Avenue only 300 feet apart, creating a unique set of safety and signaling issues. Directly south of both intersections is the Westmont PATCO station.

Issues identified:

- Left turn lanes occupy the entire length of the block between the two streets.
- Vehicles traveling east on Haddon Avenue have to quickly shift lanes twice within 300' with limited signage or pavement markings.
- Sightlines and the pedestrian walk signal on the western edge of Crystal Lake and Haddon Avenue create a dangerous crossing for those trying to reach PATCO.

Limit length of left turn lanes

Letting the left turn lanes share the middle travel lane keeps the movements while dramatically simplifying the through movements. The removal of the extra travel lane relieves the only major pinch point along Haddon Avenue for bike lanes.

Correct skew at Maple Ave

Maple Avenue provides a critical connection to Grove Street in Haddonfield and beyond. The existing intersection at Haddon Avenue is a sharp angle. There is also a slip lane right turn from Haddon onto Maple that creates an unsafe high speed turning movement. Filling in the slip lane can remove the conflicts and straightening out the end of the street near the intersection means safer movements for all - including those trying to turn right onto Maple from Haddon.

Conceptual Site Plan

Safe driveway access for businesses with clear pavement marking that give an adequate sightline for all modes.

Bike boxes are designated spaces at signalized intersections that allow bicyclists to queue in front of motor vehicles at red lights. Placed between the stop line and the pedestrian crosswalk, bike boxes increase the visibility of queued bicyclists and provide them with the ability to start up and enter and exit the intersection before motor vehicles when the signal turns green.





5

The through movements are clearly delineated on Haddon Avenue as it crosses Crystal Lake Avenue and Maple Avenue. This eliminates the shift that causes confusion for all modes.

Intersection: Collings Avenue and Atlantic Avenue/Park Avenue

Collings Avenue forms one of the three edges of Knight Park in the center of Collingswood. Between Park Avenue and Haddon Avenue, Collings Avenue cuts through the grid and creates multiple skewed intersections, all in the vicinity of Knight Park and other pedestrian destinations.

Issues identified:

- Narrow sidewalk along the Knight's Park side of Collings Ave.
- Vehicles routinely speed along the Park Avenue spur that cuts the corner of Knight Park.

- No crosswalks connecting the end of Park Avenue to Knight Park.
- The skews create long crossing distances with limited sightlines.
- Dangerous high speed right turns from Collings Ave to Atlantic Avenue.

Remove Park Avenue Spur

The spur is on land that was once part of the park and does not provide any vehicle movements that cannot be achieved at the intersection 250 feet further north on Collings Avenue. A portion of the existing pavement can be used as a multi-use path around the park and the remaining pavement could be returned to green the park. *Tighten Intersection at Atlantic and Lakeview*

This three-way intersection with Collings Avenue has one of the longest unprotected crossings for pedestrians; 105 feet long from the northern corner of Atlantic to the western edge of Lakeview. Adding bump-outs to break up the crossing distances and reduce the overall distance by 35 feet. The existing right turn from Collings Avenue to Atlantic Avenue is heavily used as an alternative route to the Collingswood PATCO station. The existing skew creates an effective turning radius of over 200 feet, which is more appropriate for highway interchanges. This creates a dangerous high speed condition for all users. The proposed bump-outs create a much safer 15 foot radius that can still accommodate delivery trucks and emergency vehicles.





Intersection: Collins Avenue and White Horse Pike

Sited between the Parkview Apartments, a block of retail and dining, Newton Creek Lake, and the Scottish Rite, this intersection is heavily used by through vehicles traffic and pedestrians making local trips.

Issues identified:

- Intersection can be dangerous to cross for pedestrians.
- White Horse Pike feels like a barrier.
- High vehicle volumes make biking in the travel lanes feel unsafe.

