

2018

Campanelli Business Park



Reimagined

Prepared for:

The Town of Stoughton, MA

By: Old Colony Planning Council

NOTICES

The preparation of this report has been financed through the Massachusetts District Local Technical Assistance (DLTA) Program. The views and opinions of the Old Colony Planning Council expressed herein do not necessarily state or reflect those of the Massachusetts Executive Office of Housing and Economic Development.

This report is a supplement to the report titled Campanelli Business Park Economic Revitalization Study that was prepared by OCPC in January 2018.

This report includes material prepared by Kleinfelder, the consultant supporting the Town in this sewer expansion effort.

The *Town of Stoughton Campanelli Business Park Reimagined Report* was prepared by the following members of the Old Colony Planning Council staff under the direction of Pasquale Ciaramella, Executive Director.

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ACKNOWLEDGEMENTS

Old Colony Planning Council would like to thank all of the people who contributed to the completion of this Study including:

Robin Muksian, Town Manager, Town of Stoughton
Marc Tisdelle, Former Interim Town Manager, Town of Stoughton

Pamela McCarthy, Economic Development Director

On the cover:

Photo of 180 Campanelli Parkway, a 2-story warehouse built in 1968 and 12 Campanelli Parkway, a 1-story warehouse built in 1969.

To illustrate maximum potential, we included an example of a 3-story Manufacturing/Industrial building.



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Executive Summary

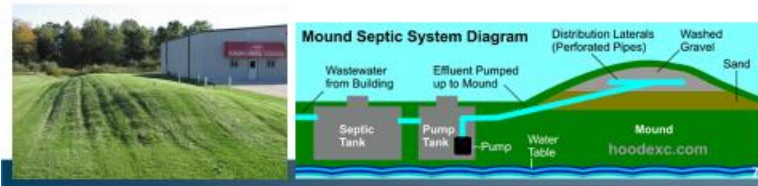
Background

Campanelli Business Park (the Park) is an approximately 429 acre, industrial zoned business park located in the southeast section of Stoughton and containing approximately 18 parcels. The commercial area consists of thirteen parcels, ten on Campanelli Park Drive and three on Shuman Avenue, which are zoned industrial and contain factory or warehouse uses. The business park is centrally located with easy highway access and direct routes to downtown Boston and Providence, or a reverse commute from towns west of Boston as well as proximity to I95 and I495. Commuter rail station in downtown Stoughton. The property falls into the priority funding area of Planning Ahead for Growth and Economic Target Area and is also the location of the twenty-two acre medical marijuana treatment and dispensing facilities and cultivation overlay.

PROPOSED SEWER EXPANSION PROJECT

Rationale for Recommending Sewer Expansion

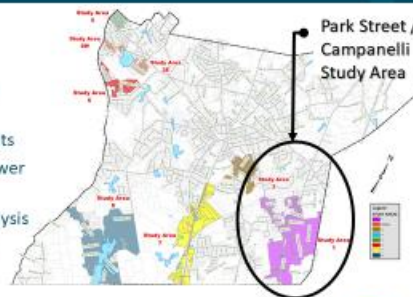
- **Septic System**
 - Requires upkeep
 - Limits use of property
 - Expensive to replace (>\$25,000)
 - Mounded Systems needed to account for high groundwater and poor soils
- **Public Sewer**
 - Little to no upkeep
 - Increases options for use of property
 - Permanent solution
 - Increases property value
 - Annual increase to tax revenue over \$1.5 Million



The Park currently relies on private septic stems for wastewater disposal. The Town of Stoughton has completed nine studies since 1963, including a sewer prioritization plan in 2015, which evaluated unsewered areas on the basis of public health, environmental need and economic benefits and potential. The Park Street/Campanelli area was confirmed to be the top priority by a wide margin. Plans have been presented before town meeting on several occasions and failed. A new plan, dated December of 2018, contemplates a wastewater connection with Brockton as well as an expansion of the MWRA public infrastructure and/or a combination of both proposals. This plan removes some residential areas from the scope and offers six alternatives which include options for phasing the project and incorporating cost saving alternatives other than conventional sewer, like low pressure sewer. All of these alternatives come with pros and cons that should be weighed by the public and elected officials alike. Should the Town decide to move forward, sewer connection could be provided to the Park in the next two years.

