#### Town of Mashpee



#### **Planning Board**

16 Great Neck Road North Mashpee, MA 02649

#### Meeting of the Mashpee Planning Board Wednesday, January 17, 2024; 5:30 PM Mashpee Town Hall - Waquoit Meeting Room 16 Great Neck Road North, Mashpee, MA 02649 \*Broadcast Live on Local Channel 8\* \*Streamed Live on the Town of Mashpee Website: https://www.mashpeema.gov/channel-8\*

#### Call Meeting to Order

Pledge of Allegiance

#### Local Comprehensive Plan Update

- Continue Review and Discussion of Draft Implementation Table
- Review and Discussion of the Most Recently Updated Draft Elements:
  - o Economic Development
  - o Sustainability
  - o Transportation
  - o Municipal Buildings Facilities and Services

#### **Approval of Minutes**

• Review of Meeting Minutes from January 3, 2024

#### Public Comment

#### Public Hearings

#### 7:10 PM (Continued from 08/02/2023)

- **Applicant:** Southworth Mashpee Properties LLC
- Location: 275 Quinaquisset Avenue (Map 69 Parcel 32)
- **Request:** Applicant proposes to modify the Willowbend Country Club Special Permit to construct a 14-unit single family cottage community immediately contiguous to the Willowbend Golf Course. With these changes the total unit count for the Willowbend project would be increased to 287 if the Board authorizes the annexation of 275 Quinaquisset into the Willowbend Special Permit as allowed. 287 dwelling units is the maximum number of dwelling units authorized under the Special Permit. All units will be connected to and served by the existing privately owned wastewater treatment plant which serves the entire Willowbend project.

#### New Business

- Request to Release the Performance Guarantee Securing Construction Completion for the Project Referred to as Sherwin Williams
- Consideration of a request made by Mr. William Russell, CEO, Cape Pickle, LLC to allow indoor recreational facilities in the I-1 Zoning District. Currently indoor recreational facilities are only allowed in commercial districts by special permit.

#### Old Business

 Review and Execute the Special Permit Modification #2 Decision for the Cluster Subdivision CLERK Referred to as Ockway Highlands
TAN 11 '24 PM1:30

#### **Town of Mashpee**



**Planning Board** 

16 Great Neck Road North Mashpee, MA 02649

Continue Review and Discussion of Updated Draft Raze and Replace Bylaw

#### **Board Engineer Report**

Project Reviews and Inspections

#### **Chairwoman's Report**

• Water Quality Issues

#### **Town Planner Report**

- Harbor Management Planning Committee Update
- Housing Production Plan Update
- MassDEP Proposed Modifications to Wetlands Protection Regulations and the 401 Water Quality Certification Regulations to Promote Coastal Resiliency Through New Land Subject to Coastal Storm Flow Standards and Updated Stormwater Management Standards
- Draft Regional Housing Strategy Invitation for Comment Planning Department Intending to Submit Comments

#### **Board Member Committee Reports**

• Cape Cod Commission, Charter Review Committee, Community Preservation Committee, Design Review, Plan Review, Environmental Oversight Committee, Historic District Commission

#### Correspondence

- Town of Barnstable Notices
- Town of Falmouth Notices

#### Additional Topics (not reasonably anticipated by Chair)

#### Adjournment

MASHPEE TOWN CLERK JAN 11'24 PM1:30

#### LOCAL COMPREHENSIVE PLAN UPDATE

#### **IMPLEMENTATION PLAN FOR ECONOMIC DEVELOPMENT**

#### **GOALS**

GOAL ED-1 Ensure a prosperous and steadily growing local economy that supports financial independence for all residents while preserving Mashpee's environmental quality, town character, and cultural heritage.

*Rewrite: "To create and maintain a prosperous and steadily growing and sustainable economy that supports financial independence while preserving and enhancing Mashpee's environmental quality, town character, and cultural heritage."* 

## GOAL ED-2 Bolster support for local businesses, local agriculture, and the "blue economy."

**Read the article "8 Policy Strategies Cities (or Towns) can Use to Support Local** Businesses". Some of the strategies that could work for Mashpee are:

- 1. GET ZONING RIGHT FOR SMALL BUSINESSES 2. SET ASIDE SPACE FOR LOCAL BUSINESSES IN NEW DEVELOPMENT 3. ADOPT A BUSINESS DIVERSITY ORDINANCE 4. FACILITATE ADAPTIVE REUSE OF VACANT BUILDINGS 5. OPEN A SMALL BUSINESS OFFICE (perhaps too expensive) 6. GIVE PREFERENCE TO LOCAL BUSINESSES IN PURCHASING and 7. EXPAND ACCESS TO CAPITAL.
- 2. Read the article: "Farm Stops: A New Way to Enhance Local and Regional Food Systems" A Farm Stop is a small-farm-supporting grocery store that supports small-scale farmers by sourcing agricultural products from nearby producers and by operating on consignment. This concept based on a survey of 284 people from 4 different Farm Stops around the country produced the following results:
  - 1. Enhanced access to local foods
  - 2. Keeps \$ circulating with a local radius
  - 3. Community resilience in crisis events (global pandemics, recessions)
  - 4. Sense of Place- create environments locals enjoy
  - 5. Sense of Meaningful action- serve community needs, bolster local producers, improve health and wellbeing

3. (Our "blue economy" cannot really grow until we remove the pollution from our water bodies. There is no agreed upon definition for the term blue economy per the August 5, 2022 Congressional Research Service attached. <u>https://crsreports.congress.gov</u>). NOAA defines the blue economy as the "sustainable use of ocean resources for economic growth, improved livelihoods and job creation.")

Goal #2 of current LCP under Economic Development: "To increase the incomes of Mashpee residents." (too vague)

Goal ED-3 Produce a stable and adequate local workforce with education and affordable living (affordable and attainable housing, education, health, transportation, childcare and recreation).

This is a lofty goal. To have a stable and adequate local workforce we need all the elements listed. Without affordable housing we cannot have a stable workforce. Employers should care about housing because: 1. Housing costs affect where employers can locate their companies 2. Available and affordable housing allows employers to attract and retain diverse employees at all levels 3. Access to affordable and stable housing can make workers more productive 4. Affordable housing options improve job access. (See attached article called "Four Reasons Why Employers Should Care about Housing") This goal is not adequately stated in current LCP under Economic Development.

GOAL ED-4 Meet or exceed the best available technological resources/infrastructure to ensure Mashpee is economically competitive in the region and state.

A very important goal. Best available infrastructure enables trade, powers businesses, connects workers to their jobs, creates opportunities for citizens, and protects us from increasingly unpredictable natural environment. From investment in telecommunication systems, broadband networks, energy projects, sewer projects, infrastructure is the backbone of a healthy economy. Creating the best available infrastructure creates new jobs! (See article "Choosing the Right Technology to Support Your Municipality" and article "Investing In America" October 2023

This goal was not referenced in the current LCP as technology did not have the prominence in economic development that it has today.

#### POLICIES

Policy ED-1 Provide financial and policy-based support for local fishers and businesses. (*Define financial and policy-based support*)

Policy ED-2: Minimize homelessness and the proportion of Mashpee residents living below the poverty line. *Rewrite: WORK TO MINIMIZE ......* (see articles entitled : "The Federal Government's Plan to Tackling America's Homelessness Crisis." Enterprise – "Cape Cod's Homeless Population is Consistent from Year to Year."

Policy ED-3: "Regularly explore grant funding opportunities for projects that support Mashpee's economic development goals whether it be related to community systems, natural systems or built systems." (People don't understand what community, natural and built systems are. Use different words.)

Policy ED-4 Prioritize economic development which creates jobs with a livable wage. (Good. See excerpt of article entitled: "What is a Living Wage? Definition, History, and How to Calculate.)

A good definition of livable wage is: "a socially acceptable level of income that provides adequate coverage for basic necessities such as food, shelter, child services , and healthcare w/o reliance on outside assistance."

Policy ED-5: Promote joint economic development effort with the Mashpee Wampanoag Tribe. (*This is an important policy in furthering the Town's relationship with the tribe.*)

#### **Policy ED-6: Develop municipal broadband service.**

(The Bipartisan Infrastructure Law has already allocated \$145 million to Massachusetts to expand high-speed internet access. The Massachusetts Broadband Institute, a state agency, wants to bring affordable high-speed internet to every person in MA. MBI has developed planning documents and wants people to read the docs and engage in public comment which ends December 15, 2023. See attached MBI info.

Policy ED-7: Leverage the assets of the Economic Development and Industrial Corporation to better meet the needs of the local economy and to support its growth.

(EDIC creation is authorized by MGL Chapter 121C to allow towns or cities identified as labor surplus areas by US Dept. of Labor to implement local economic development projects in accordance with locally approved economic development plans.) See attached info. Question for the experts: Is Mashpee a labor surplus area?

Policy ED-8: Minimize or remove barriers of entry for new startups or small businesses including but not limited to streamlining the local permitting process and incentivizing certain uses by allowing them by-right as opposed to a special permit process. (*Pop up stores to test viability of business. Make list of important businesses that would provide needed jobs and could/should be permitted by-right.* 

#### Policy ED-9: Increase access to childcare for Mashpee's workforce.

(This is a tall order. The \$24 billion the federal government provided the states to keep child care services going under the American Rescue Plan of 2021 expired at the end of September 2023). There are training courses for homebased daycares. This could work for an unemployed single mother to train as a daycare provider. (see excerpt of Money Report in Partnership with NBC)

#### ACTIONS

ACTION ED-1 "Incentivize locally owned, small business development and maintain its long-term growth by auditing the zoning bylaw to determine regulatory areas that discourage local business and harm its long-term sustainability. Bring forth zoning changes for Town Meeting consideration based on those audits."

(This action is based on Policy ED-8.) How do we incentivize locally owned, small business development? (See Action 9 as an example.)

ACTION ED-2 Work with the EDIC and Mashpee Chamber of Commerce to assess areas where the Town can assist with start-up costs.

(Supports Policy ED-7) How does the Town assist with start-up costs?

ACTION ED-3: Partner with higher education and regional institutions, including Woods Hole MBL, to enhance childcare and afterschool programs.

(Follows Policy ED-g) Are you asking that the institutions have an on premise childcare and afterschool program?

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ACTION ED-3: Consider increasing the Kids Klub Childcare program.

(Follows Policy ED-g) **Rewrite:** <u>Consider options</u> to increase the Kids Klub Childcare program.)

ACTION ED-4: Evaluate use conflicts in fisheries and invest in appropriate infrastructure. *Please explain what this statement means.* 

ACTION ED-5: Promote business which offer living wages for all Mashpee residents. (Follows Policy ED-4)

ACTION ED-6: Ensure prime soils and shell fishing areas are preserved and set aside for agriculture and aquaculture respectively. Explanation?

ACTION ED-7: Support current major local industries (such as financial services) while promoting new and emerging ones (such as eco-tourism and solar companies).

Participate in a cape wide tourism district to boost funds available for marketing and housing initiatives being promoted by the CCC. 70% of every dollar earned on the Cape is related to tourism in some way, per the executive officer of the Cape Cod Commission. Financial services are big business in Mashpee given the amount of retirees/wealth in this town. Mashpee is a perfect place to promote eco-tourism. Eco-tourism can be defined as responsible travel to natural areas which conserves the environment and improves the well-being of local people. Eco-tourism is travel in which you enjoy the world's amazing diversity of natural life and human culture without causing damage to either. The possibility of an interactive village for the tribe could be an eco-tourism venue. We now have a solar bylaw in Mashpee zoning bylaws, section 174-45.7.

ACTION ED-8: "Identify and remove barriers to full engagement in the local economy (such as childcare, education). *Enumerate more barriers to full engagement.* 

ACTION ED-9: "Provide public incubator space for emerging businesses." A business incubator is a specialized program designed as a space for new businesses to learn and grow. The program provides services for entrepreneurs and startups while offering reduced rates for supplies and workspace. (See article: Cape Cod Culinary Incubator to open shared space, commercial kitchen at future home of KAM Appliances) Housing Matters an Urban Institute Tritiative



Goal ED-3

#### HOUSING ACCESS AND STABILITY, UPWARD MOBILITY

#### Four Reasons Why Employers Should Care about Housing

#### September 11, 2019

by Aaron Shroyer and Veronica Gaitán

Available, affordable housing that fits a range of household types and lifestyles is essential to attracting, retaining, and developing a diverse, productive workforce. But with 47 percent of renters and 23 percent of homeowners <u>paying</u> 30 percent or more of their income on housing, high housing costs can <u>prevent workers from living near their jobs</u> and can put a strain on the local economy by <u>slowing employment growth</u>.

Given the far-reaching effects of today's housing shortages, the public sector needs private- and philanthropic-sector support to tackle this challenge. A <u>new report by the Urban Institute</u> shows how a lack of affordable housing can hold back a region's economy. To get ahead of this issue, employers should not only be aware of how housing affects their employees but also advocate for and invest in affordable housing as a way to support their workforce and the local economy. Here are four reasons why employers should know about, care about, and bolster affordable housing.

#### Housing costs affect where employers can locate their companies

Housing availability and costs are two of the most important factors in determining quality of life that companies take into account when moving into a metropolitan region. Why do they matter so much? When employees cannot afford to live near jobs, employers must spend more money on wages or turnover costs.

This inability of working class and service class workers to afford housing in economically vibrant cities <u>hurts</u> workers and cities too. Workers are either shut out of living in cities where their skills could command a higher salary, or the higher salaries they do earn are <u>negated</u> by higher living costs. And when workers choose to live elsewhere, cities lose productivity because of unfilled jobs.

#### Available and affordable housing allows employers to attract and retain diverse employees at all levels

High housing costs <u>limit</u> who can afford to live in a region, leading to a shortage of workers for lower-wage roles. With the exception of people who earn very high wages, job seekers are discouraged from moving into the region, and the region's existing workers get pushed to less costly markets. This creates problems for attracting and retaining workers at any level. For example, nearly 75 percent of employers in Greater Boston <u>reported (PDF)</u> finding it "extremely or somewhat difficult" to recruit or retain employees, and two-thirds cite the cost of housing as a major barrier. Cost pressures on low-wage workers are especially fierce, leading to displacement. A recent <u>survey</u> in the Washington, DC, region found that 29 percent of respondents knew someone who moved involuntarily within the past two years, with high housing costs being the primary reason for those moves. Unsustainably high rents can ultimately lead to forced moves and evictions, and survey data <u>show</u> that low-income workers are more likely lose their jobs after experiencing a forced move out of rental housing.

A lack of affordable housing can impede employee productivity. A <u>study of 34,000 workers</u> in the United Kingdom found that those who commute fewer than 30 minutes per day gain seven days' worth of productive time annually, compared with those who commute over an hour per day. Those with longer commutes are also more likely to experience depression, financial concern, and stress. Another <u>study</u> calculated that Boston-area drivers spend 164 hours in traffic per year and equated this time to a productivity cost of \$4.1 billion.

Economic instability and housing instability are closely related. Access to stable, affordable housing is particularly important for low-wage workers, who typically have inflexible work schedules and leave options. If they face high housing and transportation costs, they are then more likely to experience economic instability if related emergencies, such as a sudden repair, an unpredictable and extreme commute, or a summons to court for an eviction hearing force them to miss work. In addition, their performance at work might <u>suffer</u> because of the extra stress of dealing with an eviction and finding a new place to live.

#### Affordable housing options improve job access

The lack of affordable housing close to metropolitan job centers often pushes job seekers to the suburbs and beyond. When faced with a long commute into the city, some households might seek employment opportunities closer to their new homes. In fact, 64 percent of people who earn less than \$50,000 said they would <u>consider (PDF)</u> a lateral employment move if it would shorten their commute, while 60 percent of workers earning more than \$50,000 said the same.

This spatial mismatch between regional employment clusters and potential worker populations limits access to jobs. Because these outer neighborhoods are not as accessible by public transit, this mismatch can <u>add to congestion</u> on roads and highways. Long commutes impede employee retention. Fifty-eight percent of larger companies that lack nearby affordable housing options report that employees cite <u>long</u> commute times as a reason why (PDF) they left the company.

Employers often only consider employees' housing costs when the company is contemplating a move or an expansion. Instead, employers across the country should educate themselves about how a lack of affordable housing affects their workforce. Employers should learn about policies that can <u>improve housing across the income spectrum</u> as a way to better attract and retain workers. In higher-cost markets, employers should combine advocacy with direct investment in affordable housing, which, in turn, is an investment in the vitality of their workforce. This investment can benefit their own bottom line, as well as their employees and the local economy as a whole.

Photo by Nate Hovee/Shutterstock

Affordability, Job Access

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#### HOUSING ACCESS AND STABILITY

Local Policies to Strengthen the Renter Safety Net

Abby Boshart October 25, 2023 / Article Choosing the Right Technology to Support Your Municipality | BoardEffect





#### September 19, 2018

# Choosing the Right Technology to Support Your Municipality

#### Written by Nick Price

For the most part, government boards operate in much the same way as other types of boards. Best practices for good governance apply to all boards of directors, including municipal boards. Directors of government boards often recognize their responsibility to ensure accountability and transparency more readily than other boards because of their service to the general public.

Municipal boards may be slower to implement technology than private or public boards because of lengthy procurement cycles and lack of government funds, even when technology promotes efficiency and saves money. When governments invest taxpayer dollars in technology, they need to be sure to get it right. Their first course of action is to look for governance management software solutions that were designed with the needs of government boards in mind.

#### Choosing the Right Technology to Support Your Municipality | BoardEffect

Most government boards have to abide by state open meetings acts. Board directors for government boards are in the business of citizen capital. Government board directors have a duty to the general public to be accurate, transparent, accountable and efficient, and to make good use of public funds. These qualities are also part of the principles of good corporate governance. Secrecy of government operations generates mistrust while transparency ensures accountability.

# What Is the Right Technology for Government Boards?

The right technology for government boards is technology that meets the needs of that particular board. Since government boards operate much like other boards, in seeking the right technology, boards should consider asking the same basic questions about technology as any other board. McKinsey & Company recommends that all boards ask themselves five basic questions about technology:

- 1. How well does technology enable the core business?
- 2. What value is the business getting from its most important IT projects?
- 3. How long does it take the IT organization to develop and deploy new features and functionality?
- 4. How efficient is IT at rolling out technologies and achieving desired outcomes?
- 5. How strong is our supply of next-generation IT talent?

The right technology for government boards will support the core business activities of the board and enable them to be true partners with their many stakeholders. Government boards should be able to support the cost of implementing new technology by demonstrating the value it creates in costeffectiveness, accuracy, efficiency and transparency. Municipal boards need software solutions from innovative software providers that understand the unique needs of government boards. The right software providers are forward-thinking and continually offer valuable upgrades and enhancements.

Security is a high priority for municipal boards and boards should consider the level of security that software providers offer before making choices. Electronic board solutions are only good if they work consistently. Government boards seeking to implement new technology should make sure that software providers offer 24/7 customer service every day of the year with quick response by qualified service personnel.

The most basic tools for government boards are a secure board portal and a secure messaging system. Electronic board portals support good governance by streamlining processes that lead to increased transparency and accountability. With these systems in place, government boards should be cognizant of other helpful digital applications, such as software for taking meeting minutes and electronic applications for board evaluations.

#### How Does Technology Support Municipalities?

Board portal software supports municipalities by automating processes, reducing human error, preserving documents, promoting good governance and maintaining confidentiality as necessary.

Governance management solutions automate many of the board's standard processes like preparing agendas, taking minutes and streamlining meetings. Software solutions provide a safety net for issues that are subject to human error.

When government board directors make mistakes, even minor mistakes, they risk noncompliance with laws and regulations. Board portal software preserves the details of compliance issues, such as complying with meeting notice requirements, maintaining public access to meetings, retaining copies of agendas and minutes for the required length of time, and recording when the board met in closed sessions, along with their reasons for doing so.

BoardEffect uses cloud-based storage systems that provide unlimited storage. BoardEffect's board management software solution allows board directors to retrieve documents quickly when needed for compliance or Freedom of Information Act (FOIA) requests. Many government boards are required to write annual reports for the council or other parties.

Government boards are under as much pressure as other types of boards to make sure their boards have the proper composition that provides diversity of people and skillsets. Board portal technology supports good governance by preserving the board's efforts to recruit, nominate and appoint candidates for the board that best represent the governing body and its constituency.

Board portals help to manage a municipality's calendar of activities. Board administrators can set up the system so that it sends out automatic notifications about time-sensitive matters.

Government boards have the ability to go into executive session for the reasons outlined in their bylaws. Board portals support clear minute-taking that details the reasons boards decided to utilize private executive meeting matters. Minutes should also document how long board members spent in executive session. Due to confidentiality issues, the board should record only broad details of the matter for the permanent record.

#### The Right Technology for Municipalities Supports Boards Through Board Cycles

Municipal boards work through the same cycles as other boards. Citizens support their municipal governments through their taxes. Since municipal boards are the face and voice of the citizens in their

#### 12/12/23, 12:50 PM

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communities, they need technology offered by BoardEffect, which supports their meeting cycles, their annual cycles and the development cycles of the board. In the interest of accountability, government boards need to support their meeting cycle with clear documentation and transparency. The right technology supports the annual cycle of required board activities, such as updating policies, maintaining regulatory compliance and planning initiatives. The development cycle focuses on board education, development and skillsets, and technology provides documentation of such progress.

In essence, getting the right technology helps government boards fulfill their duties as the general public expects them to. The sooner that municipalities can get buy-in from their authorities, the sooner they can implement software solutions that save money, improve efficiency and streamline workflow.

#### **INTERESTED IN LEARNING MORE?**

See how BoardEffect can help your municipality board leverage technology for increased efficiency and better corporate governance.

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# INVESTING IN AMERICA

#### President Biden's Bipartisan Infrastructure Law is Delivering in Massachusetts

#### As of October 2023

The Biden-Harris Administration has hit the ground running to implement the Bipartisan Infrastructure Law, and it is already delivering results for the people of Massachusetts. To date, \$6 billion in Bipartisan Infrastructure Law funding has been announced and is headed to Massachusetts with over 196 specific projects identified for funding. Since the Bipartisan Infrastructure Law passed, approximately \$5.1 billion has been announced for transportation – to invest in roads, bridges, public transit, ports and airports – and roughly \$402 million has been announced for clean water and water infrastructure. Massachusetts received \$147.4 million to connect everyone in the state to reliable high-speed internet and, as of today, more than 349,000 Massachusetts households are already saving on their monthly internet bill due to the Bipartisan Infrastructure Law. Many more projects will be added in the coming months, as funding opportunities become grant awards and as formula funds become specific projects. By reaching communities all across Massachusetts – including rural communities and historically underserved populations – the law makes critical investments that will improve lives for Massachusettsans and position the state for success.

**Roads and Bridges:** In Massachusetts, there are 444 bridges and over 1,416 miles of highway in poor condition. The Bipartisan Infrastructure Law will rebuild our roads and includes the single largest dedicated bridge investment since the construction of the interstate highway system. Based on formula funding alone, Massachusetts is expected to receive approximately \$5.4 billion over five years in federal funding for highways and bridges.

- Announced funding: To date, \$3.3 billion has been announced in Massachusetts for roads, bridges, roadway safety, and major projects. This includes:
  - \$2.5 billion in highway formula funding and \$730.6 million in dedicated formula funding for bridges.

o \$71.2 million through the RAISE program.

**Internet:** High-speed internet is necessary for Americans to do their jobs, participate in school, access health care, and stay connected. Yet, over 12,522 homes and small businesses in Massachusetts do not have access to high-speed internet infrastructure. The Bipartisan Infrastructure Law invests \$65 billion to provide affordable, high-speed internet to everyone in America. The Biden-Harris Administration worked with internet providers to offer high-speed internet plans that are fully covered by the Affordable Connectivity Program — meaning most eligible households can now get high-speed internet without paying a dime. Now, the Biden-Harris Administration is calling on Congress to extend this program through 2024. Without action from Congress, millions of Americans will lose their internet connection and the economic opportunities that come with it. See ACP enrollment for every state and Congressional District <u>here</u>.

• **Announced funding:** To date, Massachusetts has received \$147.4 million through the Broadband Equity, Access, and Deployment Program (BEAD) to provide access to high-speed internet to everyone in Massachusetts. In addition, about 349,000 households in Massachusetts are enrolled in the Affordable Connectivity Program, with more signing up every day. Households can check their eligibility, sign up, and find fully covered internet plans at <u>GetInternet.gov</u>.

**Water:** The Bipartisan Infrastructure Law represents the largest investment in water infrastructure in American history, including the first-ever dedicated federal funding to replace lead service lines and address dangerous PFAS chemicals.

- Announced funding: To date, \$402 million has been announced to Massachusetts to provide clean and safe water across the state and improve water infrastructure. This includes:
  - \$363 million available to provide clean and safe water across the state through the Environmental Protection Agency. Of this funding, \$99.5 million is dedicated to lead pipe and service line replacement, with another \$87 million for safe drinking water investments that can also support lead pipe replacement.

**Public Transit:** The Bipartisan Infrastructure Law makes the largest investment in public transit in U.S. history. Based on formula funding alone, Massachusetts would expect to receive approximately \$2.8 billion over five years under the Bipartisan Infrastructure Law to improve public transit across the state.<sup>1</sup> This funding will expand healthy, sustainable transportation options in Massachusetts, where non-white households are 2 times more likely to commute via public transportation and 27% of transit vehicles in the state are currently past useful life.

<sup>&</sup>lt;sup>1</sup> Transit formula funding amounts are subject to changes resulting from the 2020 census or from annual transit service data reported to FTA's National Transit Database.

• Announced funding: To date, Massachusetts has been allocated \$1.1 billion to improve public transportation options across the state.

**Clean Buses:** The Bipartisan Infrastructure Law invests over \$10 billion for clean public transit and school buses. This includes a \$5 billion investment over the next five years to replace existing school buses with zero-emission and low-emission models. Use of clean school buses promotes cleaner air, reduced health risks, especially for children, and reduced greenhouse gas emissions. This year alone, funding from the Bipartisan Infrastructure Law will help double the number of clean public transit buses on America's roads.

 Announced funding: To date, schools in Massachusetts have been awarded \$29.6 million through the Environmental Protection Agency's Clean School Bus Program. In addition, communities in Massachusetts were awarded \$166.2 million for clean transit buses and improved bus service through DOT's Low- and No- Emission Bus and Bus and Bus Facilities Program.

**Electric Vehicle Charging:** The Bipartisan Infrastructure Law invests \$7.5 billion to build the first-ever national network of electric vehicle chargers in the United States and is a critical element of President Biden's plan to address the climate crisis and support domestic manufacturing jobs. Through the National Electric Vehicle Infrastructure Program alone, Massachusetts should expect to receive roughly \$63 million in formula funding over five years to support the expansion of electric vehicle charging in the state.

• Announced funding: To date, Massachusetts has been allocated \$36.4 million to build out a network of EV chargers across the state.

**Clean Energy & Power:** Power outages cost the U.S. economy about \$150 billion annually. The Bipartisan Infrastructure Law makes a historic investment to upgrade our power infrastructure by making the grid more resilient and building thousands of miles of new transmission lines to deliver clean, affordable electricity. The law also makes a historic investment in clean energy technologies like advanced nuclear, clean hydrogen, carbon capture, and batteries, as well as a historic \$3.5 billion investment in weatherization to improve energy efficiency of homes and lower energy costs for impacted households by an average of \$372 per year.

- **Announced funding:** To date, approximately \$170.5 million has been allocated to Massachusetts for clean energy, energy efficiency, and power. This includes:
  - \$80.1 million for weatherization;
  - \$7.7 million through the State Energy Program;

Housing Matters an Urban Institute Initiative



# Goal ED-3

#### HOUSING ACCESS AND STABILITY, UPWARD MOBILITY

#### Four Reasons Why Employers Should Care about Housing

#### September 11, 2019

by Aaron Shroyer and Veronica Gaitán

Available, affordable housing that fits a range of household types and lifestyles is essential to attracting, retaining, and developing a diverse, productive workforce. But with 47 percent of renters and 23 percent of homeowners <u>paying</u> 30 percent or more of their income on housing, high housing costs can <u>prevent workers from living near their jobs</u> and can put a strain on the local economy by <u>slowing employment growth</u>.

Given the far-reaching effects of today's housing shortages, the public sector needs private- and philanthropic-sector support to tackle this challenge. A <u>new report by the Urban Institute</u> shows how a lack of affordable housing can hold back a region's economy. To get ahead of this issue, employers should not only be aware of how housing affects their employees but also advocate for and invest in affordable housing as a way to support their workforce and the local economy. Here are four reasons why employers should know about, care about, and bolster affordable housing.

#### Housing costs affect where employers can locate their companies

Housing availability and costs are two of the most important factors in determining quality of life that companies take into account when moving into a metropolitan region. Why do they matter so much? When employees cannot afford to live near jobs, employers must spend more money on wages or turnover costs.

This inability of working class and service class workers to afford housing in economically vibrant cities <u>hurts workers and cities</u> too. Workers are either shut out of living in cities where their skills could command a higher salary, or the higher salaries they do earn are <u>negated</u> by higher living costs. And when workers choose to live elsewhere, cities lose productivity because of unfilled jobs.

#### Available and affordable housing allows employers to attract and retain diverse employees at all levels

High housing costs <u>limit</u> who can afford to live in a region, leading to a shortage of workers for lower-wage roles. With the exception of people who earn very high wages, job seekers are discouraged from moving into the region, and the region's existing workers get pushed to less costly markets. This creates problems for attracting and retaining workers at any level. For example, nearly 75 percent of employers in Greater Boston <u>reported (PDF)</u> finding it "extremely or somewhat difficult" to recruit or retain employees, and two-thirds cite the cost of housing as a major barrier. Cost pressures on low-wage workers are especially fierce, leading to displacement. A recent <u>survey</u> in the Washington, DC, region found that 29 percent of respondents knew someone who moved involuntarily within the past two years, with high housing costs being the primary reason for those moves. Unsustainably high rents can ultimately lead to forced moves and evictions, and survey data <u>show</u> that low-income workers are more likely lose their jobs after experiencing a forced move out of rental housing.

A lack of affordable housing can impede employee productivity. A <u>study of 34,000 workers</u> in the United Kingdom found that those who commute fewer than 30 minutes per day gain seven days' worth of productive time annually, compared with those who commute over an hour per day. Those with longer commutes are also more likely to experience depression, financial concern, and stress. Another <u>study</u> calculated that Boston-area drivers spend 164 hours in traffic per year and equated this time to a productivity cost of \$4.1 billion.

Economic instability and housing instability are closely related. Access to stable, affordable housing is particularly important for low-wage workers, who typically have inflexible work schedules and leave options. If they face high housing and transportation costs, they are then more likely to experience economic instability if related emergencies, such as a sudden repair, an unpredictable and extreme commute, or a summons to court for an eviction hearing force them to miss work. In addition, their performance at work might <u>suffer</u> because of the extra stress of dealing with an eviction and finding a new place to live.

#### Affordable housing options improve job access

The lack of affordable housing close to metropolitan job centers often pushes job seekers to the suburbs and beyond. When faced with a long commute into the city, some households might seek employment opportunities closer to their new homes. In fact, 64 percent of people who earn less than \$50,000 said they would <u>consider (PDF)</u> a lateral employment move if it would shorten their commute, while 60 percent of workers earning more than \$50,000 said the same.

This spatial mismatch between regional employment clusters and potential worker populations limits access to jobs. Because these outer neighborhoods are not as accessible by public transit, this mismatch can <u>add to congestion</u> on roads and highways. Long commutes impede employee retention. Fifty-eight percent of larger companies that lack nearby affordable housing options report that employees cite <u>long</u> commute times as a reason why (PDF) they left the company.

Employers often only consider employees' housing costs when the company is contemplating a move or an expansion. Instead, employers across the country should educate themselves about how a lack of affordable housing affects their workforce. Employers should learn about policies that can <u>improve housing across the income spectrum</u> as a way to better attract and retain workers. In higher-cost markets, employers should combine advocacy with direct investment in affordable housing, which, in turn, is an investment in the vitality of their workforce. This investment can benefit their own bottom line, as well as their employees and the local economy as a whole.

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Affordability, Job Access

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Abby Boshart October 25, 2023 / Article Choosing the Right Technology to Support Your Municipality | BoardEffect





#### September 19, 2018

## Choosing the Right Technology to Support Your Municipality

#### Written by Nick Price

For the most part, government boards operate in much the same way as other types of boards. Best practices for good governance apply to all boards of directors, including municipal boards. Directors of government boards often recognize their responsibility to ensure accountability and transparency more readily than other boards because of their service to the general public.

Municipal boards may be slower to implement technology than private or public boards because of lengthy procurement cycles and lack of government funds, even when technology promotes efficiency and saves money. When governments invest taxpayer dollars in technology, they need to be sure to get it right. Their first course of action is to look for governance management software solutions that were designed with the needs of government boards in mind.

#### Choosing the Right Technology to Support Your Municipality | BoardEffect

Most government boards have to abide by state open meetings acts. Board directors for government boards are in the business of citizen capital. Government board directors have a duty to the general public to be accurate, transparent, accountable and efficient, and to make good use of public funds. These qualities are also part of the principles of good corporate governance. Secrecy of government operations generates mistrust while transparency ensures accountability.

# What Is the Right Technology for Government Boards?

The right technology for government boards is technology that meets the needs of that particular board. Since government boards operate much like other boards, in seeking the right technology, boards should consider asking the same basic questions about technology as any other board. McKinsey & Company recommends that all boards ask themselves five basic questions about technology:

- 1. How well does technology enable the core business?
- 2. What value is the business getting from its most important IT projects?
- 3. How long does it take the IT organization to develop and deploy new features and functionality?
- 4. How efficient is IT at rolling out technologies and achieving desired outcomes?
- 5. How strong is our supply of next-generation IT talent?

The right technology for government boards will support the core business activities of the board and enable them to be true partners with their many stakeholders. Government boards should be able to support the cost of implementing new technology by demonstrating the value it creates in costeffectiveness, accuracy, efficiency and transparency. Municipal boards need software solutions from innovative software providers that understand the unique needs of government boards. The right software providers are forward-thinking and continually offer valuable upgrades and enhancements.

Security is a high priority for municipal boards and boards should consider the level of security that software providers offer before making choices. Electronic board solutions are only good if they work consistently. Government boards seeking to implement new technology should make sure that software providers offer 24/7 customer service every day of the year with quick response by qualified service personnel.

The most basic tools for government boards are a secure board portal and a secure messaging system. Electronic board portals support good governance by streamlining processes that lead to increased transparency and accountability. With these systems in place, government boards should be cognizant of other helpful digital applications, such as software for taking meeting minutes and electronic applications for board evaluations.

#### How Does Technology Support Municipalities?

Board portal software supports municipalities by automating processes, reducing human error, preserving documents, promoting good governance and maintaining confidentiality as necessary.

Governance management solutions automate many of the board's standard processes like preparing agendas, taking minutes and streamlining meetings. Software solutions provide a safety net for issues that are subject to human error.

When government board directors make mistakes, even minor mistakes, they risk noncompliance with laws and regulations. Board portal software preserves the details of compliance issues, such as complying with meeting notice requirements, maintaining public access to meetings, retaining copies of agendas and minutes for the required length of time, and recording when the board met in closed sessions, along with their reasons for doing so.

BoardEffect uses cloud-based storage systems that provide unlimited storage. BoardEffect's board management software solution allows board directors to retrieve documents quickly when needed for compliance or Freedom of Information Act (FOIA) requests. Many government boards are required to write annual reports for the council or other parties.

Government boards are under as much pressure as other types of boards to make sure their boards have the proper composition that provides diversity of people and skillsets. Board portal technology supports good governance by preserving the board's efforts to recruit, nominate and appoint candidates for the board that best represent the governing body and its constituency.

Board portals help to manage a municipality's calendar of activities. Board administrators can set up the system so that it sends out automatic notifications about time-sensitive matters.

Government boards have the ability to go into executive session for the reasons outlined in their bylaws. Board portals support clear minute-taking that details the reasons boards decided to utilize private executive meeting matters. Minutes should also document how long board members spent in executive session. Due to confidentiality issues, the board should record only broad details of the matter for the permanent record.

#### The Right Technology for Municipalities Supports Boards Through Board Cycles

Municipal boards work through the same cycles as other boards. Citizens support their municipal governments through their taxes. Since municipal boards are the face and voice of the citizens in their

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communities, they need technology offered by BoardEffect, which supports their meeting cycles, their annual cycles and the development cycles of the board. In the interest of accountability, government boards need to support their meeting cycle with clear documentation and transparency. The right technology supports the annual cycle of required board activities, such as updating policies, maintaining regulatory compliance and planning initiatives. The development cycle focuses on board education, development and skillsets, and technology provides documentation of such progress.

In essence, getting the right technology helps government boards fulfill their duties as the general public expects them to. The sooner that municipalities can get buy-in from their authorities, the sooner they can implement software solutions that save money, improve efficiency and streamline workflow.

#### **INTERESTED IN LEARNING MORE?**

See how BoardEffect can help your municipality board leverage technology for increased efficiency and better corporate governance.

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# INVESTING IN AMERICA

#### President Biden's Bipartisan Infrastructure Law is Delivering in Massachusetts

#### As of October 2023

The Biden-Harris Administration has hit the ground running to implement the Bipartisan Infrastructure Law, and it is already delivering results for the people of Massachusetts. To date, \$6 billion in Bipartisan Infrastructure Law funding has been announced and is headed to Massachusetts with over 196 specific projects identified for funding. Since the Bipartisan Infrastructure Law passed, approximately \$5.1 billion has been announced for transportation – to invest in roads, bridges, public transit, ports and airports – and roughly \$402 million has been announced for clean water and water infrastructure. Massachusetts received \$147.4 million to connect everyone in the state to reliable high-speed internet and, as of today, more than 349,000 Massachusetts households are already saving on their monthly internet bill due to the Bipartisan Infrastructure Law. Many more projects will be added in the coming months, as funding opportunities become grant awards and as formula funds become specific projects. By reaching communities all across Massachusetts – including rural communities and historically underserved populations – the law makes critical investments that will improve lives for Massachusettsans and position the state for success.

**Roads and Bridges:** In Massachusetts, there are 444 bridges and over 1,416 miles of highway in poor condition. The Bipartisan Infrastructure Law will rebuild our roads and includes the single largest dedicated bridge investment since the construction of the interstate highway system. Based on formula funding alone, Massachusetts is expected to receive approximately \$5.4 billion over five years in federal funding for highways and bridges.

- Announced funding: To date, \$3.3 billion has been announced in Massachusetts for roads, bridges, roadway safety, and major projects. This includes:
  - \$2.5 billion in highway formula funding and \$730.6 million in dedicated formula funding for bridges.

o \$71.2 million through the RAISE program.

**Internet:** High-speed internet is necessary for Americans to do their jobs, participate in school, access health care, and stay connected. Yet, over 12,522 homes and small businesses in Massachusetts do not have access to high-speed internet infrastructure. The Bipartisan Infrastructure Law invests \$65 billion to provide affordable, high-speed internet to everyone in America. The Biden-Harris Administration worked with internet providers to offer high-speed internet plans that are fully covered by the Affordable Connectivity Program — meaning most eligible households can now get high-speed internet without paying a dime. Now, the Biden-Harris Administration is calling on Congress to extend this program through 2024. Without action from Congress, millions of Americans will lose their internet connection and the economic opportunities that come with it. See ACP enrollment for every state and Congressional District <u>here</u>.

• Announced funding: To date, Massachusetts has received \$147.4 million through the Broadband Equity, Access, and Deployment Program (BEAD) to provide access to high-speed internet to everyone in Massachusetts. In addition, about 349,000 households in Massachusetts are enrolled in the Affordable Connectivity Program, with more signing up every day. Households can check their eligibility, sign up, and find fully covered internet plans at <u>GetInternet.gov</u>.

**Water:** The Bipartisan Infrastructure Law represents the largest investment in water infrastructure in American history, including the first-ever dedicated federal funding to replace lead service lines and address dangerous PFAS chemicals.

- Announced funding: To date, \$402 million has been announced to Massachusetts to provide clean and safe water across the state and improve water infrastructure. This includes:
  - \$363 million available to provide clean and safe water across the state through the Environmental Protection Agency. Of this funding, \$99.5 million is dedicated to lead pipe and service line replacement, with another \$87 million for safe drinking water investments that can also support lead pipe replacement.

**Public Transit:** The Bipartisan Infrastructure Law makes the largest investment in public transit in U.S. history. Based on formula funding alone, Massachusetts would expect to receive approximately \$2.8 billion over five years under the Bipartisan Infrastructure Law to improve public transit across the state.<sup>1</sup> This funding will expand healthy, sustainable transportation options in Massachusetts, where non-white households are 2 times more likely to commute via public transportation and 27% of transit vehicles in the state are currently past useful life.

<sup>&</sup>lt;sup>1</sup> Transit formula funding amounts are subject to changes resulting from the 2020 census or from annual transit service data reported to FTA's National Transit Database.

• Announced funding: To date, Massachusetts has been allocated \$1.1 billion to improve public transportation options across the state.

**Clean Buses:** The Bipartisan Infrastructure Law invests over \$10 billion for clean public transit and school buses. This includes a \$5 billion investment over the next five years to replace existing school buses with zero-emission and low-emission models. Use of clean school buses promotes cleaner air, reduced health risks, especially for children, and reduced greenhouse gas emissions. This year alone, funding from the Bipartisan Infrastructure Law will help double the number of clean public transit buses on America's roads.

 Announced funding: To date, schools in Massachusetts have been awarded \$29.6 million through the Environmental Protection Agency's Clean School Bus Program. In addition, communities in Massachusetts were awarded \$166.2 million for clean transit buses and improved bus service through DOT's Low- and No- Emission Bus and Bus and Bus Facilities Program.

**Electric Vehicle Charging:** The Bipartisan Infrastructure Law invests \$7.5 billion to build the first-ever national network of electric vehicle chargers in the United States and is a critical element of President Biden's plan to address the climate crisis and support domestic manufacturing jobs. Through the National Electric Vehicle Infrastructure Program alone, Massachusetts should expect to receive roughly \$63 million in formula funding over five years to support the expansion of electric vehicle charging in the state.

• **Announced funding:** To date, Massachusetts has been allocated \$36.4 million to build out a network of EV chargers across the state.

**Clean Energy & Power:** Power outages cost the U.S. economy about \$150 billion annually. The Bipartisan Infrastructure Law makes a historic investment to upgrade our power infrastructure by making the grid more resilient and building thousands of miles of new transmission lines to deliver clean, affordable electricity. The law also makes a historic investment in clean energy technologies like advanced nuclear, clean hydrogen, carbon capture, and batteries, as well as a historic \$3.5 billion investment in weatherization to improve energy efficiency of homes and lower energy costs for impacted households by an average of \$372 per year.

- Announced funding: To date, approximately \$170.5 million has been allocated to Massachusetts for clean energy, energy efficiency, and power. This includes:
  - \$80.1 million for weatherization;
  - o \$7.7 million through the State Energy Program;

- \$8.4 million through the Energy Efficiency and Conservation Block Grant Program; and
- o \$109.3 million to prevent outages and make the power grid more resilient.

**Airports:** According to some rankings, no U.S. airports rank in the top 25 of airports worldwide. The Bipartisan Infrastructure Law invests \$25 billion in airports to replace and modernize airport infrastructure, which helps the U.S. become more economically competitive globally, creates good jobs, and revitalizes and supports more efficient and enhanced traveler experience.

 Announced funding: To date, Massachusetts has received approximately \$181.6 million for airports.

**Ports and Waterways:** Our ports and waterways are in need of repair and investment. The Bipartisan Infrastructure Law invests \$17 billion in port infrastructure to strengthen our supply chains, address maintenance backlogs, and reduce congestion and emissions near ports– ultimately helping our country move goods more quickly and at lower cost.

• Announced funding: To date, Massachusetts has received roughly \$66.3 million for ports and waterways. Massachusetts was awarded \$33.8 million for one port project through the Port Infrastructure Development Program.

**Resilience:** Millions of Americans feel the effects of climate change and extreme weather every day. More frequent hurricanes, wildfires, heat waves, floods, unprecedented power outages, and persistent droughts devastate our communities and threaten our infrastructure. In the last decade, Massachusetts has experienced 14 extreme weather events, costing the state up to \$1.3 billion in damages. The Bipartisan Infrastructure Law makes a historic investment to bolster our resilience against pressing challenges like impacts of climate change, extreme weather events, and other hazards like cyberattacks.

• Announced funding: To date, approximately \$113.3 million has been allocated to Massachusetts for infrastructure resilience including \$10.1 million through the Army Corps of Engineers for flood mitigation.

**Legacy Pollution Cleanup:** Across the country, thousands of former industrial, chemical, and energy sites emit harmful pollutants into surrounding communities. These sites pose harms to health, welfare, and economic prosperity — and disproportionately impact communities of color: 26% of Black Americans and 29% of Hispanic Americans live within 3 miles of a Superfund site, a higher percentage than for Americans overall. The Bipartisan Infrastructure Law will deliver the largest investment in tackling

legacy pollution in American history by cleaning up Superfund and brownfield sites, reclaiming abandoned mines, and capping orphaned oil and gas wells.

• **Announced funding:** To date, approximately \$87.5 million has been allocated to Massachusetts for cleaning up brownfield sites.

For more information, click <u>here</u> to see a map of funding and announced projects in your community through the Bipartisan Infrastructure Law.