Conceptual Site Plan

- Expand the existing sidewalk to a multi-use path that can be used by pedestrians and bicyclists.
- A protected on-street bike lane helps narrow the travel lanes to 11 feet and provides direct eastern movement along White Horse Pike
- 3 Adding a designated spaces at signalized intersections that allow bicyclists to queue in front of motor vehicles at red lights.
- Pedestrian area at curve to access the shared-use path and provide a safe transition to either cross the street or continue on the path.
- 5 Excess street width is an opportunity to provide green stormwater management. This is particularly important near the Newton Creek watershed. Inclusion of stormwater infrastructure in this project may also open up new opportunities for funding.

Create Shared-Use Paths

The proposed alignment for The Link uses Collings

Create Leading Pedestrian Intervals at signals

A leading pedestrian interval (LPI) gives pedestrians a



Intersection: Cuthbert Boulevard and Emerald Avenue

In a study filled with its share of skewed intersections created by the collision of two or more street grids, the intersection at Cuthbert Boulevard and Emerald Avenue stand apart. Cuthbert Boulevard's wide S-curve cuts through the middle of the catchment area for the nearby Strawberry Elementary School in Haddon Township. Emerald Avenue is the only existing signalized intersection on Cuthbert Blvd between Haddon Avenue and Cooper River Park.

Issues identified:

- Addison Avenue and Penn Avenue intersect very close to the intersection, creating additional confusion for all users.
- Missing crosswalks and long distances force pedestrians to travel up to 400 feet to cross from the southeast corner of the intersection to the northwest corner.
- A large empty expanse without pavement markings in the middle of the intersection create confusion for all users, especially drivers.
- Right turn slip lanes create unsafe high-speed turning conditions.

Add and Shorten Crosswalks

The recommended design adds in the missing crosswalks so pedestrians can cross along every edge of the intersection. The existing crosswalks are perpendicular to Cuthbert and do not align with the pedestrian movements parallel to Emerald Ave. Aligning the crosswalks slightly increases the crossing distances but provides for much safer, and more visible conditions for pedestrians and bikes trying to cross.

Line up vehicle movements

Cuthbert continues to curve through the intersection, creating confusion for drivers trying to understand which land they need to be in. Eliminating confusing merge lanes and lining up the through movements makes the movements much more intuitive. Left turn lanes are preserved but better integrated into the intersection movements.

Remove right turn slip lanes

It is common practice to add right turn slip lanes to skewed streets to make right turns easier for vehicles. Slip lanes are dangerous because they prioritize vehicle speed over the safety of other users. Right turns can be accommodated with more reasonable turning radii and remove a dangerous conflict point between vehicles and other users.

Conceptual Site Plan

The existing 62 feet wide (curb-to-curb) stretch of Cuthbert between Emerald and Cooper River Park is wide enough to keep the center median, provide travel lanes, onstreet parking and buffered bike lanes.

Removing the right turn slip lanes brings pedestrians closer to the intersection without sacrificing the ability for emergency vehicles to make right turns.





with traffic.

Intersection: Park Avenue and Chestnut Avenue

Chestnut Avenue in Haddon Township is one of the few north-south streets that passes under the PATCO high speed line. For that reason, it serves as an important connection for people traveling to the Haddon Township Middle and High Schools.

Issues identified:

- Chestnut Ave is very narrow (24 feet curb-to-curb) and functions as a two way yield street with limited on-street parking on the western side of the street.
- Any north-south movements have to negotiate a dangerous jog across Park Avenue.
- This stretch of Park Avenue has no on-street parking to help slow traffic. Each lane is essentially 15 feet wide.

Add on-street parking to Park Avenue

Park Avenue west of Cuthbert Boulevard has a street design that allows for parking on one side of the street, effectively lowering the width each lane from 15 feet down to 11 feet. In order to slow traffic

and provide an amenity to neighbors, on-street parking could be allowed along Park Avenue in Haddon Township. The proposed bump-outs at the intersection only need to occupy the parking lane, leaving two 11 feet travel lanes to go through the intersection.