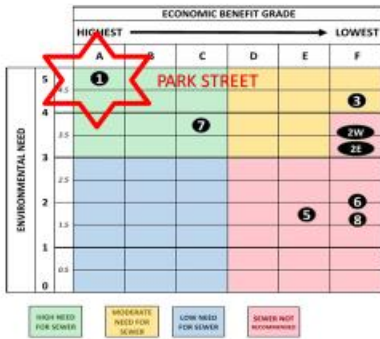
Project Overview

- 9 Studies since 1963
- Focused study since 2012
 - ✓ Confirmed Park Street is Top Priority Unsewered Area
 - ✓ Established Economic Benefits
 - ✓ Updated Betterment and Sewer Connection Policies
 - ✓ Completed Alternatives Analysis
 - ✓ Evaluated Cost-Benefit over 25-Year Life Cycle



The Town commissioned this report to document the existing conditions in the business park and lay groundwork for assessing the economic development potential if public sewer improvements were made. The report is organized into four sections; existing conditions, zoning and build out analysis, market analysis and recommendations.

Project Benefits



BENEFITS

- Economic Growth
- Open Opportunities for Improved Land Use
- Increased Land Value
- >\$1M Increase in Tax Levy per Year
- Public and Environmental Health Protection



Existing Conditions: Describes existing conditions in the Park, including zoning, land use, physical conditions, business profile, property ownership, property values and vacancies.

Zoning and build out analysis: presents theoretical maximum development potential in the park under existing town zoning and highlights parcels that may present shorter-term development

opportunities.

Market Analysis: presents elected socioeconomic data for the town of east compared to surrounding counties and the commonwealth of MA, describes current market conditions and recent trends for office and research development, R & D space, and industrial space in the suburban Boston area; present MA employment trends and projections, describes the industrial business park landscape, and describes types of businesses that typically require wastewater treatment.

Recommendations: suggests actions that would help maximize the Park's development potential and steps for further evaluating the economic development implications of providing sewer infrastructure to the Park.

History



Above: Lucius Clapp Memorial Library, Built 1903

The Town of Stoughton has a population of 28,260 and a median household income of \$75,109 which is higher than the median income of Bristol County and the Commonwealth of Massachusetts but lower than the median income of Norfolk and Plymouth Counties. Stoughton is an aging community with a quickly growing senior population. By 2030, 21 percent of the region's population will be over the age of 65, compared to almost 14 percent in 2013. This increase in the town's senior population will mean there will have to be increased resources dedicated to this segment of the public. In the coming years this increased support could prove

to be a financial strain on the town making studies like this one more important than ever. The town of Stoughton will have to carefully examine the best opportunities for economic development to maintain and enhance its local business community. Increased business will result in increased prosperity and tax revenue the town can use to provide services to its people. The Campanelli Business Park is a site that has the potential to be better utilized and attract new types of businesses that would be an economic boon to Stoughton.

The highly educated residents of Massachusetts represent the largest age 45 and older population within the New England region. Stoughton is no exception, having a significant portion of its population over the age of 45 being highly educated. The largest share, (26.35%) of Stoughton residents are employed in the educational services and health care industry, followed by the retail trade industry (11.03%) and the professional, scientific and management industry (10.95%). Industries projected to increase employment opportunities in the Commonwealth include Ambulatory Health Care Services at 24.30 percent, Social Assistance by 16.10 percent and Hospitals at 12.2 percent. Stoughton should look at these growing industries as potential opportunities for expansion and additional employment in the Campanelli Business Park.

Manufacturing has long been an industry that has employed large portions of middle-class individuals in well-paying jobs, but in recent decades the number of manufacturing jobs has been on a steady decline. This trend is true in both the Commonwealth and the entire country. The state has lost about 50,000 manufacturing jobs, or 17 percent, over the past 10 years, according to data from the federal Bureau of Labor Statistics. In fact, the total manufacturing Industry sector is projected to further lose 4.4 percent of its employment base throughout the Commonwealth and 5 percent on its employment base in the Metro South region during the 2014-2024 period. These projections as well as national trends signal that the environment is not favorable for manufacturing jobs and any projects to grow or revitalize business parks like Campanelli should look to attract businesses from other economic sectors.