#### **Massachusetts Project Spotlights**

#### Grid Resilience Spotlight

#### Accelerating Building Thermal Electrification While Managing System Impacts

Generac Grid Services is receiving up to nearly \$50 million from the Department of Energy to provide approximately 2,000 income-eligible participants a combination of home battery systems, thermostats paired with heat pumps, and hot water heater load control switches. The goal of this initiative is to demonstrate that efficient building electrification can be achieved while minimizing system overloads, reliability issues, and the need for infrastructure upgrades. This project will reduce demand during peak hours in the summer and winter.

See here for more information on recent grid resilience announcements.

#### Rail Project Spotlight

#### **Connecting the Commonwealth: Early Actions for the Inland Route Project**

The Department of Transportation has awarded \$108,085,280 to the Massachusetts Department of Transportation for rail infrastructure and safety improvements through the Consolidated Rail Infrastructure and Safety Improvements (CRISI) program. The project involves project development, final design, and construction activities for various track, signal, grade crossing and bridge improvements on the Inland Route corridor, which is CSX Transportation-owned and MassDOT-owned infrastructure. The project will increase capacity to safely accommodate the addition of two round trip Amtrak Lake Shore Limited intercity passenger trains per day at higher speeds, while maintaining current freight operations. The improvements will raise the track class in many locations and address multiple areas of track alignment within curves that were not designed for higher speeds.

See here for a full list of CRISI awards.

#### **RAISE Grant Spotlight**

#### **Roxbury Transportation Corridor**

The Department of Transportation has awarded \$20 million to the city of Boston for improvements to the Roxbury Transportation Corridor. This project will reconstruct and upgrade three corridors in the Roxbury neighborhood of Boston, as well as construct dedicated bus corridors. The project will transform a community that has been underserved and overburdened by creating a safer street while promoting active transportation choices. It will also use sensors and data technologies to improve three corridors that will provide affordable transportation options.

See here for more information on awarded grants through the RAISE program.

#### Airport Project Spotlight

#### General Edward Lawrence Logan International Airport Bridge Rehabilitation

The Department of Transportation awarded a total of \$84.5 million to the General Edward Lawrence Logan International Airport. These granted were awarded in 2022 and 2023 to replace aging infrastructure at Terminal E. Renovations include expanding the baggage claim area, replacing the HVAC system, rehabilitating the existing gates and jet bridges, adding a new oversized baggage belt, expanding the arrivals curb, renovating the arrivals level canopy, and adding two new flex gate passenger boarding bridges. The Terminal E project was completed in October 2023.

See <u>here</u> for a map and list of the Airport Terminal awards and <u>here</u> for 2023 Airport Terminal Selections.

#### **Clean Buses Project Spotlight**

#### **Expanding Clean Buses in Boston**

The Department of Transportation awarded \$116 million to the Massachusetts Bay Transportation Authority to purchase new battery-electric buses to replace older diesel buses that have reached their useful life and launching a workforce development program to support training and safety efforts.

See <u>here</u> for more information on Low or No Emission Bus programs that have been announced.

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# FY 2023 INCOME LIMITS DOCUMENTATION SYSTEM

HUD-90V HUD User Home Data Sets Fair Market Rents Section 8 Income Limits MTSP Income Limits HUD LIHTC Database

# FY 2023 Income Limits Summary

	ø	76,000	50,560	121,550		
Persons in Family	7	71,400	45,420	114,150		
	9	66,800	40,280	106,800		
	ы	62,200	37,350	99,450		
	4	57,550	34,550	92,050		
	Μ	51,800	31,100	82,850		
	2	46,050	27,650	73,650		
	Η	40,300	24,200	64,450		
FY 2023 Income Limit	Category	Very Low (50%) Income Limits (\$)	Extremely Low Income Limits (\$)*	Low (80%) Income Limits (\$)		
Median Family Income		\$124,300				
FY 2023 Income Limit Area <b>Barnstable</b> Town, MA MSA						

NOTE: Barnstable Town city is part of the Barnstable Town, MA MSA, so all information presented here applies to all of the Barnstable Town, MA MSA

Chatham town, MA; Dennis town, MA; Eastham town, MA; Falmouth town, MA; Harwich town, MA; Mashpee town, MA; Orleans town, The Barnstable Town, MA MSA contains the following areas: Barnstable Town city, MA; Bourne town, MA; Brewster town, MA; MA; Provincetown town, MA; Sandwich town, MA; Truro town, MA; Wellfleet town, MA; and Yarmouth town, MA. COMMENTARY OP-ED

#### Why Infrastructure Matters: Rotten Roads, Bum Economy

**Robert Puentes** 

January 20, 2015

Cities, states and metropolitan areas throughout America face an unprecedented economic, demographic, fiscal and environmental challenges that make it imperative for the public and private sectors to rethink the way they do business. These new forces are incredibly diverse, but they share an underlying need for modern, efficient and reliable infrastructure.

Concrete, steel and fiber-optic cable are the essential building blocks of the economy. Infrastructure enables trade, powers businesses, connects workers to their jobs, creates opportunities for struggling communities and protects the nation from an increasingly unpredictable natural environment. From private investment in telecommunication systems, broadband networks, freight railroads, energy projects and pipelines, to publicly spending on transportation, water, buildings and parks, infrastructure is the backbone of a healthy economy.

It also supports workers, providing millions of jobs each year in building and maintenance. A Brookings Institution analysis Bureau of Labor Statistics data reveals that 14 million people have jobs in fields directly related to infrastructure. From locomotive engineers and electrical power line installers, to truck drivers and airline pilots, to construction laborers and meter readers, infrastructure jobs account for nearly 11 percent of the nation's workforce, offering employment opportunities that have low barriers of entry and are projected to grow over the next decade. Important national goals also depend on it. The economy needs reliable infrastructure to connect supply chains and efficiently move goods and services across borders. Infrastructure connects households across metropolitan areas to higher quality opportunities for employment, healthcare and education. Clean energy and public transit can reduce greenhouse gases. This same economic logic applies to broadband networks, water systems and energy production and distribution.

Big demographic and cultural changes, such as the aging and diversification of our society, shrinking households and domestic migration, underscore the need for new transportation and telecommunications to connect people and communities. The percentage of licensed drivers among the young is the lowest in three decades, as more of them use public transit and many others use new services for sharing cars and bikes. The prototypical family of the suburban era, a married couple with school-age children, now represents only 20 percent of households, down from over 40 percent in 1970. Some 55 percent of millennials say living close to public transit to them, according to a recent survey by the Urban Land Institute.

Yet unlike Western Europe and parts of Asia, the United States still has a growing population. We've added 25 million people in the past 10 years. This tremendous growth, concentrated in the 50 largest metropolitan areas, will place new demands on already overtaxed infrastructure. Metropolitan areas must be ready to adapt not only to serve millions of new customers but also to help poorer residents, many of whom are jobless, have the best chance possible to find work.

A recent Brookings analysis found that only a quarter of jobs in low-skill and middleskill industries can be reached within 90 minutes by a typical metropolitan commuter. Successful cities will be those that connect workers to jobs and close the digital divide between high-income and low-income neighborhoods. The White House notes that broadband speeds have doubled since 2009 and that more than four out of five people now have high-speed wireless broadband, adoption rates for low-income and minority households remains low (about 43 and 56 percent, respectively.)

Our economy is changing as fast as our society. Over 83 percent of world economic growth in the next five years is expected to occur outside the United States, and because of rapid globalization, it will be concentrated in cities. This offers an

unprecedented opportunity for American businesses to export more goods and services and to create high-quality jobs at home. It also amplifies the importance of our seaports, air hubs, freight rail, border crossings and truck routes, which move \$51 billion worth of goods quickly and efficiently each day in the complex supply chains of the modern economy.

The diverse energy boom also disrupts our infrastructure. Natural gas needs new truck, pipeline and rail networks. Rooftop solar panels have rattled electric utilities, which are scrambling to find ways to incorporate and store the energy they produce while keeping the grid operating. At the same time, finding the money to pay for the development of a smart electricity grid and for clean energy presents challenges, as hundreds of thousands of small and large projects are projected to come online in coming decades.

High-profile natural disasters, such as Hurricane Sandy, drew attention to problems with water infrastructure. Overwhelmed waste water systems, washed-out roads, shorted electrical circuitry and flooded train stations not only highlighted the economy's reliance on these networks, but also revealed their poor condition. The nation's water systems are now being rebuilt. Cities are working to capture storm and rain water rather than building costly pipes to sluice it away. The Center for an Urban Future recently described how New York City plans to spend \$2.4 billion over 18 years in so-called "green" infrastructure such as rooftop vegetation, porous pavements, and soils to soak up rain.

Over and above the new types of needed infrastructure is a big change in how projects are financed.

Despite the importance of infrastructure, the U.S. has not spent enough for decades to maintain and improve it. It accounts for about 2.5 percent of the economy, compared to about 3.9 percent spent in Canada, Australia and South Korea, 5 percent for Europe and 9-12 percent in China. The McKinsey Global Institute estimates that the U.S. must spend at least \$150 billion more a year on infrastructure through 2020 to meet its needs. This would add about 1.5 percent to annual economic growth and create at least 1.8 million jobs.
#### Why Infrastructure Matters: Rotten Roads, Bum Economy | Brookings

Split between Republicans and Democrats, the federal government appears incapable of doing this. For the foreseeable future, the Highway Trust Fund, the State Revolving Funds for water and others will face cuts and squeezed budgets. Other experiments, such as a National Infrastructure Bank, seem prohibitively complex in the current political environment. And of course, rising interest costs on federal debt, increases in entitlement spending and declining traditional revenue sources such as the gasoline tax mean that competition for limited resources is fiercer than ever.

Some cities and states are enjoying budget surpluses because property and sales tax revenues. But most localities will take years to build back their reserves, repay additional debt incurred during the recession and pay for deferred maintenance on infrastructure. Unfunded pension obligations and other debts facing all levels of government mean there just aren't the public funds to pay for necessary infrastructure. And though interest rates remain at historically low levels, the ability of many governments to borrow from capital markets is hindered by debt caps and weak credit ratings.

Despite gradual acceptance in the past decade that infrastructure is vital to economic growth, debate of spending remains an amorphous and simplistic. Infrastructure is made up of interrelated sectors as diverse as a water treatment plant is from an airport, a wind farm, a gas line or a broadband network. The focus on infrastructure in the abstract led to unrealistic silver-bullet policy solutions that fail to capture the unique and economically critical attributes of each. In reality, each infrastructure sector involves fundamentally different design frameworks and market attributes. And they are owned, regulated, governed and operated by different public and private entities.

The federal role should not be exaggerated. American infrastructure in selected, built, maintained, operates and paid for in a diverse and fragmentary fashion. For certain sectors, such as transportation and water, federal spending is relatively high, averaging \$92.15 billion each year from 2000 to 2007. But even there, according to the Congressional Budget Office, Washington's share of spending never topped 27 percent. For other sectors, such as freight rail, telecommunications, and clean energy, the federal role is more limited.

So what does all this mean and how are we going to pay for what we need?

#### Why Infrastructure Matters: Rotten Roads, Burn Economy | Brookings

Roads, bridges and transit must be paid for largely from public funds. Ballot measures have been important for fund raising, particularly at the local level, because general obligation bonds require popular approval. That's how regions and municipalities pay for public transit systems, bridges, road construction, water and sewer improvements and a host of other infrastructure projects. Many cities are following this trend. Those places, especially in Westerns cities such as Los Angeles, Phoenix and Salt Lake City, are taxing themselves, dedicating substantial local money and effectively contributing to the construction of the nation's infrastructure.

Metropolitan transportation initiatives are popular among voters. According to the Center for Transportation Excellence, 71 percent of measures were passed in 2014 as were 73 percent in 2013. While state level ballot measures on infrastructure spending are far less common, in 2013, eight states voted to raise taxes for such projects. This includes both conservative strongholds such as Wyoming and Democrat-controlled legislatures in states such as Maryland.

A number of cities are using market mechanisms that capture the increased value in land that accrues from infrastructure. This provides a more targeted way to finance new or existing transportation projects by matching the benefit from infrastructure with its cost. These techniques include impact fees where land developers are assessed a charge to support associated public infrastructure improvements, generally local roads and public works like sidewalks. The lease or sale of air rights is another practice that has been used by to finance development around transit stations for decades, famously around Grand Central Station in New York, and more recently in Boston and Dallas.

Another growing trend is the use of tax increment financing districts. These TIFs support infrastructure projects by borrowing against the future stream of additional tax revenue the project is expected to generate. Examples include a TIF used to pay for improvements at the Atlantic Station project in Atlanta and Portland, Ore.,'s similar strategy to fund its streetcar by creating a local improvement district that leveraged the economic gains of nearby property owners.

For its part, the federal government can allow greater flexibility for states and cities to innovate on projects that connect metros. Passenger Facility Charges used to fund airport modernization are artificially capped at \$4.50 and do not begin to cover the

airport's operating and long-term investment costs. Busy airports could be freed to meet congestion and investment costs by removing the caps. Archaic restrictions on interstate highways tolls could also be lifted. Metropolitan and local leaders, with the states, are in the best position to determine which segments of road could best raise revenue.

Other infrastructures could be public-private partnerships. These often complex agreements allow the public sector to bring in private enterprises to take an active role during the life of the infrastructure asset. At their heart, these partnerships share risk and costs of design, construction, maintenance, financing and operations.

The public-sector interest in partnerships is propelled by the shortage of money. Ever since the recession, many states and local governments have been plagued by high debt, low credit ratings and limited options to borrow. PPPs are not "free money," but they can offer benefits such as better and faster completion of the project, more budgetary accountability and overall savings.

Partnerships with the private sector are not appropriate for all infrastructure sectors or projects. Some may not be profitable enough to attract investors. Green infrastructure or public parks, for example, may lack a revenue stream. Private conservancies maintain and oversee parks in New York, Pittsburgh, Houston and St. Louis, but they are all nonprofit organizations set up solely for that purpose and do not help spread risk.

The best infrastructure projects for private sector involvement are those with a clear revenue stream from rate-payers, such as water infrastructure and toll roads. The private sector can bring in new technologies for metering and billing that can improve services. Thoughtful procurement can also facilitate projects that do not include ratepayers. Nearly any project can be suitable for a private partnership as long as there is a mechanism to spread risk among all parties, even without user fees. So-called availability payment models allow the public sector to pay a recurring user fee for the use of an asset based on its condition and accessibility. These payments are a form of debt since but require continuous public expenditure and a binding budgetary obligation.

#### Why Infrastructure Matters: Rotten Roads, Burn Economy | Brookings

It would help spur public-private partnerships if there were standard contracts and pricing, risk sharing and returns. In the past, Washington has set these kinds of standards for such vast areas of the consumer market as housing and small business. But the federal government appears unlikely to do so for infrastructure investment. A mix of public, private and civic bodies will have to do so instead.

An emerging example is the West Coast Infrastructure Exchange, a collaboration between California, Oregon, Washington and British Columbia standardizing transparency, contracts, labor and risk allocation. The goal is to build a market for projects. By sharing details, project finance and delivery methods can be scaled and replicated.

If successful, the WCX could be a model for other state, city and metro infrastructure exchanges. Each exchange could focus on the infrastructure delivery and finance strategies suited to the culture, traditions and needs of the region it serves. An East Coast or Mid-Atlantic Exchange could focus on rebuilding coastlines and climate resiliency after Hurricane Sandy, or on transportation projects that cross state borders. A Midwestern Exchange might focus on water infrastructure in a largely slow growth environment or on projects with Canada. A Southern Exchange might facilitate new infrastructure to accommodate fast growth and new manufacturing, supply chains and movement of goods. Regardless of their focus, exchanges could be linked through a project clearinghouse to share data, information and best practices.

Energy, telecommunications and freight rail will remain dominated by the private sector typically with federal and state regulatory oversight. But there will also be new types of public and private relationships in these sectors, too. For example, while broadband networks are still delivered by private companies, local governments recognize that this kind of network access is equally important to the future economic success of households as well as businesses. So as cities such as Los Angeles explore ways to extend broadband to all homes, they also are working to figure out the financing arrangements and business opportunities for firms interested in developing those networks.

The trade and logistics industry is highly decentralized, with private operators owning almost all trucks and rails, and the public sector owning roads, airports, and waterway rights. Unlike such countries as Germany, Canada and Australia, the U.S. does not

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have a unified strategy that aligns disparate owners and interests around national economic objectives. Innovative partnerships are therefore necessary to make freight movements in and around big cities more efficient and reliable. The CREATE program in Chicago aligns several such interests in a citywide effort to relieve freight and passenger bottlenecks that cause delays. The \$2.5 billion for the program will come from a mix of traditional sources (federal grants), private investments (railroads), state loans (bonds) and existing local sources.

It is clear that projects are becoming more complex. There is not one-size-fits-all form of financing for them. It very much depends on the place, time and particulars of each project. The level of private engagement will depend on market and business opportunities.

In many respects, America's ability to realize its competitive potential depends on making smart infrastructure choices. These must respond to economic, demographic, fiscal, and environmental changes if they are to help people, places and firms thrive and prosper.

This commentary was originally published by the Washington Examiner A.

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# All In: The Federal Government's Plan to Tackling America's Homelessness Crisis

May 23 • Written By Paige Warren









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he served as CEO of C4 Innovations. Throughout his career, he has worked extensively in the areas of homelessness and housing, health and behavioral health, HIV, education, and organizational development. Jeff has been principal investigator on multiple research studies funded by private foundations and the National Institutes c Health. Jeff is deeply committed to social justice, racial equity, gender equality, and inclusion for all. He has a bachelor's degree from the University of Alabama and a master's degree from Boston College.

Determining the size of homeless population in the U.S. is not as straight forward as yr might think. Thousands of people enter and exit homelessness on a given day, so depending on the type of survey method — a single point-in-time count or other — most recent estimates suggest it's somewhere between <u>580,000</u> and <u>1.3 million</u> people. But despite the challenge of arriving at a precise number, the following are indisputable <u>facts</u> about the nature of that population.

- 1. Homelessness is disproportionately impacting minority and marginalized people.
- 2. People with preexisting health conditions are more likely to experience homelessness, and homelessness worsens health.
- 3. The number of people that enter homelessness each year exceeds the number that exit.

Jeff Olivet serves as the executive director of the <u>U.S. Interagency Council on</u> <u>Homelessness</u> (USICH) and recently participated in a two-day deep dive on health and homelessness that was sponsored by <u>Harvard's Advanced Leadership Initiative</u>. This interview seeks to recapture some of the highlights of his presentation and aspires to explore the topic more broadly.



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territory that we're charting is around both upstream prevention and racial equity.

# Warren: The administration's plan is rooted in the philosophy of "housing first," which I understand has been employed in other countries, like Finland, with notab success. What does it mean and how does it play out in application in the U.S.?

**Olivet:** "Housing First" is a long-standing approach that is grounded in the belief that housing is the fundamental solution to homelessness. Without it, every other aspect c person's life can suffer. But it's not the only solution. We need to make sure that peopl have access to wraparound supports that help them stay housed, like health care (including mental health and drug and alcohol treatment), job training and placeme and education support. Housing First programs offer people these supports at the same time as housing, and they continue to offer them long after people are housed

When I got into this work almost 30 years ago, we did not have "Housing First." At that time, we set up a lot of hurdles (such as sobriety or employment) for people to clear before they could get into housing. What practitioners have come to realize is that it's very hard to stop using drugs and alcohol, for example, when you're living on the street. Similarly, it's very hard to get and keep a job when you're living in a car or a tent. Housing First flipped the mindset: Instead of expecting people living on the streets and in shelters to solve all of their non-housing problems, this approach immediately ends the life-threatening crisis of homelessness and simultaneously works on solving their other problems that contributed to homelessness. That represents a real sea change in thinking.

The evidence for Housing First is extraordinary. It works for roughly 9 out of every 10 people, but we do appreciate that it doesn't work for everybody. That is partially because we need to scale housing and support, which is what *All In* aims to do. But I think we also need to have a more creative and open conversation about what else we need in the toolbox and in the continuum of housing options. Some people, for instance, do really well with recovery housing, where (unlike with Housing First) sobriety is a



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As someone who spent a large part of their career in public and affordable housing, I was surprised that I had not heard that expression before, but it immediately made visceral sense. Can you address this linkage?

**Olivet:** Homelessness is inherently harmful to people's health. Not only does homelessness worsen health, but preexisting conditions increase a person's likelihood of experiencing it. Everything from strokes and epilepsy to dementia are more comm in people who have experienced homelessness.

It is extremely hard to treat chronic medical conditions, acute medical conditions, dru and alcohol recovery when you haven't addressed the basic foundational need for a safe and stable place to sleep, when you have no kitchen to cook healthy meals, and no bathtub to bathe your children. Just try to put yourself in the shoes of that experience for a minute and imagine how you'd attend to the health of your children or your own mental and physical wellbeing when you don't know where your next meal is going to come from, when you don't know necessarily where you're going to sleep tonight, or if you're going to be safe through the night. On Maslow's <u>hierarchy of needs</u>, shelter is part of the first, most basic level along with air, water, and food.

Warren: In your presentation, you also mentioned that some cities and states have "right to shelter" laws that require jurisdictions to provide emergency shelter for any unhoused resident that requests it. I also understand that the number of people who are homeless is significantly higher than what might otherwise be plainly visible because approximately <u>60%</u> of the homeless population is estimated to be living in shelters or in other temporary housing.

**Olivet:** The conversation we really need to be having is how to operationalize a right to housing. Right to shelter jurisdictions have invested pretty heavily in shelter, and that's important for keeping people alive and giving them a temporary safe place to be — although shelters can be a mixed bag. Shelters, however, don't solve homelessness. What we need to do is dramatically shorten the length of stay in shelter and create



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tents. HUD is <u>investing</u> hundreds of millions of dollars in communities to explicitly address unsheltered homelessness, and I think that's going to be a really important tool. In addition, USICH and the White House are set to launch a new initiative to help targeted cities and states implement *All In* and test new models to get people off the streets and into homes.

While there's a lot of room for innovation, we know that criminalization doesn't work. It ineffective, expensive, and inhumane. Unfortunately, more and more cities and states are resorting to it as they face public pressure to do something about the tents that people see in their neighborhoods and on their way to work. But we cannot arrest our way out of homelessness.

Where are people supposed to go? In many communities, there is little affordable housing, and shelters are full or turn away people who are not sober, people who identify as LGBTQ+, and people with partners, pets, or teenage kids. We need to dramatically ramp up our investments in housing and expand the supply of and access to affordable housing and low-barrier shelter.

It doesn't work just to sweep an encampment and hope it doesn't pop up somewhere else. If you're not providing housing and services for people, then it's like playing whacka-mole: the encampment will go away here, but then it pops up over there. And now all you've done is displace people, disconnect them from services and support, and anger not just one neighborhood but two because the encampment simply moved.

Warren: In many areas, the COVID-19 pandemic accelerated strategies and forced innovation was required. What did the pandemic teach us about homelessness and its solutions? Do you have confidence that we've integrated the learning into the work?

**Olivet:** In the beginning of the pandemic we were all told to stay home. But not everybody has that, right? Not everybody could. And people without a home —



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homeless systems. That's a real success story.

The pandemic also forced us to reimagine and decongregate shelters. Many communities used American Rescue Plan funding to convert vacant hotels and mote into non-congregate shelters where people without a home could socially distance. This was an extraordinarily effective approach, and some communities and states ar now converting the shelters into permanent housing. That was an incredible innovation

We also saw an easing of government regulations that was really useful. I think we ne to do some real soul searching now around what bureaucratic requirements are necessary.

The pandemic also proved the power of prevention and the impact of getting money into people's pockets. Emergency rental assistance prevented more than 1 million households from losing their homes and it prevented an overall spike in evictions. Meanwhile, the stimulus checks and expanded child tax credits significantly reduced poverty — and this all happened during a time of economic crisis, proving that we can make progress even in the most difficult times.

Our response to the pandemic prevented what could have been a tsunami of new homelessness. In reality, between 2020 and 2022, homelessness flattened out. It had been increasing since 2016, but the Biden administration halted the rapid rise and is now working to reduce it 25% by 2025. The flattening of the curve was no accident. It was the result of unprecedented federal investment.

# Warren: How much of this innovation do you think is temporary, brought to bear to meet the need of the hour? Have you seen new stakeholders come in to help solve the problem and have they stayed invested?

**Olivet:** I think the jury is still out. I do know that we need the private sector to step up in a different way — the corporate sector and the philanthropic sector, including corporate



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DUSINESS COMPLOYMENT OF LO FULLY COLPORATION.

Both the availability and the cost of housing can drive your own workforce out of the area that you're based in. So I think there's some neuro-connectivity between these issues on the part of folks in the corporate sector, and I think that's wonderful. I would just issue a call for leaders in the corporate sector to step up and also to be part of the solution on homelessness.

Warren: The Social Impact Review is a social impact journal focused on ideas and solutions for advancing the thinking and problem solving by practitioners on som of the world's thorniest, most complex problems. Do you believe we can and will solve homelessness in your lifetime? Can and will — two very different questions.

**Olivet:** I'm Intensely optimistic that we can solve homelessness if we choose to. And I say that very carefully. This nation has proved extraordinary at its ability to tackle really challenging problems. It's also clear that to do that, we need public and political will. And we need resources. We can't just hope the problem goes away.

The problem of homelessness has cycled through the history of the U.S. and that's true even in the colonial era on this continent. So it's an old problem and it's deeply entrenched. In the last 50 years, as contemporary homelessness has really risen and gotten entrenched on the American landscape, that it could seem overwhelming, but it doesn't have to be this way. We know what it would take to end homelessness. We've got enough money. We've got enough creativity. We've got enough amazing people. I believe our plan lays out a lot of those ambitious approaches. I think we can absolutely end homelessness if we choose to as a nation. There's enough resilience in the lives of people who are experiencing homelessness, so much strength there, and so much ability to navigate really complex situations. We just have to put it all together and then we scale up what's working to meet the need. It all starts with preventing homelessness before it ever happens. Down to my core, I believe we can do all that.



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Paige Warren is a 2021 Harvard ALI Senior Fellow and senior editor for the Social Impact Review. Paige had a distinguished career in financial services at the nexus of business, government, and neighborhoods. Over the course of her 17-year tenure in the commercial debt side of Prudential Financial's investment management arm, Paige served in various senior roles includi Global COO and Head of Strategy, President, and Portfolio Manager.

Much of Paige's career was spent in affordable and public housing development and finance. Prior to joining Prudential, s served in the Federal Government to build an organization focused on restructuring the government's affordable multifamily housing debt. She has served in various other private sector roles, including that of developer, investor, and feasibility consultant.

Paige is currently the vice chair of the board of trustees and chair of the finance subcommittee at The Washington Center, a non-profit, higher education adjacent organization whose mission is to enhance the pipeline of diverse talent and to build more equitable, inclusive workplaces and communities. She is an ESG FSA Credential-holder and holds a certification in ESG Investment from the CFA Institute.

This interview has been edited for length and clarity.

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# **Threatening Democracy**

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# Unhoused Neighbors



https://www.capenews.net/regional\_news/cape-cods-homeless-population-is-consistent-from-year-to-year/article\_646d3399-9dcf-5636-b086-f66e3c8887d1.html

# Cape Cod's Homeless Population Is Consistent From Year To Year

By LILY HENNESSY Dec 31, 2020 Policy ED-Z

Home / Regional News

Barnstable County has an annually steady number of approximately 336 homeless people, according to the county's Human Services Department Point in Time count from January 2020.

Beth Albert, the director of the county's Human Services Department, made a presentation during the Barnstable County Board of Regional Commissioners meeting on December 23.

"Our numbers on the Cape in Barnstable County have been consistent since 2017. They go from 35 unsheltered individuals, and last year it was 32," Ms. Albert said referring to the decreases in the homeless population.

In 2019, the County reported a count of 371 homeless people in the County.

"Overall, our numbers don't fluctuate that much from year to year. We have a certain number of beds in our shelters, and those don't change typically from year to year."

However, Ms. Albert said a criticism of the way the program counts homeless people is that it does not count those who are "doubled up"—people who may be living on a friend's couch or in the basement.

Ms. Albert said it is impossible for the program to count the doubled-up people.

"It's conceivable that we always have an undercount," she said.

Homeless people are counted each year through the Annual Point in Time, or PIT.

"We undertake an annual count of homelessness on the Cape every January," Ms. Albert said. "This is a requirement by the US Department of Housing and Community Development."

Typically, the count will take place during the last week of January.

"Hopefully, the count will not be too high this year, and the weather will be good," said Ronald Bergstrom, chairman of the board of regional commissioners.

The count has two components: homelessness is counted as either unsheltered or sheltered.

"We do a count of people that are in shelter, transitional housing and also that are being put up in a motel, and then there is the unsheltered count where we actually in previous years have gone out with a group of trained volunteers, including all of our homeless outreach agencies and individuals and police departments, to conduct a count of those who are unsheltered on that night," Ms. Albert said.

The count of unsheltered homeless takes place over a 24-hour period and is scheduled for Tuesday, January 26.

"This year because of COVID we're going to be changing a little bit in order to maintain the safety of the volunteers who are doing the count," Ms. Albert said. "It is a communitywide effort. We have teams that are going to be activated not only on the Cape and the regions of the Cape but also on Martha's Vineyard and Nantucket."

Getting an accurate count during COVID-19 will be different than in previous years, she said.

"The way we're going to do it this year is a little bit different. Our methodology is going to be more of an observational count," Ms. Albert said. "At least on the Cape my understanding, and this has been confirmed by the outreach people, the outreach folks know who are unsheltered, we know where these folks are, we know where they may be in encampments, so we have a really good handle on the unsheltered and where these folks are located. So that count is going to go on."

The unsheltered count is also weather-dependent. Ms. Albert explained that on a cold night there will be more people staying in motels who might normally sleep outside.

Commissioner Ronald R. Beaty had some questions for Ms. Albert.

"I've had some concerns," he said. "I've been in Hyannis over the last few weeks, and it's really noticeable seeing the homeless individuals walking around Main Street, and it's cold out, and we have the pandemic going on and there's been talk about perhaps trying to vaccinate the homeless population. I wasn't sure if that would somehow work in conjunction with the census being conducted or if possibly we could, so there are a lot of questions that are coming up."

The majority of homeless people are in Yarmouth and Hyannis, Ms. Albert said, adding that there are multiple efforts in the works to make sure unsheltered people have a place to go when it is cold.

"We have a very—administered through Duffy Health Center—a very robust 'in from the streets' program this year where we're actually putting people up in motels," Ms. Albert said. "Duffy and many of our partners are working through FEMA (Federal Emergency Management Agency) dollars to do some of this work."

The county's human services department also works with Vinfen Corporation, Duffy Health Center and the Housing Assistance Corporation of Cape Cod to conduct a drop-in program three days a week so that homeless people have somewhere to go during the day.

"The vaccination [idea] I think is a different issue, and it's not something we're going to be doing as part of the point-in-time count. But in Massachusetts people who live in congregate settings like shelters have been prioritized to receive the (coronavirus) vaccine," Ms. Albert said.

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CAREERS > SALARIES & COMPENSATION

# What Is a Living Wage? Definition, History, and How to Calculate

By JULIA KAGAN Updated June 13, 2023

Reviewed by DORETHA CLEMON

15 the man requed to cover basic family needs w/c reliance on outside assistance.

than the legal minimum wage.

#### **KEY TAKEAWAYS**

 A living wage is a socially acceptable level of income that provides adequate coverage for basic necessities such as food, shelter, child services, and healthcare.

TRADE

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when workers demanded higher pay.

- The living wage shouldn't be confused with the minimum wage, which is the lowest amount of money someone can earn as mandated by law.
- Supporters of living wages say they boost productivity and employee morale while critics argue they could hurt the economy and force corporations to reduce hiring.

## How a Living Wage Works

What constitutes a living wage may vary slightly depending on who's defining it. According to the Global Living Wage Coalition, some 60+ definitions and descriptions of the term exist. Despite some deviations, the organization found certain common themes when comparing how it is defined in human rights declarations, by <u>non-governmental organizations (NGOs)</u>, and from others.<sup>[2]</sup> So what exactly is a living wage?

The general consensus is that a living wage is one that provides individuals with

Other basic necessities<sup>[2][3]</sup>



# Massachusetts Internet for All Plan



As the state's leading agency for broadband and connectivity, MBI is dedicated to bringing affordable, high-speed internet to every person in Massachusetts. The Bipartisan Infrastructure Law <a href="https://broadbandusa.ntia.doc.gov/sites/default/files/2022-02/state\_local%20iija%202-pager\_final%2001.27.2022.pdf">https://broadbandusa.ntia.doc.gov/sites/default/files/2022-02/state\_local%20iija%202-pager\_final%2001.27.2022.pdf</a> has already allocated \$145 million to Massachusetts to expand high-speed internet access and digital equity programming across the state. The first step to deploying these funds is developing a strong plan, informed by organizational stakeholders and residents of the Commonwealth. Over the last year, MBI has led a planning effort </internetforall> that has resulted in the development of two guiding planning documents — a Statewide Digital Equity Plan and what is known as the Initial Proposal for the Broadband Equity, Access, and Deployment (BEAD) Program. These two documents create the Massachusetts Internet for All Plan.

economic development policy ED-6

# Public Comment Period: Nov. 13 - Dec. 15, 2023

Now that our planning documents have been drafted, we want to hear from you! MBI is collecting input from residents of Massachusetts to make sure we got the plan right. Your input is crucial during this public comment period as we want to understand your experiences and how we can enhance them to meet the needs of all Commonwealth residents. Below, you'll find the executive summary, a link to the Comment Form where you can provide us your feedback, and tips for submitting a helpful comment. You can provide feedback on any portion of whichever document(s) you read. *Together, we can make a difference!* 

# **Executive Summary**



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# **Online Cor**

<https://mbicx.qualtrics.com

- MBI will also welcome typed or written public comments using this **printable form** <https://broadband.mas stech.org/sites/default/f iles/2023-11/english%20public%20 comment%20form.pdf> which can be mailed to:
- Massachusetts Broadband Institute Attn: MBI Public Comment

# **Massachusetts Internet for All**

MBI hosted many activities to help shape the State Digital Equity Plan and 5-year Strategic Broadband Action Plan that is available for download and public comment above. The listening sessions, which started in September, were an opportunity for the public to share their experiences, ideas, and vision for a connected Massachusetts, tackling key questions around internet access, adoption, affordability, digital skills training, and device availability. In addition, focus groups gathered input directly from covered populations and underrepresented communities identified by the federal programs. Visit the webpage here </internetforall> to review recaps on those events, resources, and photos from Listening Session Tour

<a>https://www.flickr.com/photos/masstechcollaborative/collections/72157722135315350/>.</a>



**Employment and Training Administration** 

# **Frequently Asked Questions**

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**Frequently Asked Questions** 

Archives

# What is a Labor Surplus Area?

A Labor Surplus Area (LSA) is a civil jurisdiction that has a civilian average annual unemployment rate during the previous two calendar years of 20% or more above the average annual civilian unemployment rate for all states (including Puerto Rico) during the same 24-month reference period. If the national annual average unemployment rate during the referenced period is less than 6.0% then the qualifying rate is 6.0%. If the national annual average unemployment rate during the referenced period is above 10% then the qualifying rate is 10%.

# What is a Civil Jurisdiction?

Civil jurisdictions are defined as follows:

- A city of at least 25,000 population on the basis of the most recently available estimates from the Bureau of the Census; or
- A town or township in the States of Michigan, New Jersey, New York, or Pennsylvania of 25,000 or more population and which possess powers and functions similar to those of cities; or
- · A county, except those counties which contain any type of civil jurisdictions defined in A or B above; or
- A "balance of county" consisting of a county less any component cities and townships identified in paragraphs A or B above; or
- A county equivalent which is a town in the States of Connecticut, Massachusetts, and Rhode Island, or a municipio in the Commonwealth of Puerto Rico.

# Who are some of the users of the LSA list and what are the reasons they use the list?

- The Administrator for Federal Procurement Policy uses the LSA list to identify where procurement set asides should be emphasized in order to strengthen our Nation's economy;
- General Service Administration (GSA) Online Representations and Certifications Application (ORCA) system uses the LSA list as a tool to determine if a business qualifies as a Labor Surplus Area concern;
- The Small Business Administration uses the LSA list for bid selections for small business awards in Historically Underutilized Business Zones (HUBZones);
- Some state and local area governments use the LSA list to allocate employment related assistance (food stamps and training); and
- Private industry has used the LSA list for strategic planning and potential areas of human capital.

# What is the Balance of County Geography?

The balance of county is defined as the reminder of the county after all cities that are civil jurisdictions are disaggregated from the county.

# Can an area be added to the Labor Surplus List if that area's unemployment rate was below the qualifying unemployment rate for the referenced period?

An area can be classified as a labor surplus area if that area's unemployment rate was below the qualifying unemployment rate for the referenced period under the exceptional circumstance provision. The exceptional circumstance provision is a written petition by the state workforce agency to the Department of Labor's ETA requesting an area(s) be classified a Labor Surplus Area. The criteria for an exceptional circumstance classification are:

- An area's unemployment rate will be greater than or equal to the Labor Surplus Area qualifying unemployment rate for each of the three most recent months;
- A projected unemployment rate that will be greater than or equal to the qualifying unemployment rate for each of the next 12 months; and
- Documentation that the exceptional circumstance event has already occurred.

State Workforce Agencies may submit petitions in electronic format to <u>wright.samuel.e@dol.gov</u>, or in hard copy to the U.S. Department of Labor, Employment and Training Administration, Office of Workforce Investment, 200 Constitution Ave NW, Room S-4231, Washington, DC 20210. Attention Samuel Wright.

# Can an area be added to the Labor Surplus List if that area is not a civil jurisdiction?

Under the Labor Surplus Area program's exceptional circumstance procedures, labor surplus area classifications can also be made for Metropolitan Statistical Areas as defined by the Office of Management and Budget.



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# **Economic Development Industrial Corporations** (EDIC)

EDIC creation is authorized by a state statute which allows cities and towns identified as labor surplus areas by the U.S. Deptartment of Labor

EDIC creation is authorized by a state statute which allows towns or cities to identified as labor surplus areas by the US Department of Labor to establish Economic Development Industrial Corporations to implement local economic development projects in accordance with local approved economic development plans.

Projects must involve industrial and manufacturing uses and are designed to lower the unemployment rate and eliminate substandard, or open areas. The DCS provides assistance to cities and towns in establishing EDICs to undertake redevelopment projects, as well as ongoing technical assistance.

Eligible Applicants: Any towns designated by the U.S. Department of Labor as a labor surplus area due to high unemployment is eligible to establish an EDIC under MGL Chapter 121C (https://malegislature.gov/Laws/GeneralLaws/PartI/TitleXVII/Chapter121C).

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Economic Development Policy ED-7

# **Eligible Activities**

In accordance with an economic development plan an EDIC may implement economic development projects designed to decrease the unemployment rate and eliminate decadent and blighted open areas existing in a city or town.

# **Selection Criteria**

In order to establish an EDIC, a town must first determine that the need for an EDIC exists. In towns this requires a vote by town meeting and in cities a vote by the city council and approval by the mayor or city manager. Under M.G.L. Chapter 121C, towns must receive certification from the Executive Office of Housing and Livable Communities (EOHLC) for the establishment of EDICs. Cities are not required to receive certification from EOHLC.

# How to Apply

Please refer to the DHCD publication EDIC Implementation Guide 2022 (/doc/edic-implementation-guide-2022/download)

# **Additional Program Information**

Organizer for Economic Development 2022 (/doc/organizer-for-economic-development-2022/download)

Matrix of Organizational Characteristics (/files/documents/2016/07/qf/matrix.pdf)

USDL Labor Surplus Areas (http://www.doleta.gov/programs/lsa.cfm)

Massachusetts Office of Business Development (/orgs/massachusetts-office-of-business-development)

Executive Office of Energy and Environmental Affairs (/orgs/executive-office-of-energy-and-environmental-affairs)

Massachusetts Department of Environmental Protection (/orgs/massachusetts-department-of-environmental-protection)

Massachusetts Environmental Policy Act Office (MEPA) (/orgs/executive-office-of-energy-and-environmental-affairs)

Massachusetts Historical Commission (http://www.sec.state.ma.us/mhc/)

Executive Office of Housing and Economic Development - Economic Development Incentive Program (EDIP)

MassDevelopment (http://www.massdevelopment.com/)

MassHousing (http://www.masshousing.com/)

# Part I ADMINISTRATION OF THE GOVERNMENT

Title XVIIPUBLIC WELFARE

Chapter 121C ECONOMIC DEVELOPMENT AND INDUSTRIAL CORPORATIONS

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Section 2	Legislative declarations
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#### Chapter 121C

real estate; exemption of income or profits from transfer of corporation obligations

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# 8 Policy Strategies Cities Can Use to Support Local Businesses

BY STACY MITCHELL | DATE: 28 AUG 2017 | 📲 🛂 🥳 🟬

The Institute for Local Self-Reliance produced this policy brief for Local Progress, a network of elected officials organized by the Center for Popular Democracy. We've reproduced the text of the brief below, and it's also available to **download** [PDF] and as part of Local Progress's **library of policy briefs**.

#### The Problem

Locally owned businesses play a central role in healthy communities, and are among the best engines that cities and towns have for advancing economic opportunity. Small business ownership has been a pathway to the middle class for generations of Americans, and continues to be a crucial tool for building wealth and community self-determination. This is something many people understand intuitively, and it is also borne out by research that finds that the presence of locally owned businesses is linked to higher rates of

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Despite these benefits, in many communities, small businesses are disappearing. Betwee 2012, the number of independent retailers fell by about 108,000 and small manufacture 70,000.[2] Even more alarming than the overall decline in small businesses is the fact the have become much harder to launch one: The number of new firms created each year he half since the 1970s, a trend that economists say is slowing job growth.[3]



Contrary to popular perception, this decline isn't because local businesses aren't competitive. In many cases, it's because public policy and concentrated market power are working against them. Misguided zoning policies, soaring real estate costs, and financing terms that incentivize landlords to rent to chains[4] are making it harder for local businesses to find suitable space. Banking consolidation and the decline of local financial institutions has left more entrepreneurs struggling to obtain the capital they need, a barrier that is especially acute for Black, Latinx, and women entrepreneurs.[5] Economic development subsidies and tax incentives further skew the playing field by **disproportionately flowing** to big corporations.

## The Solution

As policymakers begin to recognize these barriers, some are taking action to ensure that their communities are places where local businesses can thrive. Here is a sampling of the strategies they are using.

**Get Zoning Right for Small Businesses** — Rather than favoring strip malls and large-format development, zoning should support multi-story, pedestrian-oriented districts that include a mix of small and large commercial spaces, and that preserve historic buildings. This type of varied building stock offers the best habitat for local businesses, and research has found that neighborhoods with a range of building types and ages have more startups per square foot. **[6]** 

Set Aside Space for Local Businesses in New Development — Cities can require development projects to reserve a portion of their first-floor space for small storefronts and for locally owned businesses, either as a condition of permitting or through agreements in particular projects, as **Austin**, **Portland, Ore.**, and other cities have done. Because of financing incentives and national relationships, new development is often oriented to the needs of large chains; set asides can help close the gap.

Adopt a Business Diversity Ordinance — A Business Diversity Ordinance can ensure that independent, neighborhood-serving businesses don't get crowded out by chains. Municipalities around the country, from Fredericksburg, Texas, to Jersey City, have used this tool effectively. San Francisco's 12-year-old policy is one of the most comprehensive. It requires a "formula" business to apply for a special use permit and meet criteria in order to locate in any of the city's neighborhood commercial districts.[7]

**Facilitate Adaptive Reuse of Vacant Buildings** — Cities can establish an **Adaptive Reuse Program** to help local entrepreneurs turn vacant historic buildings into new businesses. In **Phoenix**, for instance, the program offers permit-fee waivers and a faster timeline for eligible projects. In **Anchorage, Alaska**, a **land trust** works with local entrepreneurs to repurpose derelict commercial properties.

**Reorient Economic Development Incentives** — Economic development incentive programs disproportionately favor big companies,**[8]** and what's more, they often don't work.**[9]** Instead of giving public dollars to big businesses, cities should redirect these resources to foster local businesses, as some cities, like **Grand Rapids, Mich**., are doing. Another model can be found in **Portland**, where the city has several initiatives to accelerate the growth of minority-owned businesses.

**Open a Small Business Office** – Cities should create a position within city government to guide business owners through local permitting requirements, and to serve as a liaison between small businesses and

Sum travit 1, 0 CAN

What Neighborhood Retail Gets Right (Episode 27) Md., and Minneapolis, or a Small Business Commission, such as the one in San Francis

**Give Preference to Local Businesses in Purchasing** — Cities should establish a **prefer owned businesses** in city purchasing, and include clear definitions, goal-setting, and rep that their purchasing doubles as economic development, as **Cleveland** has done. Cities d a preference for local businesses when leasing city-owned commercial space, as **Seattle** King Street Station.



NULLING CITES

What Neighborhood Retail Gets Right (Episode 27)

**Expand Access to Capital** — Community banks supply a majority of **small business loans**. As their numbers have plummeted in the last decade, so too has lending to small businesses. To strengthen and expand these institutions, **Oakland**, **Santa Fe**, and other cities are exploring setting up a **public partnership bank**, modeled on the Bank of North Dakota. Another helpful approach is to establish a one-stop, single-application portal for local entrepreneurs seeking loans, as **Philadelphia** has done with its Capital Consortium.

#### Landscape & Resources

For scholarship on the benefits of locally owned businesses, see the **Institute for Local Self-Reliance**'s resource page, **"Key Studies: Why Local Matters."** For more about how the built environment can support local businesses, see the ILSR report, **"Affordable Space**." Detail about the decline of local businesses can be found in the ILSR report, **"Monopoly Power and the Decline of Small Business**." Also see the ILSR articles **"Access to Capital for Local Businesses**," **"How San Francisco is Dealing With Chains**," and **"Procurement Can Be a Powerful Tool for Local Economies, but Takes More Than a Policy Change to Work**."