Create a raised intersection

Space constraints on Chestnut and Park create challenges to separate modes or create clear turning movements for vehicles. The preferred option is to allow for all users to safely navigate the intersections at a slow, careful speed. This can be accomplished with a raised intersection. A raised intersection is essentially a speed table (see photo below for an example in Haddonfield, NJ) for an entire intersection. Construction involves providing ramps on each intersection approach and elevating the entire intersection to the level of the sidewalk. They can be built with a variety of materials, including asphalt, concrete, or pavers. The crosswalks on each approach are also elevated as a part of the treatment, to enable pedestrians to cross the road at the same level as the sidewalk. They are effective at reducing vehicle speeds and can enhance the pedestrian environment and pedestrian crossings.





Bump-outs at the intersection provide extended areas for stormwater management to help control runoff.







Chestnut Street remains the same width and still functions as a two-way yield street.



Raised intersections are flush with the sidewalk and ensure that drivers traverse the crossing slowly.



Highly visible crosswalks reinforce to drivers that pedestrians can cross at each corner.

Transit Access

- Improve PATCO Station Access at Parking Lots
- Improve Bus Stops

PATCO Parking Lots

Collingswood and Haddon Township both benefit from access to Center City Philadelphia via the PATCO heavy rail line, which has stops in both towns. Built in the late 1960's, PATCO was envisioned as a high-quality commuter service for Philadelphia's southeastern New Jersey suburbs. In keeping with the thinking of the time, most PATCO stations were built in the middle of large surface park-and-ride lots. These park-and-ride lots are still well-used, but they present an obstacle for the large number of transit riders who walk or bicycle to the station. While vehicle speeds are not typically a hazard in parking lots, a lack of predictability in movements, poor sightlines, and greater distractions are issues for all travelers.

When riders walk or bicycle to connect to transit, there are environmental, economic, and public health benefits for Collingswood and Haddon Township. However, the prominence of the parkand-ride facilities and the unpleasant experience of navigating them for non-drivers are barriers to walking and bicycling to and from the station. Improvements could be made to these park-andride lots to improve safety and encourage walking and bicycling. Dedicated routes for pedestrians and bicyclists could be marked with paint or pavement through PATCO park-and-ride lots. Paint, pavement, and other traffic controls such as speed bumps could also be used to alert drivers to the presence of pedestrians and bicyclists and promote cautious driving. Bicycle parking underneath the PATCO viaducts could be expanded, including rentable storage lockers that provide greater protection from theft, and opportunities for bike share.

As transit stations are important destinations for pedestrians and bicyclists, the overall pedestrian and bicycle network should take them into consideration as important nodes. The intensity of improvements should increase closer to each station, especially directly around it, where even riders who traveled to the area by car become pedestrians.

Bus Stops

Collingswood and Haddon Township also are served by New Jersey Transit bus service to Camden along Haddon Avenue. Bus riders are especially likely to have walked or bicycled to the stop. Providing facilities like covered shelters and bike parking are important to make riding the bus a viable option. At times bus stops can also conflict with bike infrastructure. At the time when future redesigns of Haddon Avenue become possible, this must be taken into account.



Source: SF Streetsblog



Big Ideas

- Reconfigure Haddon/Cresent/Ferry Avenue
- Create a Rail-Trail in the Westville Cutoff
- Build Bicycle-Pedestrian Bridge over Cooper River

A handful of key locations and issues kept coming up in conversations between project staff and the public, but were too large to consider as part of the scope of this plan. These have been branded "Big Ideas," and are future projects for Collingswood and Haddon Township to advocate for, in partnership with neighboring municipalities and the County and State.



Reconstruction of Haddon-Crescent Intersection

There was considerable feedback about the difficulty accessing the Ferry Avenue PATCO station from neighborhoods on the east side of Collingswood. Residents in this area walk to the Collingswood station, even though it is further, because it is so difficult and unpleasant to access Ferry Avenue. In the future when NJDOT plans to reconstruct or rehabilitate the Route 130 Bridge, Collingswood should advocate for and coordinate with the State, Camden County, and City of Camden to provide better access under the bridge and safer pedestrian routes to the PATCO station on the other side.