Below: Stoughton Center



Amid shrinking numbers of manufacturing jobs in the Bay State over the past decade, the Commonwealth is leading the way nationally in pharmaceutical-manufacturing job growth. Massachusetts has more employment classified as Biotechnology Research and Development than any other state. During the period 2007 through 2015, the state has added 6,904 jobs in the industry that makes ingredients and biological components to be used in drugs, ending the 2015 year with a

40 percent increase. The number of so called “biopharma-manufacturing” jobs in the Commonwealth grew by 1,477 to 10,616 from 2007 to 2015, a 12 percent increase. Another economic sector that has shown significant growth over the past decade is Health Care and Social Assistance. This industry has added 135,994 jobs since 2006 alone, a 30 percent increase since 2006. Stoughton must look at what the jobs of tomorrow will be and what industries will show growth in both the short and long term. Biopharma-manufacturing jobs and especially jobs in health care and social assistance can fill the Campanelli Business Park if the correct updates are made by the town. These industries have potential to assist with fully populating the business park and providing the opportunity to employ hundreds of new workers. About one in five working residents of Stoughton, work in Stoughton. A more filled in and prosperous business park could likely increase the percentage of Stoughton residents who work in the town. Additional employment opportunities in these fields will have a two-fold effect; attracting more highly skilled and educated workers to Stoughton, and decreasing the unemployment rates of Stoughton and the general region.

A successful update and revitalization of the Campanelli business area has the potential to bring new business, well-paying and highly profitable employment opportunities, and increase the general tax revenue for Stoughton. *These benefits are significant, however, the financial cost of what it will take to attract these new industries is similarly substantial.*

In order to stay competitive the site should evolve in order to meet the needs of a new generation. Industrial space is abundant in the area with some biotechnology parks already in existence. The younger entrepreneur has different needs including upgraded telecommunications, open space amenities and utilities like sewer capacity, stormwater management and energy efficiency. Emerging industry including Marijuana and energy generation, R & D and manufacturing are also a good fit for this area.

Guiding Principles:

- Recognize and understand the unique asset that exists in the Business Park due to the superior location
- Economic development is an investment in the future of your community
- Economic development plans must have community consensus
- Develop a plan that matches the community vision
- Understand the obstacles opportunities and critical issues of your community
- Pay attention to existing business
- Maintain and upgrade infrastructure
- Form public and private partnerships to further community and regional goals
- Protect resources and ensure high quality development
- Act on opportunities rather than reacting to problems
- Develop reasonable time frames and measures of success
- Communicate plans to the community in a regular and timely manner
- Create a business-friendly environment

Introduction

The objective of this report is to aid the Town of Stoughton in making decisions regarding the improvement of amenities within the Campanelli Business Park. Upgrading amenities, including installation of a gravity fed sewer line and installation of fiber technology, would help this aging industrial area to become the vibrant business center it could be by both retaining current tenants and attracting new classes of buildings, companies, workers and a mix of entertainment, recreation, retail and residential uses. Public sewer is the preferred option over private septic systems because it requires no upkeep, increases options for the use of the property, provides a permanent solution and increases property value. The Town of Stoughton, Board of Assessors has estimated a sewer expansion would provide an estimated 1.5 million annual increase to tax revenue.

Documented sewer need in project area includes:

Project History16

STUDIES

1. Report on Sewerage Facility (1963), Maguire
2. Sewer Needs Study (1980), Maguire
3. Analysis of Fiscal Issues: Park Street Sewer Project (2012), Connery Associates
4. Rte. 27 Infrastructure Needs Assessment (2012), OCPC
5. Upper Taunton River Regional Wastewater Evaluation (2012), CDM/WSE
6. Sewer Priority Plan (2015), Kleinfelder
7. 23L Funding Evaluation (2017), Town of Stoughton
8. Park Street Phasing Study (2017), Kleinfelder
9. Park Street Brockton Study (2018), Kleinfelder

POLICY EVALUATIONS (2016)

- Betterment Policy
- Connection Policy



Commercial and industrial uses can be developed in a format that is friendlier to pedestrians and cyclists and minimizes car trips by allowing for a mix of uses in close proximity. Upgraded open spaces are attractive to new businesses and their employees and can revitalize the area. Most uses even light industrial activities are compatible and can be located close together. Making Stoughton’s business parks and industrial areas ore inviting to pedestrians and workers will increase interest in new investment and business development.