Notes

[1] "Key Studies: Why Local Matters," Institute for Local Self Reliance, Jan. 8, 2016.

[2] U.S. Economic Census.

[3] "Declining Business Dynamism in the United States: A Look at States and Metros," Brookings, 2014.

[4] "Blame the Banks for All Those Boring Chain Stores Ruining Your City," Patrick Clark, *Bloomberg*, Sept. 2016.

[5] "2016 Independent Business Survey," Institute for Local Self Reliance, Feb. 10, 2016.

**[6]** "Older, Smaller, Better: Measuring how the character of buildings and blocks influences urban vitality," *Preservation Green Lab and National Trust for Historic Preservation*, May 2014.

[7] "Formula Business Restrictions," Institute for Local Self-Reliance, Dec. 1, 2008.

[8] "Shortchanging Small Business," Greg LeRoy et. al., Good Jobs First, Oct. 2015.

**[9]** "An Assessment of the Effectiveness and Fiscal Impacts of the Use of Local Development Incentives in the St. Louis Region," *East-West Gateway Council of Governments*, Jan. 2011.

Photo of Hillsboro, Ore.

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access to capital adaptive reuse commercial diversity economic development homenage feature local nurchasing preferences producement set-asides small husiness office

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#### Stacy Mitchell

Stacy Mitchell is co-director of the Institute for Local Self-Reliance and directs its Independent Business Initiative, which produces research and designs policy to counter concentrated corporate power and strengthen local economies.



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#### **ACT: INSPIRATION**



# Farm Stops: A New Way to Enhance Local and Regional Food Systems

By Katie Barr, originally published by Resilience.org

July 29, 2022



There's no denying that our current food system in the United States is in trouble. With the worsening climate crisis affecting crop yields, the pandemic limiting the labor force, and the war in Ukraine driving staggering inflation, we need alternatives to a largely homogenized system and fast. Now more than ever, we need a localized system that supports the rapidly shrinking population of small to mid-sized family farms, makes food more accessible, and provides full transparency to people who increasingly demand justice, equity, and accountability for the quality and source of their food. Over the past few decades we've turned to alternative methods like farmer's markets, community-supported agriculture programs, and most recently, food hubs. But there's an emerging method that may just be the key to forming strong, localized food systems.

Enter the small-farm-supporting grocery store, otherwise known as a Farm Stop. A Farm Stop is a mission-driven entity that supports small-scale farmers by sourcing agricultural products from nearby producers, and by operating on consignment. Most people, when they hear the word "consignment" think of clothing or antique stores, but it can also be applied to sourcing local agricultural products, supporting small-scale farmers, and strengthening local food systems. A good example is the Argus Farm Stop in Ann Arbor, Michigan. This year-round grocery store works with over 200 local farmers and producers. Argus gives the producers they work with 70 percent of the retail price, and takes a 30 percent commission to maintain its operations. This ensures that farmers get the real value for their products.

With stores like Argus Farm Stop, farmers and producers set their own prices, own their products until they are sold, and make more money than an average retail sale. This not only gives small-scale farmers a fair wage yearround, but it also allows them to manage their own inventories, and save time and labor from participating in farmer's markets that are only open for part of the year. Thus far, in only eight years of operation, Argus Farm Stop has put over \$10 million back into the hands of the farmers and producers they work with.

In addition to strengthening the local food economy, stores like Argus Farm Stop foster closer relationships with the producers they work with, and educate others about the benefits of eating locally and seasonally. Because these stores operate on consignment, they often rely on additional diversified revenue streams, which allows for greater flexibility, adaptability, and stability to meet the needs of their communities and provide further support for small-scale farmers, food producers, and businesses in their area. For example, most Farm Stops have a café and a commercial kitchen to sell value-added products made from items taken from the store, or directly from other small-scale producers. These cafés often serve as third places; spaces that foster community and communication, support cultural and social creativity and expression, and enhance the quality of life of a community.

Other revenue streams can flow from incubator kitchens or production spaces which offer entrepreneurial support to small-scale producers and businesses that lack their own production spaces. In addition, Farm Stops can be flexible in their business structure, allowing them to incorporate as non-profits or co-operatives where they can access funding opportunities via grants and awards. For example, Local Roots in Wooster, Ohio, and Random Harvest in Craryville, New York, are both co-operatives that offer cafés, incubator kitchens, and rentable community spaces. In this way, Farm Stops help to strengthen local food economies, educate consumers about the benefits of local food, and build community.

The Farm Stop concept is new and not yet well researched. To better understand the social, cultural, and financial impacts of Farm Stops on the communities they serve, I conducted a study analyzing 284 survey responses from four different Farm Stops around the country. The results showed that Farm Stops provide a number of benefits not just to the farmers they work with, but also to their communities. The results are as follows:

# **1. Enhanced Access to Local Foods**

Farm Stops support small to mid-scale local producers by providing them with a year-round, direct-to-consumer sales outlet they don't have to

Farm Stops serve community needs and bolster local producers. This can shift the priorities of community members toward developing their local food system, because individuals can see the wider benefits of purchasing goods at a Farm Stop, while improving health and wellbeing for themselves and the whole community.

For more details, please read my full study here.

## How to Start a Farm Stop

When it comes to creating a more sustainable food system, we need a diversity of options that prioritize and support local and regional food systems. To that end, I have also put together a guidebook on How to Start a Farm Stop in any community.

This document is meant to guide and encourage the creation and development of Farm Stops, similar to that of Argus Farm Stop in Ann Arbor, Michigan. For those interested in developing a Farm Stop in their communities, this document not only describes essential elements, but also covers how you want your store to look, feel, and operate.

For those interested in understanding the Farm Stop model further, here is a list of existing Farm Stops around the country:

- Random Harvest, Craryville NY
- Local Roots Market and Café, Wooster, OH
- The Wild Ramp, Huntington, WV
- Agricole Farm Stop, Chelsea, MI
- Acorn Farmers Market and Café, Manchester, MI
- Boone Street Market, Jonesborough, TN


# **IN FOCUS**

# What Is the *Blue Economy*?

Marine economic activity, which may include activities occurring in the ocean, coastal areas, and Great Lakes, is important for economic growth, jobs, and livelihoods around the world, and particularly in coastal communities. However, some marine economic activities contribute to overexploitation of living (e.g., fisheries) and nonliving (e.g., oil, minerals) marine and coastal resources.

This In Focus discusses various definitions of the term *blue economy*; provides an estimate of the monetary value of the U.S. blue economy; and presents policy considerations for Congress, including a discussion about the possible need for a statutory definition of the blue economy and legislative support for its associated activities.

### **Blue Economy Definitions**

There is no agreed-upon definition of the term *blue* economy. The use of the term varies among and within countries, organizations, and institutions. Definitions of the term generally fall into two categories.

One variation of the definition refers to the blue economy as the collective economic value of the resources, uses, and activities of the ocean and coasts. This definition may be used interchangeably with other terms, such as *ocean economy* and *marine economy*. This In Focus uses this definition of the term *blue economy*.

Another variation of the blue economy definition refers to the use of ocean and coastal resources to balance economic prosperity and environmental sustainability, in line with how the term was first introduced and used at the 2012 United Nations Conference on Sustainability. For example, the World Bank defines the blue economy as the "sustainable use of ocean resources for economic growth, improved livelihoods and jobs, and ocean ecosystem health." In this definition, the blue economy refers to the efforts of nongovernmental organizations, federal agencies, or others to promote sustainable ocean development, which contributes to maintaining the ocean's ecological health and ensuring the long-term viability and economic growth of marine-based industries.

Congress has not defined the term *blue economy* in statute. Federal officials have used both of the above variations of the term in the context of federal programs. Some examples include the following:

• The National Oceanic and Atmospheric Administration (NOAA) defines the blue economy as the "sustainable use of ocean resources for economic growth, improved livelihoods and job creation."

# Goal ED-2

August 5, 2022

- The Department of State reports that the purpose of the blue economy is to "advance ocean heath alongside economic prosperity, providing sustainable food, power, and transportation."
- The Department of Energy (DOE) describes the blue economy as "comprised of sectors and activities that span commerce and trade; living resources; renewable energy; minerals, materials, freshwater; and ocean health and data" and notes that many of these sectors show an increased focus on sustainability.

## Value of the U.S. Blue Economy

In the United States, the Bureau of Economic Analysis (BEA) tracks revenues and jobs associated with the marine economy. BEA considers the following activities to be part of the marine economy: living marine resources, coastal and marine construction, marine research and education, marine transportation and warehousing, marine professional and technical services, offshore minerals, coastal utilities, coastal and offshore tourism and recreation, nonrecreational ship and boat building, and national defense and public administration. Some may consider the value of the marine economy as a potential index of the value of the U.S. blue economy. In 2019, BEA reported that the U.S. marine economy portion of the gross domestic product (GDP) grew faster than the nation's economy as a whole. In 2020, the most recent year for which data are available, BEA found the marine economy accounted for 1.7%, or \$361.4 billion, of the U.S. GDP, with coastal and offshore tourism and recreation as the largest contributor, at \$190.9 billion.

Some organizations have attempted to estimate the worth of a potentially similar group of ocean-based activities, termed the *ocean economy*. For example, the Organisation for Economic Co-operation and Development (OECD) defined the ocean economy to include water transportation; port activities; maritime and coastal tourism; industrial fish processing, capture, and marine aquaculture; exploration and production of offshore oil and gas and wind; shipbuilding and repair; and manufacture of marine equipment. In 2016, the OECD projected the global ocean economy could double in total value added to \$3 trillion by 2030.

## **Policy Considerations**

Congress may consider several issues related to the blue economy, including how the term is defined and valued and legislative support for its associated activities.

### Need for a Blue Economy Definition?

Several bills introduced in the 117<sup>th</sup> Congress aim to codify the term *blue economy*. Some bills would define blue economy as an activity, whereas others would define it as an economic sector. For example, H.R. 6680 would define the term broadly, in the context of DOE authorities, as "the sustainable use of ocean and aquatic resources to grow the economy, improve livelihoods, and create jobs in a manner that preserves the health of ocean and aquatic ecosystems." In another example, H.R. 7970/S. 3866 would define blue economy in the context of Department of Commerce responsibilities as "the value and impact of sustainable industries related to the Great Lakes, oceans, bays, estuaries, and coasts on the economy of the United States," and would specify industries and activities to include.

Some stakeholders argue that a standard definition of the term is needed to capture the blue economy's full contribution to national GDP. For example, H.R. 3748/S. 140 would direct the NOAA Administrator to work with other agency leaders to define and measure the blue economy in coordination with nonfederal and tribal stakeholders, and to collaborate with national and international entities to ensure measurement comparability, among other activities. Alternatively, Congress might maintain the status quo and leave the term undefined.

The definition used for blue economy could inform policy debates regarding ocean uses and activities. Any economic valuation of the blue economy would depend on the definition used, which would specify what industries, activities, resources, or geographic areas are included. For example, some have proposed to include *ecosystem services*—the benefits to people, such as flood control, provided by the natural environment—in valuations of the blue economy. However, measuring these aspects of the blue economy is challenging due to a lack of consensus on how to value ecosystem services. Most existing measures of the blue economy focus on activities of marine-based industries and exclude ecosystem services.

### **Supporting Blue Economy Activities**

Congress has authorized federal agencies to support activities that may be included in the broad definitions of blue economy above. Legislation in the 117<sup>th</sup> Congress would add or change these blue economy-related authorities. For example, some bills would support blue economy activities explicitly, such as legislation that would designate and fund regional Ocean Innovation Clusters to "contribute to the equitable and sustainable growth of the blue economy across all sectors" (H.R. 7970/S. 3866). Some bills would support certain industries that fall within the blue economy by providing funding for research and development of "blue energy technologies" (H.R. 6680), establishing requirements for offshore aquaculture in federal waters (H.R. 6258/S. 3100), or making changes to federal fisheries conservation and management programs and processes (H.R. 3128), among other activities. Other bills would support conservation and protection of the marine environment, which serves as the basis for many blue economy activities, or would indirectly facilitate the blue economy through research, observations, and monitoring of the marine environment.

Congress may continue to consider facilitating blue economy cooperation and coordination between the stakeholders that rely on shared marine spaces and

resources. For example, the offshore renewable energy industry anticipates job growth with the deployment of solar, tidal, and wave energy technologies and the continued expansion of federal and state offshore leasing for wind energy. However, potential productive locations for offshore renewable energy projects may coincide with locations of other marine activities, such as commercial and recreational fishing, or conservation activities, such as feeding or migration areas for certain species (e.g., North American right whales). Previous Administrations have provided funding and technical assistance to nonfederal regional ocean partnerships (ROPs) focused on marine spatial planning. Some Members have proposed to codify NOAA's relationship with ROPs, including authorizations of appropriations for financial assistance (e.g., H.R. 3817/S. 1894 in the 117<sup>th</sup> Congress).

#### International Considerations for the Blue Economy

Many international intergovernmental organizations have established goals and targets that may directly or indirectly support activities within the various definitions of the blue economy. For example, one target outlined in the U.N. Convention on Biological Diversity (CBD) Post 2020 Global Biodiversity Framework is for protected areas to cover at least 30% of land and sea areas by 2030. The Biden Administration's "Executive Order on Tackling the Climate Crisis at Home and Abroad" (E.O. 14008) specified the Administration would determine which steps to take toward "conserving at least 30 percent of [U.S.] lands and waters by 2030."

Congress may play a role in establishing new or expanding existing marine protected areas (MPAs) to help achieve the goals of the CBD. Human activities are managed within MPAs to protect and restore marine and coastal ecosystems. In the United States, MPAs can be established and managed at the federal, state, local, and tribal levels. MPAs in the United States currently cover 26% of U.S. marine waters.

MPAs may support the marine and coastal tourism sector within the blue economy. The marine and coastal tourism industry, including recreational boating and fishing, marine guided tours, and marine trips and travel, depends on healthy beaches, coral reefs, and other ecosystems. For example, a 2017 study found that 70 million trips are supported by the world's coral reefs each year, representing an estimated \$36 billion to the global marine and coastal tourism industry.

MPAs also may contribute to the blue economy through their ecosystem services. For example, 83% of U.S. mangrove forests, which occur along the U.S. Gulf Coast, are protected by federal or state MPAs. Mangroves are often referred to as one nature-based approach for mitigating global climate change—studies estimate that mangrove forests can store up to four times more carbon than tropical rainforests. Mangroves also stabilize the coastline, reducing erosion from storm surges, currents, waves, and tides.

Caitlin Keating-Bitonti, Analyst in Natural Resources Policy Eva Lipiec, Analyst in Natural Resources Policy

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# Policy ED-9

MONEY REPORT

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## NEWS

# Some 70,000 child care providers may close as federal aid ends, report finds. What that means for parents

By Ana Teresa Solá, CNBC • Published September 12, 2023 • Updated on September 14, 2023 at 10:55 am



Lauren Rosenberg, right, of Portland, Maine, and her nanny, left, set out toys for Rosenberg's children.

Economic Development Policy ED-g 12

services anoat as part of the American Rescue man Act of 2021.

- However, more than 70,000 child care providers who benefited are likely to close after the program expires this month, shutting down care for 3.2 million kids, a think tank estimates.
- Experts say that systemic change, such as broader parental leave and more public funding for child care, must be involved for child care to improve at a larger scale.

Child care is already scarce and expensive – and the stakes are about to get higher.

The federal government provided states with nearly \$24 billion in stabilization funds to keep child care services afloat as part of the American Rescue Plan of 2021.

That program expires at the end of this month.

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More than 70,000 child care providers who benefited are likely to close as a result of lost funding, according to estimates from The Century Foundation, a liberal think tank. That would affect 3.2 million kids and slash \$10.6 billion in revenue from lost worker productivity as parents reduce hours or leave jobs in the scramble to find new care.

## More from Personal Finance:

Money market funds vs. high-yield savings accounts Women will accept much lower salaries than men Homeowners say 5% is the magic number to move

Researchers came to these figures based on data from a survey of 12,000 early childhood educators from all states and settings — including faith-based programs, home providers, Head Start programs and child care centers — as well as data from the U.S. Department of Health and Human Services Office of Child Care.

"Quality, affordable child care is already scarce, and the child care workforce is already badly underpaid and under great stress," said Lauren Hipp, national director for early learning at advocacy group



# CAPE COD CULINARY INCUBATOR Resources for the food entrepreneur

ACTION ED-9

Home Posts news Cape Cod Culinary Incubator to open shared-space, commercial kitchen at future home of KAM Appliances

# Cape Cod Culinary Incubator to open shared-space, commercial kitchen at future home of KAM Appliances

By capeculinaryincubator September 7, 2021

Cape Cod Culinary Incubator (CCCI) announces it will be opening a shared space, commercial kitchen in early 2022. The facility will be the first of its kind on Cape Cod and will serve start-up and small, local food makers. The kitchen will be located within the new KAM Appliances building, currently under construction on Aggregate Way, in Barnstable, MA.

Member food makers will be able to rent kitchen time to prepare and package foods in a fully-equipped, commercial kitchen. CCCI will provide educational opportunities to support local food makers in developing their businesses. The kitchen will employ a manager to oversee the operations of the kitchen and provide on-site support to members.

KAM Appliances has been a long-time supporter of Cape Cod Culinary Incubator and we are excited to be a part of their new location.

Cape Cod Culinary Incubator was founded in 2013 as a 501(c)(3) non-profit organization to promote culinary entrepreneurship across Cape Cod. CCCI offers education, counseling,

Cape Cod Culinary Incubator to open shared-space, commercial kitchen at future home of KAM Appliances - CAPE COD CULIN...

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<sup>1</sup> networking, and marketing guidance to small entrepreneurial food businesses. CCCI is committed to providing small, local food makers with the resources necessary for success.

Last updated on September 7, 2021

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2023 Local Comprehensive Plan

#### 2.0 ECONOMIC DEVELOPMENT

#### 2.1 Introduction

This chapter assesses market and economic conditions in Mashpee, provides a local and regional context for economic development, and offers recommendations for aligning economic development efforts to meet new challenges, including:

- An aging population. Barnstable County residents are getting older, and there is a decline in the number of young adults.
- Housing costs outpace wages. Mashpee wages are relatively stable while housing prices continue to increase. The pandemic had some negative impact on housing affordability, as remote workers purchased homes on the Cape.
- A lack of infrastructure to support new investment. Nearly all development on Cape Cod
  continues to utilize on-site septic systems that release nitrogen to groundwater, which results in
  degraded embayment water quality. Significant investment in wastewater infrastructure is
  needed in the region to encourage economic growth.
- High speed fiber cables have significant benefits to the community but can lead to legal issues in the future regarding land rights, including federal and private rights-of-way (United States Department of Energy, 2020). They are often more expensive due to their complex design and installation costs and are more prone to physical damage due to their thin design made of glass.

#### 2.1 Existing Conditions

#### 2.1.1 Regional Context

The economic challenges faced by Mashpee reflect those of the greater Cape Cod region: how to grow a sustainable economic base while preserving the community's important natural resources. One of the major factors in creating a sustainable economic base is the availability of housing for local workers. As housing and land prices increase, the cost of living and doing business on the Cape becomes unattainable for all but those in the highest income brackets. The 2017 Regional Housing Market Analysis found that residents earning less than \$90,000 in Barnstable County will be housing cost-burdened (Cape Cod Commission, 2017). Since Mashpee's median household income is \$78,309, more than half of residents are considered cost-burdened (United States Census Bureau, 2020).

Cape Cod's economy is a small business economy. Eighty-eight percent of the region's businesses have fewer than twenty employees and many are seasonal and tourism-related (Richardson & Clinton, 2017). Location quotients (LQ) are a useful tool to identify how concentrated an industry is within an area, compared to the rest of the country. Because so much of Barnstable County's economy is tied to tourism, it would follow that the LQ for tourism-related industries is high – meaning these types of industries are more concentrated within the county as compared to the rest of the nation. Within Barnstable County, the industries with the highest 2020 LQ based on annual average employment were Health Care and Services, Accommodations and Food Services, and Retail Trade. These industries serve as "core industries" in Barnstable County. Construction, utilities, arts, entertainment, and recreation were identified as growing sectors (United States Bureau of Labor Statistics, 2020).

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#### 2023 Local Comprehensive Plan

In 2019, the Cape Cod Commission conducted a county-wide regional economic development analysis. This Comprehensive Economic Development Strategy (CEDS) identified the following regional priorities:

- Infrastructure in activity centers
- Last-mile broadband strategy
- Expanded financing tools for infrastructure
- Expansion of the blue economy
- Business Development to support job growth
- Education and workforce development to support wage growth
- Housing diversity and affordability
- Zoning and regulatory reform for Smart Growth/Activity Centers
- Regionalization for greater government efficiency.

Many of these priorities are relevant for Mashpee. The 2020 CEDS update identified several trends that affect economic development in the region, all of which can be found in Mashpee:

- Aging population. Barnstable County residents are getting older, and there is a decline in the number of young adults.
- Stagnant wages. Barnstable County has experienced growth in the Gross Domestic Product, number of jobs, number of businesses, and in household income levels, since the Great Recession of 2008; however, average earnings remain stagnant when adjusted for inflation, consistent with the rest of Massachusetts and the nation. Slightly under 7% percent of Barnstable County lives below the federal poverty level (U.S. Census Bureau, 2020).
- **COVID-19 impacts.** In 2020, the pandemic caused unprecedented economic distress in the region. Barnstable County faced a higher unemployment rate at 21.6% in April 2020, compared with the state (15.1%) and the US (14.7%).
- Lack of worker housing. Housing affordability continues to be a crucial economic challenge for Barnstable County. The pandemic had some negative impact on housing affordability, as remote workers purchased homes on the Cape.
- A lack of infrastructure Investment. Nearly all development on Cape Cod continues to deploy
  onsite septic systems that release nitrogen into the groundwater, which results in degraded
  embayment water quality. Wastewater infrastructure is needed in identified Activity Centers in
  the region to encourage economic growth.

#### 2.1.2 Mashpee Context

Like many Cape Cod towns, Mashpee's economy is influenced by seasonal residents and tourists in the summer season. The Cape's economy is less seasonal than during the 1990s, but it still depends heavily on the doubling of the population in the summer and spending by second homeowners and visitors. Table 2-1 shows the range of annual unemployment for both Mashpee and the state. In calendar years 2020 and 2021, the employment rates of both the Town and state fluctuated more dramatically than usual.

Table 2-1. Annual Unemployment Rates, Not Seasonally Adjusted						
Year	Mashpee	Massachusetts				
2016	4.6	4.0				
2017	4.4	3.8				

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2018	4.5	3.4
2019	3.9	3.1
2020	10.6	9.4

Source: 2016-2020 Labor Market Information, Massachusetts Department of Economic Research, 2020

#### Industries





As of 2020, 43% of jobs in Mashpee are in tourismrelated industries. The Location Quotients (LQ) for Mashpee are consistent with the Cape-wide statistics and, outside of healthcare, involve tourism-related industries. The LQ is a way of identifying which industries take up the greatest share of the local economy – the "core industries." As would be anticipated, the core industries in Mashpee are tourism-related and include retail, accommodations, and food services. Health services also represent a "core industry" in Mashpee, while the arts, entertainment, and recreation industries contain a relatively high share of jobs.

#### **Income and Wages**

The 1998 Comprehensive Plan noted that Mashpee residents had lower income levels compared to other Cape Cod residents. This trend appears to have changed. Mashpee's 2020 household income was \$78,309, compared to \$76,863 in Barnstable County (and comparable to Massachusetts overall at \$84,385). However, while median household incomes in Cape Cod are relatively high, the prohibitive cost of living on Cape Cod, and in Mashpee, need to be considered.

While employment growth has been steady, when controlled for inflation average weekly wages in Cape Cod have not increased significantly since 1990, a trend consistent with both Massachusetts and the overall US. In fact, median earnings on Cape Cod showed a slight decline, averaging \$8,000 to \$15,000 lower per year than wages in the US. The gap is even greater when compared to wages in Massachusetts overall (Richardson & Clinton, 2017). In May 2020, the US Bureau of Labor Statistics (BLS) listed the average annual wage for Massachusetts as \$70,010, the same measure for Barnstable County is \$57,262. Although Cape Cod has a more expensive housing market than the state of Massachusetts, local wage rates are lower.

Chapter 1, *Housing*, contains more detail on issues of affordability, but it is important to note that Massachusetts is one of the most expensive real estate markets in the nation, and the median home value on Cape Cod (\$414,000) is 4% higher than the rest of the state (United States Census Bureau, 2020). The affordability gap for workers on the Cape, including Mashpee, continues to widen and represents a major challenge for sustainable economic development.

The Cape Cod economy is unique because of its significant natural resources, reliance on tourism, and a disproportional number of wealthy retirees. The percentage of self-employed residents in Barnstable County was 18%, which is double the percentage for Massachusetts and the United States. Compared to

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Massachusetts, Mashpee and Barnstable Country also had higher rates of non-wage income – 33% versus 22% statewide (Cape Cod Commission, 2016).

The average commute for a Mashpee resident was 26.4 minutes. The current employers in Mashpee provide jobs for just under 5,000 people on average over the year, but the proportion of these jobs occupied by residents of other Cape towns is unknown. Almost 1,000 residents of Mashpee work outside Barnstable County and about 85 residents work outside the state (Cape Cod Commission, 2016).

#### Unemployment

The 1998 Comprehensive Plan also identified Mashpee as having a relatively high unemployment rate, but that trend has reversed and the employment rates over the past few years in Mashpee are generally consistent with those across Barnstable County. Unemployment in Mashpee, as would be expected, was significantly impacted by the COVID-19 pandemic. Mashpee's unemployment rate reached 20% in April 2020, mirroring the county-wide figures. These numbers exceeded both Massachusetts and U.S. figures, which is likely due to the Cape's considerable number of retail and restaurant uses, and to the annual seasonal dip in employment. Although the numbers are relatively low, they do not reflect the seasonal nature of unemployment in Mashpee, and on the Cape.

#### 2.1.3 Land Use and Zoning

Mashpee's tax base reflects the general land use configuration of the Town. Ninety-one percent of the total tax levy comes from residential property, compared to 86% countywide. Only 10% of the total land area is zoned for commercial (2.6%) or industrial (7.8%) uses. Approximately 28% of the total land area in Mashpee is protected open space.

Source: ESRI

- Vacant commercial 214 acres
- Vacant industrial 120 acres

In 2013, the Market Assessment for Cape Cod, Massachusetts prepared by the Chesapeake Group, Inc., projected the future demand for sales and commercial space in Mashpee. From 2013 to 2033, the Assessment projected an additional 60,000 square feet of commercial space. This is a small number considering the amount of developable land available, but Mashpee will not continue to see the rates of population growth that spur growth in the typical tourism-related industries and the pandemic's effect on the availability of remote work options will impact an already weak office market. The report recommended zone changes to accommodate a denser, more mixed-use type of development within the existing commercial areas. It is worth noting that 85.5% of the undeveloped commercial land is within

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Commented [LL1]: Unsure where data came from Commented [LL2R1]: Mashpee RESET, 2016

Commented [LL3]: Unsure where data came from
Commented [LL4R3]: Mashpee RESET, 2016



**Commented [EL5]:** I think we should qualify this figure. What is "Protected Open Space" in this context? Important to understand methodology fo calculating because I think it likely ignores open space protected as a requirement of a cluster subdivision for example THAT IS STILL OWNED BY AN hoa. I believe this figure is between 40-45%

the C-1 zoning district generally located around the Mashpee Rotary and is owned and controlled by Mashpee Commons, which provides an opportunity for these recommendations to be realized.

#### **Major Commercial Areas**

Mashpee's commercial and industrial uses and zones are in a few concentrated areas within the Town. The most prominent is the C-1 Zoning District where Mashpee Commons is located. The other four were the subject of a 2016 RESET study where the Town partnered with the Cape Cod Commission:

**Mashpee Commons** - Mashpee Commons is currently permitted for an additional 400,000 SF of commercial space and 482 residential units. Consensus regarding Mashpee Commons overall development/expansion goals has not been achieved and should be readdressed at an appropriate time in the near future.

**Mashpee Industrial Park** - The Mashpee Executive Park is located on Route 28 just south of the Mashpee Commons. The park has twenty-one parcels and is zoned for industrial uses (I-1) on the Mashpee Zoning Map. The Commonwealth designated the Mashpee Executive Park as an Economic Opportunity Area for property tax abatement. The park is partially within the state-approved Wellhead Protection Area on the Regional Policy Plan Water Resources Classification Map 1. The 2016 analysis noted consistent vacancies and significant non-industrial uses in an area zoned for industrial uses, which suggests that demand for industrial space at this location is fairly weak. The data also suggests that office uses may be in much higher demand, especially for medical uses that make up 37% of the uses in the Executive Park.

John's Pond Area - This area includes commercial-zoned land along Route 151 between Old Brickyard Road and Algonquin Avenue and includes approximately 38 acres. This area includes commercial uses, with some multi-tenant commercial structures. The land use pattern here is an auto-oriented suburban strip. In 2016, the vacancy rate was relatively low. This area has been identified by the Planning Board as a 'Redevelopment Priority Area' and hopes to encourage, with future zoning bylaw changes, the production of commercial and residential mixture of uses in a pedestrian friendly and walkable built form.

**Route 130 Area** – The Route 130 Area is zoned Commercial with the remainder of this area zoned Industrial for a total area of about 198 acres.

**Route 28 East Area** – The Route 28 East Project Area includes the commercial and industrial zoned land surrounding Route 28 at the Mashpee/Barnstable Town Line and extending roughly between Old Mill Road and Cape Drive. The Project Area is approximately 57 acres, and the study identified this area as one of the more successful commercial areas within Mashpee based upon vacancy rates. This area has been identified by the Planning Board as a 'Redevelopment Priority Area' and hopes to encourage, with future zoning bylaw changes, the production of commercial and residential mixture of uses in a pedestrian friendly and walkable built form.

#### **Natural Resources**

During the 1980s, Mashpee's population was the fastest growing in New England, increasing by 113%. At the same time, it is located almost entirely within the watersheds of two shallow, nitrogen-sensitive embayments – Popponesset Bay and Waquoit Bay East. The estuarine systems of both bays have shown significant signs of degradation, which has been documented to be attributable to excessive inputs of nitrogen. Federal, state, and local efforts have identified this issue and created regulations that are intended to mitigate the current conditions and also prevent further degradation. Chapter 4, Natural

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*Resources*, and Chapter 8, *Facilities and Services*, both include more information about nitrogen loading and wastewater treatment, but this is an issue that affects the Town's capacity to encourage economic development, particularly any initiatives related to new development as these regulations increase the costs of new development.

#### 2.1.4 Economic Development Programs and Organizations

Mashpee has local organizations that are dedicated to the Town's economic development.

**Economic Development and Industrial Corporation (EDIC)** - The mission of the Mashpee EDIC is to advocate sound growth policy, and to stimulate sustainable economic opportunities that will enhance the quality of life within the Mashpee community.

The Mashpee Chamber of Commerce - The Mashpee Chamber of Commerce is a dynamic and growing non-profit organization, providing its members with ways to develop their businesses through networking events, education seminars, promotional avenues in digital and print media, and more. There are approximately 330 members of the Chamber who have access to these networking opportunities, referral systems, insurance benefits, educational sessions, and sponsorship opportunities at community events.

#### 2.2 Challenges & Opportunities

#### 2.2.1 Challenges

Mashpee faces an ongoing challenge of identifying funding options to support local government programs. The Town lacks a grant writer, which makes securing funding for various projects more difficult. The Town has also seen a decline in its traditional "blue" economy based primarily around fishing due to shrinking public access to waterways and barriers to joining the sector, including commercial fishing and aquaculture. Many small businesses operating in the seasonal cape economy struggle to reconcile increased costs of doing business across the board, and notably wages. It is quite difficult for small businesses to compete on Cape Cod.

#### 2.1.1 Opportunities

Mashpee has numerous opportunities to expand its economy over the next few years. The Town can prioritize eco-tourism since prime greenspace is located within walking distance of highly prized commercial and retail space near the Mashpee rotary. This area has potential to be a base for eco-tourism. Tourism can also be expanded by connecting visitors to Mashpee's historical roots. The Mashpee Historical Commission has planned walks and events in the historic areas near Town Hall. These areas include the Mashpee Historic One Room Schoolhouse, the Mashpee Wampanoag Indian Museum, Attaquin Park, Mashpee Pond, and the Mashpee River and Herring Run. These efforts could be coordinated to showcase nearby commercial establishments, which could take part in hosting events.

#### 2.1.2 Current Measures

The Town is working toward bolstering its shellfishing sector by pursuing a Commonwealth approved harbor management plan with hopes to attract commercial fishermen to the area. Exploring new zoning strategies such as the implementation of form-based code is a priority to remove barriers to entry for small businesses in the Town. The Mashpee EDIC has become more involved with housing issues of-late

**Commented [EL6]:** Consider re-writing without specific reference to form based code. I think its important to stress that the special permit dominant zoning approach need be re-evaluated.

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as the housing crisis is directly impacting the Town's economic development priorities and success of the Town's small businesses.

#### 2.3 Goals & Policies

Goals

- 1. Ensure a prosperous and steadily growing local economy that supports financial independence for all residents while preserving Mashpee's environmental quality, town character, and cultural heritage.
- 2. Bolster support for local businesses, local agriculture, and the "blue economy."
- 3. Goal ED-3: Produce a stable and adequate local workforce with education and affordable living (affordable and attainable housing, education, health, transportation, childcare and recreation).
- 4. Meet or exceed the best available technological resources/infrastructure to ensure Mashpee is economically competitive in the region and state.

#### Policies

- 1. Provide financial and policy-based support for local fishers and businesses.
- 2. Minimize homelessness and the proportion of Mashpee residents living below the poverty line.
- Regularly explore grant funding opportunities for projects that support Mashpee's economic development goals whether it be related to community systems, natural systems, or built systems.
- 4. Prioritize economic development which create jobs with a liveable wage.
- 5. Promote joint economic development effort with the Mashpee Wampanoag Tribe.
- 6. Develop municipal broadband service.
- 7. Leverage the assets of the Economic Development and Industrial Corporation to better meet the needs of the local economy and to support its growth.
- 8. Minimize or remove barriers of entry for new startups or small businesses including but not limited to streamlining the local permitting process and incentivizing certain uses by allowing them by-right as opposed to a special permit process.
- 9. Increase access to childcare for Mashpee's workforce.

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#### 2023 Local Comprehensive Plan

#### 3.0 SUSTAINABILITY

#### 3.1 Introduction

This chapter focuses on sustainable development patterns, energy efficiency, climate preparedness, and green infrastructure. As a coastal community with a large seasonal population, Mashpee's natural resources, housing, and economic development are closely intertwined. Rapidly changing conditions resulting from climate change will affect every aspect of residents' lives. Fortunately, the Town of Mashpee has initiated planning efforts that will improve its resiliency to these impacts. In 2010, Mashpee was designated as a "Green Community" by the Commonwealth under the Green Communities Act. This program provides a designation and grant funding to incentivize cities and towns to reduce municipal energy consumption by 20 percent over five years.

Additionally, the Town completed a Municipal Vulnerability Preparedness Plan (MVP) which provides an assessment of Mashpee's vulnerabilities and strengths and outlines actions to improve resiliency and a Hazard Mitigation Plan (HMP) in 2017 to reduce damages resulting from natural disasters. An updated HMP is currently being drafted with a public comment period expected at the end of August 2023. The HMP identifies infrastructure, parcels, and buildings that are vulnerable to the impacts of flooding. Information on flood zones is further detailed in the Natural Resources Chapter of this Comprehensive Plan. The Town also completed a Comprehensive Watershed Nitrogen Management Plan, which sets forth actions to mitigate the impacts of nitrogen on the watershed to ensure a sustainable environment for organisms.

Mashpee's infrastructure is largely developed; however, there is much that the Town can do to promote sustainability. Local sustainability efforts can leverage the following federal, state, and regional plans and programs:

- Commonwealth goal for 50% reduction in GHG emissions by 2050
- Cape Cod Commission Climate Action Plan.
- Municipal Vulnerability Preparedness (MVP) Program and related funds
- Federal Emergency Management Agency grant programs, including the Building Resilient Infrastructure and Communities (BRIC) Program
- National Fish and Wildlife Funding programs

#### 3.2 Existing Conditions

#### 3.2.1 Sustainable Development Patterns

Development is shaped not just by market opportunities, but also by state and local regulation. Understanding what development patterns result from the Town's regulations (Zoning Bylaws and Subdivision Regulations) is key to addressing problems before they are built. Table 3-1 identifies existing regulations and conservation efforts that are in place to protect the natural environment and to reduce waste in Mashpee.

Table 3-1. Development Regulations that Support Sustainability and Resiliency						
Regulation	Purpose and Effect					
Protection Districts Zoning Bylaw	Restrict development or require a review process before certain types of development are allowed. These areas include floodplain zones as defined by FEMA, Mashpee River, Quashnet River Protection Districts, Groundwater Protection District, and Areas of Critical Environmental Concern (ACEC). ACEC areas include areas of flood control or the					

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**Commented [EL1]:** HMP comment period closed on 12/22. Final edits are being made to the draft now for submission to FEMA. Adoption expected in 2024.

**Commented [EL2]:** Not just flooding but all natural hazards.

**Commented [EL3]:** Most recently the Sewer Commission initiated a Waterway Revitalization Plan a long range plan for wastewater facilities and other actions needed to restore water quality in our bays and ponds.

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Table 3-1. Development Regulations that Support Sustainability and Resiliency						
Regulation	Purpose and Effect					
	prevention of storm damage, waters containing shellfish and fisheries, and other public interests identified by the Wetlands Protection Act and Bylaw.					
Wetlands Protection	Wetlands provide several benefits. They filter pollutants from rainwater so that they do not wash into water bodies, prevent flooding during storms by holding rainwater, provide food and habitat for fish and wildlife, control erosion, and support the economic, academic, and recreational activities of people. Mashpee's General Bylaws are intended to protect wetlands, related water resources, and adjoining land areas by requiring prior review by the Conservation Commission. The Town's Wetland Protection Bylaw regulations utilize the Home Rule authority to protect additional resource areas, for additional values, with additional standards and procedures that are stricter than the Wetlands Protection Act, G.L. Chapter 131, Section 40 and Regulations in 310 CMR 10.00.					
Conservation Lands	The Conservation Commission has the power to protect environmental values on conservation lands by imposing rules and regulations. They can govern the use of land and waters under its control for the protection, promotion and development of water supply, groundwater, flood control, erosion and sedimentation control, for the prevention of water pollution, for the protection and preservation of fisheries, shellfish, recreational values, wildlife and wildlife habitat, and for the providing of open spaces in land and water areas and for all other purposes as provided for in the Massachusetts State Laws, MGL C. 40, §8c.					
Low Impact Development (LID)	Low Impact Design and Best Management Practices are terms that describe design techniques that imitate natural processes and mitigate impacts from development. The updated Zoning Bylaws, adopted in October 2022, also requires that development plans will not adversely affect air quality, will not have a significant adverse impact on wildlife habitat, estuarine systems, traffic flow, traffic safety, waterways, fisheries, public lands, or neighboring properties and will not destroy or disrupt species that are listed as endangered or threatened by the Massachusetts Natural Heritage Program or any known historic or archeological sites. Although this regulation is a great step towards sustainability, it does not clearly define or by whom these determinations are made.					
Erosion and Sediment Control	The purpose of this ordinance is to build off the earth removal ordinance and ensure the prevention or reduction of soil erosion and sedimentation before, during, and after the development or redevelopment of a site. This ordinance requires an Erosion and Sedimentation Control Plan to be submitted to the Town for approval before any construction takes place. Although, single-family homes are exempt from an approved Erosion and Sedimentation Control Plan. Of the 10,035 residential properties, 7,056 are single-family, which accounts for about 70% of the residential properties and 20% of the Town's land area (Commonwealth of Massachusetts, 2021b). The Town should consider revoking the exemption privilege for single-family homes since they cover much of the town land. This would help further reduce soil erosion and disturbance by expanding the jurisdiction of the ordinance.					
Nitrogen Control Bylaw	This Bylaw is meant to conserve valuable waterways and other resources that increase property values, protect the unique environment vital to the local economy, and reduce the financial burden on taxpayers and property owners by regulating the outdoor application of nitrogen and phosphorous on turf. Nitrogen and phosphorus are found in fertilizers that aid in lawn growth, but they are detrimental to the water quality of Mashpee's ponds, streams, and bay areas. The regulation of fertilizer applications will reduce the overall amount of excess nitrogen and phosphorus entering the town's natural resource areas.					
Earth Removal	This ordinance is typical in municipalities, and they are granted such a right to impose these regulations under Chapter 40A of the Massachusetts General Laws (Commonwealth					

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Table 3-1. Development Regulations that Support Sustainability and Resiliency						
Regulation	Purpose and Effect					
	of Massachusetts, 2021a). It states that "no topsoil, subsoil, gravel, sand or other earth may be removed from the Town of Mashpee without first having obtained a permit from the Selectmen (Zoning Board of Appeals, 2019, pg. 62)". This section may also require that if the area of ground being removed exceeds 500 square feet, then the board may require the entity to replant the entire area annually with rye, vetch, wheat, legumes, or other soil- improving plants or plants with a permanent cover crop or reforest the area. This section also requires sand and gravel pits to replant trees or shrubs in areas larger than 5,000 square feet that have become unsuited for further use to prevent soil erosion. These regulations protect the natural integrity of the soils and land within the Town limits. If a permit is issued and earth removal is allowed, remediation to support regrowth in the area is required. This supports a sustainable cycle, but it should be defined that the plants shall be of native origin so that invasive species are not introduced into the area.					
Solar Energy Overlay District	At the Annual Town meeting in October 2021, the Town of Mashpee proposed edits to the Zoning Bylaw that would allow for a solar energy overlay district. The Town voted to expand the allowance of medium and large scale solar systems to the C1 and C2 zoning districts in May 2022					
Single-Use Plastic Prohibition	The Town is prohibiting the use and distribution of single-use plastic carryout bags by any person, owner, or operator of any establishment within the Town of Mashpee. This ordinance was approved in 2017 and it stated that the existing stock of single-use bags shall be phased out within twelve months of the adoption of the ordinance and that any remaining bags after twelve months should be disposed of properly. The purchase by the Town of Mashpee of water or any other beverage in single-use plastic bottles, of any size, is prohibited and the sale of water or any beverage in single-use plastic containers is prohibited on Town property. This ordinance went into effect in October of 2020, but it has not appeared to have had much of an impact on litter or the costs of recyling locally thus far.					

Source: Town of Mashpee Zoning Bylaw, Town of Mashpee General Bylaw, 2022

#### Incentives for Sustainable Development

More sustainable development patterns can be regulated to offset additional costs to property owners and to reward specific approaches.

#### Table 3-2. Incentives for Sustainable Development

Roof-mounted solar	Mashpee does not offer incentives for the addition of solar energy systems				
	There is no zoning ordinance encouraging the installation or use of solar energy				
Ground-mounted solar	systems, but there is a table that defines which districts solar energy systems can be				
	installed in. The only district currently allowed with a plan review is industrial.				
Course Tours of Machines					

Source: Town of Mashpee, 2022

**Commented [EL4]:** Allowed in base zoning districts but solar overlay was never established.

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#### 3.2.2 Nature-Based Improvements

The Cape Cod Green Infrastructure Guide provides an overview of bioretention and green infrastructure sites in the Cape Cod area (Tufts' Water: Systems, Science, and Society Practicum Program, 2015). Green infrastructure is a naturebased improvement and site design technique that controls stormwater on the ground by replicating natural hydrology patterns. These techniques can accomplish many regulatory needs of urban stormwater treatment through bioretention and infiltration, a process of temporary storage of stormwater in a ponding area. It can provide several benefits for stormwater treatment, flood control, erosion control, and nitrogen removal in Mashpee. All water quality impairments and information on how stormwater is addressed by federal, state, and local regulations is detailed in the Natural Resources Chapter of this Comprehensive Plan. Nutrient-related water quality decline is a serious

#### What is Stormwater?

Stormwater is rainwater or melted snow that runs off streets, roofs, pavement, and other impervious surfaces as well as lawns, woodlands, and other more pervious areas as they become saturated. As the water flows over these surfaces, it can collect pollutants and sediment that can contaminate water bodies.

threat to coastal waters and freshwater ponds as excess nitrogen can lead to eutrophication and degrade water habitats. When proper site preparation and maintenance do not occur during development, excessive quantities of soil can also erode from the site. This can result in costly repairs and damage to the environment. Information on Mashpee's nitrogen control and erosion and sediment control are detailed in the Natural Resources Chapter of this Comprehensive Plan.

The Environmental Protection Agency (EPA) has identified several economic and health benefits of green infrastructure/low impact development (United States Environmental Protection Agency, 2023). These include:

- Reduction in community infrastructure costs
- Increase in construction and maintenance jobs
- Increase in private and public cost savings such as lower capital costs for developers
- Increase in the efficiency of water supply systems through infiltration-based practices
- Reduction in air temperatures.
- Reduction in power plant emissions associated with air conditioning
- Reduction in particulate pollution through absorbing and filtering particulate matter
- Resiliency to the impacts of climate change
- Improved habitat in small streams and washes
- Protection of the local watershed and conservation of native ecosystems
- Increase in property values, benefiting both developers and homeowners.