Westville Cutoff Rail Trail

The Westville Cutoff is a never-used rail right of way that extends from the Cooper River to Gloucester. It was graded and prepared for rail infrastructure that was never built, and the easement currently contains power transmission lines. It could provide a great opportunity for creating a rail trail connecting from Cooper River Park to Gloucester and The Link. It would provide a link from the schools and activity hubs of Haddon Township to the exclave of Haddon Township residents west of Oaklyn and Audubon Park.

Bike-Ped Bridge Over the Cooper River

Crossing the Cooper River today requires taking one of the heavily used auto bridges at Crescent or Cuthbert. This can make the Cooper River Trail loop feel more disconnected than it geographically is, and discourages residents from commuting to jobs across the river. Cooper River necks down at an existing rail bridge, providing the best opportunity for a bikepedestrian bridge that would connect directly to Park Boulevard on the Camden side of the river.

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SECTION **Project Implementation**

It is essential to the process of planning that it lead to a process of implementation. Otherwise, the end result is only pretty pictures on paper.

For Collingswood Borough and Haddon Township, implementing the Connect 2020 plan will require some persistence and some patience on all fronts. Due to the COVID-19 pandemic, which is still ongoing as of this plan's completion, towns, counties, and states are all facing near-term fiscal issues, and inperson meetings are not prudent. At the same time, the upheaval that has been experienced in 2020 also offers a rare opportunity to rethink the practices of the past, and consider new ways of operating in the futur

Into this moment, the Connect 2020 plan offers a menu of policy recommendations, larger-scale ideas, and small-scale concepts. It leaves detailed engineering and site-specific engagement to future projects. It presents choices and trade-offs, but doe not make them for elected officials. In many ways, thi plan is an introductory statement in what must be a community-wide conversation about what kind of transportation system and public realm Collingswoo and Haddon Township want to have.

Continuing that conversation is the most important action item following the publication and

Connect 2020 Plan Implementation Matrix Legend						
Recommendation	Timeframe	Responsible Parties	Potential Funding	Cost		
Priority Recommendation in Bold Text	Short (0-3 years) Medium (3-5 years)	List of any potential responsible parties	List of funding sources	Costs are for planning purposes only		
Plan Recommendation	Long (5+ years)	List of any potential responsible parties	List of funding sources	Minimal, \$, \$\$, \$\$\$		

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9	approval of this plan. Both towns should launch committees whose task will be to sift through the recommendations described above, weigh their merits and urgency, and work as a mediator between government and the community to prioritize projects policies and set them on the path to implementation. That will also require the work of communicating with city staff, with the public, and with outside stakeholders and potential funders at different levels of government.
o he re.	Ultimately, there must also be an eye on the future. It is recommended that this plan be reexamined and updated every five years, to adjust to the changing technologies and attitudes towards transportation, the environment, public health, and safety. The best plans are ones that are flexible and recognize the iterative nature of change in our cities and towns.
es is od	The following matrix lists individual recommendations from the plan along with information on time-frame, responsible parties, potential funding sources, and an order of magnitude cost. A legend is shown below. A number of recommendations have been identified as priorities that are achievable in the short to medium
	time-frame. There selection was heavily influenced by

the outreach and feedback the plan has received.

Connect 2020 Plan Implementation Matrix					
Recommendation	Timeframe	Responsible Parties	Potential Funding	Cost	
Policy Recommendations					
Investigate Use of Flex Zones	Short	Collingswood Borough, Haddon Township, Camden County, local business groups	DVRPC (TCDI or as part of their 2021 work program); internal research from municipalities	\$	
Consider Right-on-Red Ban	Short	Collingswood Borough, Haddon Township, Camden County		Minimal	
Revisit Bike to School Policy	Medium to long	Collingswood Borough, Haddon Township, School District		Minimal	
Develop Education and Advocacy Campaign	Medium	Collingswood Borough, Haddon Township	New Jersey Division of Highway Traffic Safety (NJDHTS)	\$	
Pedestrian Recommendation	ons				
Conduct Sidewalk Gap/ Accessibility Audit	Short	Collingswood Borough, Haddon Township	DVRPC TCDI, NJDOT Local Technical Assistance Program	\$	
Priority Accessibility Improvements	Medium	Collingswood Borough, Haddon Township, Camden County, private property owners	NDOT Local Aid Programs, County and Municipal capital Improvement Plan/ resurfacing plan	\$\$	
Create Network of Pedestrian Priority Corridors	Medium	Collingswood Borough, Haddon Township	NDOT Local Aid Programs, County and Municipal capital Improvement Plan/ resurfacing plan	\$	
Improve Baseline Intersections	Long	Collingswood Borough, Haddon Township, Camden County	NDOT Local Aid Programs, County and Municipal capital improvement plan/ resurfacing plan	\$\$	