The revitalization of this older industrial park will have significant ongoing economic impacts on Stoughton. This area and the legacy it represents, ban be the building block for a new economic development strategy. By focusing attention and policies that encourage a broader mix of building types, scale and uses, the town is directing resources to the areas that would benefit most. Resuscitating some of the larger sites and underutilized buildings in the industrial park must be a priority if Stoughton is going to maximize the infrastructure investment that will be required to serve the area.

In order to stay competitive the site should evolve in order to meet the needs of a new generation. Industrial space is abundant in the area with some bio-technology parks already in existence. The younger entrepreneur has different needs including upgraded telecommunications, open space amenities and utilities like sewer capacity and energy efficiency. The property falls into the priority funding area of planning ahead for growth and economic target area and is alto the location of the twenty-two acre medical marijuana treatment and dispensing facilities and cultivation overlay.

Existing Conditions

The Campanelli Business Park is a generally well-maintained park with low vacancy rates, competitive rental rates and a mix of businesses. Tax record data from the Town Assessor’s Office and input from local brokers indicate the following key characteristics:

- The Park contains thirteen (13) industrial zoned parcels, 10 on Campanelli Park Drive and 3 on Shuman Avenue, and a total of 1.4 million SF of building space.
- Building sizes range from 24,210 SF to approximately 327,880 SF
- Approximately 75 percent of the commercial buildings in the park are over 50,000 SF.

- Three buildings are under 50,000 SF, while ten are greater than 50,000 SF
- Five buildings are greater than 100,000 SF
- Approximately 85 percent of the commercial buildings are single story structures.
- The Park is primarily warehouse and light industrial uses.
- The largest blocks under single ownership contain approximately 18.5 acres each.
- There is 723,800 SF of available space on seven sites.
- Rental rates in the Park are competitive compared to surrounding areas.

The Park consists of thirteen parcels on Campanelli Park Drive and Shuman Avenue which are zoned industrial. There are currently 1.4 million SF of commercial industrial and warehouse space in the Park.



Above: 44 Campanelli Parkway

There is 723,800 SF of available space on seven sites. Approximately 75 percent of the commercial buildings in the park are over 50,000 with the average of the thirteen parcels averaging 106,767 SF. Three buildings are less than 50,000 SF and five buildings are greater than 100,000 SF.

Existing uses include trucking and distribution, flooring and carpet sales, warehousing, moving and storage and container distribution. Some of the land is

environmentally constrained with wetlands and a high water table. Properties are reliant on septic systems since there is currently no sewer service available in the area. The existing water line is an eight inch line, which is not looped. There are no fiber optic lines serving the Park at this time. The Park could benefit from developments of an overall infrastructure improvement plan for the area addressing both public and private utilities. When improvements to the water, sanitary and storm sewer systems are made, an additional line should be laid for the potential future use for fiber to improve telecommunications. Within the Campanelli Business Park there are eight parcels with frontage on Campanelli Parkway containing one-story structures and two parcels that contain two-story structures. Of the two remaining parcels fronting Campanelli Parkway, one depicts the roadway layout, and the remaining parcel contains wetlands and stormwater management.

Of the parcels with structures on Shuman Avenue, all three contain one-story buildings. The remaining three parcels on Shuman Avenue depict the roadway layout, wetlands, and a land locked parcel located behind 200 Shuman Avenue.

Table 1: Existing Conditions Campanelli Business Park (Campanelli Park Drive & Shuman Ave parcels)

Built Type	Square Footage
Warehouse 1-Story	785,833
Warehouse 2-Story	406,720
Light Industrial 1-Story	195,425
Total Existing Square Footage	1,387,978

Zoning and Build-Out Analysis

The Campanelli Business Park is a relatively mature park, with few vacancies and limited available vacant land. Development potential on several of the Park's vacant parcels is constrained by wetlands, floodplains or irregular lot shapes. Some of the vacant parcels are suitable for substantial new development and many of the lots with existing structures are not built to the extent permitted by existing zoning regulations.