The MVP report outlines actions and nature-based improvements to improve resiliency (Woods Hole Group, 2020). These include:

1. Initiate plans to permit, fund, and construct coastal green infrastructure that provides beach nourishment, dune restoration, and other living shoreline projects to build coastal resilience to climate change.

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- 2. Implement the Mashpee Comprehensive Watershed Nitrogen Management Plan and further develop infrastructure to support shellfish aquaculture and enhanced monitoring of pollutants and invasive aquatic species.
- 3. Update stormwater systems and infrastructure to anticipate future conditions and protect natural resources from erosion and nutrient impacts.
- 4. Conduct a detailed vulnerability assessment for municipal facilities and infrastructure in Mashpee.
- 5. The Town should prioritize road adaptations and culvert resizing for access roadways to build resilience to coastal storms and sea-level rise.
- Updating and coordinating emergency preparedness planning including considerations for communication networks, enabling energy resilience, enhancing local shelter capacity, coordinating town services, and developing climate-related outreach.

#### 3.2.3 Energy Use Reduction

Reducing energy use through behavior modification, efficient facilities and equipment, and focused design can lower costs and reduce greenhouse gases. As a Green Community, Mashpee is required to lower municipal energy usage by 20%. The Town is currently employing several strategies and tools to reach this goal:

#### Mass Energy Insight

MassEnergyInsight is a free web-based tool provided that allows towns to monitor energy usage and carbon footprint by providing energy information for buildings, vehicles, streetlights, traffic lights, and drinking water & wastewater treatment.

#### Stretch Codes

Stretch Codes are building performance standards for energy efficiency that are intended to result in more cost-effective construction and higher energy efficiency. Mashpee's Board of Selectmen adopted stretch codes in 2010 (Town of Mashpee, 2020).

#### LED Streetlights

LED streetlights can help decrease energy consumption and municipal costs. Mashpee converted to LED streetlights to meet the energy efficiency criteria needed to be designated a Green Community ( (Cape Cod Light Compact, n.d.).

#### Hybrid or Electric Municipal Fleets

Mashpee instated a fuel-efficient fleet policy in 2009 to comply with the Green Community designation standards but their efforts and progress beyond that are unknown. There is a statewide contract, VEH102: Advanced Vehicle Technology, that assists with procuring energy efficient vehicles for municipalities (Green Communities Division, n.d.) DOER is providing this procurement service in partnership with the Metropolitan Area Planning Council (MAPC).

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#### 3.2.4 Renewable Energy Sources

Several different types of renewable energy sources can replace or supplement traditional forms of energy production. Within the Town of Mashpee, solar and wind energy are viable sources of renewable energy production.

#### COMMON RENEWABLE ENERGY SOURCES

**Solar** - Solar energy is collected from sunlight and converted to electricity through solar panels. Solar energy systems can be installed on the roofs of existing and new structures or on the ground. When properly sited, solar energy systems can generate enough electricity to meet the needs of a building or home and produce excess energy to be sold back to the electric grid.

**Wind** - Wind power is generated with the use of wind energy conversion systems, most commonly in the form of wind turbines. Conversion systems convert the kinetic energy of the wind into electricity for consumption.

**Geothermal** – Geothermal energy utilizes the heat contained in rocks and fluids beneath the earth's crust by digging wells to access steam and hot water, then used to drive turbines connected to electricity generators.

**Hydroelectric** – Hydropower is generated by converting the force of moving water into electricity by spinning a generator's turbine blades.

**Biomass** – Biomass is organic material that comes from plants and animals, including crops, waste wood, and trees. When biomass is burned, the chemical energy is released as heat and can generate electricity with a steam turbine.

#### Solar

Solar installations on municipal facilities including the DPW building, high school, landfill, library, and senior center supplement the energy needed for operation (Town of Mashpee, n.d.).

#### Wind

In 2010, the Town installed wind turbines at Heritage Park followed by the solar energy installations listed previously. These projects are projected to generate 90% of the Town's municipal electric energy demand (Town of Mashpee, n.d.).

#### 3.3 Challenges & Opportunities

#### 3.3.1 Challenges

Efforts to address and increase the Town's sustainability can be cost prohibitive and in some cases are not fully understood or supported by the community. The Town will need to remain focused on sustainability education and implementation in a manner and tempo that is supported by the residents.

The Town's large summer visitor and resident influx can make implementing sustainable practices challenging. Visitor and summer residents are less likely to feel vested in local efforts to improve the Town's overall sustainability. The Town will need to work towards educating summer residents and visistor of the benefits of maintaining and improving Mashpee's sustainability efforts.

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#### 3.3.2 Opportunities

Mashpee has taken important strides towards increasing the Town's overall sustainability as it relates to sustainable development patterns, energy efficiency, climate preparedness, and green infrastructure as discussed in this chapter. Although much has been accomplished, with increasing climate change impacts and evolving technology, the Town must remain vigilant and adaptable in their approach to addressing sustainability.

The Town will continue to investigate ways in which they can increase their renewable energy production, reduce their green house gas emissions and overall energy usage. This can be accomplished by continuing to take advantage of state programs and funding towards these efforts and by continuing to implement local policy and practice that increases the Town's sustainability.

As advances in technology work to improve sustainability efforts the Town will continue to investigate and implement options that are cost effective and provide a measureable amount of success for the investment.

#### 3.3.3 Current Measures

The Town has been working toward a more climate resilient and sustainable future. The Town Hall inspectional services fleet has been upgraded with four new electric vehicles with accompanying charging stations. The Town hopes to grow the electric vehicle fleet in coming years. Solar projects have expanded on municipally owned property and now all four schools have roof-mounted solar energy systems in addition to a ground-mounted array at the capped landfill adjacent to the Mashpee Transfer Station.

In addition to solar projects the Town is working to implement stormwater retrofits to enhance pretreatment of stormwater prior to recharging into the aquifer and has collaborated with stakeholders such as Save Popponesset Bay to enhance the resilience of the barrier beach known as the Popponesset Spit with dredging activity and beach nourishment.

#### 3.4 Goals & Policies

Goals

- 1. Ensure Mashpee serves as an exemplary regional leader in municipal electrification and reduces its dependency on fossil fuels for energy.
- 2. Be leaders in municipal resiliency and minimize to the maximum extent possible the Town's exposure to climate related impacts such extreme storm event, drought, flooding and sea level.

#### Policies

- 1. Reduce the Town's reliance on fossil fuel for energy by investing in renewable technologies.
- 2. Maximize the opportunities and monies available to the Town following receipt of Municipal Vulnerability Preparedness Certification from the Commonwealth.
- 3. Assist with transition of gasoline-powered vehicles to electric vehicles.
- 4. Prioritize the use protection, preservation, and municipal control of open space with environmentally sensitive features such as water and wetlands increase the Town's resilience to climate change.
- 5. Promote responsible consumption and production of products.
- 6. Maintain all dams in good condition.of gasoline-powered vehicles to electric vehicles.

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#### 9.0 TRANSPORTATION AND CIRCULATION

#### 9.1 Introduction

Transportation is the movement of people and goods and may involve circulation by passenger vehicle, truck or trailer, railcar, plane, boat, bus, subway, bicycle, or other means. The local transportation system should provide safe and efficient mobility for people traveling using all transportation modes and should offer connections to regional facilities. Residents, businesses, students, visitors, and emergency services rely on an available and quality transportation system. The maintenance and enhancement of the transportation system impact Town resources, community character, and quality of life of new and existing residents, and can attract and respond to new development.

This section discusses the current transportation network available in the Town including highway and roadway infrastructure, bridges, mass transit, biking, and pedestrian facilities. Effective transportation of people and goods allows for more productivity and is important to the functionality of a municipality. Planning for transportation allows a community to align long-term goals with other aspects of community planning such as land use, economic development, and housing.

Relevant circulation patterns include routes both within Town boundaries as well as larger routes that link Mashpee to the region and to the State. These circulation routes support connectivity of local goods and services to regional and Statewide markets and connect residents to regional job centers. The scale and location of the road network contributes to both existing and future development patterns within the community. This chapter of the plan ties in closely with the land use, economic development, agriculture, and housing chapters and will reference data from each that helps to inform transportation goals.

#### 9.2 Existing Conditions

The following factors will affect the Town's transportation network and have continual impacts on the Town's influx in traffic volumes and future development.

#### 9.2.1 Demographics

Table 9-1 summarizes total population estimates based on data from the U.S. Census Bureau for the years 2000, 2010, and 2020 at the local, county, and state levels.

Table 9-1. Demographic Data								
	Total estimated population							
	2000	2000 2010		Net change 2000-2020		Net change 2010-2020		
				Total	Yearly	Total	Yearly	
Mashpee, Massachusetts	12,946	14,006	15,060	16.3%	.8%	7.5%	.8%	
Barnstable County, Massachusetts	222,230	215,888	228,996	-2.9%	0.2%	6.1%	0.6%	
Massachusetts	6,349,097	6,547,629	7,029,917	10.7%	0.5%	7.4%	0.7%	

Source: U.S. Census Bureau, 2000, 2010, 2020

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**Commented [EL1]:** There is no agricultural chapter. Perhaps change to Land Use?

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Mashpee's population reached an estimated 15,060 persons in 2020, an increase of almost 7.5 percent since 2010 (14,006 estimated population). Over the past ten years, the population increase experienced by Mashpee was in line with the population increase statewide (7.4 percent), but higher than the population increase in Barnstable County (around 6.1 percent). Between 2000 and 2020, Mashpee experienced a population increase of around 16 percent, while Barnstable County saw a decrease in population of around three percent.

#### 9.2.2 Journey-to-Work Data

Figure 9-1 shows the most popular work destinations for Mashpee residents based on the most recent data from the U.S. Census American Community Survey 2011-2015 Five-Year Estimate. As shown in the figure, 1,820 Mashpee residents (approximately 34 percent of workers) work in Mashpee. A total of 1,344 residents (25 percent of workers) are employed in the Town of Barnstable. Mashpee residents also work within nearby communities such as Falmouth (830) and Sandwich (586).



Figure 9-1. Most Popular Work Destinations for Mashpee Residents Source: U.S. Census Bureau, 2015

Figure 9-2 shows the major residence locations for people working in Mashpee based on the most recent data from the U.S. Census American Community Survey 2011-2015 Five-Year Estimate. Approximately 1,820 people who work in Mashpee also live in Mashpee (29 percent). A total of 986 Barnstable residents (16 percent) work in Mashpee. People who work in Mashpee also come from nearby towns including Falmouth, Sandwich, and Bourne. In total, more Mashpee residents are commuting out of Mashpee, than non-residents commuting into Mashpee.

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Figure 9-2. Residence Location of Mashpee Workers Source: U.S. Census Bureau, 2015

#### 9.2.3 Vehicles Available

Figure 9-3 shows the number of vehicles available per household for both Mashpee and the State of Massachusetts based on the U.S. Census American Community Survey 2015-2019 Five-Year Estimate. As shown, 40 percent of households in Mashpee have access to one vehicle. The percentage of households in Mashpee with access to two or more vehicles is 57 percent, which is slightly greater than the percentage of households in Barnstable County with two or more vehicles available (60 percent). Approximately three percent of Mashpee households do not have access to a vehicle. This is less than the state average of over twelve percent, however, geographically the percent of households in Mashpee with access to no vehicle or one vehicle vary greatly. In the census tract in the northeast of Town framed by Route 151 to the south and Meetinghouse Road to the east, an estimated 57 percent of households have no vehicle or one vehicle, with an estimated 8 percent of households with one vehicle. The other three census tracts in Town have between 33 percent and 43 percent of households with one vehicle or no vehicle.

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Figure 9-3. Vehicles Available Per Household Source: U.S. Census Bureau, 2019

#### 9.2.4 Mode Share and Commute Time

Figures 9-4 and 9-5 show the modes of transportation to work for Mashpee residents in 2019, the most recent year for which data is available. As shown, 83 percent of residents drove alone, eight percent carpooled, and five percent worked from home. Just one percent walked, and one percent took a taxi, motorcycle, bicycle, or other means, and one percent used public transportation. The percentage (83 percent) of Mashpee residents commuting to work by driving alone was slightly higher than the Barnstable County average of 80 percent and significantly higher than the Massachusetts average (70 percent). In both Barnstable County and Mashpee, significantly fewer people take transit or walk to work than in Massachusetts as a whole. Again, the percentage of people commuting by driving alone does vary across Mashpee. In the northwest census tract, an estimated 69 percent of workers drive alone while in the northeast census tract, framed by Meetinghouse Road to the west and Route 28 to the south, an estimated 89 percent of workers drive alone. Important to note that during the pandemic, the work from home share likely increased as it did across the country.

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Figure 9-6 shows the reported travel times to work for Mashpee residents in 2019. Approximately 68 percent of Mashpee residents had an average commute of fewer than 30 minutes, 22 percent had a commute of 30-60 minutes, and nine percent had a commute of an hour or more. The mean travel time to work for Mashpee residents was 25 minutes, which was slightly longer than the Barnstable County average of 24 minutes but shorter than the Massachusetts average of 30 minutes. Again, the travel time to work varied significantly by census tract in Mashpee. The southern tract along the ocean, framed to the north by Holland Mill Road has a mean travel time to work of an estimated 34 minutes, while the northern census tracts have estimated mean travel times to work of 22 and 23 minutes.



Figure 9-6. Travel Time to Work

Source: U.S. Census Bureau, 2019

The future of commuting patterns in Mashpee and the region is still uncertain. Both commuting patterns before March 2020 and the recent increase in remote working behavior may offer indicators of the future commute patterns for Mashpee residents.

#### 9.2.5 Public Transportation

The Cape Cod Regional Transit Authority (CCRTA) serves Mashpee with two bus routes; the Sealine, and the Bourne Run. The main bus stop in Mashpee is located by the entrance to the Mashpee Commons Stop & Shop. Figure 9-7 shows the locations of Mashpee's two fixed-route bus lines. The CCRTA also operates a demand response/paratransit service called Dial-A-Ride Transportation (DART) and a Boston hospital service. Funding for the CCRTA is partially from local contributions. The Town of Mashpee's FY 23 assessment is \$115,135. As of January 2022, CCRTA ridership has grown back to 90 percent of its pre-Covid ridership, where earlier in the pandemic, ridership was down to 30 percent, growing to 50 percent in the summer of 2021 (Fitzpatrick, 2022). The only Town-provided public transportation is school buses.

#### Sealine

The Sealine bus route runs from Downtown Hyannis to Woods Hole with stops in Centerville and Osterville Centers, Mashpee Commons, Falmouth Center, and the Falmouth Bus Terminal. The Sealine connects at the Hyannis Transportation Center to the Plymouth & Brockton bus service to Boston and

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Providence, to the Peter Pan bus to Boston, Providence, and New York, and CCRTA routes (the Barnstable Villager, Hyannis Loop, and the H2O). Riders can either board at a scheduled bus stop or flag the bus anywhere along the route. In Mashpee, the Sealine makes scheduled stops at Mashpee Commons Stop & Shop, South Cape Village Marshalls, and the Community Health Center of Cape Cod. At Mashpee Commons Stop & Shop, the Sealine connects to the Bourne Run.

Service along the Sealine runs Monday to Saturday. On weekdays in the Woods Hole direction, service begins at 5:54 AM at Mashpee Commons Stop & Shop and ends at 7:06 PM. On Saturdays, service begins at 8:06 AM and runs until 7:06 PM. In the Hyannis direction, service on weekdays begins at 7:05 AM and runs until 8:50 PM. On Saturdays, service begins at 10:18 APM and runs until 8:50 PM. Service runs roughly every hour on weekdays and weekends.

For adults and youth, a one-way ride on the Sealine costs \$2, a day pass costs \$6 and the monthly pass costs \$60. The CCRTA has a half-price discount on all fare products for seniors sixty and older, and people with disabilities. Transfers on CCRTA require a new fare. The buses have bike racks and are accessible to riders with limited mobility or in a wheelchair. There is a bus shelter located at the Community Health Center of Cape Cod Sealine stop.

#### The Bourne Run

The Bourne Run bus route runs from Buzzards Bay Train Station/ Mass Maritime to Mashpee Commons Stop & Shop via Bourne. Riders can either board at scheduled stops or flag the bus down anywhere along the route. During the summer, the Buzzards Bay Train Station offers weekend trips to Boston's South Station. In Mashpee, the Bourne Run makes scheduled stops at Mashpee Commons Stop & Shop, Mashpee Village, and Algonquin Avenue. At Mashpee Commons Stop & Shop, the Bourne Run connects to the Sealine.

The Bourne Run provides service Monday to Friday from 6:40 AM to 7:40 PM. The first trip from the Stop & Shop at Mashpee Commons is at 8:30 AM and the last is at 6:30 PM. Buses run roughly every hour.

The pricing and bus amenities for the Bourne Run are the same as for the Sealine.

#### **Dial-A-Ride Transportation**

The CCRTA's Dial-A-Ride Transportation (DART) service is a door-to-door ride-by-appointment service available to any Cape Cod residents and visitors for any purpose. All DART vehicles are fully accessible. According to CCRTA customer service, the service is typically recommended for people going to and from the supermarket or medical appointments. The CCRTA encourages riders to take fixed route service unless they need an accessible vehicle or are underserved by fixed-route service. DART times vary and before making an appointment, the CCRTA recommends riders call to determine the best appointment time. DART costs \$3 per ride for adults and youth, and \$1.50 for seniors and people with disabilities. DART passes (20 rides for the cost of 15) can be purchased for \$45 for general riders and \$22.50 for seniors and riders with disabilities. The CCRTA requires riders to make reservations at least one weekday in advance, and up to one month in advance.

#### **Boston Hospital Service**

The CCRTA offers round trip service Monday through Thursday to Boston Area Hospitals. The service picks up in Wellfleet, Eastham, Orleans, Barnstable, Wellfleet, Harwich, and at the Sagamore commuter lot. The service can also pick up in Mashpee based on availability. CCRTA runs the service with shared,

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accessible vehicles to eight Boston hospital locations, including Massachusetts General Hospital, Tufts Medical Center, Boston Medical Center, Boston Children's Hospital, Beth Israel, New England Baptist Hospital, Faulkner Hospital, and Carney Hospital. The service costs \$30 round trip. CCRTA recommends riders make medical appointments at 11 AM when using the service. The service requires a reservation.

Figure 9-7. CCRTA Fixed Route Bus Service



Source: Town of Mashpee, 2022

#### **School Buses**

The Town provides buses for children to get to school. The Town owns the school buses and contracts out the bus service to a private operator. All students in Mashpee, regardless of how far they live from school, are eligible to take the school bus.

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#### 9.2.6 Roadways

#### **Roadway Classification**

Roadway classifications can be broken down into a hierarchy that ranges from interstates, providing high levels of vehicle mobility and low levels of vehicle access, to local roadways, providing low levels of vehicle mobility and high levels of access. Table 9-2 shows the total length of each classification of roadway in Mashpee and Figure 9-6 illustrates the roadway classification system in Mashpee.

Source: MassDOT Road Inventory, 2018

Table 9-2. Classification of Roadways in Mashpee						
Roadway Class	Miles	% of Miles				
Interstate	0	0%				
Arterial	23.8	10%				
Collector	9.6	4%				
Local	201.1	86%				
TOTAL	234.5	100%				

Interstates

Mashpee does not have an interstate highway located in Town or nearby.

#### Arterials

Arterial roadways provide the second-highest level of vehicle mobility and are not primarily intended to provide access to abutting properties. Mashpee contains approximately 24 miles of arterials making up 10 percent of its transportation network. Main Street (Route 130), Nathan Ellis Highway (Route 151), and Falmouth Road (Route 28) are principal arterials, while Great Neck Road, Quinaquisset Avenue, Cotuit Road, Red Brook Road, and Great Oak Road are minor arterials. The primary purpose of major arterials is to move heavy traffic efficiently and safely, while minor arterials typically move traffic between major arterials and provide moderate access to abutting properties.

- Route 130 (also known as Main Street) is a north-south major arterial running from close to 6A in Sandwich to Route 28 in Barnstable with a connection to Route 6. The route generally provides one lane in each direction and runs through the north side of Mashpee.
- **Route 151** (also known as Nathan Ellis Highway) is a route running east-west from the Mashpee Rotary to Route 28 in Falmouth. The route generally provides one lane in each direction.
- Route 28 (also known as Falmouth Road) runs from Eastham to New Hampshire via Boston. On Cape Cod, Route 28 runs along the western and northern sides of the peninsula providing access to Harwich, Chatham, Falmouth, Yarmouth, Barnstable, Dennis, and Bourne.

#### **Collector Roads**

Collector roads move traffic from local streets to arterials. They provide moderate amounts of vehicle mobility and moderate vehicle access to adjacent properties. Mashpee contains approximately 10 miles of collector roadways, making up four percent of its roadway network, which is typical of Cape Cod towns. In Mashpee, major collector roadways include South Sandwich Road, Meetinghouse Road, Lowell Road, Old Barnstable Road, Mashpee Neck Road, Orchard Road, Pimlico Pond Road, and Asher's Path East.

#### Local Roadways

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Local roadways provide the highest level of vehicle access to adjacent properties with the lowest level of vehicle mobility. Approximately 86 percent of all roadways in Mashpee fall under this classification.

Figure 9-8. Roadway Classification Source: Town of Mashpee, 2022

#### **Roadway Jurisdiction and Tribal Roadways**

Table 9-3 shows the roadway miles in Mashpee under Town, State, private, and Federal jurisdiction. Around half of Mashpee's roadways are under Town jurisdiction. Falmouth Road, including the Mashpee rotary, is the only state-owned (MassDOT) road in Town. The US Air Force roadways are within the Otis Air Base. The high percentage of roads under private jurisdiction is due to the many subdivision complexes in Mashpee. **Figure 11** shows roadways by jurisdiction in Mashpee.

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Table 9-3. Jurisdiction of Mashpee Roadways						
Jurisdiction	Miles	% of Miles				
Private	111.5	48%				
Town	116.1	49%				
State	4.1	2%				
US Air Force	2.8	1%				
TOTAL	234.5	100%				

Source: MassDOT Road Inventory, 2018

Several state and Town-owned roads in Mashpee are also listed under the Indian Reservation Roadways program. Indian Reservation Roads (IRR) are public roads that are located within or provide access to an Indian reservation, Indian trust land, or restricted Indian land. In Mashpee, IRR roads include parts of Route 151, Route 28, Red Brook Road, Route 130, Great Neck Road, Quinaquisset Avenue, Sampson's Mill Road, Meetinghouse Road, Cotuit Road, and Old Barnstable Road (Mashpee Wampanoag Tribe, 2013).

#### **Traffic Volumes**

Table 9-4 shows average daily traffic volumes (AADT) on Mashpee roadways collected between 2014-2021.

The data show that traffic volumes are heaviest on Route 151 (Nathan Ellis Highway) and Route 28 (Falmouth Road). Traffic volumes on Route 151 east of Old Barnstable Road grew seven percent from an average daily traffic volume (AADT) of 17,364 in 2016 to 18,618 in 2019. Volumes decreased significantly in 2021, down to 10,571, reflecting a decrease in travel during the COVID-19 pandemic.

According to Town staff, traffic in Mashpee varies greatly by time of day and season. For example, Route 151 and Old Barnstable Road are both busy around school pick-up and drop-off times, particularly during the pandemic when fewer students chose to take the bus. Mashpee also has more traffic in the summer months than the winter months, as visitors come to enjoy Mashpee's beaches and natural resources. In the summer, week-long rentals change over on Saturday generating delays and long queues in Town. Figure 9-9 shows average daily traffic volumes.

Table 9-4. Average Daily Traffic Volumes at Highest Volume Locations								
Location	2014	2015	2016	2017	2018	2019	2020	2021
Great Neck Road south of Route 130		16,079			15,207			
Great Neck Road south of Donna's Lane	9,270	11,186						9,011
Great Neck Road north of Mashpee Rotary			10,448			11,435		
Nathan Ellis Highway (Route 151) west of Market Street					13,697			

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		I.		I.	I.	I.	1	
Old Barnstable Road north								
of Nathan Ellis Highway			7,770			8,615		
(Route 151)								
Nathan Ellis Highway								
(Route 151) west of	13,719	13,602		12,813		13,625		
Mashpee Rotary								
Nathan Ellis Highway								
(Route 151) west of Old	21,516							11,825
Barnstable Road								
Nathan Ellis Highway								
(Route 151) east of Old			17,364	16,690	17,679	18,618		10,571
Barnstable Road								
Falmouth Road (Route 28)	47 707							
east of Donna's Lane	1/,/2/							
Falmouth Road (Route 28)								
at Orchard Rd & Asher's			19,361					
Path								
Falmouth Road (Route 28)								
east of Industrial Way					14,2/3			
Falmouth Road (Route 28)								
west of Mashpee Rotary				15,205				
Cotuit Road at Sand/Mash	6.000							
TL (N end)	0,893			/,303	/,103			
Main Street west of South	10.058					10.079		
Sandwich Road	10,920					10,970		

Source: MassDOT Transportation Data Management System

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#### Figure 9-9. Average Annual Daily Traffic Source: Town of Mashpee, 2022

#### **Roadway Safety**

Crash data available from Massachusetts Department of Transportation (MassDOT) indicate that 3,265 crashes, or an average of approximately 327 crashes per year, have occurred in Mashpee from the years 2012 to 2021. As shown in Figure 9-10, the total number of crashes each year has fluctuated since 2012, with a low of 245 in 2020 and a high of 396 in 2013. From 2013 to 2021, the total number of crashes has trended downward, with a record low in 2020 (as a result of fewer vehicle trips being made during the

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Covid-19 pandemic). The total number of crashes in 2021 (297) was comparable to the number in 2019 (292). However, while total crashes have decreased over time, the total number of crashes resulting in injury has remained steady. In 2021, 12 crashes resulted in serious injury, compared to an average of five crashes in the past ten years.



Figure 9-10. Total Crashes by Severity

Source: MassDOT Interactive Mapping Portal for Analysis and Crash Testing

#### **Crash Type**

Of the 3,265 crashes from 2012 to 2021, 34 crashes involved pedestrians, and 15 crashes involving bicyclists. During that same time frame, 2,286 crashes resulted in no injuries, 426 resulted in possible injury, 370 resulted in minor injury, 50 resulted in serious injury, and six crashes resulted in fatal injury. Of the 50 crashes resulting in a serious injury or death, 15 involved an older driver, 9 involved a younger driver, 8 involved a pedestrian, 3 involved a bicyclist, and 3 involved a motorcyclist.

Out of the six fatal crashes, three crashes involved a person walking. One occurred at the Quinaquisset Avenue and Orchard Road intersection involving a person under 15 years old, one occurred at the intersection of Falmouth Road and Bowdoin Road and involved a person between age 55 and 64, and one occurred at the intersection of Falmouth Road and Orchard Road and involved a 91-year-old woman crossing the street from a CCRTA bus. All three fatal crashes occurred at night and two were on unlit roadways. MassDOT identified Route 151 and Market Street as a high pedestrian crash cluster with six total crashes, five resulting in injury or death, between 2010 and 2019. Generally, crashes involving people walking occur near the center and east of Town.

#### Highway Safety Improvement Program

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MassDOT maintains a database of top crash locations in the state. This database includes locations identified under the Highway Safety Improvement Program (HSIP) in addition to a list of the top 200 crash locations in the state.

Table 9-5. HSIP Locations	
Intersection	Total Crashes Between 2017 and 2019
Nathan Ellis Highway (Route 151) and Old Barnstable Road	26
Great Neck Road North and Main Street (Route 130)	18
Nathan Ellis Highway (Route 151) and Job's Fishing Road	15
Old Barnstable Road and Great Neck Road North	14
Algonquin Avenue and Nathan Ellis Highway (Route 151)	11
Great Neck Road North and Meetinghouse Road	10
Falmouth Road (Route 28) and Asher's Path East	9

Source: MassDOT Interactive Mapping for HSIP Clusters, 2020

For the years of 2017-2019, Figure 9-11 shows the intersections in Mashpee identified as HSIP clusters and high crash locations.

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Figure 9-11. HSIP Clusters, 2017-2019 Source: Town of Mashpee, 2022

#### **Other Safety Concerns**

The Mashpee Police Department and Department of Public Works identified high vehicle speeds as a safety challenge on Route 28 between Orchard Road and Old Barnstable Road, Route 151 by Old

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Brickyard Road, Orchard Road, and South Sandwich Road, based on observation. Currently, the Town does not have any speed feedback signs or a speed trailer.

Town staff also identified several wide intersections that have visibility issues for turning vehicles. These include the intersections of South Sandwich Road and Route 130, Meetinghouse Road and Great Neck Road North, Old Barnstable Road and Great Neck Road North, Great Neck Road South and Great Oak Road, Meetinghouse Road and Route 28, Quinaquisset and Route 28, Sampson's Mill Road and Route 28, and Monomoscoy Road and Red Brook Road.

#### 9.2.7 Pedestrian and Bicycle Accommodations

Mashpee has around 12 miles of dedicated paths for people walking or biking, in the form of either a sidewalk or a shared-use path. These sidewalks and shared-use paths are on around 10 percent of Townowned roads and on around 30 percent of Mashpee's arterial and collector roadways. The paths extend primarily along the arterial and collector roadways close to the center of Town, and throughout most of the Mashpee Commons commercial complex.

In addition to the shared-use paths and sidewalks on Mashpee's roadways, the Town has some shareduse pedestrian connections that help fill the gaps along roads. For example, there is a shared-use path connecting Mashpee Police Department, Kenneth C. Coombs Elementary School, the Stop & Shop Complex, and the 99 Restaurant in the center of Town. This connection allows people walking or biking to bypass the northwest side of the rotary.

A major gap in the path network is located at the Mashpee Rotary, where paths coming from Great Neck Road North and Great Neck Road South, Route 151 (Nathan Ellis Highway) and Route 28 (Falmouth Road) abruptly end at the rotary. In general, the collector and arterial roadways on the east side of the Mashpee rotary do not have dedicated paths, while the western side of Town does. Many private roadways do not have sidewalks because, while the subdivision regulations in Mashpee require developers to put a sidewalk on at least one side of the roadway, this requirement is frequently waived because roads in subdivisions frequently dead end. Figure 9-12 shows the sidewalks and shared-use paths along roadways in Mashpee.

In Mashpee, people on bikes are permitted to ride on the Town's sidewalks and paths, but there are a few on-street bike lanes in the form of a painted four- to five-foot-wide shoulder on Great Neck Road South, Red Brook Road, and Great Oak Road. Mashpee offers bike parking at locations around Town, including in Mashpee Center, John's Pond, and at the recreational fields off of Main Street. The Town of Mashpee received funding from the Cape Cod Commission for bike racks.

The Town has several off-road trails for both biking and walking within the following recreational areas:

- Besse's Bog
- Child's River
- Jehu Pond
- John's Pond
- Noisy Hole
- Santuit Pond
- Pickerel Cove
- Mashpee River Woodlands

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- Pine Barrens
- Quashnet River Woodlands
- Lowell Holly Reservation
- Mashpee's beaches, extending more than five miles along the waterfront



Source: Town of Mashpee, 2022

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Several recent and proposed projects in Mashpee are focused on expanding and improving the network of trails, paths, and sidewalks. Some of the proposed projects in Mashpee are the result of the Town's Complete Streets Prioritization Plan. The Massachusetts Complete Streets Funding program provides technical assistance and construction funding to eligible municipalities who pass a Complete Streets Policy and develop a Prioritization Plan. The program funds projects making the public right of way accessible to people of all ages, abilities, and modes of travel, including walking, biking, driving, and using public transportation. The Town of Mashpee passed a Complete Streets Policy in 2018 and developed a Prioritization Plan in 2020. Mashpee's Complete Streets program has 22 projects in the prioritization plan, with the highest-ranked improvements on Route 151, South Sandwich Road, Orchard Road, and Old Barnstable Road (MassDOT, 2020). The projects proposed include new sidewalks, speed feedback signs, rapid rectangular flashing beacons, multiuse paths, traffic calming, intersection improvements, and bike lanes.

Further information on recent and planned improvements for walking and biking is in the Recent and Planned Projects section of this chapter.

#### 9.2.8 Parking

The Town of Mashpee owns three beach parking lots at South Cape Beach, Attaquin Park, and John's Pond. To use these parking lots in the summer season, Mashpee residents and residential property owners must purchase a beach sticker for \$30 and Mashpee visitors must purchase a weekly pass for \$50.

- South Cape Beach Town parking lot has around 120 spaces, including 6 accessible spaces
- Attaquin Park Town parking lot has around 70 spaces, including 3 accessible spaces
- John's Pond Town parking lot has around 75 spaces, including 4 accessible spaces

Other Town surface parking is available at the Mashpee Senior Center, Fire Department and Police Department complex, Mashpee Recreation Department, Mashpee Town Hall, Mashpee Department of Public Works, Mashpee Public Library, Mashpee Community Park, Quashnet Elementary School, and Mashpee Middle-High School. The Town also provides parking lots at some of the Town's conservation areas for people accessing trails, and at some of Mashpee's boat ramps. During the summer, parking at Town-owned boat ramps is restricted to Mashpee vehicles with a permit.

The State owns a parking lot at South Cape Beach with discounted prices for Massachusetts residents.

Mashpee Commons, Mashpee's commercial hub, has a mix of on-street parking and an abundance of surface parking lot spaces. Most residential and commercial developments in Town offer surface parking lots and most single-family homes have driveways.

Mashpee Commons has a publicly available electric vehicle charging station, where people with Tesla vehicles can pay to recharge. The Town also has electric vehicle charging stations at the Town Hall dedicated to Town-owned electric vehicles.

#### 9.2.9 Airports

The Otis Air National Guard Base is located northwest of Mashpee. The Coast Guard uses this airbase, but no commercial or private flights are allowed. The closest airport with commercial flights is in Barnstable.

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#### 9.2.10 Marinas and Boat Ramps

Mashpee has three private marinas.

- Little River Boat Yard is a private marina located on Seconsett Island with access to Waquoit Bay and Vineyard Sound. They offer both slips and rack boat storage, along with other maintenance and fueling.
- New Seabury Marina is a private marina located with the New Seabury housing community. The marina offers fuel, docking, and boating supplies. The slips are available seasonally or on a transient basis.
- Mashpee Neck Marina is a private marina with 154 slips located on Popponesset Bay.

In addition to the marinas in Mashpee, the State owns two boat ramps, Mashpee/Wakeby State Boat Ramp and John's Pond State Boat Ramp, and the Town of Mashpee owns Great River Boat Ramp, Edward A. Baker Boat ramp at Pirate's Cove, Santuit Pond Boat Ramp, and Ockway Bay Boat Ramp.

#### 9.2.11 Maintenance of Infrastructure

#### **Pavement Management Program**

The Town of Mashpee implements a pavement management program to monitor the conditions of roadways and prioritize their repair. The GIS-based program collects and evaluates data about the condition of roadways in order to determine a Pavement Condition Index (PCI) and schedule of maintenance. The PCI is a pavement scoring system based on 100 points, with 100 being the best score. The Pavement Condition Index for the Town of Mashpee is 78.8 for arterial roads and 86.9 for residential roads (Stantec 2020). Figures 9-13 and 9-14 shows the condition of roadways in Mashpee.

#### **Bridges**

According to the most recently available data in MassDOT's database, five bridges are located in Mashpee. Of the five bridges, MassDOT found one bridge was structurally deficient (Route 28 Falmouth Road over the Mashpee River). Figure 9-15 shows the condition of bridges in Mashpee.

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Figure 9-13. Pavement Management Summary 2020 for Arterial/Collector Network Source: Stantec, 2020

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Figure 9-14. Pavement Management Summary 2020 for Local Network Source: Stantec, 2020

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#### Figure 9-15. Bridges Source: Stantec, 2020

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#### 2023 Local Comprehensive Plan

#### 9.3 Challenges & Opportunities

The following transportation-related issues were identified:

- Residents and Town staff have identified speeding as being an issue in Town, particularly along Route 28 and Route 151.
- Only 30 percent of arterial and collector roadways in Mashpee have sidewalks or shared-use paths.
- Route 28 east of the Mashpee Rotary lacks a sidewalk or shared-use path and crossings for people accessing the Sealine CCRTA route.
- Three people were killed while walking in Mashpee in the past 10 years, all three deaths occurring at night, and two on unlit roadways.
- The Town is required to work with private developers, the Mashpee Wampanoag Tribe, and the State to develop and improve the roadway network. Only around half of the roads in Mashpee are under the jurisdiction of the Town, and some roads under Town jurisdiction are Indian Reservation Roads.
- Adding high visibility crossings and bus amenities is a challenge along the CCRTA routes. Generally, the CCRTA buses running in Town do not have designated bus stops, as the buses can be flagged.
- While crashes have been declining overall over the past 10 years, crashes resulting in injury have remained steady, and serious injury crashes have increased in the past three years.
- One bridge in Mashpee (Falmouth Road over the Mashpee River) was found structurally deficient by MassDOT.
- The Mashpee Rotary lacks pedestrian or bike accommodation and has a high number of minor vehicle crashes.
- When new roads get built in Mashpee, DPW does not receive an increase in maintenance funds.
- Traffic in Mashpee is highly variable by time of day and season, including school drop-off times and summer rental changeovers.
- The majority of Mashpee households commute by driving alone, demonstrating a general car dependency; however, the dependence on driving alone varies geographically in. In the northwest section of Town, a lower percentage of residents drive alone to commute, and a higher percentage do not have a vehicle compared with other parts of Town.
- High crash locations in Mashpee include Great Neck Road North and Old Barnstable Road, Great Neck Road North and Meetinghouse Road, Great Neck Road North and Route 130, the Mashpee Rotary, Route 151 and Old Barnstable Road, Route 151 and Job's Fishing Road, Route 151 and Algonquin Avenue, and Route 28 and Asher's Path East.
- Truck volumes on Lowell Road were identified as an issue.

#### 9.3.1 Opportunities

The following transportation-related opportunities were identified:

- The Town has adopted a Complete Streets Policy and created Project Prioritization Plan, so is eligible to apply for up to \$400,000 of infrastructure funding from the MassDOT.
- The Mashpee Rotary Study offered recommendations and support for improving bicycle and pedestrian connectivity and safety for all road users through the Mashpee Rotary.

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- Several intersections in Mashpee would benefit from tighter curb radii and intersection realignment to improve visibility, lower vehicle speeds for turning vehicles and reduce pedestrian crossing distances. These include South Sandwich Road at Route 130, Meetinghouse Road at Great Neck Road, Old Barnstable Road at Great Neck Road North, Meetinghouse Road at Route 28, Quinaquisset at Route 28, and Sampson's Mill Road at Route 28.
- Mashpee has "hidden" pedestrian connections that could be enhanced by wayfinding signage and improved connectivity to other pedestrian infrastructure.
- The Town has expressed interest in a speed trailer to better enforce speeding on critical roadways in Town.
- Mashpee does not currently participate in MassDOT's Safe Routes to Schools program. The
  program can provide education and encourage programs and funding to improve walking and
  biking facilities around elementary and middle schools.
- The Town has expressed interest in a bicycle and pedestrian plan to prioritize improvements in Town for people walking and biking.
- MassDOT has identified seven Highway Safety Improvement Program crash clusters in Mashpee eligible for a road safety audit. Road safety audits have already been conducted at four of these crash clusters. The intersections of Great Neck Road North and Meetinghouse Road, Route 28 and Asher's Path East, and Great Neck Road and Route 130 are eligible for Road Safety Audits.
- The Town could benefit from increasing pedestrian scale lighting and high visibility crossings at areas where people walk across the street, for example, at higher ridership bus stops.
- The Town could benefit from adding a bus shelter at Mashpee Commons CCRTA stop.
- A sidewalk plow is needed to maintain accessibility in winter.
- The Town of Mashpee does not currently have any speed feedback signs, but there is an opportunity to apply for these using MassDOT Shared Streets and Spaces grant funding.
- The Town approved a roundabout redesign at Route 130 and Great Neck Road North and is looking for funding opportunities.
- The Town of Mashpee has several public transportation options serving the community including two fixed-route buses, paratransit, Boston Hospital service, and school buses for all children. There is just one bus shelter in Town located at the Community Health Center serving the Sealine route. There is an opportunity to add bus amenities at other locations in Town.
- There are existing studies on the Route 28 Corridor by both the Cape Cod Commission and MassDOT that could be referenced to improve this corridor.
- The Cape Cod Commission is examining where to put electric vehicle (EV) charging stations across Cape Cod, including in the Town of Mashpee.
- The Cape Cod Commission is beginning an inventory of side path crossings in Mashpee and other Cape towns starting in the summer of 2022.

#### 9.3.2 Current Measures

The following transportation-related projects are currently planned or under construction in Mashpee:

 Mashpee, Route 151 Corridor Improvements (Phase 1) (2021-2022): This Transportation Improvement Program (TIP) funded project will include intersection improvements, new drainage, pavement markings, signage, and traffic signal upgrades at the intersections of Job's Fishing Road, Old Barnstable Road, and Market Street. The project will improve pedestrian and

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bicycle accommodation both along the corridor and at key intersections. The Cape Cod Commission expects the improvement in active transportation options will lower greenhouse gas emissions on the Cape by approximately 8,000 kilograms per year. The \$5 million project is mostly funded using federal grants. This project received the highest prioritization score in the 2022-2026 TIP out of the 31 considered projects. Work has already begun on the project and is expected to be completed in 2025 (Cape Cod Commission 2021).

- Mashpee, Route 151 Corridor Improvements (Phase 2) (2026): This TIP project will include installation of new turn lanes, a small portion of raised median, new drainage, pavement markings, a shared-use path, and a sidewalk from the Falmouth Town Line to just west of Old Barnstable Road. This \$8 million project is mostly funded using federal grants. This project received the fifth-highest prioritization score in the 2022-2026 TIP out of the 31 considered projects. The project is expected to be completed in 2026-2027.
- Great Neck Road and Route 130 Roundabout: The Town recently approved this project in early 2021 and the project is in the conceptual design stage. The goal of the project is to make the intersection safer. The final design and construction are not yet funded.
- Old Barnstable Road Improvements: The Mashpee Wampanoag Tribe received a \$300,000 grant to redesign Old Barnstable Road from Route 151 to the Falmouth Town Line. The goal of the project is to add sidewalk and drainage improvements, in response to a death of a young adult walking on this road.
- Mashpee Rotary Retrofit: The State plans to retrofit the rotary, as recommended by the Mashpee Rotary Study (see below) and add pedestrian and bicycle accommodation. This project is not yet funded for construction. As of early 2022, MassDOT has hired an engineer to begin design on the rotary retrofit.
- **Prioritized Complete Streets Projects:** The priorities from the Complete Street Prioritization Plan include improvements to bicycle and pedestrian accommodation across Town including on Route 151, South Sandwich Road, Orchard Road, and Old Barnstable Road. The projects are not yet funded.
- Speed Feedback Signs on South Sandwich Road and Orchard Road: The Town applied for Shared Streets & Spaces funding from MassDOT in Spring 2022 to add speed feedback signs along South Sandwich Road and Orchard Road, to reduce speeds and improve safety. The Cape Cod Commission conducted a speed survey for both roads to apply for this funding.

The following transportation-related projects were recently completed in Mashpee:

- Mashpee Rotary Study: Completed in August of 2019, this study was funded by MassDOT and the Federal Highway Administration Unified Planning Working Program and conducted by the Cape Cod Commission in Partnership with the Town of Mashpee. The study offered short-, mid-and long-term recommendations. The highest priority recommendations were a shared-use path around the rotary, rotary retrofit improvements, Route 28 directional signage on Donna's Lane for retail traffic, and multi-modal accommodations, including a shared-use path, on Route 28 between Mashpee Rotary and Quinaquisset Avenue. Some of the short-term signage improvements have been completed. The next steps include securing funding for the remaining short-term improvements through Town, beginning the design process, and identifying state funds for the construction of the long-term improvements.
- Road Safety Audits:

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- Mashpee Rotary (2019)
- Nathan Ellis Highway (Route 151) at Job's Fishing Road, Algonquin Ave and Ninigret Ave (2018)
- Nathan Ellis Highway (Route 151) at Old Barnstable Road Intersection (2014)
- Great Neck Road North/Old Barnstable Road (2009)
- Route 130 Lane Departure Road Safety Audit (2007
- Route 28 Eastern Mashpee Corridor Study: Completed in January 2018 and funded by the Unified Planning Work Program, this report examined existing conditions, recommended short-term, mid-term, and long-term improvements, and alternatives development for the section of Route 28 from Route 130 to Orchard Road. This section of roadway was prioritized due to safety and congestion issues. This study recommended improvements included a speed study, traffic signal improvements, new turn lanes, visibility improvements, sidewalks, and improved crosswalks.
- Intersection Realignment at Cotuit Road: The Town recently completed an intersection realignment at Cotuit Road and Route 130 to improve sightlines.

#### 9.4 Goals & Policies

Goals

- 1. Maintain and enhance a cost-effective, efficient, safe, and accessible multi-modal transportation system that is sensitive to and respectful of the Town's small-town character.
- 2. Support efforts to enhance and increase alternative modes of transportation such as ride shares, bicycling, and public transportation with an eye towards reductions in greenhouse gasses and air pollution.
- 3. Minimize and mitigate impacts of transportation issues such as congestion as the Town considers its growth pattern to ensure maintenance of Town's quality of life, historic and natural resources, and small Town character
- 4. Minimize financial impacts of new road construction on the Town's budget.
- 5. Ensure Mashpee's stormwater management systems are utilizing best management practices to maximize the amount of stormwater treatment prior to recharging into groundwater.
- 6. Minimize the impact of parking facilities on the Town's visual character.