Connect 2020 Plan Imp	lementation	Matrix		
Recommendation	Timeframe	Responsible Parties	Potential Funding	Cost
Improve Pedestrian Priority Intersections	Medium	Collingswood Borough, Haddon Township, Camden County	NDOT Local Aid Programs; DVRPC HSIP; County and Municipal capital improvement plan/ resurfacing plan	\$\$\$
Improve Major Haddon Avenue Crossings	Medium	Collingswood Borough, Haddon Township, Camden County	NDOT Local Aid Programs; DVRPC HSIP and CMAQ; County and Municipal capital improvement plan/ resurfacing plan	\$\$\$
Improve Access to Schools	Short to medium	Collingswood Borough, Haddon Township, Camden County	NJDOT Safe Routes to School grant program	\$\$
Bicycle Recommendations				
Haddon Avenue Bike lane	Short to medium	Collingswood Borough, Haddon Township, Camden County	NDOT Local Aid Programs; DVRPC HSIP and CMAQ; County and Municipal capital improvement plan/ resurfacing plan	\$
Haddon Avenue Remove Parking	Medium	Collingswood Borough, Haddon Township, Camden County		\$\$
Haddon Avenue Move Curbs	Long	Collingswood Borough, Haddon Township, Camden County	NJDOT Local Aid Programs; DVRPC HSIP; County and Municipal capital improvement plan/ resurfacing plan	\$\$\$\$
MacArthur Blvd Bike Lane	Short	Haddon Township	NJDOT Local Aid Programs, County and Municipal capital improvement plan/ resurfacing plan	\$

Priority Recommendations in Bold Text

Priority Recommendations in Bold Text

Connect 2020 Plan Implementation Matrix					
Recommendation	Timeframe	Responsible Parties	Potential Funding	Cost	
Cuthbert Bike Lanes	Medium	Collingswood Borough, Haddon Township, Camden County	NDOT Local Aid Programs; DVRPC HSIP and CMAQ; County and Municipal capital improvement plan/ resurfacing plan	\$\$	
White Horse Pike Sidepath	Medium	Collingswood Borough, NJDOT	NDOT Local Aid Programs; DVRPC HSIP and CMAQ; County and Municipal capital improvement plan/ resurfacing plan	\$\$	
Shared Streets Short- term Improvements	Short	Collingswood Borough, Haddon Township	Municipal capital improvement plan	\$	
Shared Streets Long-Term Improvements	Long	Collingswood Borough, Haddon Township	NJDOT Local Aid Programs, County and Municipal capital improvement plan/ resurfacing plan	\$\$	
Install Priority Bike Amenities	Medium	Collingswood Borough, Haddon Township	NJDOT Local Aid Programs, County and Municipal capital improvement plan/ resurfacing plan	\$	
Intersection Recommendat	ions				
Collings and Haddon - Short Term	Short	Collingswood Borough, Camden County	NJDOT Local Aid Programs, County and Municipal capital improvement plan/ resurfacing plan	\$	
Collings and Haddon - Long Term	Long	Collingswood Borough, Camden County	NDOT Local Aid Programs; DVRPC HSIP and CMAQ; County and Municipal capital improvement plan/ resurfacing plan	\$\$\$	