In order to understand the maximum capacity for new development within the park, a park wide build-out analysis was conducted. A primary goal of this analysis was to establish a theoretical ceiling for building square footage within the park under existing zoning regulations. Thus, the base analysis was conducted utilizing a "clean slate" approach, i.e. assuming that any existing structures in the park could be reconfigured or expanded to maximize allowable square footage. This theoretical ceiling is unlikely to be realized for a number of reasons. For example, maximizing built square footage on some of the park's irregularly shaped parcels would necessitate irregularly shaped buildings that would be expensive to design and construct and/or difficult to market to certain types of tenants. In addition, many existing buildings in the park are in good condition and are unlikely to be demolished or reconfigured by property owners in the foreseeable future. Recognizing such constraints, the district-wide build-out analysis is supplemented with a discussion on build-out potential for parcels that may represent shorter-term development opportunities.

Campanelli Business Park Parcels considered for Build-Out Analysis

Table 2: Campanelli Parkway Properties

Parcel ID	Address	Owner	Built Type	Finished Area (s.f.)
087 025 0	Campanelli Parkway	181 Campanelli Parkway LLC	Roadway layout	0
088 144 0	Campanelli Parkway	Town of Stoughton	Vacant land – wetlands	0
088 138 0	12 Campanelli Parkway	Stag Stoughton 2 LLC	1969 Warehouse 1 story	50,832
088 146 0	17 Campanelli Parkway	Franklin Sports Industries Inc.	1971 Warehouse 1 story	115,000
088 139 0	44 Campanelli Parkway	44 Campanelli Holdings LLC	1975 Industrial Light 1 story	110,100
088 145 0	75 Campanelli Parkway	NCHWU LLC	1979 Warehouse 1 story	65,000
088 140 0	100 Campanelli Parkway	Stag Stoughton 1 LLC	1977 Warehouse 2 stories	327,880
088 141 0	146 Campanelli Parkway	One Forty Six Campanelli Stoughton	1969 Warehouse 1 story – Marijuana Overlay District	41,516
099 010 0	175 Campanelli Parkway	Elan Realty LLC	1979 Industrial Light 1 story	29,925
087 026 0	179 Campanelli Parkway	179 Campanelli Parkway LLC- Haemonetics	1884 Industrial 1 story	55,400
087 027 0	180 Campanelli Parkway	180 Stoughton LLC	1968 Warehouse 2 stories	78,840
087 024 0	181 Campanelli Parkway	181 Campanelli Parkway LLC	1989 Warehouse 1 story	60,900
Total Finished Area (Square Footage)				935,393

*Table 3: Shuman Avenue Industrial Zoned * Parcels*

Parcel ID	Address	Owner	Built Type	Finished Area (s.f.)
099 009 0	Shuman Ave	Schiffman John. R – NCHWU LLC	Vacant	0
100 001 0	Shuman Ave	Town of Stoughton	Vacant – all wetlands	0
099 008 0	37 Shuman Ave	NCHWU LLC	1986 Warehouse 1 story	24,210
088 143 0	139 Shuman Ave	Shuman Realty LLC	1984 Warehouse 1 story – Marijuana Overlay District	271,223
088 142 0	200 Shuman Ave	EIP 20 Shuman Ave LLC	1980 Warehouse 1 story -	157,152
089 142 0	Turnpike St	Helen Crane	Land locked parcel behind 200 Shuman Avenue *this 19 acre parcel is zoned 74% Industrial, 26% Res 55	0
Total Finished Area (Square Footage)				452,585

Below: 139 Shuman Ave, Warehouse built 1984

Marijuana Overlay District



Parcels outside of the Campanelli Business Park

Table 4: Turnpike Street Industrial Zoned Parcels

Parcel ID	Address	Owner	Built Type	Parcel Size (acres)
088 137 0	175 Turnpike St	Clarke Eamon	1900 Old Style 1.75 story	0.52
088 136 0	199 Turnpike St	FADDS LLC	1978 Condo Ind Light 1 story	1.88
088 136 1	199 Turnpike St	FADDS LLC	1978 Condo Ind Light 1 story	
088 136 2	199 Turnpike St	Clarke Eamon	1978 Condo Ind Light 1 story	
088 135 0	213 Turnpike St	213 Turnpike St LLC	1969 Ind Light 1 story	2.24
Total Acres				4.64



Above: 199 Turnpike Street, built 1978



Above: 175 Turnpike Street, built 1900

Three parcels on Turnpike Street were analyzed due to the existing Industrial Use zoning designation. The property located at 175 Turnpike contains a residential structure that according to tax assessment records, was constructed in 1900. The property located at 199 Turnpike contains a 1 story structure with three light industrial condominium units. The property located at 213 Turnpike is currently zoned 63 percent Industrial, 37 percent Res 55, and contains a 1 story structure which according to tax assessment records was constructed in 1969 and is currently occupied by a screen printing business.