Policies

- Implement road design and maintenance standards and procedures that promote, protect, and encourage exiting patterns of development and neighborhood character in residential zoning districts.
- 2. Maintain a formal program for road maintenance, new road construction, and accompanying drainage infrastructure that is economically responsible and implementable.
- 3. Promote cooperative state/local efforts in transportation planning, ensuring that the Town's qualities are maintained throughout any transportation planning and construction projects.

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- 4. Encourage alternative modes of transportation and increase opportunities in Town for access to biking, walking, and carpooling.
- 5. Enhance connectivity between residential neighborhoods, as well as between commercial centers, and between neighborhoods, commercial center and municipal centers.

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#### 2023 Local Comprehensive Plan

#### 8.0 MUNICIPAL BUILDINGS, FACILITIES, AND SERVICES

#### 8.1 Introduction

The quality of public services and facilities directly impacts the ability of the residents to live in a safe and healthy environment. Sanitation, public safety, and human services as well as schools and the operation of the Town government, are vital components of a thriving community. Planning must be linked to, and complementary with, established levels and quality of service. When it is not, growth can be disruptive and stress the community's ability to serve new and existing residents or businesses. The Town's existing public services and facilities are presented on Map SF-1.

In general, major Town functions in Mashpee are conducted from several main public buildings – Town Hall, the Public Works Department, the Police Station, the Fire Station, Water District Building, and several smaller public buildings. Three school buildings, a Senior Center, and Library also provide a variety of services to the Town's population. Various municipal departments are integral in enhancing and protecting the quality of life that is so important to the residents of Mashpee. In particular, the Public Works Department is responsible for:

- Services and facilities related to wastewater
- Town road maintenance, repair, and construction
- Stormwater maintenance
- Town building maintenance.

The Police Department, Fire Department, and Emergency Management provide a vital public safety role for the community protecting the overall health, safety, and welfare of residents. The School Department maintains three school buildings and an operating budget that, on average, represents a significant portion of the Town's operating budget, providing a high level of educational and human services.

#### 8.2 Existing Conditions

Mashpee provides high-quality facilities and services for residents and visitors through a variety of government departments. This chapter outlines the roles of each of the main public departments and provides an overview of relevant information to offer transparency to the public. Health and human services refer to a variety of services and functions provided by the Town that relate to the basic needs of the community. These facilities and services range from those that concern mental and physical health, such as the Council on Aging, to infrastructural needs by the Department of Public Works. Public Safety also falls into this category as well as more social functions like the Town's Public Library and public education. This section identifies those services and provides an overview of their current capacity and operations.

8.2.1 Town Hall

The Mashpee Town Hall is located at 16 Great Neck Road North and houses the following Town Departments:

- Accounting
- Assessing

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• Board of Health

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**Commented [EL1]:** This isn't the case. Anything wastewater related is under control of Sewer Commission staffed by a wastewater superintendent leading the wastewater department. The DPW does, I believe, manage the contracts for the high school WWTF, who outsources the plant's operation.

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- Building
- Conservation
- GIS NG911 CRS Coordinator
- Human Resources
- Human Services
- Information Technology
- Natural Resources
- Planning
- Town Manager
- Treasurer/Tax Collector
- Watershed Nitrogen Management
- Zoning Board of Appeals

#### 8.2.2 Department of Public Works

The Mashpee Department of Public Works (DPW) is responsible for public roads, bikeways, solid waste and recycling, cemeteries, public building maintenance, and recreational facilities. The DPW works with all Town departments, regionally with surrounding Towns, the Cape Cod Commission, and statewide with various state agencies, including Mass DOT. The DPW facility is located at 350 Meetinghouse Road and is the oldest of the municipal buildings dating back to 1985. The current facility does not have adequate space for the current DPW needs. Vehicles and equipment lack adequate indoor storage and thus are not protected from the weather. These conditions increase vehicle wear and necessitate more frequent replacement. The Department usually replaces work vehicles every seven years, depending on wear and tear. A garage at the facility is used to maintain all Town equipment. The DPW is responsible for all custodial functions and has a staff of four to maintain all 13 Town buildings. The Department currently lacks a bucket truck vehicle and a large dump truck, often contracting out for tree maintenance work and other work that requires these vehicles. The Town also contracts out for road paving functions, as they do not have that equipment in-house. As Mashpee has developed over the years, the need for new roads, recreational facilities, and services has increased. The DPW's resources have not kept pace, making it more challenging for the Department to maintain a high level of service to residents. Chapter 10, Water and Coastal Resources, offers additional information on the water supply and wastewater management by the Department of Public Works.

#### 8.2.3 Council on Aging (Senior Center)

The Council on Aging (COA) sponsors, coordinates, and conducts educational, social, and recreational services and programs at the Mashpee Senior Center. The COA also identifies and creates solutions for the empowerment and betterment of the Town's senior population. The Senior Center is located at 26 Frank E. Hicks Drive, adjacent to the Police and Fire Stations. The Mashpee Senior Center is a site for a variety of different support groups and functions to assist Mashpee seniors. These include, but are not limited to, the following:

- Legal services
- Grief counseling
- Mental health consultation
- Blood pressure clinics

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**Commented [EL2]:** Natural Resources has moved to a new facility outside of Town Hall leasing space on Mercantile. Will provide details.

**Commented [EL3]:** Wastewater Management? We now have a Wastewater Department with 1 FTE, Wastewater Superintendent.

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- Foot care clinic
- Hope Dementia & Alzheimer's Services Caregiver Support Group
- Serving the Health Insurance Needs of Everyone (SHINE) counseling
- Parkinson's Support Group
- Hearing tests
- Candid Coffee Hour (with a nurse from the VNA of Cape Cod)
- Veteran's Services
- Sight Loss Services Peer Support Group

In addition to the services listed above, the COA coordinates a host of social activities including art and craft classes, dance classes, book clubs, exercise classes, and sports-related activities and groups. The COA also coordinates support services and appointments to assist seniors with tax preparation, legal appointments, library services, and medical appointments.

Two transportation options are available to Mashpee seniors through the COA. The Senior Center operates a van service that runs between Mashpee and other local Towns on a scheduled basis. The van is handicapped-accessible. The second option is transportation to local doctor's appointments which are arranged through COA volunteers. Additional opportunities for bus service exist through the Cape Cod Regional Transit Authority (CCRTA), which provides transportation to Boston hospitals.

#### 8.2.4 Board of Health

The Mashpee Board of Health (BOA) licenses and inspects all food service, retail food, catering, mobile food, residential kitchen, and bakery facilities in Mashpee. They also license, inspect, and address complaints regarding all semi-public swimming pools (condominiums and hotels), tobacco retailers, tanning facilities, bodywork facilities, stables, kennels, housing, motels, camps, and trailer parks in the Town. The BOA also oversees the operation and maintenance of the capped sanitary landfill at Ashers Path and is responsible for septic system plan review, permitting, and approval, as well as the licensing of septic pumpers and installers. During the summer season (Memorial Day to Labor Day) the BOA oversees the sampling of all bathing beaches in Town.

The Board of Health is located at 16 Great Neck Road North, in the Town Hall, and is staffed by a Health Agent, Assistant Health Agent, a Code Compliance Inspector, and an Administrative Secretary.

#### 8.2.5 Department of Human Services

The Mashpee Department of Human Services offers resources and solutions for community members who are in need of support. Numerous municipal, regional, and federal entities work with the Department of Human Services and Mashpee Human Services Committee to help Mashpee residents. Through a variety of clinical and other services, the Department assesses and advocates for food access, housing provisions, youth and senior services, substance abuse, and mental health awareness. The following are Town funded contracts for FY 2022:

- AIDS Support Group of Cape Cod
- Big Brothers/Big Sisters of Cape Cod & The Islands
- Capeabilities
- Community Health Center
- Falmouth Service Center

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**Commented [EL4]:** Arong Acronym. Change all references from BOA to BOH.

- Independence House
- South Coastal Legal Services
- Salvation Army
- Sight Loss Services
- St. Vincent De Paul Society
- Visiting Nurses Association

#### 8.2.6 Public Safety

The topic of public safety includes police, fire, and emergency management services. These organizations work cooperatively to ensure the overall health, safety, and welfare of Mashpee residents.

#### Police

The Mashpee Police Department is responsible for protecting the life and property of Mashpee residents, and preservation of peace within the community. The Police Department performs a variety of functions including, but not limited to, the prevention of crime, apprehension of criminals, protection of rights of persons and property, and the enforcement of Massachusetts General Laws and the bylaws of the Town of Mashpee. The Police Department also assists other Town Departments and officials in the performance of their duties when necessary.



The Mashpee Police Department is a full-service law enforcement organization, fully accredited through the Massachusetts Commission

on Police Accreditation that strives to create an environment that fosters the development of partnerships within the community. The Mashpee Police Department strongly embraces the philosophy of community policing with all of our citizens. The Community Services Unit is highly committed and dedicated to identifying the core needs of our community. By providing outreach programs, specialized events and functions, we hope to build a strong collaborative supportive relationship, which will build public trust and mutual respect between our citizens and our police department, increasing the quality of life for those that live, work and visit the beautiful Town of Mashpee.

The Police Station is located at 19 Frank E. Hicks Drive, adjacent to the Mashpee Fire Department. The station was built in 1990. Currently, there are 38 full-time officers 1 full-time animal control officer, one full-time administrative assistant, 7 full-time public safety dispatchers, 1 part-time records clerk, one part time firearms licensing clerk, one part-time domestic violence coordinator, and five part-time reserve police officers. The Department responded to over 40,500 service calls in 2021, resulting in 489 arrests or criminal applications.

The station is understaffed and should have approximately 45-48 officers and three administrative staff. The Police Station needs upgrades, with concerns about air quality (a study of air quality conditions is in progress). Furthermore, the design of the Station requires officers to walk through the cell block area to get to the other side, which is problematic. The Station has two garages, but one is utilized for storage and maintenance. The Station has one sally port for officers to bring detainees in, which creates potential conflicts when multiple detainees are being brought in at the same time. The facility space is at capacity and additional space is desired to continue to operate at current staffing levels. Station upgrades will be

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necessary if staff increases in proportion to the community's growth. The Station has separate facilities for men and women, which have reached capacity, but drains backing up in those facilities have been an ongoing issue that needs to be addressed.

The Department maintains a fleet of 11 patrol vehicles which operate 24/7 365 days a year. These vehicles are replaced every three years. There are 8 administrative vehicles and detective vehicles that are replaced every 6 years as well as the animal control vehicle which is replaced every six years. This has been a comprehensive vehicle replacement plan which has been in effect since January of 2005 and has worked well. The department also has two ATV patrol vehicles for beaches and difficult terrain as well as two bicycle patrol units.

The Police Department has two divisions. The operations division consists of patrol, dispatch, animal control, school resource officers, special response team, K-9-unit, bike unit, ATV units, and the honor guard. The support services division consists of the detective bureau, prosecution, community services unit, internal affairs, and training and facility inspections.

#### **Animal Control**

Animal Control falls under the jurisdiction of the Mashpee Police Department and is responsible for any issue related to stray or loose dogs, nuisance dogs, dog bites, loose livestock, rabid animals, and other animal complaints. The department also conducts animal and barn inspections in compliance with Massachusetts General Laws. The department is responsible for enforcing the Town Bylaws relating to dogs and the Massachusetts General Laws in the care of strays and homeless animals. The Animal Control Unit is staffed by one animal control officer and one vehicle. Animal Control is contacted by calling the Mashpee Police Department and a dispatcher will contact the Animal Control Unit, which is available during normal business hours Monday through Friday.

#### **Fire and Rescue**

The Mashpee Fire and Rescue Department's mission is to minimize loss and suffering within the community by education, training, and the mitigation of emergency incidents within the limit of available resources. As of December 31, 2021, the current authorized force of the Department was 36 operational members (four captains, four lieutenants, 24 firefighters, one fire prevention inspector, one lieutenant EMS officer, one fire chief, and one deputy fire chief), one administrative assistant, and one billing clerk for a total of 38 members.

The Mashpee Fire and Rescue Department is located at 20 Frank E. Hicks Drive, adjacent to the Mashpee Police Station. The building was constructed in 2000. The Department maintains a total of twelve vehicles, including three engines, one rescue pumper, one brush breaker, one ladder tower, one forestry truck, one tanker, one rescue boat, and three ambulances. The Department were called to 44 total fires, 2,942 emergency medical responses, and 79 hazardous material responses.

The Fire Inspector and Emergency Medical Services (EMS) Officer are continually working to develop new ways to deliver public education courses, site visits, and other public safety events to enhance the quality of life in Mashpee. Some of the beneficial offerings have been smoke and carbon monoxide detector surveys of homes and businesses, childcare seat installations, vital of life medical reviews, fire extinguisher training, home safety inspections and lectures, and the management of end-of-life decisions. Both the Fire Inspector and the EMS Supervisor work closely with the Council on Aging and

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Board of Health to monitor activities within the Town that they and others in the Department can assist with.

The Department participates in wildfire planning in the Mashpee National Wildlife Refuge. The Department performs prescription fires for habitat restoration and fire fuels reduction practices on both state and federal lands. There are plans to continue these programs in 2022 to accomplish beneficial burns by the Massachusetts Division and Federal Department of Fisheries and Wildlife. This program is accomplished in partnership with the U.S. Fish and Wildlife Service, Massachusetts Department of Conservation and Recreation, Massachusetts Fish and Wildlife, Orenda Wildlife Trust, and the Town of Mashpee.

#### **Emergency Management**

To provide reliable and effective emergency communications to residents, the Town of Mashpee implemented the Blackboard Connect Notification System as a Town-wide emergency notification platform to provide timely and important emergency notification information to residents. Blackboard Connect is a high-speed notification system designed to make calls to specific people or areas in the event of an emergency or for sharing important information. The Mashpee Emergency Management Team and other Town departments use this system to notify residents by telephone of important information. The system can make thousands of calls in a minute to convey vital information. These messages may include information about the flood, fire, water emergencies, road closures, missing persons, evacuation orders, weather events, and other related emergency issues or situations.

Residents and businesses must verify their contact information in the database and can do so by using the Blackboard Connect icon on the Town's website. Accurate telephone numbers in the database help to ensure that emergency information will be distributed on time. Residents can add additional telephone numbers including a cell phone, and can also receive notification by email, text, or pager. The address documented must be in Mashpee, but the associated phone number can be from anywhere to receive alerts.

#### 8.2.7 Department of Natural Resources

The Department of Natural Resources (DNR) promotes public health and safety by protecting and restoring Mashpee waterways, enforcing shellfish and water way laws, and maintaining water quality (Town of Mashpee, n.d.). The DNR was created in 2016 and includes the following positions: Director of Natural Resources, Harbormaster, Assistant Harbormasters, Shellfish Constable, Shellfish and Water Quality Monitoring Technician, and Waterways Assistants (Town of Mashpee, 2021). Chapter 4, Natural Resources, and Chapter 10, Water and Coastal Resources, provide additional information on the Department of Natural Resources.

#### Harbormaster

The Harbormaster's Office reports to the Town of Mashpee Police Department. Section 170 of the Mashpee General Bylaws states that the Harbormaster is responsible for enforcing the rules and regulations relating to Mashpee waterways. All moorings require a permit from the Harbormaster (Town of Mashpee, 2021). The Mashpee Harbormaster Division maintains a fleet of seven vessels and five vehicles for patrol and related duties across all Mashpee waterways. The assistant harbormaster responded to one boating accident, 26 service calls, 15 marine incidents, and gave out over 50 citations over 1,600 hours of patrol during the 2021 boating season.

**Commented [EL5]:** Does harbormaster still report to PD? I don't think they do. I think when DNR was established Harbormaster left PD.

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#### **Shellfish Warden**

The Shellfish Warden, like the Harbormaster, reports directly to the Police Department. In accordance with Chapter 130, Section 98 of the Massachusetts General Laws, the Shellfish Warden is appointed by the Town to promote and manage shellfisheries (Commonwealth of Massachusetts). Fines and other penalties are enforced by the Shellfish Warden for failure to abide by regulations, including acquiring permits and catch restrictions. The Mashpee Shellfish Regulations have been effective since June 15, 2010, and remain in effect indefinitely (Town of Mashpee, 2021). The Mashpee Shellfish Division has three vessels and one vehicle used for Joint HM-Shellfish Patrol, propagation work, and staff transport. The Shellfish Division also has access to 72 floating cages and 350 bottom cages; upwellers, powered by 4 Hayward Super Pumps; and an oyster tumbler. The Town currently has approximately 1,400 recreational boating permit holders, which is the primary use of Mashpee waterways.

The Town's waitlist for moorings has increased substantially in recent years, resulting in diminished commercial interest and available permits. Additional boats have also damaged the healthy bottoms of these waterbodies, which are critical for shellfish digging. The clam flats of Waquoit Bay have experienced particularly notable decline in productivity as the influx of recreational vessels have led to seasonal closures and narrow waterways, posing a threat to the health and safety of commercial fishers. Aquaculture farms are located throughout the Town's waterways, but expansion has become limited due to boating traffic patterns.

#### 8.2.8 Library

Mashpee opened its first library in 1892 with an appropriation of \$15, appointed trustees, and a \$100 donation from the state. In 1928, the Town appropriated \$1,625 to construct a new building on the southeast corner of Snake Pond and Great Neck Roads to function exclusively as the Town's library. In response to the growth of the community, a larger library building was constructed and opened on Nathan Ellis Highway in 1987. Despite the increase in size and scope of this building, it was quickly noted that the expansion of the Town would easily outpace the new library's ability to provide services to the residents.

The Mashpee Public Library opened the doors to its current 22,000 square foot facility at 64 Steeple Street in 2010, as the first certified Leadership in Energy and Environmental Design (LEED) library on Cape Cod, and one of the few public libraries in the state to achieve the status at the time. The Town of Mashpee was one of 35 Towns named in the inaugural class of "Green Communities" by the Massachusetts Department of Energy Resources. The Library achieved silver LEED status by earning credits in six categories: Sustainable Sites, Water Efficiency, Energy and Atmosphere, Materials and Resources, Indoor Environmental Quality, and Innovation (U.S. Green Building Council, 2010). The Library employs a solar energy system to help fuel the building's lighting, electrical components, and air conditioning. Heat is generated by a high-efficiency, gas-fired boiler, and an energy recovery system is used to reclaim heat and cooling. Low emitting materials used in carpets, paints, and sealants were selected to reduce indoor air contaminants. Lighting systems include features that dim or switch off lighting when sufficient ambient light is present or when a space is unoccupied.

The Library offers traditional circulation and reference services, along with programs for children, teens, and adults, online databases, streaming content, internet access, and printer/copier equipment. Wi-Fi is accessible throughout the building, and patrons can check out a laptop for use in the building. All online

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**Commented [EL6]:** Same comment. Isn't this still all under DNR? Once DNR was created I think these functions lef the police department.

services are available with a library card all the time from any computer. Meeting rooms with a computer projector, screen, sound system, and kitchen access are available for large and small groups.

The Library is a municipal library funded primarily by the Town of Mashpee and is governed by a sevenmember elected Board of Library Trustees. The current staff includes a Director, an Assistant Director, three full-time librarians, one standard part-time Library Assistant, and seven non-standard part-time Library Assistants working less than 20 hours per week. Library employees are contracted with the Town and receive accounting, human resources, technology, DPW, administrative, and legal support through Town Departments.

The total appropriated budget for FY 2020 was \$692,665 of which \$501,560 is designated for salaries and wages, and \$191,105 is provided for operational expenses. The most significant item in the Library's operational expense budget is for the purchase of library materials (books, DVDs, music, magazines, etc.), which totaled \$111,760 in FY 2020. Table 8-1 provides additional information on library operations.

Table 8-1. Library Operations	
Operation	Number
Library Cardholders	17,247 (includes seasonal and year-round residents)
Circulation	209,055 (total transactions)
Holdings	103,551 (items)
Public Computer Use	15,600 (users per year)
Meeting Room Use	219 (bookings)
Program Attendance	11,461 (total for children's, teens, and adult programs)
Total Hours Open	2228 (for the year)

#### Source: Mashpee Public Library Strategic Plan, 2020

In April of 2019, a Strategic Planning Committee of residents, business owners, non-profit leaders, library staff, Town officials, and employees was formed to develop a comprehensive strategic plan to guide the organization for the following five years. The group hired a consultant to facilitate the strategic planning process and led two focus groups, met with a staff steering committed, and implemented a survey to the community. The Mashpee Public Library Board of Trustees adopted the Strategic Plan on November 12, 2019. The Strategic Plan outlines five goals of the organization and provides activities to achieve those goals. The Strategic Plan goals are:

- Building Community and Outreach
- Patron Experience
- Diversity and Inclusion
- Experiential Learning
- Community Service and Emergency Preparedness

#### 8.2.9 School Facilities

The Town, along with the Mashpee School Department, is committed to providing and maintaining highquality education to the children and families of Mashpee. The Town allocated approximately \$15,504,000 of the total operating budget to education in FY 2021-2022. The general administration of the Mashpee School Department is directed by a five-member committee who are elected to a four-year term.

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8-8

Weston (&) Sampson

**Commented [EL7]:** October Town Meeting authorized the conversion of a few part timers to full time. Need to confirm with Library Director.

The Mashpee School District is composed of three schools (Kenneth C. Coombs School, Quashnet Elementary School, and Mashpee Middle-High School). The school facilities operated by the Mashpee School Department are presented in Table 8-2 below.

Table 8-2. Mashpee School Facilities							
School	Year Built	Location	Grades	Enrollment (2021-22)	Class Size	Site Size	
Kenneth C. Coombs School	1989	152 Old Barnstable	Pre-K-2			52.2 total acres (senior	
		Road				center, police	
Quashnet Elementary School	1978 (major addition in 1993)	150 Barnstable Road	3-6	460	20:1	and fire stations located on one of the parcels)	
Mashpee Middle- High School	1996	500 Old Barnstable Road	7-12	440	10.7:1	135 acres	

**Commented [EL8]:** Why no enrollment numbers for KC Coombs?

Source: Mashpee School Department, 2022; Massachusetts Department of Elementary and Secondary Education: School District and Profiles, 2022

Table 8-3 provides enrollment numbers for all grade levels from the 2014-15 school year through the 2021-22 school year.

Table 8-3. M	Table 8-3. Mashpee School Enrollment by Grade													
School							Gra	des						
Year	PK	K	1	2	3	4	5	6	7	8	9	10	11	12
2014-2015	92	106	122	123	109	136	131	149	127	141	119	109	99	104
2015-2016	81	120	100	125	135	104	135	131	149	127	114	105	106	97
2016-2017	30	73	116	95	121	134	102	137	129	148	113	105	95	102
2017-2018	74	122	101	119	116	132	135	102	140	130	129	112	111	99
2018-2019	94	97	114	103	119	116	128	140	111	140	115	120	108	111
2019-2020	91	96	95	111	100	120	117	123	147	109	119	116	113	106
2020-2021	54	93	92	91	105	97	119	119	115	141	95	122	106	119
2021-2022	80	90	98	96	90	109	105	119	118	112	127	95	113	105
Source: Massa	chusett	s Depai	tment	of Elem	entary o	and Sec	ondary	Educat	ion: Sch	nool and	l Distric	t Profile	2022	2

Over an eight-year period (2014-2022), school enrollment in Mashpee declined by approximately 19.8%. Table 8-3 provides total enrollment counts for 2013-2022 on a grade-by-grade basis, while Table 8-4 provides total school enrollment and the percent change from enrollment the prior year. Except for the 2017-2018 school year, each year experienced an enrollment decline from the prior year.

Table 8-4. Historical Scho	Table 8-4. Historical School Enrollment Percent Change, 2014-2022							
School Year	K-12 Total Enrollment	Difference	% Change					
2014-15	1,667	NA	NA					
2015-16	1,629	-38	-2.3%					
2016-17	1,500	-129	-8.6%					
2017-18	1,622	122	7.5%					
2018-19	1,616	-6	-0.3%					

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#### 2023 Local Comprehensive Plan

Table 8-4. Historical Scho	Table 8-4. Historical School Enrollment Percent Change, 2014-2022						
School Year	K-12 Total Enrollment	Difference	% Change				
2019-20	1,563	-53	-3.3%				
2020-21	1,468	-95	-6.4%				
2021-22	1,457	-11	-0.8%				
	Change	-210	-10.8%				

Source: Massachusetts Department of Elementary and Secondary Education, 2022

#### 8.2.10 Solid and Hazardous Waste Management

The Town of Mashpee does not provide curbside trash pickup. Residents must either purchase a permit to drop off trash at the transfer station or contact a licensed trash hauler for privately operated curbside pickup. The Mashpee Transfer Station is located at 380 Asher's Path and is open to residents five days a week, including weekends (currently closed on Tuesdays and Thursdays). Stickers for the transfer station are purchased at Town Hall and recycling-only permits can be purchased.

Recycling is collected at the transfer station and users must separate the recyclables into categories. Massachusetts State Law bans the disposal of recyclable materials without household trash. Mashpee residents can purchase recycling bins at the DPW facility.

In addition, the transfer station also accepts antifreeze, appliances, automotive batteries, rechargeable batteries, books, electronics, mattresses and box springs, mercury products, mixed rigid plastic, oil filters and used oil, propane tanks, scrap metal, textiles, tires, yard waste, and brush. Barnstable County residents can dispose of household hazardous waste during scheduled events several times a year.

#### 8.3 Challenges & Opportunities

#### 8.3.1 Challenges

Mashpee's outdated Town technology would benefit from an update to ensure that residents are kept informed on important matters. Residents voiced their concern around the lack of communication between Town departments and the need for expanded integration between the Town and Mashpee Wampanoag Tribal leaders. The lack of a community center has been seen as a detriment to the Town. The community center could be an opportunity to promote traditions of the region and connect people within Mashpee and represent the cultural heritage of the area.

Public safety issues are most pertinent on the water. Increased boating traffic, especially speed boats and recreational vessels that stray out of their channel, presents a safety risk to diggers.

Outdated and antiquated public buildings and lack of necessary equipment pose a problem for the Town, specifically related to public safety and public works. The Town's growth has outpaced its ability to keep up with facilities and services for these departments and the Town will need to address these issues regardless of future growth projections.

#### 8.3.2 Opportunities

Designated moorings for commercial entities may alleviate the issue of safety risks to diggers and remove a significant barrier to entry, especially for the burgeoning aquaculture industry. While Mashpee does not currently have the same amount of viable space for aquaculture as other Towns, a well thought out smaller scale version of this has the potential to impact the Town and drive our local "Blue Economy".

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8-10



**Commented [EL9]:** Recently voted to change hours of operation at transfer station. Confirm with Catherine.

#### 2023 Local Comprehensive Plan

#### 8.3.3 Current Measures

The Town has been working diligently to ensure the Town's facilities and services meet the demands of 21<sup>st</sup> century Mashpee. Facilities are being upgraded to include modern technologies for communications, energy efficiency and storage, as well as climate resiliency and environmental sensitivity. The Town continues to look forward to implementing low-impact design retrofits where possible on Town-owned properties and infrastructure. Services across Town Department from the Council on Aging, Recreation, and Public Library are consistently evolving to meet the demands of the Mashpee Community.

#### 8.4 Goals & Policies

Goals

- 1. Ensure all Mashpee residents have access to the highest quality of physical, mental, and emotional health care.
- 2. Provide safe, equitable school facilities that allow all Mashpee students to receive an excellent education and achieve their full potential.
- 3. Ensure municipal facilities are equipped with the most advanced communications technologies with particular focus to emergency service communications.
- 4. Maintain financial stability and AAA bond rating.
- 5. Ensure every Mashpee resident and taxpayer has accessibility to local government and maximized ability to participate in decision making
- 6. Ensure appropriate facilities for the number of students expected in the school system, as well as the kinds of facilities that best support and accommodate a quality educational program for the Town.
- 7. Ensure that the development and operation of school facilities and programs are coordinated to the maximum extent possible with those of other municipal agencies.
- 8. Ensure that the development of new school facilities not only assists each Mashpee child in reaching his or her full potential but also enhances life-long learning for Mashpee adults as well.
- 9. Maximize non-property tax sources of funding for school facilities and programs.
- 10. Ensure that the greatest possible contributions to the town's educational program are achieved in relation to the dollars expended.
- 11. Ensure adequate municipal facilities to meet community needs.
- 12. Ensure that the location and construction of municipal buildings & facilities is consistent with Mashpee's other planning goals.
- 13. Ensure that the construction and maintenance of municipal buildings & facilities enhances community pride and the visual quality of our built environment.
- 14. Maximize non-property tax funding sources for new municipal buildings and facilities.
- 15. Ensure that new development provides or contributes a fair share of the cost of municipal infrastructure and services necessary to support it.
- 16. Ensure that new development provides or contributes a fair share of the cost of municipal infrastructure services necessary to support it.
- 17. Ensure that Mashpee interests are fully represented in the location and development of regional facilities.
- 18. Minimize loss and suffering in our community due to fire, storms and other man-made and natural disasters.

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8-11



#### 2023 Local Comprehensive Plan

- 19. Ensure that Mashpee residents, visitors and their property are protected from physical and emotional harm.
- 20. Ensure that the laws and regulations of the town and commonweal th are obeyed and enforced.
- 21. Minimize vehicular, boa ting and other accidents and injuries.
- 22. Ensure the highest quality of care and minimum response times in the event of medical and fire emergencies.
- 23. Minimize injuries and property damage caused by animals and to ensure proper treatment of domestic animals and wildlife.
- 24. Ensure that public safety services are delivered in a coordinated, cost-effective and humanitarian manner.
- 25. Protect and improve the physical, mental and emotional health of all Mashpee residents.
- 26. Access for all town residents to a full continuum of health and human services, including social and leisure services.
- 27. Collaboration and cooperation between the public, non-profit and private sectors in Mashpee to develop a common understanding of health and human service needs, priorities and appropriate resource allocation.

Policies

- 1. Encourage sustainable solid waste management practices to prevent hazardous waste from infiltrating natural areas and municipal systems.
- 2. Protect Mashpee residents, visitors, and their property from crime.
- Expand role of emergency management in minimizing loss and suffering from man-made and natural disasters.
- 4. Efficiently coordinate public safety services to ensure rapid response times and high-quality care.
- 5. Increase collaboration internally between Town departments and externally with Mashpee residents to limit the chance for a lack of communication or miscommunication.
- 6. Maintain and enhance cross-sector collaborations such as with educational institutions and research organizations to bolster water quality sampling programs and reporting.
- 7. Increase substance abuse support programs.
- 8. Identify a site to be used for materials storage and develop the materials storage site.
- 9. Enhance Suicide Prevention programing and educational awareness.
- 10. Enhance collaboration and communication with Mashpee Wampanoag Tribe.
- 11. Ensure critical facilities are located near populated centers while promoting equitable access to underserved communities.
- Increase the supply and availability of public meeting space for Town Boards and Committees, working groups, and for Mashpee-based non-profit service organizations such as Girls Scouts, Boy Scouts, etc.
- 13. Support volunteer members of public board and committee with training, conflict resolution/mediation services, and legal support.
- 14. Increase youth participation in local governance with integration of activities with other youth systems, such as school and youth groups.

8-12



# MINUTES

(forthcoming)

# 7:10 PHN: 275 QUINAQUISSET AVE



16 Great Neck Road North Mashpee, Massachusetts 02649

### Mashpee Planning Board Public Hearing Notice

Pursuant to Massachusetts General Laws, Chapter 40A Section 11, the Mashpee Planning Board will hold a public hearing on Wednesday, March 1, 2023 at 7:10PM at the Mashpee Town Hall, 16 Great Neck Road North, to consider an application from Southworth Mashpee Properties LLC, property owner, to modify the Willowbend Country Club Special Permit. The applicant proposes to construct a 14-unit single family cottage community immediately contiguous to the Willowbend Golf Course at 275 Quinaquisset Avenue (Map 69 Block 32). The existing single-family dwelling is proposed for demolition. With these changes the total unit count for the Willowbend project would be increased to 287 if the Board authorizes the annexation of 275 Quinaquisset into the Willowbend Special Permit as allowed. 287 dwelling units is the maximum number of dwelling units authorized under the Special Permit. All units will be connected to and served by the existing privately owned wastewater treatment plant which serves the entire Willowbend project.

Submitted by:

Mary E. Waygan Mashpee Planning Board

Publication dates: Friday, February 10, 2023 Friday, February 17, 2023

### BAXTER NYE ENGINEERING & SURVEYING Registered Professional Engineers and Land Surveyors 1597 Falmouth Rd., Suite 1, Centerville, MA Tel: (508) 771-7502 Fax: (508) 771-7622

### BOG RESTORATION PERFORMED WILLOWBEND – GOLF HOLE BOG #7





### <u>TYPICAL REPRESENTATIVE EXAMPLE OF A BOG RESTORATION</u> <u>"BEFORE" AND "AFTER" PICTURES OF RESTORATION</u> <u>(Tidmarsh Farms)</u>



Photo Credits: Before Glorianna Davenport After Alex Hackman, MA DER



Photo Credits: Before Glorianna Davenport After Alex Hackman, MA DER

BAXTER NYE ENGINEERING & SURVEYING Registered Professional Engineers and Land Surveyors

### **UNDISTURBED END OF QUAKER RUN**

### "THE GOAL IS TO RESTORE THIS SYSTEM TO ITS NATURAL STATE"



O:\2014\2014-009\ADMIN\PERMITS - Applications and Approvals\Quinaquisset\Conservation\Informal Discussion on Mitigation Plan\Bog Restoration Cut Sheet Sample.docx

# **Cranberry Point At Willowbend Site Construction Plans**



Locus Map

Scale 1" = 500'

Mashpee, Massachusetts

# Owner:

Southworth Mashpee Properties, LLC 130 Willowbend Drive Mashpee, MA 02649 (508)-539-5316

# Applicant:

Southworth Mashpee Properties, LLC 130 Willowbend Drive Mashpee, MA 02649 Phone (508)-539-5316

# Job Number: 2014-009 QUIN

Plan Sheet Inde	X
No.	Drawing Title
C0.0	Cover Sheet
C1.0	Legend and General Notes
CPP1.0	Certified Plot Plan
C2.0	Existing Conditions Plan
C3.0	Master Layout Plan
C3.1	Site Layout Plan - Sheet 1 of 2
C3.2	Site Layout Plan - Sheet 2 of 2
C3.3	Sight Distance Plan
C3.4	Truck Turning Template Plan
C4.0	Grading & Drainage Plan - Sh
C4.1	Grading & Drainage Plan - Sh
C4.2	Grading Inset & Drainage Det
C4.3	Drainage Notes
C5.0	Utility Plan - Sheet 1 of 2
C5.1	Utility Plan - Sheet 2 of 2
C5.2	Proposed Driveway and Utilit
C6.0	Master Mitigation Plan
C7.0	Details Plan
C7.1	Details Plan





# Engineer/Surveyor:

## BAXTER NYE ENGINEERING & SURVEYING

Registered Professional Engineers and Land Surveyors 1597 Falmouth Road Centerville, MA 02632

Phone (508) 771-7502 Fax (508) 771-7622 ATTN: Matthew Eddy, P.E.

heet 1 of 2 heet 2 of 2 etails

ity Profiles

# BAXTER NYE **ENGINEERING &** SURVEYING

Registered Professional Engineers and Land Surveyors

1597 Falmouth Road Centerville, MA 02632

Phone - (508) 771-7502 Fax – (508) 771–7622 www.baxter-nye.com

STAMP

STAMP

CONSULTANT

CONSULTANT

PREPARED FOR:

Southworth Mashpee Properties, LLC 130 Willowbend Drive Mashpee, MA 02649

PROJECT TITLE

Cranberry Point 275 Quinaquisset Avenue Mashpee, MA 02649

A	JKL	10/13/2023	REVISE GRADING/STORMWATER MGMT
	ZDP	5/23/2023	CONSERVATION UPDATE
A	ZDP	5/1/2023	CONSERVATION UPDATE
$\triangle$	JKL	4/28/2023	PER PLANNING BOARD COMMENTS
$\triangle$	JKL	3/24/2023	PER PLANNING BOARD COMMENTS
		DATE	DESCRIPTION

SHEET TITLE

**Cover Sheet** 

SHEET NO

**CO.O** DATE: JANUARY 16, 2023

SCALE: NO SCALE FOR PERMIT ONLY - NOT FOR CONSTRUCTION

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EX

OVERHEAD ELECTRIC, TELEPHONE, CABLE & FIRE ALARM

UNDERGROUND ELECTRIC, DATA/COMMUNICATIONS LINES

Sheet no.

TR

WETLANDS

--- 50' WETLAND BUFFER

WETLAND FLAG

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TR

100' WETLAND BUFFER

200' WETLAND BUFFER

100 YEAR FLOOD PLAIN

MITIGATION AREA LINE

EDGE OF WATER

TELEPHONE MANHOLE

FIRE ALARM CONTROL PANEL

TELEPHONE MARKER

TRAFFIC SIGNAL

FIRE ALARM BOX

TRANSFORMER PAD

TELEPHONE RISER

MAIL BOX

SIGNAL BOX

LIMIT OF WETLANDS

ABAN

ADJ

BOC

BOS

BOW

CC

CCB

CSE

ECB

EL

ELEV

EOG

EOL

EOP EXIST

EQ.

FDN

GE

MCC

PCC

PROP

PWW

REMOD

REM

R&R

R&S

RET

SGE

SGC

TIEG

TOC

TOS

TOW

TYP

UON

ACCMP

CAP

CIP

COND

CPP

CS

DS

F&C

F&G

HYD

INV

PVC

RCP

C/0

TSV&B

VCP

ABBREVIATIONS

GENERAL ABANDON ADJUST APPROX APPROXIMATE BITUMINOUS BERM **BITUMINOUS CURB** BOTTOM OF CURB BOTTOM OF SLOPE BOTTOM OF WALL CONCRETE CURB CAPE COD BERM COBBLESTONE EDGING EROSION CONTROL BLANKET ELEVATION ELEVATION EDGE OF GRAVEL EDGE OF LAWN EDGE OF PAVEMENT EXISTING EQUAL FOUNDATION FINISHED FLOOR ELEVATION GRADE BREAK GRANITE CURB GRANITE EDGINO HANDICAF HOT MIX ASPHALT HIGH POINT LANDSCAPE AREA LANDSCAPE AREA LOW POINT MAXIMU MINIMUM MONOLITHIC CONCRETE CURB MHB/EP LP MASS HIGHWAY BOUND/ ESCUTCHEON PIN LEAD PLUG NOT IN CONTRACT NOT TO SCALE PRECAST CONCRETE CURB PROPOSEI PAVED WATER WAY REMODE REMOVE REMOVE AND RESET REMOVE AND STACK RETAIN SLOPED GRANITE EDGING SLOPED GRANITE CURB TIE INTO EXISTING GRADE TOP OF CURB TOP OF FOUNDATION TOP OF SLOPE TOP OF WALL TYPICAL UNLESS OTHERWISE NOTED VERIFY IN FIELD BY CONTRACTOR VERTICAL GRANITE CURB ASPHALT COATED CORRUGATED METAL PIPE CORRUGATED ALUMINUM PIPE CAST IRON PIPE CHANGE IN TYPE CORRUGATED METAL PIPE CONDUIT HIGH DENSITY POLYETHYLENE CORRUGATED PLASTIC PIPE - SMOOTH INTERIOR CURB STOP FOR WATER LINE DUCTILE IRON PIPE DOWN SPOUT ELECTRIC FRAME AND COVER FRAME AND GRATE GAS HYDRAN<sup>®</sup> INTERCEPTOR DRAIN INVERT ELEVATION PERFORATED DRAIN POLYVINYL CHLORIDE PIPE REINFORCED CONCRETE PIPE ROOF DRAIN SEWER SEWER CLEANOUT STORM DRAIN TELEPHONE TAPPING SLEEVE, VALVE & & BOX RISER UTILITY POLE VERIFY IN FIELD VITRIFIED CLAY PIPE WATER

### **GENERAL CONSTRUCTION NOTES** \* (ALL REFERENCES TO "CONTRACTOR" SHALL MEAN THE GENERAL CONTRACTOR OR HIS

SUB-CONTRACTORS.)

1. ALL WORK & MATERIALS SHALL BE IN ACCORDANCE WITH MASSDOT, HIGHWAY DIVISION, STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES (MASSDOT-SSHB), AS CURRENTLY AMENDED, UNLESS OTHERWISE NOTED. IF THERE ARE CONFLICTS IN ANY OF THE SPECIFICATIONS OR PROJECT DOCUMENTS, THE HIGHER STANDARD SHALL APPLY.

ALL WORK UNDER THESE DOCUMENTS SHALL ALSO CONFORM TO ALL CODES AND STANDARDS, AS CURRENTLY AMENDED, WHICH ARE APPLICABLE TO THIS PROJECT. ALL WORK SHALL FURTHER CONFORM TO SPECIFIC REQUIREMENTS, SPECIFICATIONS, ORDINANCES AND INTERPRETATIONS OF LOCAL AUTHORITIES HAVING JURISDICTION OVER THE PROJECT. DETERMINATION OF APPLICABLE CODES AND STANDARDS AND OF THE AUTHORITIES HAVING JURISDICTION, SHALL BE THE RESPONSIBILITY OF EACH CONTRACTOR, AS SHALL BE THE ANALYSIS OF ALL SUCH CODES AND STANDARDS IN REGARD TO THEIR APPLICABILITY TO THE PROJECT FOR SECURING ALL APPROVALS AND PERMITS.

ALL WORK WITHIN THESE PLANS SHALL BE PERFORMED AND PROVIDED BY THE CONTRACTOR IN ACCORDANCE WITH THE CONSTRUCTION DETAILS PROVIDED IN THIS PLAN SET WHETHER OR NOT THE DETAIL NUMBER IS SPECIFICALLY REFERENCED.

EXCEPT WHERE THE PROJECT DOCUMENTS INCLUDE MORE STRINGENT REQUIREMENTS, APPLICABLE CONSTRUCTION INDUSTRY STANDARDS HAVE THE SAME FORCE AND EFFECT AS IF BOUND HERETO. SUCH STANDARDS ARE MADE A PART OF THE PROJECT DOCUMENTS BY REFERENCE.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL QUANTITY ESTIMATES AND VERIFYING, TO HIS OWN SATISFACTION, THAT ALL QUANTITIES ARE ACCURATE FOR ALL CONSTRUCTION MATERIALS, INCLUDING CUT & FILL ESTIMATES WHICH THE CONTRACTOR MAY PREPARE BASED ON INFORMATION CONTAINED WITHIN THESE PLANS.

3. WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED TO THE ENGINEER FOR RESOLUTION OF THE CONFLICT.

4. THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS WITH THE APPROPRIATE UTILITY COMPANIES FOR OBTAINING CONSTRUCTION PERMITS AND PERFORMING ALL NEW CONSTRUCTION, RELOCATION, ALTERATION AND ADJUSTMENT OF GAS, ELECTRIC (INCLUDING UTILITY POLES), TELEPHONE, CABLE, FIRE ALARM, WATER, SANITARY SEWER, STORM DRAIN, AND ANY OTHER UTILITIES, BOTH PUBLIC AND PRIVATE, AS REQUIRED.

5. THE LOCATION OF EXISTING UNDERGROUND SYSTEMS, INFRASTRUCTURE, UTILITIES, CONDUITS, WELLS, AND LINES ARE SHOWN IN AN APPROXIMATE WAY ONLY. MAY NOT BE LIMITED TO THOSE SHOWN HEREIN. AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER, THE ENGINEER, OR THEIR REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION, BOTH HORIZONTALLY AND VERTICALLY, OF ALL EXISTING UTILITIES, CONDUITS, LINES, WELLS, AND OTHER BURIED INFRASTRUCTURE AND SYSTEMS BEFORE THE START OF ANY WORK. THE CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO LOCATE THE INFRASTRUCTURE, UTILITIES, CONDUITS AND LINES EXACTLY. THE CONTRACTOR

SHALL PRESERVE ALL UNDERGROUND INFRASTRUCTURE AND UTILITIES AS REQUIRED. THE CONTRACTOR MUST CALL "DIG SAFE" (AT 1-888-DIG-SAFE) AT LEAST 72 HOURS BEFORE THE START OF CONSTRUCTION

6. THE CONTRACTOR SHALL BE RESPONSIBLE TO CALL AT LEAST 24 HOURS AHEAD FOR INSPECTIONS BY THE APPROPRIATE AUTHORITY IN ACCORDANCE WITH THE TOWN REQUIREMENTS, AS APPLICABLE.

7. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES, PUBLIC AND PRIVATE, INCLUDING THOSE IN CONTROL OF UTILITIES NOT SHOWN ON THIS PLAN, (SEE CHAPTER 370, ACTS OF 1963, MASSACHUSETTS) PRIOR TO COMMENCING ANY WORK

8. BAXTER NYE ENGINEERING & SURVEYING ASSUMES NO RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES OMITTED OR INACCURATELY SHOWN.

9. THE TERM "PROPOSED" (PROP.) MEANS WORK TO BE CONSTRUCTED USING NEW MATERIALS OR, WHERE APPLICABLE, RE-USING EXISTING MATERIALS IDENTIFIED AS "REMOVE AND RESET" (R&R).

10. UPON AWARD OF CONTRACT, CONTRACTOR SHALL MAKE ALL NECESSARY CONSTRUCTION NOTIFICATIONS AND APPLY FOR AND OBTAIN ALL NECESSARY PERMITS, PAY ALL FEES AND POST ALL BONDS ASSOCIATED WITH SAME, AND COORDINATE WITH THE ENGINEER AS REQUIRED.