Connect 2020 Plan Implementation Matrix					
Recommendation	Timeframe	Responsible Parties	Potential Funding	Cost	
Haddon and Cuthbert - Short Term	Short	Collingswood Borough, Haddon Township, Camden County	NJDOT Local Aid Programs, County and Municipal capital improvement plan/ resurfacing plan	\$	
Haddon and Cuthbert - Long Term	Long	Collingswood Borough, Haddon Township, Camden County	NJDOT Local Aid Programs, County and Municipal capital improvement plan/ resurfacing plan	\$\$\$	
Haddon/Maple/Crystal Lake - Short Term	Short	Haddon Township, Camden County	NDOT Local Aid Programs; DVRPC HSIP and CMAQ; County and Municipal capital improvement plan/ resurfacing plan	\$	
Haddon/Maple/Crystal Lake - Long Term	Long	Haddon Township, Camden County	NDOT Local Aid Programs; DVRPC HSIP and CMAQ; County and Municipal capital improvement plan/ resurfacing plan	\$\$\$	
Cuthbert and Emerald -Short Term	Short	Collingswood Borough, Haddon Township, Camden County	NJDOT Local Aid Programs, County and Municipal capital improvement plan/ resurfacing plan	\$	
Cuthbert and Emerald -Long Term	Long	Collingswood Borough, Haddon Township, Camden County	NDOT Local Aid Programs; DVRPC HSIP and CMAQ; County and Municipal capital improvement plan/ resurfacing plan	\$\$\$	

Priority Recommendations in Bold Text

Priority Recommendations in Bold Text

Connect 2020 Plan Implementation Matrix						
Recommendation	Timeframe	Responsible Parties	Potential Funding	Cost		
Collings/Park/Atlantic - Short Term	Short	Collingswood Borough, Camden County	NJDOT Local Aid Programs, County and Municipal capital improvement plan/ resurfacing plan	\$		
Collings/Park/Atlantic - Long Term	Long	Collingswood Borough, Camden County	NJDOT Local Aid Programs, County and Municipal capital improvement plan/ resurfacing plan	\$\$\$		
Park and Chestnut - Short Term	Short	Haddon Township, Camden County	NJDOT Local Aid Programs, County and Municipal capital improvement plan/ resurfacing plan	\$		
Park and Chestnut - Long Term	Long	Haddon Township, Camden County	NDOT Local Aid Programs; DVRPC HSIP and CMAQ; County and Municipal capital improvement plan/ resurfacing plan	\$\$\$		
Collings and White Horse Pike - Short Term	Short	Collingswood Borough, NJDOT	NJDOT Local Aid Programs, County and Municipal capital improvement plan/ resurfacing plan	\$		
Collings and White Horse Pike - Long Term	Long	Collingswood Borough, NJDOT	NDOT Local Aid Programs; DVRPC HSIP and CMAQ; County and Municipal capital improvement plan/ resurfacing plan	\$\$\$		

Connect 2020 Plan Implementation Matrix						
Recommendation	Timeframe	Responsible Parties	Potential Funding	Cost		
Transit Recommendations						
Collingswood PATCO Parking Lot Improvements	Long	PATCO	NJDOT Safe Streets to Transit; DVRPC CMAQ	\$\$\$		
Westmont Patco Parking Lot Improvements	Long	РАТСО	NJDOT Safe Streets to Transit; DVRPC CMAQ	\$\$\$		
Upgrade Bus Stops	Medium	NJ Transit, Camden County, Collingswood Borough, Haddon Township	NJDOT Safe Streets to Transit, Cross County Connection TDM Reimbursement Program (at least for Collingswood who is a member)	\$\$		

Priority Recommendations in Bold Text



The following information will be included in the final report appendix as a separate PDF:

Pages 1- 223

• Boards and Survey Responses from Collingswood Greenfest and Haddon Township Go Green Festival in April, 2019

Pages 224-226

• Meeting agenda and minutes from Steering Committee Meeting June 11. 2019

Pages 227-288

• Boards, survey responses, and meeting summary of Public Workshop in January 2020

Pages 289-343

• Model complete streets ordinances and policy guidance document from NJDOT

Pages 344-346

Copy of Collingswood Complete Streets Ordnance



ADOPTED September 2020



Master Plan