Parcels outside of the boundaries of the business park but included in this assessment due to their existing Industrial Use zoning classification, 11 parcels contain frontage on Park Street.

Table 5: Park Street Industrial Zoned Parcels

Parcel ID	Address	Owner	Built Type	Parcel Size (acres)
077 105 0	600 Park St	Scott Carrara	1925 Repair Garage	0.95
077 106 0	614 Park St	Richard Lonnie	repair garage 1 story	3.09
077 107 0	630 Park St	Jeffrey Koss Trustee	1900 office 3 stories	1.85
076 072 0	653 Park St	Tiago Costa	1875 Multi-conv 2 stories	1.95
076 082 0	720 Park St	Janet Jones	1950 Cape 1.75 stories	0.26
087 018 0	1044 Park St	1044 Park Street LLC Kindred Nursing and Rehab	1966 Nursing Home 1 story	4.16
087 019 0	1096 Park St	Evelyn Walsh	1900 Old Style 1.5 story	9.98
087 020 0	1148 Park St	Crown Enterprises/Consolidated Freightways	truck terminal 1 story	4.2
087 022 0	1214 Park St	Group Leasing Company	Office Pro 2 stories	1.06
086 061 0	1228 Park St	McKiernan Realty LLC	Repair Garage 1 story	0.94
086 062 0	1256 Park St	SandJoy LLC	office 2 stories	1.45
Total Industrial Use Zoned Parcels (Acres)				29.89



Above: 1228 Park Ave, built 1967



Above: 1096 Park Ave, built 1900

Parcels outside of Campanelli Business Park

Table 6: Park Street Industrial Zoned Properties

Parcel ID	Address	Owner	Built Type	Finished Area (s.f.)
077 105 0	600 Park St	Scott Carrara	1925 Repair Garage 81% Ind/19% Res 55	3,915
077 106 0	614 Park St	Richard Lonnie	Repair Garage 1 story 86% Ind/14% Res 55	10,504
077 107 0	630 Park St	Jeffrey Koss Trustee	1900 Office 3 stories	16,218
087 018 0	1044 Park St	1044 Park St LLC – Kindred Nursing Rehab	1966 Nursing Home 1 story	21,952
087 019 0	1096 Park St	Evelyn Walsh	1900 Old Style 1.5 story	1,620
087 020 0	1148 Park St	Crown Enterprises	Truck terminal 1 story	9,912
087 021 0	1156 Park St	Arthur Kelley	1900 Old Style 1.5 story Trailer Park 100% Res 55	1,440
087 022 0	1214 Park St	Group Leasing Co	Office Pro 2 stories	16,074
086 061 0	1228 Park St	McKiernan Realty LLC	Repair Garage 1 story	4,920
086 062 0	1256 Park St	SandJoy LLC	Office 2 stories	19,000
086 042 0	1297 Park St	Sukosolovisit Suthin Trustee	1930 store 1 story 46% gen Bus 54% Res 55	4,918
086 065 0	1334-1366 Park St	RK Pine Tree Plaza	1973 Shopping Center 1 story 100% Neigh Bus	116,971
Total Finished Area (Square footage)				227,444