11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THAT THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS DO NOT CONFLICT WITH ANY KNOWN EXISTING INFORMATION OR OTHER PROPOSED IMPROVEMENTS. IF ANY CONFLICTS ARE DISCOVERED, THE CONTRACTOR MUST NOTIFY THE OWNER OR ENGINEER IMMEDIATELY UPON DISCOVERY AND AT LEAST 72 HOURS PRIOR TO INSTALLATION OF ANY PORTION OF THE AFFECTED WORK.

12. THE CONTRACTOR SHALL REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR ALL BUILDING DIMENSIONS AND CONSTRUCTION. BUILDING DIMENSIONS SHOWN HEREIN ARE FOR COORDINATION WITH OTHER SITE WORK ONLY AND SHOULD NOT BE USED TO STAKE OUT BUILDINGS. SITE CONTRACTOR SHALL STAKE OUT THE EXTERIOR BUILDING CORNERS FROM THE LATEST ARCHITECTURAL PLANS. THE CONTRACTOR SHALL NOTIFY BAXTER NYE ENGINEERING & SURVEYING OF ANY DISCREPANCIES BETWEEN SITE PLAN DIMENSIONS AND ARCHITECTURAL BUILDING PLANS BEFORE PROCEEDING WITH ANY PORTION OF SITE WORK WHICH MAY BE EFFECTED SO THAT PROPER ADJUSTMENTS TO THE SITE LAYOUT CAN BE MADE IF NECESSARY.

13 PRIOR TO THE START OF CONSTRUCTION THE CONTRACTOR SHALL SUBMIT A SCHEDULE OF OPERATIONS TO THE OWNER AND ITS REPRESENTATIVE. THE CONTRACTOR SHALL NOTIFY AND COORDINATE WITH THE OWNER, ITS ENGINEER OR REPRESENTATIVE.

14. THE CONTRACTOR SHALL CONTACT THE ENGINEER TO SCHEDULE A PRE-CONSTRUCTION MEETING AT LEAST TWO (2) WEEKS PRIOR TO COMMENCING CONSTRUCTION.

15. THE CONTRACTOR SHALL MAKE SUBMITTALS TO THE ENGINEER FOR APPROVAL BEFORE ANY FABRICATION OR DELIVERY OF PRODUCTS OR MATERIALS.

16. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR JOB SITE SAFETY AND ALL CONSTRUCTION MEANS AND METHODS. BAXTER NYE ENGINEERING & SURVEYING, DOES NOT ASSUME ANY RESPONSIBILITY IN JOB SITE SAFETY FOR CONSTRUCTION METHODS USED. ALL FEDERAL, STATE, AND LOCAL OSHA REQUIREMENTS AND REGULATIONS SHALL BE FOLLOWED BY ALL PERSONNEL ON THE JOB SITE AT ALL TIMES.

17. THE CONTRACTOR SHALL REMOVE ALL STUMPS, RUBBISH, AND DEBRIS FROM THE PROJECT SITE. STORAGE OF THESE ITEMS WILL NOT BE PERMITTED ON THE PROJECT SITE. THE CONTRACTOR SHALL LEAVE THE SITE IN A SAFE, CLEAN, AND LEVEL CONDITION AT THE COMPLETION OF THE SITE CLEARANCE WORK.

18. ALL UNSUITABLE MATERIALS ENCOUNTERED WITHIN THE LIMIT OF WORK SUB GRADES SHALL BE REMOVED, AS DIRECTED BY THE ENGINEER OR OWNERS REPRESENTATIVE, TO NATURAL STABLE GROUND BY THE CONTRACTOR. UNSUITABLE MATERIALS INCLUDE TOPSOIL, LOAM, PEAT, ALL ORGANIC MATERIAL, SNOW, ICE, CONSTRUCTION RUBBLE, TRASH, AND OTHER DELETERIOUS DEBRIS.

19. TREES AND SHRUBS WITHIN THE LIMITS OF GRADING SHALL BE REMOVED AND RESET ONLY UPON APPROVAL OF THE ENGINEER OR OWNERS REPRESENTATIVE.

20. AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS, WITHOUT PRIOR APPROVAL BY THE OWNER OR ITS REPRESENTATIVE, SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.

21. EXISTING SUBSURFACE ROCK IS NOT SHOWN ON THE PLANS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE THEIR OWN DETERMINATION AS TO THE LOCATION OF SUBSURFACE ROCK.

22. THE CONTRACTOR SHALL PROTECT ALL UNDERGROUND DRAINAGE, SEWER, AND UTILITY FACILITIES FROM EXCESSIVE VEHICULAR LOADS DURING CONSTRUCTION. ANY FACILITIES DAMAGED BY CONSTRUCTION LOADS SHALL BE REPAIRED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.

23. ALL EXISTING SIGNS WITHIN THE PROJECT LIMITS SHALL BE RETAINED UNLESS NOTED OTHERWISE.

24. JOINTS BETWEEN NEW BITUMINOUS CONCRETE ROADWAY PAVEMENT AND SAWCUT EXISTING PAVEMENT SHALL BE SEALED WITH BITUMEN AND BACKSANDED. ALL JOINTS TO EXISTING PAVEMENT SHALL BE SAWCUT TRUE AND STRAIGHT. ALL CRACKED OR INADEQUATE PAVEMENT AND/OR SUBBASE MATERIAL SHALL BE REMOVED AND REPLACED.

25. ALL PROPOSED WALKWAYS WILL BE HANDICAPPED ACCESSIBLE. ALL PROPOSED SLOPES ON WALKWAYS SHALL BE LESS THAN 5% AND ALL CROSS SLOPES < 2%. THESE ARE MAXIMUM SLOPES WITH NO TOLERANCE. ALL WORK WILL BE IN ACCORDANCE WITH THE MOST CURRENT REQUIREMENTS OF THE U.S. ACCESS BOARD, AMERICANS WITH DISABILITIES ACT & COMMONWEALTH OF MASSACHUSETTS, ARCHITECTURAL ACCESS BOARD.

26. FINAL LAYOUT AND STAKING OF ALL PROPOSED FEATURES AND GRADING SHALL BE REVIEWED IN THE FIELD AND APPROVED BY THE OWNERS REPRESENTATIVE PRIOR TO ANY SITE PREPARATION OR CONSTRUCTION. THE CONTRACTOR SHALL NOT ADJUST OR MODIFY THE LAYOUT AND STAKING OF ANY PROPOSED FEATURES WITHOUT FINAL APPROVAL FROM THE OWNERS REPRESENTATIVE AND ANY GOVERNMENTAL AGENCY WHICH MAY HAVE JURISDICTION OVER CONTEMPLATED CHANGE.

27. ALL ELECTRICAL (BOTH PRIMARY AND SECONDARY), TELEPHONE, DATA/COM AND FIRE DEPARTMENT CONDUITS AND APPURTENANT FEATURES REQUIRED BY THE APPLICABLE UTILITY COMPANY ARE TO BE INSTALLED BY THE ELECTRICAL CONTRACTOR. TRENCHING, BACKFILLING, CONCRETE WORK, MANHOLE AND RELATED STRUCTURES AND STREET REPAIR SHALL BE PERFORMED BY THE GENERAL CONTRACTOR/SITE CONTRACTOR. ALL ASSOCIATED COSTS FOR COMPLETE EXECUTION OF THIS WORK SHALL BE INCLUDED IN THE CONTRACTORS PRICING.

28. RIM ELEVATIONS OF DRAINAGE AND SANITARY SEWER MANHOLES ARE APPROXIMATE. FINAL ELEVATIONS ARE TO BE SET FLUSH AND CONSISTENT WITH GRADING PLANS. ADJUST ALL OTHER RIM ELEVATIONS OF MANHOLES, GAS GATES, WATER GATES AND OTHER UTILITIES TO FINISHED GRADE WITHIN THE LIMITS OF THE SITE WORK.

30. THE CONTRACTOR SHALL WATER, MOW, FERTILIZE OR OTHERWISE MAINTAIN ALL SODDED AND SEEDED OR OTHERWISE STABILIZED AREAS UNTIL GRASS STANDS OR OTHER VEGETATED METHODS ARE ESTABLISHED TO THE SATISFACTION OF THE OWNER OR THEIR REPRESENTATIVE

31. THE CONTRACTOR SHALL RESET ALL MONUMENTATION DISTURBED DURING CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER. THE CONTRACTOR SHALL PROVIDE A SURVEY BY A PLS TO ENSURE THAT THE MONUMENTATION IS RESET TO ITS ORIGINAL LOCATION. MONUMENTS INCLUDE, BUT ARE NOT LIMITED TO, TOWN BOUNDS, MASS HIGHWAY BOUNDS, PROPERTY LINE MONUMENTS, IRON RODS, STAKES, CONCRETE BOUNDS, GRANITE BOUNDS AND STONE WALLS WITH DRILL HOLES.

**EXCAVATION SAFETY:** ALL EXCAVATION MUST FOLLOW OSHA, MASSACHUSETTS AND LOCAL REGULATIONS FOR SAFETY. ALL TRENCH EXCAVATION EXCEEDING 3 FEET OF DEPTH WILL REQUIRE A TRENCH PERMIT FROM THE LOCAL TOWN OR CITY PRIOR TO ANY EXCAVATION.

INSPECTIONS.

INCLUDE:

29. ALL AREAS DISTURBED DURING CONSTRUCTION SHALL BE REPLACED IN KIND. SURFACES NOT OTHERWISE TREATED SHALL BE STABILIZED AS LAWNS. ALL LAWN AREAS SHALL HAVE A MODIFIED LOAM BORROW PLACED, SEEDED, FERTILIZED, LIMED AND MULCHED UNTIL GRASS STAND IS ESTABLISHED AND SURFACE IS STABILIZED. THE MODIFIED LOAM BORROW SHALL HAVE A MINIMUM DEPTH OF 6" AND SHALL BE PLACED FLUSH WITH THE TOP OF ADJACENT CURB, EDGING, BERM, OR OTHER SURFACE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR AREAS UNTIL VEGETATION HAS BEEN PERMANENTLY ESTABLISHED. SLOPES IN EXCESS OF 3:1 SHALL BE FURTHER STABILIZED WITH EROSION CONTROL BLANKETS (ECB) OF CURLEX OR EQUAL.

### DRAWINGS STATEMENT:

THE CONTRACTOR WILL PREPARE AS-BUILT DRAWINGS, STAMPED BY A MA LICENSED PROFESSIONAL ENGINEER (PE) CERTIFYING THAT: "TO THE BEST OF THEIR KNOWLEDGE, JUDGEMENT AND BELIEF, THE CONSTRUCTED WORK IS IN GENERAL CONFORMANCE WITH THE PLANS."

### INSPECTIONS/TESTING:

1. CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH THE ENGINEER ON ALL NECESSARY INSPECTIONS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST TWO (2) BUSINESS DAYS AHEAD OF REQUIRED

2. AT A MINIMUM, THE FOLLOWING INSPECTIONS/TESTING WILL BE REQUIRED. IF ISSUES ARISE DURING CONSTRUCTION THE CONTRACTOR SHALL NOTIFY THE ENGINEER AS ADDITIONAL INSPECTIONS BEYOND WHAT IS NOTED MAY BE NEEDED.

A. INSTALLATION OF SEDIMENT AND EROSION CONTROLS AT LIMIT OF WORK PRIOR TO COMMENCING CONSTRUCTION.

B. DRAINAGE AND STORMWATER MANAGEMENT: • BOTTOM OF EXCAVATION FOR EACH STORMWATER MANAGEMENT (SWM) FACILITY. • DURING INSTALLATION OF STRUCTURES TO SEE A CROSS SECTION VIEW OF INSTALLATION • AT COMPLETION OF INSTALLATION OF EACH SWM FACILITY PRIOR TO BACKFILL. • AT FINAL SHAPING OF STONE WEIRS, OUTFALLS AND EARTH BERMS

C. GRAVEL BORROW SUBBASE UNDER ALL PAVED AND CONCRETE SURFACES (UNLESS OTHERWISE WITNESSED BY A TESTING AGENCY.)

D. BN WILL NEED TO WITNESS REPRESENTATIVE INSTALLATION OF VERTICAL AND SLOPED CURBING.

E. BN SHALL BE PROVIDED FOR REVIEW ALL TESTING AGENCY LABORATORY MATERIAL AND ON-SITE TESTING RESULTS AS REQUIRED UNDER THE PROJECT DOCUMENTS FOR COMPLETE REQUIREMENTS, INCLUDING BUT NOT LIMITED TO: - SANDY TOPSOIL SIEVE ANALYSIS AND MATERIAL CHARACTERISTICS PER SPEC FOR SWM ARFAS

> - ALL COMPACTION TESTING RESULTS FOR BACKFILL. - GRAVEL BORROW MATERIAL UNDER PAVING, SIDEWALK, SITE SLABS, PADS, ETC. AS TO DEPTH OF MATERIAL PLACEMENT AND COMPACTION TESTING RESULTS. BITUMINOUS CONCRETE PLACEMENT AND COMPACTION TESTING RESULTS

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING MATERIAL SAMPLES TO AND COORDINATING WITH THE TESTING AGENCY AS REQUIRED.

F. BN WILL NEED TO WITNESS A REPRESENTATIVE UTILITY INSTALLATION BEFORE BACKFILL FOR:

• WATER CONTRACTOR SHALL CONTACT BN THREE BUSINESS DAYS PRIOR TO ALLOW BN TO TAKE AS-BUILT SHOTS ON PIPE BENDS, PIPE TOP FOR AS-BUILT REQUIREMENTS - THE WATER SYSTEM SHALL BE INSPECTED BY A THIRD PARTY APPROVED WATER INSPECTOR PAID FOR BY THE CONTRACTOR. ACCEPTANCE REPORTS AND AS-BUILT TIE CARDS FOR THE WATER SYSTEM (INCLUDING TIES TO ALL BENDS, TEES, ETC.) SHALL BE PREPARED BY THE 3RD PARTY INSPECTOR AND PROVIDED TO THE ENGINEER FOR RECORD.

 SEWER INSTALLATION OF PIPE AND PIPE BEDDING, AND SMH PRIOR TO BACKFILLING. NUTUR SMALL PROVIDE ALL REQUIRED TESTING FOR ACCE SEWER SYSTEM. UNACCEPTABLE TEST/INSPECTION RESULTS WILL RESULT IN THE CONTRACTOR REPAIRING THE CONDITION AT NO ADDITIONAL EXPENSE TO THE OWNER.

- CONTRACTOR TO PROVIDE BN WITH APPROVED TESTING REPORTS.

G. SANITARY SEWER TESTING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL

1. ALL SEWERS AND APPURTENANT WORK, IN ORDER TO BE ELIGIBLE FOR ACCEPTANCE BY THE ENGINEER, SHALL BE SUBJECTED TO TESTS THAT WILL DETERMINE THE DEGREE OF WATER TIGHTNESS AND HORIZONTAL AND VERTICAL ALIGNMENT. THOROUGHLY CLEAN AND/OR FLUSH ALL SEWER LINES TO BE TESTED, IN A MANNER AND TO THE EXTENT ACCEPTABLE TO THE ENGINEER, PRIOR TO INITIATING TEST PROCEDURES. 3. TESTING GRAVITY SEWER PIPING: a. I OW-PRESSURE AIR TEST.

b. INFILTRATION TEST. 4. HYDROSTATIC TESTING PRESSURE PIPING.

5. DEFLECTION TESTING PLASTIC PIPING.

a. DEFLECTION TESTING PER ACCEPTED STANDARDS (RIGID BALL, "GO-NO GO MANDREL). MAX ALLOWABLE DEFLECTION IS 5% OF ORIGINAL PIPE DIAMETER. PIPES HOLDING WATER MAY RESULT IN FAILING INSPECTION. CAMERA VIDEO INSPECTION.

SEALING AND TESTING PRECAST SANITARY SEWER MANHOLES, FRAMES AND COVERS 8. WATER TIGHT TESTS PRIOR TO BACKFILLING OF WET WELL AND TANKS PER ACCEPTABLE STANDARD.

ALL TESTING SHALL BE PERFORMED PRIOR TO ACCEPTANCE OF THE SEWER SYSTEM.

H. THE CONTRACTOR SHALL NOTIFY AND COORDINATE A SITE MEETING WITH THE ENGINEER PRIOR TO PLACING FINAL PAVING COURSE. LAYOUT AND FINAL REQUIRED DIMENSIONS ARE TO BE REVIEWED AT THIS MEETING PRIOR TO PAVING OPERATION. REQUIREMENTS SHALL BE PER MASSDOT STANDARD SPECIFICATIONS.

I. FINAL STABILIZATION AND PLANTINGS PRIOR TO REMOVING ANY SEDIMENT AND EROSION CONTROL DEVICES.

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UIMQUISSET AVENUE LOCUS MAP Scale: 1" = 2000'	BAXTER NYE         ENGINEERING & SURVEYING         BAXTER NYE         ENGINEERING & SURVEYING         BAXTER NYE         ENGINEERING & SURVEYING         BAXTER NYE         SURVEYING         Registered Professional Engineers         and Land Surveyors         78 North Street – 3rd Floor         Hyannis, Massachusetts 02601         Phone – (508) 771–7502         Fax – (508) 771–7622         www.baxter–nye.com
	STAMP SHANE MALLON No. 48687
<ul> <li>GENERAL NOTES:</li> <li>THE INTENT OF THIS PLAN IS TO DETAIL EXISTING SITE CONDITIONS AT O QUINAQUISSET AVE. AND 275 QUINAQUISSET AVE. MASHPEE, MA 02649.</li> <li>LOCUS AREA IS COMPRISED OF: PER CURRENT ASSESSOR'S RECORDS:</li> <li>OWNER: DARRELL H. CHAPMAN AND JOANNE V. CHAPMAN, TRUSTEES OF THE CHAPMAN FAMILY INVESTMENT TRUST DEED BOOK 30961 PAGE 180 AND 185 RECORD PLAN BOOK 448 PAGE 38 LOT 1 AND 2</li> </ul>	CONSULTANT
<ul> <li>A. ZONING INFORMATION:</li> <li>ZONING DISTRICT: R3 CURRENT MINIMUM ZONING REQUIREMENTS: MIN. LOT AREA = 40,000 SF. MIN. LOT AREA = 40,000 SF. MIN. LOT FRONTAGE = 150 FEET MIN. YARD SETBACKS: FRONT = 40 FEET, SIDE = 15 FEET, REAR = 15 FEET MAXIMUM BUILDING HEIGHT = 2-1/2 STORIES MAXIMUM BUILDING HEIGHT = 2-1/2 STORIES MAXIMUM LOT COVERAGE = 20%</li> <li>A TITLE SEARCH HAS NOT BEEN PERFORMED FOR THIS SITE. THERE MAY BE RIGHTS BY OTHERS, EASEMENT, TAKINGS, MORTGAGES, RIGHT OF WAYS ETC. NOT DEPICTED. IF DETERMINED TO BE NECESSARY, A TITLE SEARCH SHALL BE PERFORMED BY OTHERS AND SUPPLIED TO BAXTER NYE ENGINEERING &amp; SURVEYING.</li> <li>THE PROPERTY LINE INFORMATION SHOWN IS BASED ON CURRENT AVAILABLE RECORD INFORMATION CONSISTING OF PLANS AND DEEDS. THE EXISTING FEATURES SHOWN HEREON WERE OBTAINED FROM AN ON THE GROUND FIELD SURVEY PERFORMED BY BAXTER NYE ENGINEERING &amp; SURVEYING ON MAY 1, 2019.</li> <li>COMMUNITY PANEL NUMBER: 250009 0752 J. THE FLOOD INSURANCE RATE MAP DEFINES THIS AREA AS ZONE X (UNSHADED) AND ZONE X (SHADED).</li> </ul>	PREPARED FOR: Southworth Mashpee Properties, LLC 130 Willowbend Drive Mazshpee, MA 02649
<ul> <li>8. <u>ENVIRONMENTAL INFORMATION:</u> PER MASS GIS OLIVER AS OF 04/25/2019:</li> <li>SITE DOES NOT APPEAR TO BE WITHIN AN A.C.E.C. (AREA OF CRITICAL ENVIRONMENTAL CONCERN).</li> <li>SITE DOES NOT APPEAR TO BE WITHIN AN AREA OF ESTIMATED HABITAT OF RARE WILDLIFE AS MAPPED ON MASS GIS OLIVER PER NHESP "ESTIMATED HABITATS OF RARE WILDLIFE" FOR USE WITH THE MA WETLANDS PROTECTION ACT REGULATIONS (310 CMR 10)."</li> <li>SITE DOES NOT APPEAR TO BE WITHIN A PRIORITY HABITAT AS MAPPED ON MASS GIS OLIVER PER NHESP "ENTIMATED HABITATS OF RARE WILDLIFE" FOR USE WITH THE MA WETLANDS PROTECTION ACT REGULATIONS (321 CMR 10)."</li> <li>SITE DOES NOT APPEAR TO CONTAIN A CERTIFIED VERNAL POOL AS MAPPED ON MASS GIS OLIVER PER NHESP "CERTIFIED VERNAL POOLS."</li> <li>SITE DOES NOT APPEAR TO BE WITHIN A WETLAND RESOURCE AREA AS MAPPED ON MASS GIS OLIVER PER NHESP TO BE WITHIN A WETLAND RESOURCE AREA AS MAPPED ON MASS GIS SYSTEM.</li> <li>SITE DOES NOT APPEAR TO BE WITHIN A WETLAND RESOURCE AREA AS MAPPED ON MASS GIS OLIVER PER NHESP TO BE WITHIN A WETLAND RESOURCE AREA AS MAPPED ON MASS GIS OLIVER PER NHESP TO BE WITHIN A WETLAND RESOURCE AREA AS MAPPED ON MASS GIS OLIVER PER NHESP TO BE WITHIN A WETLAND RESOURCE AREA AS MAPPED ON MASS GIS OLIVER PER NHESP TO BE WITHIN A WETLAND RESOURCE AREA AS MAPPED ON MASS GIS SYSTEM.</li> </ul>	PROJECT TITLE <b>275 Quinaquisset Avenue</b> Mashpee, MA 02649
	DATE DESCRIPTION DATE DESCRIPTION SHEET TITLE Certified Plot Plan SHEET NO
	CPP1.0         DATE: MAY 13, 2019         30       0         30       0         SCALE IN FEET         SCALE: 1"=30'         DRAWN BY: JKL       CHECKED BY: MWE         JOB NO: 2014-009       FILE: 2014-009 CPP dwg



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GATE HOUSE HOUSE GATE HOUSE GATE HOUSE GATE HOUSE GATE HOUSE GATE HOUSE C HOUS	Image: Second	BAXTER NYE ENGINEERING & SURVEYINGRegistered Professional Engineers and Land Surveyors1597 Falmouth Road Centerville, MA 02632Phone - (508) 771-7502 Fax - (508) 771-7622 www.baxter-nye.com
OWNE WY VEST WY 3	ER: SOUTHWORTH MASHPEE PROPERTIES, LLC 130 WILLOWBEND DRIVE, MASHPEE, MA 02649 DEED BOOK 32022 PAGE 219 RECORD PLAN BOOK 448 PAGE 38 LOT 1 AND 2 ASSESSOR'S MAP 69, PARCEL 32 AND 169 BENCHMARK AS SHOWN ON THIS PLAN	
G W G A.	Zoning information: Zoning district: R3 current minimum zoning requirements: Min. Lot area = 40,000 sf. Min. Lot frontage = 150 feet Min. Yard Setbacks: front = 40 feet, side = 15 feet, rear = 15 feet Maximum building height = $2-1/2$ stories Maximum Lot coverage = 20% A title search has not been performed for this site. There may be rights by others, easement, takings, mortgages, right of ways	STAMP STAMP
BOLLARD C.	ETC. NOT DEPICTED. IF DETERMINED TO BE NECESSARY, A TITLE SEARCH SHALL BE PERFORMED BY OTHERS AND SUPPLIED TO BAXTER NYE ENGINEERING & SURVEYING. THE PROPERTY LINE INFORMATION SHOWN IS PER THE PROPERTY LINES SET BY THE REGISTERED PROFESSIONAL LAND SURVEYOR (PLS) AS SHOWN ON THE CERTIFIED PLOT PLAN AS SEALED BY THE PLS WITHIN THIS PLAN SET. THE EXISTING FEATURES SHOWN HEREON WERE OBTAINED FROM AN ON THE GROUND FIELD SURVEY PERFORMED BY BAXTER NYE ENGINEERING & SURVEYING ON MARCH 17, 2022, ON AUGUST 12 AND 16 AND DECEMBER 12 2022. THE PROPERTY LINE AND SURVEY INFORMATION WAS COMMISSIONED AS PART OF THE PROJECT AND IS SHOWN AS BACKGROUND INFORMATION ON THE DESIGN PLANS. COMMUNITY PANEL NUMBER: 250009 0752 J. THE FLOOD INSURANCE RATE MAP	CONSULTANT
B-05 H K H H K H K H H K H K	DEFINES THIS AREA AS ZONE X (UNSHADED) AND ZONE X (SHADED). <u>ENVIRONMENTAL INFORMATION:</u> IR MASS GIS OLIVER AS OF 08/23/2022: SITE DOES NOT APPEAR TO BE WITHIN AN A.C.E.C. (AREA OF CRITICAL ENVIRONMENTAL CONCERN). SITE DOES NOT APPEAR TO BE WITHIN AN AREA OF ESTIMATED HABITAT OF RARE WILDLIFE AS MAPPED ON MASS GIS OLIVER PER NHESP "ESTIMATED HABITATS OF RARE WILDLIFE" FOR USE WITH THE MA WETLANDS PROTECTION ACT REGULATIONS (310 CMR 10)."	CONSULTANT
	SITE DOES NOT APPEAR TO BE WITHIN A PRIORITY HABITAT AS MAPPED ON MASS GIS OLIVER PER NHESP "PRIORITY HABITATS OF RARE SPECIES" FOR SPECIES UNDER THE MASSACHUSETTS ENDANGERED SPECIES ACT, REGULATIONS (321 CMR 10). SITE DOES NOT APPEAR TO CONTAIN A CERTIFIED VERNAL POOL AS MAPPED ON MASS GIS OLIVER PER NHESP "CERTIFIED VERNAL POOLS." SITE APPEARS TO BE WITHIN A WETLAND RESOURCE AREA AS MAPPED ON MASS GIS SYSTEM. SITE DOES NOT APPEAR TO BE WITHIN A STATE APPROVED ZONE II GROUNDWATER RECHARGE PROTECTION AREA. <u>UTILITY INFORMATION SHOWN HEREIN:</u> THE CONTRACTOR SHALL CONTACT DIG SAFE (AT 1–888–DIG–SAFE) AND UTILITY COMPANIES TO LOCATE THE LOCATION OF ALL EXISTING UTILITIES, AT LEAST 72 HOURS PRIOR TO THE START OF CONSTRUCTION. EXISTING UNDERGROUND INFRASTRUCTURE,	PREPARED FOR: Southworth Mashpee Properties, LLC 130 Willowbend Drive Mashpee, MA 02649
	UTILITIES, CONDUITS AND LINES ARE SHOWN IN AN APPROXIMATE WAY ONLY, MAY NOT BE LIMITED TO THOSE SHOWN HEREIN AND HAVE BEEN RESEARCHED BASED ON THE AVAILABLE UTILITY RECORDS NOTED HEREON. THE CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO LOCATE SAID INFRASTRUCTURE AND UTILITIES EXACTLY. IF FIELD CONDITIONS DIFFER FROM PLAN INFORMATION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY FOR POSSIBLE REDESIGN. SOURCE INFORMATION FROM PLANS HAS BEEN COMBINED WITH OBSERVED EVIDENCE OF UTILITIES TO DEVELOP A VIEW OF THOSE UNDERGROUND UTILITIES. HOWEVER, LACKING EXCAVATION, THE EXACT LOCATION OF UNDERGROUND UTILITIES. HOWEVER, LACKING EXCAVATION, THE EXACT LOCATION OF UNDERGROUND FEATURES CANNOT BE ACCURATELY, COMPLETELY AND RELIABLY DEPICTED. WHERE ADDITIONAL OR MORE DETAILED INFORMATION IS REQUIRED, THE CLIENT IS ADVISED THAT EXCAVATION MAY BE NECESSARY. UTILITIES NOTED HEREON AS "COMPILED" ARE SHOWN BASED ON SOURCE INFORMATION (RECORD PLANS) OBTAINED FROM UTILITY COMPANIES AND/OR MUNICIPALITIES. LOCATIONS OF "COMPILED" UTILITY SCHONA ARE TO BE CONSIDERED APPROXIMATE ONLY	PROJECT TITLE Cranberry Point 275 Quinaquisset Avenue Mashpee, MA 02649
	EXISTING SEPTIC SYSTEM INFORMATION OBTAINED FROM TITLE 5 SEPTIC SYSTEM INSPECTION REPORT BY PAUL C. MARTIN, DATED 3/27/2019, ON FILE AT BOARD OF HEALTH. TOWN WATER SERVICE SHOWN ON PLAN FROM WATER DEPARTMENT TIE CARD "275 QUINAQUISETT AVENUE ACCT#5043" DATED 10/17/1996. GAS SERVICE SHOWN ON PLAN FROM NATIONAL GRID "MA-S02570" DATED 4/26/2019.	Image:
	ELECTRIC LINE SHOWN ON THIS PLAN COMPILED FROM EVERSOURCE T-PLAN DATED 6/10/2022 AND PHYSICAL SITE FEATURES.	▲       JKL       10/13/2023       REVISE GRADING/STORMWATER MGMT         ▲       ZDP       5/23/2023       CONSERVATION UPDATE         ▲       ZDP       5/1/2023       CONSERVATION UPDATE         ▲       JKL       4/28/2023       PER PLANNING BOARD COMMENTS         ▲       JKL       3/24/2023       PER PLANNING BOARD COMMENTS         ▲       DATE       DESCRIPTION         SHEET TITLE
		Existing Conditions Plan SHEET NO C2.0
FOR PERMITION	NLY - NOT FOR CONSTRUCTION	DATE: JANUARY 16, 2023 30 0 30 60 SCALE IN FEET SCALE: 1"=30' DRAWN BY: ZDP CHECKED BY: MWE JOB NO: 2014-009 FILE: 2014-009 QUIN EC.dwg



### NOTES:

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1. ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH MHDSS, TOWN ORDINANCES, REQUIREMENTS, AND SPECIFICATIONS.

2. THE CONTRACTOR SHALL CONTACT THE ENGINEER TO SCHEDULE A PRE-CONSTRUCTION MEETING AT LEAST TWO (2) WEEKS PRIOR TO COMMENCING CONSTRUCTION.

3. THE CONTRACTOR SHALL MAKE SUBMITTALS TO THE ENGINEER FOR APPROVAL BEFORE ANY FABRICATION OR DELIVERY OF PRODUCTS OR MATERIALS.

4. ALL PROPOSED WALKWAYS WILL BE HANDICAPPED ACCESSIBLE WHERE REQUIRED. ALL PROPOSED RUNNING SLOPES ON WALKWAYS SHALL BE LESS THAN 5%, ALL CROSS SLOPES AND ALL LANDING SLOPES SHALL BE LESS THAN 2%. RAMPS WHERE NEEDED SHALL HAVE SLOPES LESS THAN 8%. RAILINGS SHALL BE PER ARCHITECT. THESE ARE MAXIMUM SLOPES WITH NO TOLERANCE. ALL WORK WILL BE IN ACCORDANCE WITH THE MOST CURRENT REQUIREMENTS OF THE U.S. ACCESS BOARD, AMERICANS WITH DISABILITIES ACT & COMMONWEALTH OF MASSACHUSETTS, ARCHITECTURAL ACCESS BOARD.

5. CONTRACTOR SHALL CONFIRM AND PROVIDE ALL LANDINGS OUTSIDE OF DOORWAYS, AT THE TOP AND BOTTOM OF STEPS, AND AT TOP AND BOTTOM OF RAMPS, TO BE CONSTRUCTED SO THE LANDING IS 5 FT X 5 FT MIN. (UON) AND IS LESS THAN A 2% SLOPE IN ALL DIRECTIONS ON THE LANDING. THE CONTRACTOR SHALL VERIFY THE LANDING CONDITIONS IN THE FIELD AND CONTACT THE SITE ENGINEER WITH ANY QUESTIONS PRIOR TO INSTALLING LANDING.

STAIRS REPRESENTED ON THE SITE PLANS DO NOT INDICATE THE EXACT NUMBER OF TREADS AND RISERS NEEDED. THESE WILL VARY BASED ON SPECIFIC FIELD CONDITIONS. THE CONTRACTOR SHALL VERIFY THE CONDITION IN THE FIELD AND DETERMINE TREADS AND RISERS REQUIRED PER THE BUILDING CODE. REFERENCE SHALL BE MADE TO THE ARCHITECTURAL PLANS.

THE CONTRACTOR SHALL CONTACT THE SITE ENGINEER AS NEEDED WITH QUESTIONS REGARDING SPECIFIC TREADS AND RISERS PRIOR TO INSTALLING THE STAIRS.

6. DEMOLISH/REMOVE ALL EXISTING STRUCTURES, FOUNDATIONS, CONCRETE PADS, FENCES AND APPURTENANT ITEMS UNLESS OTHERWISE NOTED TO SAVE, SALVAGE OR RESET.

7. EXISTING PAVING EDGES SHALL BE SAWCUT TO CREATE A CLEAN EDGE WHERE IT IS TO BE TIED INTO NEW PAVING, OR WHERE ASPHALT IS REMOVED ADJACENT TO ASPHALT WHICH IS TO REMAIN. BROKEN OR UNSTABLE PAVEMENT SHALL BE REMOVED AND SUBBASE REPLACED WITH SUITABLE COMPACTED MATERIAL PER PAVEMENT SECTION DETAIL HEREIN. ANY SAWCUT LINES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE EXACT EDGE OF SAWCUT SHALL BE DETERMINED BY THE CONTRACTOR IN THE FIELD TO PROPERLY BLEND TO THE SURROUNDING GRADES. PROPOSED ASPHALT SHALL BE PROPERLY BUTTED AND BLENDED TO SURROUNDING ASPHALT WHICH IS TO REMAIN. THE BLENDED TRANSITION BETWEEN PROPOSED AND EXISTING ASPHALT SHALL BE WITH AN APPROXIMATE 1.5% GRADE UNLESS OTHERWISE IDENTIFIED. THE JOINT SHALL NOT BE ABRUPT.

8. THE PROPERTY LINE INFORMATION SHOWN HEREIN/HEREON IS PER THE PROPERTY LINES SET BY THE REGISTERED PROFESSIONAL LAND SURVEYOR (PLS) AS SHOWN ON THE CERTIFIED PLOT PLAN AS SEALED BY THE PLS WITHIN THIS PLAN SET. THE PROPERTY LINE AND SURVEY INFORMATION WAS COMMISSIONED AS PART OF THE PROJECT AND IS SHOWN AS BACKGROUND INFORMATION ON THE DESIGN PLANS. SETBACKS SHOWN ARE TO THE PROPERTY LINE SET BY THE PLS. DIMENSIONS SHOWN ARE TO OUTSIDE FACE OF FOUNDATION OR TO THE FACE OF CURB/BERM WHERE APPLICABLE.

9. ALL CURBING SHALL BE INSTALLED SO THAT WHEN A TERMINAL END OF A CURB X EXISTS IT SHALL HAVE A TAPERED END PER MDOT SPECIFICATIONS SO THAT THERE IS NOT A BLUNT SQUARE END PROJECTING.

10. THE CONTRACTOR SHALL NOTIFY AND COORDINATE A SITE MEETING WITH THE ENGINEER PRIOR TO PLACING FINAL PAVING COURSE. LAYOUT AND FINAL REQUIRED DIMENSIONS ARE TO BE REVIEWED AT THIS MEETING PRIOR TO PAVING OPERATION. REQUIREMENTS SHALL BE PER MASSDOT STANDARD SPECIFICATIONS.

11. SITE LIGHTING - SEE ELECTRICAL DRAWINGS IN ARCHITECTURAL PLAN PACKAGE FOR DETAILED INFORMATION.

12. ALL WORK WITHIN THESE PLANS SHALL BE PERFORMED AND PROVIDED BY THE CONTRACTOR IN ACCORDANCE WITH THE CONSTRUCTION DETAILS PROVIDED IN THIS PLAN SET WHETHER OR NOT THE DETAIL NUMBER IS SPECIFICALLY REFERENCED.

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8	ZONING DISTRICT(S): R3* OVERLAY DISTRICTS: NONE ALLOWED USE: SINGLE FAMILY RES. <u>PROPOSED USE:</u>														
	EXIST USE: SINGLE-FAMILY RES. 12 DETACHED SINGLE FAM. RESIDENTIAL UNITS TYPICAL UNIT FOOTPRINT: BUILDING = 1,802 SF REAR DECK = 309 SF FREE STANDING GARAGE = 296 SF								PREPARED FOR: Southworth Mashbee						
i \	TOTAL FOOTPRINT/UNIT = 2,407 SF									Proportion LLC					
	EXIST BLDGS FOOTPRINT=3,873 SF PROP TOTAL SITE BLDG FOOTPRINT = 28,884 SF								Properties, LLC						
TS L										130 Willowbend Drive					
3	TOTAL PARCEL AREA: 220,650 SF TOTAL (UPLAND-152,288± SF; WETLAND-68,362 SF)									hpee	MA	02649	)		
$ $ $\langle \cdot \rangle$	REQUIRED//           LOT AREA:           40.000 SF (						152,288 SF								
	FRONTAGE:					Т	658 FT								
	FRONT S	ETBACKS*			40 FT		67 FT±								
	SIDE SETBACK REAR SETBACK					*	N/A INTERIOR LOT LINE		0.1		- 1 - 1				
	PARKING SETBACK TO ABUTTER LOTS				10 FT		N/A								
12	MAX. BLDG. HEIGHT (STORIES)				2.5 ST	TORIES / 35 FT	2 STORIES/30.7 FT	Ci	Granderry Point						
	MAX. LUT UUVERAGE (STRUCTURES):				20%*		N/A PER WILLOWBEND SPECIAL PERMIT (19.0%)	275 Quinaquisset Avenue Mashpee. MA 02649							
	MAX. LAWN -ASSUMES -ASSUMES (TOTAL LA	AREA 2,000 SF 20,040 S WN AREA	LAWN PE F VILLAGE /TOTAL LO	R UNIT GREEN DT AREA)	35% (77,228 SF)		20.0% (44,040 SF)								
	PARKING TABLE														
	SINGLE FAN (1 GARAGE	ILY = 2 I AND 1 DF	PER UNIT RIVEWAY S	X 12 UNITS PACE)	24 SP	ACES	24 SPACES								
	PARKING STALL SIZE - 90°					x 9'	19.33' x 9'								
		TROFUSED DUILDING REQUIREMENTS TO BE FER WILLOWDEND SPECIAL PERMIT MUDIFICATION													
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# BAXTER NYE ENGINEERING & SURVEYING

Registered Professional Engineers and Land Surveyors 1597 Falmouth Road

Centerville, MA 02632

Phone - (508) 771-7502 Fax – (508) 771–7622 www.baxter-nye.com

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WF B-01	Image: Image
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	CONSULTANT
	PREPARED FOR: <b>Southworth Mashpee</b> <b>Properties, LLC</b> 130 Willowbend Drive Mashpee, MA 02649
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### SWM SPECIFICATIONS

ALL MATERIALS AND WORK SHALL BE IN ACCORDANCE WITH THE MASSDOT/MASSHIGHWAY STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES (MHDSS), SPECIFIC ON-SITE SOIL SPECIFICATIONS IF A GEOTECHNICAL REPORTS WAS PERFORMED, AND THE PLANS HEREIN. WHERE CONFLICTS OF INFORMATION EXIST, THE MORE RESTRICTIVE SHALL APPLY. ALL REFERENCES TO ASTM AND AASHTO SPECIFICATIONS APPLY TO THE MOST RECENT VERSION.

(NOTE: THE CONTRACTOR SHALL BE RESPONSIBLE TO FULLY UNDERSTAND THIS INFORMATION AND INTENT OF THE SWM FACILITIES AND SHALL REVIEW THIS INFORMATION WITH THE ENGINEER AS NEEDED. SITE PREPARATION AND GRADING:

AREAS DESIGNATED FOR BORROW AREAS, EMBANKMENT, AND STRUCTURAL WORKS SHALL BE CLEARED, GRUBBED AND STRIPPED OF TOPSOIL. ALL TREES, VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED. CHANNEL BANKS AND SHARP BREAKS SHALL BE SLOPED TO NO STEEPER

AREAS TO BE COVERED BY THE INFILTRATION AREA, BASIN OR RESERVOIR WILL BE CLEARED OF ALL TREES, BRUSH, LOGS, FENCES, RUBBISH AND OTHER OBJECTIONABLE MATERIAL UNLESS OTHERWISE DESIGNATED ON THE PLANS. TREES, BRUSH AND STUMPS SHALL BE CUT APPROXIMATELY LEVEL WITH THE GROUND SURFACE FOR DRY STORMWATER MANAGEMENT PONDS, A MINIMUM OF A 50-FOOT RADIUS AROUND THE INLET STRUCTURE SHALL BE CLEARED. ALL CLEARED AND GRUBBED MATERIAL SHALL BE DISPOSED OF OUTSIDE AND BELOW THE LIMITS OF THE DAM, BASIN AND RESERVOIR AS DIRECTED BY THE OWNER OR HIS REPRESENTATIVE

THE CONTRACTOR SHALL ENSURE ALL SWM AREAS WHICH ARE DESIGNED FOR INFILTRATION SHALL HAVE THEIR EXISTING INFILTRATABLE SUBSOIL CONDITIONS UNCHANGED AT THE HEREIN SPECIFIED ELEVATIONS FOR THE STORMWATER MANAGEMENT FACILITY. THE INFILTRATABLE LAYER BELOW THE DESIGN ELEVATION SHALL NOT BE MINED, ALTERED OR AFFECTED FROM CONSTRUCTION IN ANY WAY. WITHIN BASIN FOOTPRINTS, BOTTOMS. AND NON-EMBANKMENT (NON-DAM) SIDESLOPES. NO UNSUITABLE OR LESS PERVIOUS MATERIAL SHALL BE PLACED OVER THESE LAYERS WHICH COULD AFFECT THE INFILTRATION RATE, UNLESS OTHERWISE SPECIFICALLY IDENTIFIED BY THE ENGINEER. IF SUBGRADE FILL IS NEEDED FOR SWM INFILTRATION BOTTOM AND NON-EMBANKMENT (NON-DAM) SIDE SLOPE AREAS. THE FILL SHALL MEET THE SPECIFICATIONS OF MHD-SSHB M.1.04.0 TYPE B. FILL IN AREAS OF INFILTRATION SHALL NOT BE OVERLY COMPACTED. INFILTRATION AREAS SHALL BE PROTECTED FROM EXCESSIVE CONSTRUCTION EQUIPMENT MOVEMENT AND SEDIMENT/EROSION RUNOFF SO AS TO PRESERVE THE INFILTRATION CHARACTERISTICS. THE CONTRACTOR SHALL BE RESPONSIBLE TO FULLY UNDERSTAND THIS INFORMATION AND INTENT OF THE SWM FACILITIES AND SHALL REVIEW THIS INFORMATION WITH THE ENGINEER AS NEEDED.

TOPSOIL OR PLANTING MATERIAL REQUIRED FOR SEEDING. SOD OR VEGETATION GROWTH ON THE BASIN BOTTOM AND NON-EMBANKMENT SIDESLOPES, SHALL BE PLACED IN ONLY A THREE (3) INCH SURFACE DEPTH OF LOAMY SAND OR SANDY LOAM TOPSOIL (EXCESSIVE TOPSOIL SHALL NOT BE PLACED WHERE INFILTRATION IS USED). THE TOPSOIL SHALL NOT INHIBIT THE INFILTRATION RATE OF THE FACILITY. THE TOPSOIL SHALL BE LESS THAN 5% CLAY CONTENT (AND <5% MATERIALS PASSING THE #200 SIEVE), CORRECTED PH 5.5-6.5, AND ORGANIC MATTER OF BETWEEN 1.5% TO 3%.

THREE (3) INCHES OF HARDWOOD MULCH SHALL BE PLACED AROUND REQUIRED SHRUBS AND OTHER SPECIFIED LANDSCAPE PLANTINGS, MULCH SHALL BE PLACED ACROSS THE BOTTOM OF BIO-RETENTION AREAS IF SPECIFIED IN THE PLAN DETAILS. WHERE A PLANTING PLAN OR SCHEDULE IS NOT IDENTIFIED FOR THE SWM FACILITIES, THEN THE BOTTOM AND SIDE SLOPES OF SWM BASINS AND BIORETENTION FACILITIES SHALL BE STABILIZED AND SEEDED AS FOLLOWS:

- BOTTOM AND SIDE SLOPES OF BASINS/FACILITES SHALL BE SEEDED AND STABILIZED WITH ERNST
- SEEDS RETENTION BASIN FLOOR MIX, LOW MAINTENANCE, OR EQUAL. - GENERAL SLOPES SHALL BE SEEDED AND STABILIZED WITH "NEW ENGLAND EROSION
- CONTROL/RESTORATION SEED MIX".
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING EROSION. CLEANOUT OF SEDIMENT FROM EROSION, AND RESEEDING AS NEEDED UNTIL FULL STABILIZATION IS ACHIEVED. THIS SHALL BE REQUIRED THROUGH TWO GROWING SEASONS.

NO OTHER MATERIALS UNLESS SPECIFICALLY IDENTIFIED AND REVIEWED BY THE ENGINEER, SHALL BE PLACED ON THE BASIN BOTTOM.

#### EARTH FILL FOR EMBANKMENTS ONLY:

MATERIAL - THE FILL MATERIAL SHALL BE TAKEN FROM APPROVED DESIGNATED BORROW AREAS. IT SHALL BE FREE OF ROOTS, STUMPS, WOOD, RUBBISH, STONES GREATER THAN 6". FROZEN OR OTHER OBJECTIONABLE MATERIALS. FILL MATERIAL FOR THE CENTER OF THE DAM EMBANKMENT AND CUT OFF TRENCH WHICH ARE TO BE IMPERMEABLE SHALL CONFORM TO UNIFIED SOIL CLASSIFICATION GC, SC, CH OR CL. CONSIDERATION MAY BE GIVEN TO THE USE OF OTHER MATERIALS IN THE EMBANKMENT IF DESIGN AND CONSTRUCTION ARE SUPERVISED BY A GEOTECHNICAL ENGINEER.

PLACEMENT - AREAS ON WHICH FILL IS TO BE PLACED SHALL BE SCARIFIED PRIOR TO PLACEMENT OF FILL. FILL MATERIALS SHALL BE PLACED IN MAXIMUM 8 INCH THICK (BEFORE COMPACTION) LAYERS AND ARE TO BE CONTINUOUS OVER THE ENTIRE LENGTH OF THE FILL. THE MOST PERMEABLE BORROW MATERIAL SHALL BE PLACED IN THE DOWNSTREAM PORTIONS OF THE DAM EMBANKMENT. THE PRINCIPAL SPILLWAY MUST BE INSTALLED CONCURRENTLY WITH FILL PLACEMENT AND NOT EXCAVATED INTO THE EMBANKMENT.

COMPACTION - THE MOVEMENT OF THE HAULING AND SPREADING EQUIPMENT OVER THE EMBANKMENT FILL SHALL BE CONTROLLED SO THAT THE ENTIRE SURFACE OF EACH LIFT SHALL BE TRAVERSED BY NOT LESS THAN ONE TREAD TRACK OF THE EQUIPMENT OR COMPACTION SHALL BE ACHIEVED BY A MINIMUM OF FOUR COMPLETE PASSES OF A SHEEPSFOOT, RUBBER TIRED OR VIBRATORY ROLLER (COMPACTION OF 95% STANDARD PROCTOR SHALL BE ACHIEVED). FILL MATERIAL SHALL CONTAIN SUFFICIENT MOISTURE SUCH THAT THE REQUIRED DEGREE OF COMPACTION WILL BE OBTAINED WITH THE EQUIPMENT USED. THE FILL MATERIAL SHALL CONTAIN SUFFICIENT MOISTURE SO THAT IF FORMED INTO A BALL IT WILL NOT CRUMBLE YET NOT BE SO WET THAT WATER CAN BE SQUEEZED OUT.

A MINIMUM REQUIRED DENSITY SHALL NOT BE LESS THAN 95% OF MAXIMUM DRY DENSITY WITH A MOISTURE CONTENT WITHIN ±2% OF OPTIMUM. EACH LAYER OF FILL SHALL BE COMPACTED AS NECESSARY TO OBTAIN THAT DENSITY, AND IS TO BE TESTED AND CERTIFIED BY A GEOTECHNICAL ENGINEER AT THE TIME OF CONSTRUCTION. ALL COMPACTION IS TO BE DETERMINED BY AASHTO METHOD T-99.

#### STRUCTURE BACKFILL

<u>RIP-RAP</u>

BACKFILL ADJACENT TO PIPES OR STRUCTURES SHALL BE OF THE TYPE AND QUALITY CONFORMING TO THAT SPECIFIED FOR THE ADJOINING FILL MATERIAL. THE FILL SHALL BE PLACED IN HORIZONTAL LAYERS NOT TO EXCEED FOUR INCHES IN THICKNESS AND COMPACTED BY HAND TAMPERS OR OTHER MANUALLY DIRECTED COMPACTION EQUIPMENT. THE MATERIAL NEEDS TO FILL COMPLETELY ALL SPACES UNDER AND ADJACENT TO THE PIPE. AT NO TIME DURING THE BACKFILLING OPERATIONS SHALL DRIVEN EQUIPMENT BE ALLOWED OVER OR WITHIN 4 FEET OF A CONCRETE STRUCTURE OR PIPE, UNLESS THERE IS A COMPACTED FILL OF 24" OR GREATER OVER THE STRUCTURE OR PIPE.

#### ROCK RIPRAP SHALL MEET THE REQUIREMENTS OF MHDSS.

THE RIPRAP SHALL BE PLACED TO THE REQUIRED THICKNESS IN ONE OPERATION. THE ROCK SHALL BE DELIVERED AND PLACED IN A MANNER THAT WILL INSURE THAT THE RIPRAP IN PLACE SHALL BE REASONABLY HOMOGENEOUS WITH THE LARGER ROCKS UNIFORMLY DISTRIBUTED AND FIRMLY IN CONTACT ONE TO ANOTHER WITH THE SMALLER ROCKS FILLING THE VOIDS BETWEEN THE LARGER ROCKS. FILTER CLOTH SHALL BE PLACED UNDER ALL RIPRAP AND SHALL MEET THE REQUIREMENTS OF MHDSS.

CHAMBERS

THE MANUFACTURER'S RECOMMENDATIONS, GUIDELINES, AND REQUIREMENTS.

#### PIPE CONDUITS

ALL PIPES SHALL BE CIRCULAR IN CROSS SECTION.

REINFORCED CONCRETE PIPE-

ALL OF THE FOLLOWING CRITERIA SHALL APPLY FOR REINFORCED CONCRETE PIPE: 1. MATERIALS - REINFORCED CONCRETE PIPE SHALL HAVE BELL AND SPIGOT JOINTS WITH RUBBER GASKETS AND SHALL EQUAL OR EXCEED ASTM C-361. THIS BEDDING SHALL CONSIST OF HIGH SLUMP CONCRETE PLACED UNDER THE PIPE AND UP THE SIDES OF THE PIPE AT LEAST 10% OF ITS OUTSIDE DIAMETER WITH A MINIMUM THICKNESS OF 3 INCHES, OR AS SHOWN ON THE DRAWINGS.

2. BEDDING - ALL REINFORCED CONCRETE PIPE CONDUITS SHALL BE LAID IN A CONCRETE BEDDING FOR THEIR ENTIRE LENGTH.

3. LAYING PIPE - BELL AND SPIGOT PIPE SHALL BE PLACED WITH THE BELL END UPSTREAM. JOINTS SHALL BE MADE IN ACCORDANCE WITH RECOMMENDATIONS OF THE MANUFACTURER OF THE MATERIAL. AFTER THE JOINTS ARE SEALED FOR THE ENTIRE LINE, THE BEDDING SHALL BE PLACED SO THAT ALL SPACES UNDER THE PIPE ARE FILLED. CARE SHALL BE EXERCISED TO PREVENT ANY DEVIATION FROM THE ORIGINAL LINE AND GRADE OF THE PIPE. THE FIRST JOINT MUST BE LOCATED WITHIN 2 FEET FROM THE RISER.

4. BACKFILLING SHALL CONFORM TO "STRUCTURE BACKFILL". 5. OTHER DETAILS (ANTI-SEEP COLLARS, VALVES, ETC.) SHALL BE AS SHOWN ON THE DRAWINGS. POLYVINYL CHLORIDE (PVC) PIPE-

#### ALL OF THE FOLLOWING CRITERIA SHALL APPLY FOR POLYVINYL CHLORIDE (PVC) PIPE: 1. MATERIALS - PVC PIPE SHALL BE PVC-1120 OR PVC-1220 CONFORMING TO ASTM D-1785 OR ASTM D-2241.

2. JOINTS AND CONNECTIONS TO ANTI-SEEP COLLARS SHALL BE COMPLETELY WATERTIGHT. 3. BEDDING - THE PIPE SHALL BE FIRMLY AND UNIFORMLY BEDDED THROUGHOUT ITS ENTIRE LENGTH. WHERE ROCK OR SOFT, SPONGY OR OTHER UNSTABLE SOIL IS ENCOUNTERED, ALL SUCH MATERIAL SHALL BE REMOVED AND REPLACED WITH SUITABLE EARTH COMPACTED TO PROVIDE ADEQUATE SUPPORT.

4. BACKFILLING SHALL CONFORM TO "STRUCTURE BACKFILL". 5. OTHER DETAILS (ANTI-SEEP COLLARS, VALVES, ETC.) SHALL BE AS SHOWN ON THE DRAWINGS.

<u>CONCRETE</u> CONCRETE SHALL MEET THE REQUIREMENTS OF MHDSS.

ROCK RIPRAP ROCK RIPRAP SHALL MEET THE REQUIREMENTS OF MHDSS.

THE RIPRAP SHALL BE PLACED TO THE REQUIRED THICKNESS IN ONE OPERATION. THE ROCK SHALL BE DELIVERED AND PLACED IN A MANNER THAT WILL INSURE THE RIPRAP IN PLACE SHALL BE REASONABLY HOMOGENEOUS WITH THE LARGER ROCKS UNIFORMLY DISTRIBUTED AND FIRMLY IN CONTACT ONE TO ANOTHER WITH THE SMALLER ROCKS FILLING THE VOIDS BETWEEN THE LARGER ROCKS. FILTER CLOTH SHALL BE PLACED UNDER ALL RIPRAP AND SHALL MEET THE REQUIREMENTS OF MHDSS.

LOW FLOW ORIFICE (IF IDENTIFIED ON PLAN AS NEEDED): PERFORATED PIPE FOR LENGTH WITHIN BASIN TO UPSTREAM SIDE TOE OF OVERFLOW SLOPE, AND NON-PERFORATED PIPE AS NEEDED TO EXTEND UNDER OVERFLOW WEIR TO OUTLET. EXTEND CLEANOUT PIPES TO SURFACE WITH VENTED CAPS AT TEES AND WYES. ANY CLEANOUTS IN AREA SUBJECT TO VEHICULAR LOADING SHALL BE INSTALLED WITH CONCRETE COLLARS.

CARE OF WATER DURING CONSTRUCTION

ALL WORK ON PERMANENT STRUCTURES SHALL BE CARRIED OUT IN AREAS FREE FROM WATER. THE CONTRACTOR SHALL CONSTRUCT AND MAINTAIN ALL TEMPORARY DIKES, LEVEES, COFFER DAMS, DRAINAGE CHANNELS, AND STREAM DIVERSIONS NECESSARY TO PROTECT THE AREAS TO BE OCCUPIED BY THE PERMANENT WORKS. THE CONTRACTOR SHALL ALSO FURNISH, INSTALL, OPERATE AND MAINTAIN ALL NECESSARY PUMPING AND OTHER EQUIPMENT REQUIRED FOR REMOVAL OF WATER FROM THE VARIOUS PARTS OF THE WORK AND FOR MAINTAINING THE EXCAVATIONS, FOUNDATION AND OTHER PARTS OF THE WORK FREE FROM WATER AS REQUIRED OR DIRECTED BY THE ENGINEER FOR CONSTRUCTING EACH PART OF THE WORK. AFTER HAVING SERVED THEIR PURPOSE, ALL TEMPORARY PROTECTIVE WORKS SHALL BE REMOVED OR LEVELED AND GRADED TO THE EXTENT REQUIRED TO PREVENT OBSTRUCTION IN ANY DEGREE WHATSOEVER OF THE FLOW OF WATER TO THE SPILLWAY OR OUTLET WORKS AND SO AS NOT TO INTERFERE IN ANY WAY WITH THE OPERATION OR MAINTENANCE OF THE STRUCTURE. STREAM DIVERSIONS SHALL BE MAINTAINED UNTIL THE FULL FLOW CAN BE PASSED THROUGH THE PERMANENT WORKS. THE REMOVAL OF WATER FROM THE REQUIRED EXCAVATIONS AND THE FOUNDATION SHALL BE ACCOMPLISHED IN A MANNER AND TO THE EXTENT THAT WILL MAINTAIN STABILITY OF THE EXCAVATED SLOPES AND BOTTOM OF REQUIRED EXCAVATIONS AND WILL ALLOW SATISFACTORY PERFORMANCE OF ALL CONSTRUCTION OPERATIONS. DURING THE PLACING AND COMPACTING OF MATERIAL IN REQUIRED EXCAVATIONS. THE WATER LEVEL AT THE LOCATIONS BEING REFILLED SHALL BE MAINTAINED BELOW THE BOTTOM OF THE EXCAVATION AT SUCH LOCATIONS WHICH MAY REQUIRE DRAINING THE WATER TO SUMPS FROM WHICH THE WATER SHALL BE PUMPED.

**STABILIZATION** 

ALL BORROW AREAS SHALL BE GRADED TO PROVIDE PROPER DRAINAGE AND LEFT IN A SIGHTLY CONDITION. ALL EXPOSED SURFACES OF THE EMBANKMENT, SPILLWAY, SPOIL AND BORROW AREAS, AND BERMS SHALL BE STABILIZED BY SEEDING, LIMING, FERTILIZING AND MULCHING IN ACCORDANCE WITH MHDSS OR AS SHOWN ON THE ACCOMPANYING DRAWINGS.

EROSION AND SEDIMENT CONTROL

CONSTRUCTION OPERATIONS WILL BE CARRIED OUT IN SUCH A MANNER THAT EROSION WILL BE CONTROLLED AND WATER AND AIR POLLUTION MINIMIZED. STATE AND LOCAL LAWS CONCERNING POLLUTION ABATEMENT WILL BE FOLLOWED. DETAIL EROSION AND SEDIMENT CONTROL MEASURES TO BE EMPLOYED DURING THE CONSTRUCTION PROCESS SHALL BE IN ACCORDANCE WITH THE SEDIMENT EROSION CONTROL PLAN HEREIN AND GENERALLY ACCEPTED PRACTICES.

STORMWATER MANAGEMENT FACILITIES SHALL BE PROTECTED FROM SEDIMENT AND SILTATION AT ALL TIMES. JUST PRIOR TO COMPLETION. THE SITE SUBCONTRACTOR SHALL PERFORM A FINAL INSPECTION AND CLEANING OF THE STORM WATER MANAGEMENT SYSTEM. ALL SEDIMENT AND SILTATION SHALL BE REMOVED FROM THE BASINS, FOREBAYS, ETC. AND THESE AREAS SHALL BE SHAPED TO FINAL CONTOURS AND ELEVATION PER THE PLANS. ALL REPAIRS SHALL BE MADE AS NECESSARY TO THE SATISFACTION OF THE ENGINEER PRIOR TO PLACING FINAL TOPSOIL, MULCH, VEGETATION, SEEDING, ETC.

## ALL CHAMBERS (PLASTIC AND CONCRETE) SHALL BE HANDLED AND INSTALLED IN STRICT ACCORDANCE WITH

### **EXCAVATION/FILL NOTES:**

1. SIDE SLOPES OF TRENCH EXCAVATIONS DEEPER THAN 4 FEET SHOULD BE FLATTENED (AS REQUIRED BY SITE CONDITIONS) TO AT LEAST 1H: 1V OR SUPPORTED WITH TRENCH BOX OR SIMILAR DEVICE. ALL WORK SHALL BE PERFORMED SAFELY AND IN ACCORDANCE WITH OSHA AND MOSHA REQUIREMENTS. CONTRACTOR SHALL OBTAIN TRENCH PERMIT AS REQUIRED.

2. AFTER REMOVAL OF TOPSOIL AND INADEQUATE MATERIALS, GENERAL FILL SUBGRADE SHOULD BE PROOF-ROLLED WITH A LOADED 10-WHEEL TANDEM-AXLE DUMP TRUCK. THE PROOF-ROLLING SHOULD BE PERFORMED AS DIRECTED BY A GEOTECHNICAL ENGINEER. NO FILL SHOULD BE PLACED UNTIL THE SUBGRADE IS APPROVED BY A GEOTECHNICAL ENGINEER. BORROW MATERIALS FOR FILL OPERATIONS FOR GENERAL SITE GRADING SHOULD MEET AASHTO DESIGNATION A-2-4 (CLASS III) OR MORE GRANULAR AND BE APPROVED BY A GEOTECHNICAL ENGINEER. ALL FILLS SHOULD BE CONSTRUCTED IN 8" LOOSE LIFTS AND COMPACTED AS FOLLOWS, UNLESS OTHERWISE NOTED IN PROJECT SPECIFICATIONS:

- FILLS SUPPORTING FOUNDATIONS AND FLOOR SLABS, 95% OF ASTM D-1557 (AASHTO T-180) - TOP 24 INCHES OF ROADWAY SUBGRADE AND SUBBASE, 95% OF ASTM D-1557 (AASHTO T-180) - RETAINING WALLS AND FILLS WITHIN ROADWAY (BELOW TOP 24 INCHES OF SUBGRADE AND SUBBASE), 92%

OF ASTM D-1557 (AASHTO T-180) - FILLS IN GREEN SPACE, 90% OF ASTM D-1557 (AASHTO T-180) - FILLS UNDER AND AROUND STRUCTURES, MANHOLES, TANKS, VAULTS, ETC. AND PIPE EMBEDMENT

(BEDDING, HAUNCHING AND INITIAL BACK FILL), 95% OF ASTM D-1557 (AASHTO T-180)

### GRADING AND DRAINAGE NOTES:

1. THE PROJECT ELEVATIONS ARE BASED ON THE NAVD VERTICAL DATUM.

2. DEBRIS, STUMPS, EXCESS, AND UNSUITABLE MATERIALS FROM THE CLEARING & DEMOLITION OPERATIONS SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN A LEGAL MANNER BY THE CONTRACTOR. 3. DISTURBED AREAS SHALL BE PROTECTED AT ALL TIMES TO CONTROL SEDIMENT TRANSPORT BEYOND THE

LIMIT OF WORK. 4. DISTURBED AREAS SHALL BE TREATED WITH WATER DURING EXCAVATION, OR APPROVED ALTERNATIVE, TO

CONTROL THE DUST. 5. THE SITE SUBCONTRACTOR SHALL PROVIDE ALL EXCAVATION, BACKFILL AND COMPACTION NECESSARY TO

ACHIEVE THE FINISH GRADES SHOWN ON THE PLANS AND FOR INSTALLATION OF BUILDING STRUCTURES, PAVING. STORMWATER MANAGEMENT AND ALL UTILITIES (INTERIOR AND EXTERIOR). SITE CONTRACTOR TO REFER TO SITE ELECTRICAL, MEP AND LANDSCAPE PLANS FOR ADDITIONAL INFORMATION AND DETAIL. EXISTING PAVING EDGES SHALL BE SAWCUT TO CREATE A CLEAN EDGE WHERE IT IS TO BE TIED INTO NEW PAVING, OR WHERE ASPHALT IS REMOVED ADJACENT TO ASPHALT WHICH IS TO REMAIN. BROKEN OR UNSTABLE PAVEMENT SHALL BE REMOVED AND SUBBASE REPLACED WITH SUITABLE COMPACTED MATERIAL PER PAVEMENT SECTION DETAIL HEREIN. ANY SAWCUT LINES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE EXACT EDGE OF SAWCUT SHALL BE DETERMINED BY THE CONTRACTOR IN THE FIELD TO PROPERLY BLEND TO THE SURROUNDING GRADES. PROPOSED ASPHALT SHALL BE PROPERLY BUTTED AND BLENDED TO SURROUNDING ASPHALT WHICH IS TO REMAIN. THE BLENDED TRANSITION BETWEEN PROPOSED AND EXISTING ASPHALT SHALL BE ACCOMPLISHED WITH AN APPROXIMATE 1.5% GRADE UNLESS OTHERWISE IDENTIFIED. THE JOINT SHALL NOT BE ABRUPT.

6. ALL PIPE OUTFALLS, CURB OPENINGS, STONE WEIRS, AND OTHER DRAINAGE OVERFLOW AND OUTLET AREAS SHALL HAVE RIPRAP EXTENDED FROM THE OUTLET TO THE BOTTOM OF SLOPE WITH A MINIMUM 10 FT x 10 FT RIPRAP LEVEL SPREADER, UNLESS OTHERWISE SPECIFICALLY DETAILED. ALL STONE OUTFALLS SHALL BE PROPERLY SHAPED SO THE RUNOFF IS CONTAINED WITH THE STONE LINING. SEE TYPICAL DETAILS FOR ADDITIONAL INFORMATION.

7. ALL DISTURBED AREAS NOT OTHERWISE TREATED SHALL BE STABILIZED WITH 4" LOAM, SEED. & MULCH. THE CONTRACTOR SHALL BE RESPONSIBLE FOR AREAS UNTIL VEGETATION HAS BEEN PERMANENTLY ESTABLISHED. SLOPES IN EXCESS OF 3:1 AND AREAS THAT SHOW SIGNS OF EROSION FROM CONCENTRATED FLOWS SHALL BE FURTHER STABILIZED WITH EROSION CONTROL BLANKETS (ECB) OF CURLEX DOUBLE NET -CURLEX II .98 BY AMERICAN EXCELSIOR COMPANY OR EQUAL. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE REQUIRED ECB'S AND PROPERLY STABILIZE ALL AREAS OF THE SITE.

8. ALL DRAINAGE STRUCTURES AND PIPING SHALL BE DESIGNED AND INSTALLED FOR H-20 LOADING. SETTING OF CATCH BASINS AND MANHOLE STRUCTURES SHALL BE ADJUSTED WITH CONCENTRIC OR OFFSET TOPS AS NEEDED FOR MINOR ADJUSTMENTS TO AVOID CONFLICTS WITH UNDERGROUND UTILITIES OR OTHER STRUCTURES. THE GRATE OR MANHOLE COVER SHALL ALSO BE ADJUSTED OVER THE STRUCTURE TO NOT CONFLICT WITH STEPS INSIDE THE STRUCTURE.

9. A 10 FOOT MINIMUM SEPARATION SHALL BE MAINTAINED BETWEEN ALL SWM INFILTRATION FACILITIES AND SANITARY SEWER LINES AND MANHOLES.

10. CPP - HIGH DENSITY POLYETHYLENE CORRUGATED PIPE WITH SMOOTH INTERIOR WALL TO MEET ADS N-12 PIPE SPECIFICATION OR EQUAL. CPP PIPE USE SHALL BE ALLOWED AS NOTED, WITH A DIAMETER UP TO AND INCLUDING 24". BACKFILLING CPP MUST FOLLOW MANUFACTURER'S RECOMMENDATIONS AND SPECIAL CARE MUST BE EXERCISED (SEE ADS PRODUCT NOTE 3.115).

11. ALL COTTAGES ROOF DOWNSPOUTS SHALL BE TIED INTO ROOF DRAINS. REFER TO ARCHITECTURAL PLANS FOR ALL LOCATIONS OF DOWNSPOUTS. CONTRACTOR SHALL PROVIDE TIE-INS TO ALL DOWNSPOUT LOCATIONS. ROOF DRAINS TO BE AT LEAST 4" CPP AT 1% SLOPE MINIMUM WITH 1 FOOT MINIMUM COVER, TYPICAL, UNLESS OTHERWISE NOTED ON THE PLAN. GARAGES SHALL BE PROVIDED WITH STONE DRIP STRIPS ALONG FOUNDATION OUT PAST ROOF LINES TO CONTROL ALL GARAGE ROOF RUNOFF.

12. ALL GRADING WORK SHALL BE DONE IN A WORKMANLIKE MANNER ACCOMPLISHED TO CREATE POSITIVE DRAINAGE AND ELIMINATE ANY PUDDLING OR PONDING. WHERE NOT OTHERWISE NOTED OR DEFINED ON THE PLAN, ALL CUT AND FILL SHALL BE BLENDED TO DAYLIGHT AT EXISTING GRADE WITH A 3:1 SLOPE.

13. THE CONTRACTOR SHALL NOTIFY THE ENGINEER WITH ANY GRADE ISSUES OR QUESTIONS PRIOR TO PERFORMING THE FINISH GRADING WORK.

14. ALL PROPOSED WALKWAYS WILL HAVE RUNNING SLOPES OF LESS THAN 5% AND ALL CROSS SLOPES < 2%, U.O.N. THESE ARE MAXIMUM SLOPES WITH NO TOLERANCE. ALL WORK WILL BE IN ACCORDANCE WITH THE MOST CURRENT REQUIREMENTS OF THE U.S. ACCESS BOARD, AMERICANS WITH DISABILITIES ACT & COMMONWEALTH OF MASSACHUSETTS, ARCHITECTURAL ACCESS BOARD, WHERE REQUIRED.

15. CONTRACTOR SHALL CONFIRM AND PROVIDE ALL LANDINGS OUTSIDE OF DOORWAYS, AT THE TOP AND BOTTOM OF STEPS, AND AT TOP AND BOTTOM OF RAMPS, TO BE CONSTRUCTED SO THE LANDING IS 5 FT X 5 FT MIN. (UON) AND IS LESS THAN A 2% SLOPE IN ALL DIRECTIONS ON THE LANDING. THE CONTRACTOR SHALL VERIFY THE LANDING CONDITIONS IN THE FIELD AND CONTACT THE SITE ENGINEER WITH ANY QUESTIONS PRIOR TO INSTALLING LANDING.

STAIRS REPRESENTED ON THE SITE PLANS DO NOT INDICATE THE EXACT NUMBER OF TREADS AND RISERS NEEDED. THESE WILL VARY BASED ON SPECIFIC FIELD CONDITIONS. THE CONTRACTOR SHALL VERIFY THE CONDITION IN THE FIELD AND DETERMINE TREADS AND RISERS REQUIRED PER THE BUILDING CODE. REFERENCE SHALL BE MADE TO THE ARCHITECTURAL PLANS. THE CONTRACTOR SHALL CONTACT THE SITE ENGINEER AS NEEDED WITH QUESTIONS REGARDING SPECIFIC TREADS AND RISERS PRIOR TO INSTALLING THE STAIRS

16. BOTTOM OF WALL (BOW) OR TOP OF WALL (TOW) ELEVATIONS FOR RETAINING WALLS NOTED ON THE PLAN ARE APPROXIMATE FLEVATIONS WHERE THE WALL IS EXPECTED TO DAYLIGHT WITH EXISTING GRADE. STRUCTURAL RETAINING WALL DESIGN IS DONE BY OTHERS AND THE BOW OR TOW EXISTING GROUND ELEVATIONS FOR WHERE THE WALL WOULD DAYLIGHT TO EXISTING GRADES SHALL BE VERIFIED AS NEEDED FOR THE STRUCTURAL DESIGN. THE ACTUAL BOW OR TOW ELEVATION AT THE PROPOSED WALL(S) MAY DIFFER FROM CONTOURS SHOWN ON THE PLANS ESPECIALLY AT STEEP SLOPES AREAS.

17. STORMWATER MANAGEMENT FACILITIES SHALL BE PROTECTED FROM SEDIMENT AND SILTATION AT ALL TIMES. JUST PRIOR TO COMPLETION, THE SITE SUBCONTRACTOR SHALL PERFORM A FINAL INSPECTION AND CLEANING OF THE STORMWATER MANAGEMENT SYSTEM. ALL SEDIMENT AND SILTATION SHALL BE REMOVED FROM THE BASINS, FOREBAYS, ETC. AND THESE AREAS SHALL BE SHAPED TO FINAL CONTOURS AND ELEVATION PER THE PLANS. ALL REPAIRS SHALL BE MADE AS NECESSARY TO THE SATISFACTION OF THE ENGINEER PRIOR TO PLACING FINAL TOPSOIL, MULCH, VEGETATION, SEEDING, ETC.

18. ANY DEWATERING OPERATION, WHEN REQUIRED AS PART OF THE CONSTRUCTION PROCESS, SHALL ENSURE ALL DEWATERING OCCURS THROUGH A PROPER DEWATERING BASIN (STONE, FILTER FABRIC AND HAYBALES OR OTHER ACCEPTABLE MEANS) PRIOR TO DISCHARGE FROM THE SITE.

19. ALL WORK WITHIN THESE PLANS SHALL BE PERFORMED AND PROVIDED BY THE CONTRACTOR IN ACCORDANCE WITH THE CONSTRUCTION DETAILS PROVIDED IN THIS PLAN SET WHETHER OR NOT THE DETAIL NUMBER IS SPECIFICALLY REFERENCED.

20. FOUNDATION DRAINS ARE REQUIRED. REFER TO STRUCTURAL AND ARCHITECTURAL PLANS (SEE DETAIL *#*120).

### CONSTRUCTION SEQUENCE

NECESSARY.

6. ESTABLISH ROUGH SUB GRADES OF SITE FOR ROAD AND BUILDING PADS. THE SOILS FROM WETLAND AREA SHALL BE SAVED FOR REUSE IN MITIGATION PLANS. INSTALL SEDIMENT BASINS IN AREAS OF FOREBAYS TO CONTAIN LARGER RUNOFF FLOWS DURING CONSTRUCTION. 7. WHERE BASINS ARE USED AS SEDIMENT BASINS DURING CONSTRUCTION, THE BASIN GROUND ELEVATION

SHALL BE KEPT ONE FOOT ABOVE THE FINAL BASIN ELEVATION. THESE BASINS SHALL THEN BE CLEANED AND EXCAVATED TO FINAL ELEVATIONS UPON COMPLETION OF THE CONSTRUCTION PROJECT. 8. PERFORM BUILDING, DRAINAGE, UTILITY AND SITE CONSTRUCTION. INSTALL BASE COURSE PAVING AS SOON AS PRACTICAL. 9. INSPECT AND MAINTAIN EROSION CONTROL MEASURES AFTER RAINFALL EVENTS AND A MINIMUM OF ONCE

PER WEEK. 10. REMOVE SEDIMENT BUILDUP AT EROSION CONTROL DEVICES AS NEEDED. REDISTRIBUTE MATERIAL OVER SITE IN CONFORMANCE WITH EARTHWORK SPECIFICATIONS.

11. ONCE ALL DRAINAGE STRUCTURES ARE INSTALLED. INSTALL SILT SAC OR FILTER FABRIC AND STONE /HAY BALES AROUND ALL NEW STRUCTURES AND MAINTAIN THEM UNTIL PAVEMENT IS IN PLACE AND CONTRIBUTING DRAINAGE AREAS ARE STABLIZED. ALL OUT FALLS SHALL BE STABILIZED WITH STONE PROTECTION AS REQUIRED WHETHER GRAPHICALLY SHOWN ON THE PLAN OR NOT.

12. ALL CUT AND FILL SLOPES SHALL BE TEMPORARILY STABILIZED WITH TOP SOIL. SEED AND MULCH OR CURLEX AS REQUIRED IF CONSTRUCTION ACTIVITY CEASES ON SAID SLOPES FOR A PERIOD OF 7 DAYS OR GREATER. ALL SLOPES SHALL BE PERMANENTLY STABILIZED AS REQUIRED IMMEDIATELY UPON COMPLETION OF FINAL GRADING. 13. COMPLETE FINISH GRADING, LANDSCAPING AND FINAL STABILIZATION OF SITE. PLACE FINAL PAVING COURSE.

14. REMOVE SEDIMENT FROM ALL BASINS, DRAINAGE STRUCTURES, DRAIN MANHOLES, PIPES AFTER COMPLETION OF CONSTRUCTION. REMOVE AND REGRADE TEMPORARY BERMS, SWALES, CHECK DAMS, ETC. STABILIZE DISTURBED AREAS.

15. CLEAN OUT ALL SEDIMENT FROM SWM FOREBAYS/BASINS AND OUTLET STRUCTURES. REGRADE TO FINAL CONTOURS PER DESIGN. STABILIZE ALL SLOPES AS REQUIRED. REPLACE AND/OR CLEAN FILTER FABRIC AND STONE AT SWM FOREBAYS. ALL AREAS CONTRIBUTING RUNOFF TO THE PROPOSED INFILTRATION DEVICES/BASINS SHALL BE STABILIZED PRIOR TO THE REMOVAL OF SEDIMENT AND EROSION CONTROL DEVICES PROTECTING THESE AREAS.

16. UPON ESTABLISHMENT OF PERMANENT GROUND COVER AND APPROVAL BY THE ENGINEER, REMOVE WATTLES & SILT FENCE. STABILIZE ALL AREAS WHERE WATTLES WHERE REMOVED.

**OPERATION:** 

2. PERSONNEL ASSOCIATED WITH THE CONSTRUCTION OF THIS PROJECT SHALL BE INFORMED THAT THE MAINTENANCE OF SILTATION CONTROLS TAKES PRECEDENCE OVER NORMAL CONSTRUCTION ACTIVITIES. ADJACENT PROPERTIES AND STREETS SHALL BE PROTECTED FROM EROSION OR SILTATION CONDITIONS. 3. INSPECTION AND MAINTENANCE, AS OUTLINED HEREIN, SHALL BE PERFORMED FOUR TIMES WITHIN THE FIRST YEAR OF OPERATION. THENCE, INSPECTIONS AND MAINTENANCE SHALL BE CONDUCTED ON A SEMIANNUAL BASIS (2 TIMES A YR.) AND AFTER ALL LARGE STORMS. AN INSPECTION REPORT SHALL BE

MAINTAINED. 4. ACCUMULATED DEBRIS IN CATCH BASINS, SEDIMENT FOREBAYS, AND DRAINAGE BASINS SHALL BE REMOVED BEFORE IT EXCEEDS 12 INCHES IN DEPTH AND DISPOSED OF PROPERLY. BROKEN OR DAMAGED GAS TRAPS/HOODS SHALL BE IMMEDIATELY REPAIRED OR REPLACED TO ENSURE ADEQUATE FUNCTION.

5. A VISUAL INSPECTION SHALL BE MADE AT ALL ACCESS MANHOLES, CATCH BASINS, OUTFALLS, LEACHING BASINS. PIPES AND DRAINAGE CHANNELS FOR THE ENTIRE STORM DRAINAGE SYSTEM. THE GENERAL CONDITION OF THESE STRUCTURES SHOULD BE REVIEWED AND ACCUMULATED DEBRIS SHALL BE REMOVED. THE CONDITION OF ALL OUTLETS SHALL BE NOTED AND A DESCRIPTION OF THE DRAINAGE STRUCTURES SHALL BE INCLUDED IN THE REPORT. DELETERIOUS MATERIALS SHALL BE REMOVED FROM THESE STRUCTURES AND THE DRAINAGE CHANNELS IN ORDER FOR THE SYSTEM TO FUNCTION PROPERLY.

6. ALL OUTLETS, DRAINING CHANNELS, AND SLOPES SHALL BE KEPT STABILIZED. ANY EROSION SHALL BE REPAIRED IMMEDIATELY.

7. ACCUMULATED SEDIMENT SHALL BE REMOVED FROM THE SWM BASINS BEFORE IT EXCEEDS 1' IN DEPTH, OR AT LEAST ONCE EVERY 5 YEARS. THE SPILLWAYS OUTLETS SHALL BE CLEANED AND INSPECTED FOR PROPER FUNCTIONING. ALL DEBRIS OR DELETERIOUS MATERIAL SHALL BE REMOVED FROM OUTLET STRUCTURES. BASIN SLOPES SHALL BE MAINTAINED WITH A GRASS STAND OF AT LEAST 3". GRASS SHALL BE MOWED AT LEAST TWICE A YEAR AND CLIPPINGS SHALL NOT BE LEFT IN BASIN. ANY TREES OR OTHER WOODY VEGETATION GROWING IN EMBANKMENTS OR NEAR OUTLET CONTROL STRUCTURES SHALL BE REMOVED. 8. THE FOLLOWING MINIMUM INFORMATION SHALL BE RECORDED: \* DATE OF INSPECTION REPORT \* GENERAL CONDITION OF THE ENTIRE SYSTEM

\* A COPY OF THESE REPORTS SHALL BE FURNISHED TO THE PLANNING BOARD UPON REQUEST. 9. MAINTENANCE OF THE STORMWATER MANAGEMENT FACILITIES SHALL BE IN ACCORDANCE WITH THE EXECUTED INSPECTION AND MAINTENANCE AGREEMENT FOR PRIVATE STORMWATER MANAGEMENT FACILITIES AND SHALL BE THE RESPONSIBILITY OF THE OWNER AND THE ASSIGNEES.

OWNER SIGNATURE DATE (OWNER UNDERSTANDS RESPONSIBILITIES OF OPERATION AND MAINTENANCE REQUIREMENTS OF STORMWATER MANAGEMENT SYSTEMS)

1. INSTALL SILT FENCING AND WATTLES TO ESTABLISH THE LIMIT OF WORK AROUND THE PERIMETER OF THE PROJECT AND ANY AREAS WHICH HAVE GROUND DISTURBANCE BASED ON THE PROJECT WORK AND CONTRACTORS STAGING AREAS. SILT FENCE, WATTLES AND OTHER PERIMETER CONTROL SHALL BE INSTALLED TO PREVENT TRANSPORT OF SEDIMENT OUTSIDE OF THE PROJECT AREA. SILT FENCE AND OTHER EROSION CONTROLS MAY BE REQUIRED BEYOND WHAT IS SPECIFICALLY SHOWN ON THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR AND PROVIDE ALL THE NECESSARY EROSION CONTROLS TO PREVENT SEDIMENT AND OTHER DELETERIOUS RUNOFF MATERIAL FROM LEAVING THE PROJECT AREA DURING CONSTRUCTION.

2. INSTALL TEMPORARY CONSTRUCTION ENTRANCE/EXIT STONE AREAS WHERE EVER CONSTRUCTION TRAFFIC ENTERS OR EXITS THE PROJECT AREA.

3. DISCHARGES FROM DEWATERING OF EXCAVATIONS SHALL NOT BE DIVERTED DIRECTLY INTO ANY WETLANDS OR EXISTING STORM DRAINS WITHOUT PRETREATMENT VIA SEDIMENT BASINS AND/OR SETTLING BASINS.

4. INSTALL HAY BALE AND/OR STONE CHECK DAMS ALONG CENTER OF SWALES/FLOW LINES AT 100' O.C., AS 5. CLEAR AND GRUB SITE WITHIN THE LIMIT OF WORK.

## **OPERATION/MAINTENANCE PLAN**

1. THIS OPERATION AND MAINTENANCE PLAN SHALL BE PERFORMED BY THE GENERAL CONTRACTOR DURING CONSTRUCTION OPERATIONS AND BY THE OWNER ONCE THE FACILITIES ARE COMPLETED AND PUT INTO

\* CORRECTIVE ACTIONS TAKEN TO ENSURE ADEQUATE FUNCTION AND WHEN PERFORMED.

# **BAXTER NYE ENGINEERING & SURVEYING**

Reaistered Professional Engineers and Land Surveyors

1597 Falmouth Road Centerville, MA 02632

Phone - (508) 771-7502 Fax – (508) 771–7622 www.baxter-nye.com

STAMP

STAMP

CONSULTANT

CONSULTANT

PREPARED FOR:

Southworth Mashpee Properties, LLC 130 Willowbend Drive Mashpee, MA 02649

### PROJECT TITLE

Cranberry Point 275 Quinaquisset Avenue Mashpee, MA 02649

⚠	JKL	10/13/2023	REVISE GRADING/STORMWATER MGMT
À	ZDP	5/23/2023	CONSERVATION UPDATE
À	ZDP	5/1/2023	CONSERVATION UPDATE
$\triangle$	JKL	4/28/2023	PER PLANNING BOARD COMMENTS
$\triangle$	JKL	3/24/2023	PER PLANNING BOARD COMMENTS
		DATE	DESCRIPTION

SHEET TITLE

### **Drainage Notes**

SHEE	ΤΝΟ		
	<b>C4</b>	.3	
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	SCALE	IN FEET	
SCAL	E:1"=20'		
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FOR PERMIT ONLY - NOT FOR CONSTRUCTION



14/2014-009/CIVII\/PLOT\QUINAQUISETT\2014-009 QUIN UT.dwg, 10/16/2023 2:37:05 PM, Zparrella, DWG To PDF.pc3



TLITTY NOTES: 2AUTION: THE CONTRACTOR SHALL CONTACT DIG SAFE (AT 1-888-DIG-SAFE) AND UTILITY COMPANIES TO ATE ALL EXISTING UTILITES, AT LEAST 72 HOURS PRIOR TO THE START OF CONSTRUCTION. THE WITRACTOR SHALL DETERMINE THE EXACT LOCATION, BOTH HORIZONTALLY AND VERTICALLY, OF ALL STING UTILITIES BEFORE THE START OF ANY WORK. THE LOCATION OF EXISTING UNDERGOUND SYSTEMS. RASTRUCTURE, UTILITIES, CONDUITS AND LINES ARE SHOWN IN AN APPROXIMATE WAY ONLY, MAY NOT BE IFED TO THOSE SHOWN HEREIN AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER, THE INDEER, OR ITS REPRESENTATIVE. THE CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL AAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO LOCATE SAID SYSTEMS, RASTRUCTURE AND UTILITES EXACTLY. IF ELEVANTION INFORMATION DIFFERS FROM PLAN INFORMATION, THE STRYL THE AND OTHY THE ENGINEER IMMEDIATELY FOR POSSIBLE REDESIGN. AT UTILITY CROSSINGS, BYPY IN FIELD THE LOCATION AND INVERTS OF WATER, ELECTRIC, GAS, TELEPHONE & DATA/COMM AND LOCATE IF CONFLICTING WITH PROPOSED INVERTS PER THE ENGINEERS DIRECTION. THE CONTRACTOR SHALL SERVE ALL UNDERGROUND SYSTEMS, INFRASTRUCTURE AND UTILITIES AS REQUIRED. 12" MINIMUM VERTICAL CLEARANCE SHALL BE MAINTAINED BETWEEN ALL UTILITY CROSSINGS. ALL MANNEY OF THE WATER LINE, THE SEWER LINE SHALL BE LOCATED WITH A MINIMUM VERTICAL CARANCE OF 18" BELOW THE WATER LINE, SHALL BE LOCATED WITH A MINIMUM VERTICAL ANDALY FORM THE WATER LINE, SHALL BE MAINTAINED BETWEEN WATER AND SEWER LINES. WHERE TER LINES CROSS SEVER LINES, STHEL SEWER LINE SHALL BE LOCATED EQUIDISTANT AND FRA WAYS FROM THE WATER LINE, AP OSSIBLE, WHEN IT IS IMPOSSIBLE TO ACHIEVE HORZONTAL AND/OR TICAL SEPARATION AS STIPULATED ABOVE, BOTH THE WATER LINE AND SEWER LINE AT THE CROSSING ANTIN SHALL BE CONSTRUCTED OF MECHANICAL JOINT GEMENT-LINED DUCTLE RON PIPE FOR ONE FULL PIPE LENGTH OR ANOTHER EQUIVALENT THAT IS WATERTICHT AND SEWER LINE AT THE CROSSING ATION SHALL BE LOCATED AS FAR AWAY FROM THE WATER LINE SHOLLDE 6'. IF LESS THAN 4' COVER IS P	
WATER MAINS TO BE CEMENT LINED DUCTILE IRON PIPE CLASS 52, U.O.N. ALL CONSTRUCTION METHODS D MATERIALS SHALL BE AS REQUIRED BY, AND IN ACCORDANCE WITH THE LOCAL WATER DEPARTMENT AND PLICABLE AWWA SPECIFICATIONS. DOMESTIC SERVICE TO BE 200 PSI CTS PLASTIC LINE U.O.N., TO DIVISION ECIFICATIONS SLEEVED WHERE REQUIRED. GATE VALVES SHALL BE MUELLER ONLY. IRON BODY, BRONZE MOUNTED, DOUBLE DISC, WITH TWO INCH ERATING NUT WITH MECHANICAL JOINT HUBS. GATE VALVES SHALL CONFORM IN EVERY RESPECT TO ALL PLICABLE AWWA STANDARDS. VALVES SHALL BE DESIGNED FOR 200 PSI WORKING AND 300 PSI TEST ESSURE AND SHALL OPEN LEFT. VALVES SHALL ALSO CONFORM TO THE SPECIFICATIONS OF THE AWWA AS TO SIZE STEM, PITCH OF READ, GASKET SEATING AREA SHALL BE FULLY MACHINED TO THE FIXED DIMENSIONS AND TOLERANCES AS R AWWA SPECIFICATIONS. ALL VALVES SHALL BE PROVIDED WITH "O" RINGS. THE DESIGN OF THE VALVE	STAMP STAMP
ALL BE SUCH THAT THE SEAL PLATE CAN BE FITTED WITH NEW "O" RINGS WHILE THE VALVE IS UNDER ESSURE IN THE FULLY OPEN POSITION. VALVE BOXES AND CURB BOXES SHALL BE BUFFALO OR PIONEER AND SHALL BE FURNISHED AND TALLED FOR ALL VALVES. THEY SHALL BE CAST IRON, TAR COATED, SLIDING TYPE ADJUSTABLE VALVE KES TOGETHER WITH CAST IRON COVERS. SEE WATER DIVISION REGULATIONS. TYPICAL COVER OVER WATER LINE SHALL BE 5'. IF LESS THAN 4' OF COVER IS PROVIDED, INSULATE TER LINE AGAINST FREEZING IN ACCORDANCE WITH DETAIL #205 OR EQUAL. WATERLINE INSTALLATION REQUIRES TIE ROD RESTRAINED JOINTS TO BE USED AT ALL BENDS, ENDS OF E, VALVES AND FIRE HYDRANTS, PER WATER DISTRICT REQUIREMENTS. RESTRAINED JOINTS TO BE TALLED PER WATER DISTRICT REQUIREMENTS. IF RESTRAINED JOINTS CAN'T BE USED DUE TO PHYSICAL CONSTRAINTS, ONLY AS SPECIFICALLY APPROVED THE WATER DISTRICT, THRUST BLOCKS TO BE INSTALLED AT ALL BENDS, ENDS OF LINE, VALVES AND FIRE PRANTS IN ACCORDANCE DETAIL #301. CONCRETE THRUST BLOCKS AS REQUIRED, CONCRETE SHALL BE 1 RT CEMENT TO 2 PARTS SAND AND 4 PARTS COARSE AGGREGATE. CONCRETE CLASS "C" WITH A 28 DAY MPRESSION STRENGTH OF 2000 PSI MINIMUM AGGREGATE SIZE OF 1-1/2". THRUST BLOCKS SIZED PER CECIFICATIONS. ALTERNATELY PRECAST THRUST BLOCKS TO DISTRICT SPECIFICATIONS MAY BE UTILIZED. RE SHALL BE TAKEN TO ENSURE THAT ALL CONCRETE THRUST BLOCKS BEAR AGAINST UNDISTURBED INCH WALLS AND NOT TO ENCASE FLANGES AND BOLTS ON MECHANICAL JOINT FITTINGS. WHERE SUITABLE BEARING MATERIAL IS ENCOUNTERED, EXCAVATE AND PLACE SUFFICIENT CONCRETE BALLAST TO SET THE ANTICIPATED THRUSTS.	CONSULTANT
MASHPEE WATER DISTRICT APPROVED WATER SUBCONTRACTOR AND THIRD PARTY INSPECTOR REQUIRED. ST OF THE INSPECTOR SHALL BE BORN BY THE CONTRACTOR/WATER SUBCONTRACTOR. GAS, ELECTRIC, DATA/COM IS SHOWN SCHEMATICALLY HEREON. ALL LABOR, WORK, EQUIPMENT AND TERIALS FOR INSTALLATION OF THESE UTILITIES SHALL BE OWNED AND PERFORMED BY THE CONTRACTOR. LITIES SHALL BE INSTALLED WITH A MINIMUM COVER OF 3 FEET U.O.N. OR OTHERWISE DIRECTED BY THE NTROLLING UTILITY COMPANY. CONTRACTOR SHALL COORDINATE ALL FINAL LAYOUTS AND DETAILS WITH PLICABLE UTILITY COMPANY. POWER AND COMMUNICATION DUCT BANKS SHALL BE INSTALLED IN ACCORDANCE WITH DETAIL #C-832. ERE A DESIGN BY THE UTILITY COMPANY OR MEP ENGINEERS ARE PROVIDED, THOSE SHALL SUPERCEDE -832. EXTERIOR RESIDENTIAL LIGHTING SHALL BE LOW WATTAGE TYPE AND DIRECTED SO AS TO KEEP ALL HTING WITHIN SUBJECT LOT. SITE LIGHTING USED SHALL BE LOW WATTAGE LED STREET LANTERNS ON 15' KIMUM POLE LOCATED ADJACENT TO ROAD SHOULDERS OR WALKWAYS. LIGHTING FIXTURES TO BE FULL 90' FOFF ("DARK SKY" COMPLIANT). A FINAL PHOTOMETRIC AND LIGHTING SCHEDULF PI AN SHALL BE PREPARED	PREPARED FOR: Southworth Mashpee Properties, LLC 130 Willowbend Drive Mashpee, MA 02649
THE ÉLECTRICAL ENGINEER OR LIGHTING VENDOR. ALL UTILITY CUTS THROUGH EXISTING CONCRETE OR BITUMINOUS CONCRETE PAVED SURFACES SHALL BE WCUT. BACK FILLING OF TRENCH SHALL INCLUDE 12" IN DEPTH FLOWABLE FILL TO THE BASE COURSE OF SURFACE TREATMENT. THE SURFACE TREATMENT SHALL THEN BE REPLACED IN KIND. SITE CONTRACTOR TO OWN ALL EXCAVATION, TRENCHING, & BACKFILLING FOR ALL UTILITIES AND CELLANEOUS WORK INCIDENTAL TO THE SCOPE OF THE PROJECT AND CONTRACT DOCUMENTS. NTRACTOR SHALL REFER TO MEP AND LANDSCAPE PLANS BY OTHERS FOR ADDITIONAL INFORMATION AS PLICABLE. ALL WORK WITHIN THESE PLANS SHALL BE PERFORMED AND PROVIDED BY THE CONTRACTOR IN CORDANCE WITH THE SPECIFICATIONS REFERENCED AND CONSTRUCTION DETAILS PROVIDED IN THIS PLAN THE THER OR NOT THE DETAIL NUMBER IS SPECIFICALLY REFERENCED. ALL COVERS, CURB BOXES, GRATES, AND OTHER FINISH SURFACES SHALL BE RESET TO THE NEW FINISH ADE. THE FIRST 10 FEET FROM THE BUILDING FACE FOR STORM DRAIN, SEWER AND WATER PIPING SHALL LOW THE PLUMBING CODE. REFER TO PLUMBING PLANS BY OTHERS AS APPLICABLE.	PROJECT TITLE Cranberry Point 275 Quinaquisset Avenue Mashpee, MA 02649
WHERE UTILITES CALLED OUT TO BE ABANDONED OR REMOVED AS NEEDED, CONTRACTOR SHALL OWN AOVING ALL TANKS, PIPE AND APPURTENANCES AS NEEDED WHERE WITHIN THE PROPOSED AREA OF WORK.	Image: Second state       Image: Second state         Image: Second state       Image: Second state </td
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Itiple	iredBuffer Mitigation	Area N	Wetland Restoration Required (Ac)	)					ENGINEERING &
			the form of Wetland Restoration of existing active Bog Areas. As						SURVEYING
2.9 3.3	sf 117,562 24,347	Ac. 2.70 0.56	this is a higher form of						
1.0	33,329	0.77							Registered Professional Engineers and Land Surveyors
		4.02							1597 Falmouth Road
		0.11							Centerville, MA $02632$ Phone - (508) $771 - 7502$
		3.91	0.25 '	*	0.98				Fax — (508) 771—7622 www.baxter—nve.com
			to Bylaw Mitigation Table. Between a 5 to 6:1 ratio is required at 0 ft to 10 ft buffer						
			impact. Reasoning a 4:1 credit ratio for actual wetland restoration vs. buffer restoration						
Requir	ed Wetland Replicationsf	n Area Ac.							
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S.	C-	CAPE COD BERM (CCB) N.T.S.	C-	BITUMINOUS CONCRETE PAVEMENT SECTIONS	N.T.S.
	411	DETAIL	418	DETAIL	





SILT SACK	N.T.S.
DETAIL	



### **NEW BUSINESS**

MASHPEE PLANNING BOARD	
RECORD OF SPECIAL PERMIT PERFORMANCE GUARANTEE	
Project 314 Nothan Ellis - Willians File/Plan Number	
Date special permit endorsed 1/19/22_Recorded at Book Page Occupancy Release approval date 10/27/200 (Aled w/ Aer 1/20/2022 Land Court Document 1,453,787 Form of guarantee: Peash Deposit Bond Other (explain) Attach copy of check or other documents	22
Amount of guarantee \$ <u>2300</u> Name of guarantor (if not cash)	
Submitted by Lisci otti CRE LLC Address Deprinsles MA 0443 Phone 978-860-106	S
Guarantee received by: E. Lehror Grand Date:	
For Mashpee Planning Board Date:	
Cash deposited to: Bank Town Treasurer Account type Account # Account #ACCOUNT #A	
Other Security held by in	
Construction to be completed by Performance guarantee to expire on	
Date (if any) Date(if any)	
REDUCTION OF PERFORMANCE GUARANTEE	
At its meeting of the Planning Board voted to reduce the above guarantee amount to \$	
Must be signed by a majority of the Planning Board	
Released funds returned to:	
At its meeting of the Planning Board voted to further reduce the above guarantee amount to \$	
Must be signed by a majority of the Planning Board	
Released funds returned to:Signature of Owner/Applicant/Guarantor Date	
At its meeting of the Planning Board voted to further reduce the above guarantee amount to \$	
Must be signed by a majority of the Planning Board	
Released funds returned to:	

Note: Attach copy of expense vouchers for released funds

### RELEASE OF PERFORMANCE GUARANTEE

Planning Board Consulting Engineer's or Town Planner's Certification that secured work has been completed:

Consulting Engineer / Town Planner Signa	ature Date	_
Based on the representations of the applican Planner, the Mashpee Planning Board voted at its meeting of	t and the certification of the Board's Consult to release any remaining performance gua	ing Engineer or Town rantee for this project
	Must be signed by 4/5 o	f the Planning Board
Date of submission of final expense voucher	Must be signed and attached for r	release of deposits of money
Remaining guarantee returned by Treasurer	Town Treasurer	Date
Guarantee received by	Owner/Applicant/Guarantor Signature	Date

.



Town of Mashpee

16 Great Neck Road North Mashpee, Massachusetts 02649

#### Mashpee Planning Board Notice of Decision

January 20, 2022

You are hereby notified that the Mashpee Planning Board has filed its decision with the Town Clerk on January 20, 2022 at the Town Hall, Mashpee, Massachusetts on the petition of Lisciotti Development Corporation for approval of a Special Permit to construct a 4,000 s.f. retail paint store (Sherwin Williams) to be located at 413 Nathan Ellis Highway (Route 151). This application was made pursuant to the Mashpee Zoning Bylaw Sections 174-31 (N)(8), 174-25(E)(1), 174-24(C), 174-37, 174-82(1), 174-82(4), 174-41 (M), 174-31(N)(14).

The petition has been granted with conditions/modifications. The Planning Board's decision and project plans may be viewed at the office of the Town Clerk. Appeals, if any, may be made pursuant to Chapter 40A, Section 17 of Massachusetts General Laws within 20 days of the date of filing with the Town Clerk indicated herein.

Deborah Dami Town Clerk

January 9, 2024

**TO:** Evan Lehrer Town Planner, Town of Mashpee Elehrer@mashpeema.gov

FROM: Bill Russell, CEO
Cape Pickle, LLC
166 Hollidge Hill Lane, Marstons Mills MA
774/602-0404 wruss14@gmail.com

SUBJECT: 51 Evergreen Circle – Rezoning for Pickleball and Other Commercial Use

Greetings Evan. As we have discussed on recent phone calls, I am interested in developing 51 Evergreen Circle for use as a +/-35K SF indoor recreation facility that includes pickleball, golf simulators, a pro shop, restaurant and sports themed bar.

I am aware that this lot is in an Industrial zone which does not allow for such use and request support from the town to pursue rezoning. I kindly ask you to bring this proposal along with any supporting documentation you may require for an informal discussion with the planning board to assess feasibility of adding a rezoning vote to the ballot for the May 2024 town meeting.

Please let me know if you need any additional information beyond the additional details that I have provided you with by email.

I believe that this endeavor will be of tremendous value to the residents of the Town of Mashpee.

Best Regards,

William Russell

#### **Business Plan: Island Pickle**

#### January 8, 2024

#### **Pickleball Complex Description:**

Island Pickle<sup>™</sup>, (IP) Cape Cod's Premier Pickleball Club, is a business of Cape Pickle LLC and is to be located just off Route 130 in Mashpee, MA in a company owned +/-35K SF new construction facility. The primary elements of IP are an indoor recreation destination, consisting of ten indoor pickleball courts, eight Trackman indoor golf simulators, and a restaurant and sports themed bar.

Island Pickle will have full-service locker-room facilities, making it attractive for members and nonmembers alike to sneak in a quick game at any time. Current plans are for the courts to be open seven days a week, 6am to 10pm, weekend hours possibly till midnight and food service approximately 8am-9pm. There will be expert pickleball and professional golf staff members available for private and group lessons, as well as a pro shop which will provide clothing sales, paddles for sale or rent, and various other pickleball and golf products for sale.

Courts and golf simulators will be available to use on a per hour or multiple hour basis and will be available to members and non-members alike. Memberships will have increasing benefits and reservation windows based upon the specific plan chosen. Memberships will have annual and/or monthly fees as well as discounted per play fees. Non-members will be welcome to use all facilities albeit on a higher charge basis. In addition to individual play, Island Pickle will host several tournaments each year and will also offer league play, for example, age group specific, women only, men only, high school, corporation, etc. Leagues.

The location of Island Pickle just off Route 6 on Evergreen Circle is ideally located for convenient commuting throughout upper and mid-cape as well as just a short distance from the Sagamore Bridge making it convenient to many off-cape patrons as well. By example, the location is approximately 12 miles from both downtown Falmouth and the Cape Cod Mall on Rt 132 in Hyannis, 11 miles from the Sagamore Bridge with a convenient drive down Rt 130 off exit 58 (the old exit 2), and 4 miles from Mashpee Commons in Mashpee.

#### **Market Analysis:**

Starting as a sport played mostly by seniors and amateurs, Pickleball courts, complexes, and players - amateur and professional, have ballooned. Today, the fastest growing demographic is the 18-54 age group. According to the Sports & Fitness Industry Association's 2022 Topline Participation Report, released in Feb. 2022, pickleball grew in 2021 to 4.8 million players in the US - an incredible two-year growth rate of over 39%.

The sport, originally developed in 1965 by a couple of Washington State neighbors, was incorporated in 1972 and its first rulebook written in 1984 by the United States Amateur Pickleball Association. Since

inception, the number of people playing has grown each year and after 2010 began being mentioned as one of the fastest growing sports in the US.

But the sports hyper-accelerated growth started around 2019. This growth has been attributed to several factors, including;

- A new player can start enjoying the sport at the first introduction
- People of varying ages and physical abilities can enjoy the game together
- The sport is relatively inexpensive to start playing if a public court is available
- A strong social aspect has developed within the sport
- Experience in other racket sports can easily transfer to pickleball
- Competitive players find the strategic aspects of the sport an exciting challenge

Pickleball is governed by the USA Pickleball Association, which maintains the rules, promotes the sport, sanctions tournaments, and provides player ratings. USA Pickleball includes a network of over 2,000 volunteer ambassadors that promote the sport nationwide by conducting clinics such as "Intro to Pickleball."

Two Professional tours were independently formed in 2019. A professional league was formed in 2021 with numerous sponsors, private investors, and high-profile athletes including LeBron James, Patrick Mahomes, Drew Brees and Tom Brady investing in ownership. The global pickleball equipment market is forecasted to grow at a CAGR of 9% in the period 2023-2033, greater than the actual 5% CAGR in the period 2018-2022. It is estimated that as many as 40 million will play the game by 2030.

Closer to home: There are approximately 225,000 full time residents in Cape Cod, with a median age of 56. Additionally, nearly six-million people visit Cape Cod each year. CCP will be attractive to year-round and seasonal homeowners and to those who visit the cape each summer/fall season and play regularly back home or want to try Pickleball out in a friendly, supportive environment.

Pickleball has significantly gained in popularity over the last two years on the Cape and the demand has surpassed the available court capacity, outdoors and indoors. There are thousands of pickleball players in the Greater Cape Cod area. Over 1800 members belong to the Barnstable, Yarmouth, and Dennis/Wixom Pickleball Clubs, with play almost exclusively outdoors. Several towns limit membership size because of limited court availably. At the Marston Mils' courts last summer, there were many days where 12 courts of 4 players each were in use and over 50 players waiting to play. During the winter, even on days when the temperature is in the 30's, 7-8 courts are in regular, daily use.

But the fun stops at dusk, or when it's raining. Further, there has been an increase in noise complaints from neighbors that abut some outdoor courts nationwide that have forced towns to put hourly restrictions or an outright ban at some locations on outdoor play. Bans have already occurred in Falmouth earlier last summer and discussions are underway to limit early and evening play in Marstons Mills due to neighbor complaints. The need for indoor courts is compelling across many fronts. It's good for town managers, good for neighbors, and good for the players.

There are only a few Indoor pickleball court venues on Cape Cod; Two being at the Mid-Cape Athletic Club in S. Yarmouth and Willy's Gym in Eastham. Wily's has recently announced expanding to nine

courts at their lower cape location of Eastham which further substantiates the value proposition of Island Pickle here on Mid-Cape. The other indoor courts on cape are multi-use courts at local boys' and girls' clubs, schools, or other town facilities with flooring more often built for basketball than pickleball.

Todd Reed, managing partner at Aimwell Development Co. (ADC), has built two Real Dill Pickleball Clubs in St. Louis, MO, and Columbus, OH, and they are in the process of finalizing plans for five more, says a company rep. ADC had previously been solely focused on hotels and the hospitality space. While opening a hotel in Kansas City, Reed and his team were struck by the potential they saw in another venue in the city — Chicken N Pickle — which pioneered the pickleball/restaurant hybrid. That franchise has since expanded with locations in Wichita, KS; Overland Park, KS; San Antonio, TX; Grand Prairie, TX; and Oklahoma City, OK.

In Malvern PA, a complex called Bounce Pickleball wass set to open last winter. At a cost of the more than \$4 million, this facility will feature 16 courts, a teaching pro, instructors, and programming that will include court rentals, open-play events, tournaments, leagues, one-on-one and group lessons, clinics, drills sessions, and "facilitated play" where members can experience playing against some of the country's top players.

Talen Singer and Bill Davis, developers of Bounce Pickleball, aren't limiting themselves to just one center. They plan to open six Bounce Pickleball centers in the region over the next two years, and eventually expand to as many as 18 facilities stretching to the Jersey Shore.

Numerous similar complexes have opened nationwide in the past couple years including a venue in Boston called PKL, Pickles in Hanover MA and more opening virtually every week nationwide. As example to the Massachusetts interest in this sport, PKL rents courts from \$50 to \$100 per hour with the highest rates late at night and weekends.

Just a fad or is Pickleball a long-term trend? At one-point (1970s-1980s) racquetball was the fastest growing sport and soared to over 12million players versus the 3.5million who play today. Stacie Townsend writes in an article on thepickler.com that the decline of racquetball had much to do with "1) Increased competition from other racquet sports, as well as other fitness crazes that offered club and gym owners higher profit margins per square foot which pushed to displace courts space, and 2) Advances in the technology of racquetball equipment changed the game making it too fast, and too difficult for new players to enter the game."

She goes on to write: "The sport of pickleball is clearly in its growth phase. Many, including sports expert and MIT Senior Lecturer, Ben Shields, think pickleball is here to stay and is not a fad."

It's too soon to tell how pickleball may be impacted by technology changes, but its steadfast popularity with the senior crowd, as well as the ability for families of all ages to play together, socialize, and have fun suggest that pickleball has tremendous opportunities for increased demand and growth for years to come.

Pickleball is a game that is easy to learn, accommodates players of all skills, and results in less wear and tear on the body due to court size and type of equipment used. And what's better to do after a game than to grab a quick shower and relax with friends and family over a drink or two. Well, you can at IP.

#### **Financial Analysis:**

Forecasted revenues are generated from the sports of Golf and Pickleball, Restaurant and Bar and the Pro shop. Revenue streams from Pickleball and golf include the following:

- Membership annual fees (tiered structure)
- Member and non-member booking fees
- Sanctioned and recreational tournaments
- League play
- Seasonal programs
- Pro-Shop rentals and sales
- Corporate and vendor sponsorships
- Lessons and clinics

Island Pickle has forecasted annual sales into three seasons, Summer (June-Sept), Shoulder (Oct-Nov and Apr-May), and Winter (Dec-Mar) and conservatively estimates greatest usage in the winter month months. That said, there is significant upside for increased court usage and revenues in all seasons, including Winter, that is not yet factored into the financial modeling.

#### Summary:

*Island Pickle* offers a newly created and one of a kind pickleball venue on Cape Cod for enthusiasts and non-enthusiasts alike. The combination of the court complex and golf simulators with full bar and restaurant offers a unique alternative for full-time and seasonal residents, for corporate and private parties/events, tournament and league play, as well as just a great place to enjoy year-round. And the location in Mashpee, just a few miles down route 130, will allow patrons to visit from throughout cape cod and Plymouth County.

# A review with the Cape Cod Commission

January 8, 2024

Bill Russell CEO, Cape Pickle, LLC President, Cape Cod Pickleball, Inc

#### Business Plan: Cape Cod Pickleball, Inc.

March 22, 2023

#### Pickleball Complex Description:

Island Pickle, Cape Cod's Premier Pickleball Club, (IP) is a for profit enterprise to be con Landing At Hyannis (LAH), a shopping complex on Rt 132 (also known as the Kmart Plaz redeveloped by WS Development. WS Development recently secured a 49-year lease and has similar shopping properties in Massachusetts that include The Street, Chestnu Place, Dedham; The Shops at Blackstone Valley, Millbury; Wareham Crossing, Warehar Street Shops, Hingham - to name a few of their 46 properties in Massachusetts and 10 across the United States. LAH is poised to become a destination shopping location on the process of securing a 10-year, renewable lease on these grounds.

Non-Member

Dink

Ace

Pickler

Founder\*

Approximately 42K SQFT of what was the Kmart store will be conve consisting of: ten indoor pickleball courts, a restaurant and sports t a seven station Trackman Indoor Golf Simulator area. IP will have making it attractive for members and non-members alike to sneak iummer Revenue (13 We plans are for the courts to be open seven days a week, 6am to 11p with food service approximately 8am-9pm. There will be expert p members available for private and group lessons, as well as a pro s Number of courts Hours of Operation / Day paddles for sale or rent, and various other pickleball products for s

Courts and golf simulators will be available to use on a per hour or available to members and non-members alike. Memberships will reservation windows based upon the specific plan chosen. Memb monthly fees as well as discounted per play fees. Non-members albeit on a higher charge basis. In addition to individual play, If IP will also offer league play, for example, age group specific, corporation, etc. leagues.

Combining the courts and golf simulators with a full bar and regames, will encourage players to bring family and friends to wa meal. Other activities that will attract folks to the emporium v entertainment, and special events. This robust sport, eating, g attract and grow membership and drop-ins, in conjunction wit customers to LAH, and subsequently IP.

#### Market Analysis:

Starting as a sport played mostly by seniors and amateurs, Pick amateur and professional, have ballooned. Today, the fastest group. According to the Sports & Fitness Industry Association released in Feb. 2022, pickleball grew in 2021 to 4.8 million play growth rate of over 39%.

all, Inc					Island	Pickle Fi	inancial	Summary	/ - 20 M	ay 2023	: Target Case					
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ickler	\$1,250	\$625	\$0	10 Hours/month	1 Free/yr, \$75	14	yes	20%	20%		Taxes @ 16% \$	2,351.15				
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under*	\$5,000	"Club Lifetime	\$0	30 Hours/month	∠ Free/yr, \$/5	21	yes	20%	20%		iotal Payroll monthly \$	17,045.81				



### Golf Simulator Area – Seven Stations plus putting Green





Each Station with comfortable seating plus bar top. Open walkway to putting green

Open / Windowed wall between pickleball and golf to 1) connect all areas and 2) keep pickleball noise in court area

### But after seven months.... no lease nor LOI

# **THEREFORE, A NEW PLAN:**



Let's Build It Ourselves!



### Build New -Conceptual Layout

#### Notes:

- Courts: 30ft x 60ft. Inside court (20x44 ft) min ceiling clearance height of 22 ft. (height to lowest obstacle)
- Outdoor Patio poured floor only with exterior fence.
- Additional Storage Outbuilding: Pad only with power
- Pavilion courts: the two green walls can open to outside with garage doors or equivalent. Other two walls are solid with windows.
- Indoor courts: Purple wall has windows to see courts. Else solid – same as other walls.
- Restaurant has 30 person section that can be closed off for private parties. But connects to other seating.
- Office sized to allow for couch, cabinets, and desk







- Requires rezoning
- No town sewer

- C3 3.59 ACRES
- Street has other commercial businesses
- Convenient to upper/mid cape & Plymouth
- Size of building would be "hidden" from residential and small business buildings

### **Discussion Topics**

- 1. Is anyone else pursuing a pickleball complex with CCC on Cape Cod?
- 2. Given current info, would one option be advantaged by CCC over the other?
- 3. Can I pursue rezoning with the town of Mashpee in parallel with CCC process for Option 1?
- 4. What level of planning can I complete with a town in parallel with CCC process?
- 5. What is the CCC initial opinion of the value of Island Pickle to the community?
  - a) A Cape Cod solution to mounting neighbor concerns of outdoor play noise
  - b) A community activity center for all ages
  - c) Economic growth for Cape Cod
  - d) Low impact to natural resources given the footprint of the two land options
  - e) What else?
- 6. What development details are required to complete a full CCC review?
  - a) Civil engineering of plot including building footprint, parking and drainage?
  - b) Traffic Study Would option 2 require given location?
  - c) Exterior building design details?
  - d) Septic design details?
  - e) What else?
- 7. What else do I need to know?
- 8. (Given what you have seen) what is an estimate of the cost and timeline to complete a CCC review?

### **OLD BUSINESS**



16 Great Neck Road North Mashpee, MA 02649

Special Permit Modification #2 BCDM, LLC (Original Applicant) Ockway Highlands LLC (Owner) "Ockway Highlands" Cluster Subdivision Blue Castle Drive / Degrass Road

#### I. <u>Proposal</u>

This decision concerns an application made by Ockway Highlands LLC (applicant), P.O. Box 1726, Mashpee, MA 02649 to further modify the special permit originally issued to BCDM, LLC, 66 Charles Street, Suite 215, Boston, MA 02114 (precedent in title) authorizing a 15-lot cluster subdivision (hereafter, the "Project") located across approximately 12.09 acres of land now improved as authorized with 11 new single-family dwellings across the 15 created building lots. Four of the approved subdivision lots with frontage on the new subdivision street Carriage Road have not yet been built upon. The subject properties were shown on Mashpee Assessor's Map 104 as Lots 14, 20 and 28 (mother parcels) at the time of the subdivision's approval in 2013.

As submitted, the Project was depicted on a 11-sheet plan set entitled "Proposed Subdivision of Land, "Ockway Highlands" in Mashpee, Massachusetts" prepared by Costa Associates, Inc., issued on June 1, 2013. The original proposal was for 16 lots, which was later reduced to 15 lots, including one lot to be donated for affordable housing. The plan set included the installation of a sidewalk along one portion of Blue Castle Drive. This application requests approval to modify the special permit decision to note that the requirement to install the sidewalk as shown on the approved subdivision plans has been waived in totality and is no longer a required condition of the special permit approval.

#### II. Jurisdiction

This application was made and this Decision has been issued by the Mashpee Planning Board pursuant to Sections 174-24.C, 174-47, and other provisions of the Mashpee Zoning By-Laws (the "By-Laws") as they existed on December 20, 2023, the date on which this Special Permit modification decision was approved. Where reference is made to the By-Laws, it shall refer to the provisions thereof as they existed on December 20, 2023. This project is also subject to the applicable provisions of M.G.L. Chapter 40A, Section 9.

This proposal is not subject to review as a mandatory Development of Regional Impact by the Cape Cod Commission.



16 Great Neck Road North Mashpee, MA 02649

#### III. Chronology

On December 6, 2023, the Planning Board at a public meeting considered a request by the applicant to treat this modification as "minor" in nature without the requirement to open a public hearing. On December 6, 2023 the Planning Board found that the requested modification may impact abutting land owners and voted to set a public hearing date.

A hearing was opened before the Mashpee Planning Board at the Mashpee Town Hall, 16 Great Neck Road North, Mashpee, Massachusetts on December 20, 2023. Notice was duly given to abutters in accordance with Massachusetts General Law Chapter 40A. Notice was given by publication in the Mashpee Enterprise, a newspaper of general circulation in the town of Mashpee on November 24, 2023 and December 1, 2023.

The proposed modification was reviewed at the December 20, 2023 meeting and the Planning Board voted to make the following findings and approve the modification to the Special Permit subject to the conditions enumerated below. The members of the Board were recorded as voting as follows upon a motion made by Dennis Balzarini and seconded by Mike Richardson: Members Faulkner, Waygan, Richardson, Balzarini, and were recorded as voting in favor of the modification, no members were recorded as voting against.

#### IV. Findings

- 1. Written and verbal testimony were submitted to the record by parties of interest with overwhelming support to grant the modification. The testimony from abutting property owners was that they supported the proposal to remove the required sidewalk and that the proposed modification would not negatively impact them.
- 2. At a public hearing held on December 20, 2023 pursuant to M.G.L Chapter 41 Section 81T the Planning Board voted unanimously to further waive the requirement to install a sidewalk at least 4' in width on at least one side of a street under its Rules and Regulations Governing the Subdivision of Land.
- 3. The proposed modification conforms with the requirements of Zoning Bylaw Section 174-24 (C)(9)(d) in that it proposes modifications only to roadway facilities and does not involve any increase in the size of residential or non-residential structures within the project, does not increase the land area occupied by any use within the project and otherwise conforms with the zoning bylaw applicable to the land at the time of the original special permit approval.
- 4. The project satisfies the requirements of Massachusetts General Law Chapter 40A, in that it complies with the general purposes and intent of the Mashpee Zoning By-Law on the applicable dates.



16 Great Neck Road North Mashpee, MA 02649

5. In conformance with the provisions of Article VI, Section 174-24.C.(2) of the Zoning Bylaw, the Planning Board finds that the proposal will not adversely affect public health or safety, will not cause excessive demand on community facilities, will not significantly decrease surface or ground water quality or air quality, will not have significant adverse impact on wildlife habitat, estuarine systems, traffic flow, traffic safety, waterways, fisheries, public lands or neighboring properties, will not cause excessive levels of noise, vibration, electrical disturbance, radioactivity or glare, will not destroy or disrupt any species listed as rare, endangered or threatened by the Massachusetts Natural Heritage program or any known historic or archaeological site, will not produce amounts of trash, refuse or debris in excess of the town's landfill and waste disposal capacities, will provide adequate off street parking, will not cause excessive erosion or cause increase runoff into neighboring properties or into any natural river, stream, pond or water body and will not otherwise be detrimental to the town or the area.

#### V. <u>Conditions</u>

1. Condition #1 of the original special permit decision is now modified to read as follows:

"Construction of the Project shall be done only in accordance with the 11-sheet plan set hereby approved by the Planning Board entitled "Proposed Subdivision of Land, Ockway Highlands, in Mashpee, Massachusetts" prepared by Costa Associates, dated July 15, 2013, revision date May 1, 2014 consisting of the following sheets: 1) Index Sheet, 2) Definitive Subdivision Plan, 3) Grading Plan, 4) Road Profile, Blue Castle (Proposed Improvements), 5) Road Profile, Carriage Road (Proposed), 6) Utility Layout, 7) Drainage Area of Contribution, 8) Drainage Details 1, 9) Drainage Details 2, 10) Utility Details and 11) Existing Road Improvement Plan except for the sidewalk shown on the north side of Blue Castle Drive between the eastern boundary of the Project and Carriage Road noted in Finding #35 of the original special permit decision. The Planning Board further waived this requirement in accordance with Section IX(I) of the Board's Rules and Regulations Governing the Subdivision of Land. The installation of a sidewalk on at least one side of the street as shown in the plans is no longer required.

- 2. The Applicant is to submit for review a limited "As Built" Plan to the satisfaction of the Planning Board's Consulting Engineer showing all lots, location of concrete bounds, surface location of catch basins and drain manholes, entrances to driveways, the cluster box unit area (mailboxes), telephone poles, edge of pavement, edge of slope of detention basins, existing structures where visible, and inlets to retention basins.
- 3. All other conditions of the original special permit remain in full effect and shall be binding not only on the applicant but also on all successors in interest and assigns of the applicant.


## **Planning Board**

16 Great Neck Road North Mashpee, MA 02649

### VI. Expiration, Extension or Modification

This Special Permit Modification shall lapse only as part of any lapse of the original Special Permit as previously approved. It may be further modified under the terms of Section 174-24.C(9) of the Mashpee Zoning By-Law.

### Signature and Filing

This Special Permit decision document, which incorporates by reference herein all attachments and plans, has been approved on this \_\_\_\_\_ day of \_\_\_\_\_\_, 2024. A copy of same shall be filed with the Town Clerk in accordance with applicable law.

Mashpee Planning Board - Duly Authorized Member

Commonwealth of Massachusetts Barnstable, ss

On this \_\_\_\_ day of \_\_\_\_\_, 2024 before me, the undersigned notary public, personally appeared \_\_\_\_\_\_, a member of the Mashpee Planning Board, proved to me through satisfactory evidence of identification, which were \_\_\_\_\_, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that (he/she) signed it voluntarily for its stated purpose.

Notary Public My Commission Expires:\_\_\_\_\_

A copy of this decision and the accompanying plans endorsed by the Planning Board has been duly filed on \_\_\_\_\_\_ with the Town Clerk of Mashpee.

Town Clerk

I, Deborah Kaye, Town Clerk of the Town of Mashpee, hereby certify that a copy of this decision and the accompanying plans endorsed by the Planning Board were filed with the office of the



## **Planning Board**

16 Great Neck Road North Mashpee, MA 02649 and that no appeal of that decision was filed within 20

Town Clerk on	 and that no	appeal	of that	decision	was	filed	within	2
days thereafter.								

Town C	lerk			
Date: _		 	-	

Upon expiration of the statutory appeal period with no appeal having been filed, this Special Permit decision has been endorsed by the undersigned members of the Mashpee Planning Board on \_\_\_\_\_\_ and may be recorded.

### **RE: Sherwin Williams**

Edward Pesce <ed@pesceeng.com>

Mon 1/8/2024 11:42 AM

To:Evan Lehrer <ELehrer@mashpeema.gov> Cc:Karyn Leslie <kleslie@mashpeema.gov>

**Attention!:** : Links contained herein may not be what they appear to be. Set. Please verify the link before clicking! Ask IT if you're not sure.

Yes - all set.

Send me what you need me to sign, no problem.

By the way, did the check ever get processed for my final invoice?

Thanks,

ED

### Edward L. Pesce, P.E., LEED<sup>®</sup>AP Pesce Engineering & Associates, Inc.

43 Porter Lane West Dennis, MA 02670

(A Veteran Owned Small Business)

Cell: 508-333-7630 Ed@PesceEng.com

From: Evan Lehrer <ELehrer@mashpeema.gov> Sent: Monday, January 8, 2024 11:33 AM To: Edward Pesce <ed@pesceeng.com> Cc: Karyn Leslie <kleslie@mashpeema.gov> Subject: Sherwin Williams

Ed,

We are working on closing out the accounts for the withdrawn and completed projects. Can you write to me to confirm your satisfaction with Sherwin Williams and that construction has been completed in substantial conformance with the approved plans? May also require your signature on a document that I can send to you if you're able to scan and send back.

Let me know.

Thanks, Evan

### **Evan Lehrer, MPA**

### - - - /

### Town Planner

Town of Mashpee

16 Great Neck Road North

Mashpee, MA 02649

elehrer@mashpeema.gov

(508) 539-1400 x 8521

To see if the Town will vote to repeal Section 174-17.1: Raze and Replace of the Mashpee Zoning Bylaws and replace with a new Section 174-17.1 Raze and Replace as follows:

### **Purpose and Intent**

Buildings or structures that are nonconforming by dimension are likely if they are changed, extended or altered, to cause overcrowding and congestion in the neighborhoods and are contrary to the purposes of this bylaw. Buildings or structures that are nonconforming by dimension inhibit present and future development of nearby properties. It is intended that existing buildings or structures that are nonconforming by dimension shall not justify further departures from this bylaw. This section is intended to provide clarity to property owners and any applicable special permit granting authority which changes, extensions, or alterations of a pre-existing dimensional conformity may constitute detriment to the neighborhood in which the proposed reconstruction is located as to preserve the character and general scale of neighborhoods.

### **General Requirements**

No pre-existing, non-conforming single or two family dwelling structures shall be torn down and rebuilt on any lot unless there is an issuance of a Special Permit from the Zoning Board of Appeals unless the proposed reconstruction qualifies for an exception as defined in this chapter or is otherwise buildable pursuant to Section 174-21 of this bylaw. Such a special permit may be granted only if the Zoning Board of Appeals finds that any changes, extensions, alterations, or reconstruction of the pre-existing nonconformities are not substantially more detrimental to the neighborhood than existed prior to the removal of the existing structure and that there is adequate land area to provide sufficient parking. No new nonconformities shall be permitted without the issuance of a variance from the Zoning Board of Appeals.

# For All Properties except those Located Within the Floodplain Zone Overlay District and/or Popponesset Overlay District

- 1. The Zoning Board of Appeals may approve replacement structures that continue, extend, or alter lawful pre-existing nonconformities as follows:
  - a) For structures that do not comply with one or more required setbacks (front, side, rear, and/or setback to water and wetlands) property owners may increase the footprint within the side, front, rear or water and wetlands setback area provided that the replacement structure is not any closer to the applicable property line (or resource area) than existed previously. Any structure that is proposed to increase the intensity of a setback nonconformity as described shall be considered substantially more detrimental to the neighborhood and shall not be permitted.
  - b) For portions of a structure that are not nonconforming, the replacement structure may increase the building footprint and height to the maximum extent allowed in the applicable zoning district. For example, a 1.5 story house may be replaced with a 2.5 story house or a house with 20 feet to the side property line may be replaced with a house that is 15 feet from the side property line. The creation of any new nonconformities shall be considered substantially more detrimental to the neighborhood and shall not be permitted.

- c) For properties with pre-existing lot coverage nonconformities, the Zoning Board of Appeals may approve replacement structures that maintain, but do not increase, the lot coverage nonconformity. Any increase of a lot coverage nonconformity shall be considered substantially more detrimental to the neighborhood and shall not be permitted.
- d) For structures with nonconformities described in items a-c above (setbacks, lot coverage, and building height) replacement structures may increase the height of replacement structures up to the maximum height allowed in the applicable zoning district. For homes with pre-existing nonconforming building heights, the Board of Appeals can approve a replacement structure that maintains, but does not increase, the nonconforming nature of the building height. Increases in building height nonconformities shall be considered to be substantially more detrimental to the neighborhood and shall not be permitted.

### For Properties within the Floodplain Zone Overlay District and/or the Popponesset Overlay District

The Zoning Board of Appeals may approve replacement structures in the Floodplain Zone Overlay District and/or the Popponesset Overlay District that continue, extend, or alter lawful pre-existing nonconformities as follows:

- a) For structures that do not comply with one or more required setbacks (front, side, or rear) property owners may NOT increase the footprint within the side, front or rear setback area that was pre-existing nonconforming. Increases in the size of the building footprint in the Floodplain Zone Overlay and Popponesset Overlay Districts shall be considered substantially more detrimental to the neighborhood than existed previously and shall not be permitted. The location of the footprint of a replacement structure may be adjusted on the lot so long as the overall footprint area is not larger than existed previously and is otherwise compliant with the provisions of this bylaw.
- b) For replacement structures that propose to continue a pre-existing side, front, or rear setback nonconformity than any increase in building height within the nonconforming setback area shall be considered substantially more detrimental to the neighborhood than existed previously and shall not be permitted. Building height may increase provided that the increase in height is located within the portion of a structure that conforms with the applicable setbacks of the underlying zoning district or overlay as applicable. For example, a house that is situated 10 feet from a property line where 15 feet is required may increase the height of a building at the 15 foot setback line. The portion of a home within the nonconforming setback area shall not exceed the height of the home that existed previously.
- c) Any reconstruction of a single or two-family dwelling that renders any portion of the lot outside of the building footprint impervious shall be considered substantially more detrimental to the neighborhood than existed previously and shall not be permitted. Previously existing impervious surfaces shall be replaced with pervious materials.

#### Exceptions

- The voluntary demolition and reconstruction of a single or two-family residential structure may be approved as of right by the Building Commissioner if the reconstruction complies with all current setbacks, lot coverage, and building height requirements defined in 174-31 but is located on a lot with insufficient area and/or insufficient frontage where the reconstruction will also comply with all of said current requirements except frontage and/or lot area.
- 2. The voluntary demolition and reconstruction of a single or two-family residential structure that is reconstructed within the same footprint, building height, and the same volume or less as the building voluntarily demolished may be approved as of right by the Building Commissioner.

# TOWN PLANNER REPORT

Evan Lehrer Community Development Director (508) 539-1414 elehrer@mashpeema.gov



Planning Department Mashpee Town Hall 16 Great Neck Road North Mashpee, MA 02649

To:	Erin Perry, Deputy Director
	Cape Cod Commission
From:	Evan Lehrer, Community Development Director
Date:	January 18, 2024
Re:	Regional Housing Strategy Comment

On page 82 of the Draft Regional Housing Strategy there are a series of zoning strategies contemplated that are specific to the Town of Mashpee. As you know, Mashpee is nearing the completion of its updated Housing Production Plan (HPP) where zoning strategies have been contemplated and refined among the Affordable Housing Committee, Planning Board and Select Board. Subsequent to two joint meetings with the Planning Board and Select Boards the zoning strategies contemplated in the draft HPP provided to the Commission for compliance with the terms and conditions of our District Local Technical Assistance grant funding have been further modified and, in some cases, are now in conflict with the strategies contemplated on page 82.

As such, I am providing as public comment a summary of the strategies that have been voted on by the Planning Board and Select Board for inclusion in the draft HPP. Specifically each Board expressed concerns over the allowance of duplexes/triplexes throughout the Town by-right and, further, the Boards maintain concern with a by-right permitting process for multifamily projects and mixed-use projects. Of primary concern to Planning Board and Select Boards is the lack of existing wastewater infrastructure and the severely polluted waters within Town limits. The modifications to the strategies I'm outlining below leave the door open for future consideration of these strategies but whilst the water quality remains so poor, neither entity felt it advantageous to consider strategies that would impact the sewer systems' ability to arrest and eventually reverse the degradation. The zoning strategies contemplated in the HPP update are as follows:

- Establishing conventional zoning overlay districts or form based code overlay districts if desired in developed areas with suitable infrastructure, particularly for wastewater collection and treatment, which would allow townhouses and/or multifamily buildings commonly identified as building types in the "missing middle."
- Allowing conversion of existing single-family homes to small multifamily homes by special permit so long as parking maximums are imposed.
- Amending the Town's Cluster Development Bylaw to allow additional residential uses beyond what is allowed in the underlying zoning.
- Replace the OSID Bylaw with a new transfer of development rights bylaw that provides for protection of open space.

While we recognize that the strategies contemplated in the Draft Regional Housing Strategy are recommendations for each municipality, the severity of the pollution here in Mashpee leaves decision makers weary of prioritizing zoning strategies that may have a negative impact on the investments currently being made to address that problem. As such, we wanted to make sure the Commission was made aware of why some of these strategies are infeasible at this time.

# CORRESPONDENCE

### TOWN OF BARNSTABLE PLANNING BOARD NOTICE OF PUBLIC HEARING MONDAY, JANUARY 22, 2024, AT 7:00 P.M. JAMES H. CROCKER, JR. HEARING ROOM BARNSTABLE TOWN HALL, 2ND FLOOR, 367 MAIN STREET, HYANNIS, MA

#### SPECIAL PERMIT NO. 2024-01 WINNDEVELOPMENT COMPANY, LP -- 307 MAIN STREET, HYANNIS

To all persons deemed interested in the Planning Board acting under the General Laws of the Commonwealth of Massachusetts, Chapter 40A, Section 9, and all amendments thereto and the Town of Barnstable Zoning Ordinances you are hereby notified of a Public Hearing to consider a request for a Special Permit Application No. 2024-01.

The Applicant WinnDevelopment Company, LP and Owner 307 Main Street Nominee Trust, Conrad Watson, have requested relief pursuant to Section 240-1.5(C)(2)(b) Parking Standards and Section 240-57, Circumstances warranting reduction of requirements. The application proposes 122 parking spaces of varied parking dimensions. The application seeks to confirm compliance with the zoning ordinance or grant any necessary relief for parking dimensional standards. The subject property is located at 307 Main Street, Hyannis, Massachusetts, shown on Assessor's Map 327 Parcel 103, zoned Downtown Main Street Zoning District and Wellhead Protection Overlay District.

The Planning Board meeting shall take place in person at the James H. Crocker, Jr. Hearing Room, Barnstable Town Hall, 2<sup>nd</sup> floor, 367 Main Street, Hyannis, MA.

The meeting will be televised via Channel 18 and may be viewed via the Channel 18 website at <a href="http://streaming85.townofbarnstable.us/CablecastPublicSite/">http://streaming85.townofbarnstable.us/CablecastPublicSite/</a>.

Documentary exhibits and/or visual presentations should be submitted in advance of the meeting to <u>Karen.pina@town.barnstable.ma.us</u>, so that they may be accessible for viewing.

Copies of the Special Permit application are available for review by calling 508-862-4064 or emailing <u>Karen.pina@town.barnstable.ma.us</u> or on the Town of Barnstable webpage, <u>www.town.barnstable.ma.us</u> under Planning Board, "meeting materials".

Barnstable Patriot January 5 & January 12, 2024 Stephen Robichaud, Chair Barnstable Planning Board

**Received By** 

JAN 8 2024 Planning Dept.

## **Received By**



JAN 1 0 2024 Planning Dept.

TOWN OF FALMOUTH MASSACHUSETTS

### **BOARD OF APPEALS**

## **Notice of Decision**

Notice is hereby given that the Board of Appeals of the Town of Falmouth has made a decision on a petition by Paul and Amy Sellers, 606 West Falmouth Highway, West Falmouth, Ma. (Map 24A Lot(s) 001U - 009U) under 240-12.4(1)(b) of the Zoning By-Law, as amended to **uphold** the determination of the Building Commissioner regarding the landscaping at the above referenced property.

Appeals, if any, shall be made pursuant to the Massachusetts General Laws, Chapter 40A, Section 17, and shall be filed within twenty (20) days after **January 5, 2024** which is the date the Decision was filed in the office of the Town Clerk.

Please contact Noreen Stockman at 508-495-7460 or <u>Noreen.stockman@falmouthma.gov</u> if you have any questions or comments full text of decision available at http://www.falmouthmass.us