Below: 213 Turnpike Street, Map view

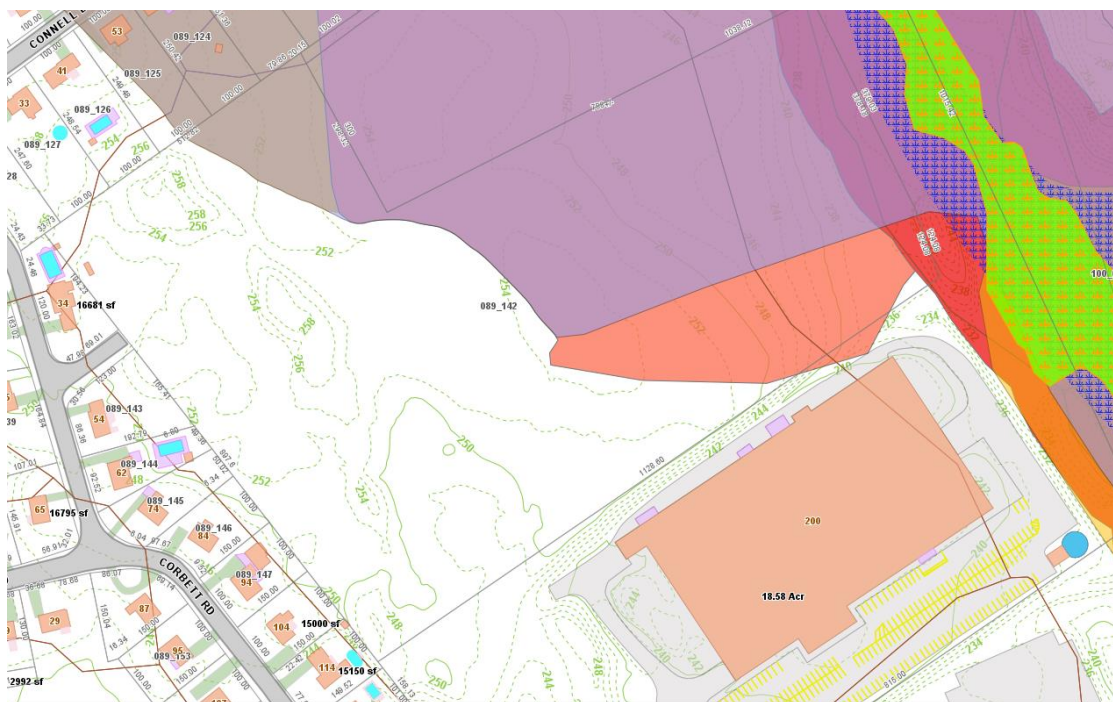


Table 7: Turnpike Street Industrial Zoned Parcels

Parcel ID	Address	Owner	Built Type	Finished Area (s.f.)
088 137 0	175 Turnpike St	Clarke Eamon	1900 Old Style 1.75 story	839
088 136 0	199 Turnpike St	FADDS LLC	1978 Condo Ind Light 1 story	15,876
088 136 1	199 Turnpike St	FADDS LLC	1978 Condo Ind Light 1 story	8,183
088 136 2	199 Turnpike St	Clarke Eamon	1978 Condo Ind Light 1 story	7,595
088 135 0	213 Turnpike St	213 Turnpike St LLC	1969 Ind Light 1 story	29,640
Total Finish Area (Square footage)				62,133

Zoning Regulations Affecting Build-Out Potential

Development in Campanelli Business Park is governed by Industrial (I) zone dimensional and density regulations that specify yard requirements, minimum lot dimensions, maximum building height and number of stories, maximum lot coverage, and by off-street parking regulations that tie parking spaces to building **gross square feet (gsf)** based on different building uses. In addition, development must comply with off-street loading regulations. Table 8 summarizes dimensional, density, and parking regulations that apply to development in the Park.

Table 8: Dimensional, Density, and Parking Regulations for Stoughton Campanelli Park

Dimensional and Density Regulations in Industrial (I) District	
Minimum lot size	80,000 sf
Continuous minimum lot frontage (ft)	150
Minimum front yard depth (ft)	25
Minimum side yard depth (ft)	20
Minimum rear yard depth (ft)	40
Minimum lot depth (ft)	125
Minimum lot width (ft)	125
Maximum building height (ft)	40
Maximum Stories (number)	4
Maximum percent building area	50
Minimum percent open space	25 – requirements of Section 6.1.7 shall apply
Parking Regulations	
New and used car sales and automotive service	One per 1,000 sf of gross floor space
Other retail, service offices, finance, insurance, real estate establishment or shopping center	One per each 300 sf of gross floor space
Wholesale establishment, warehouse or storage	One per each 1,000 sf of gross floor space
Manufacturing or Industrial establishment	One per each 600 sf of gross floor space or 0.75 per each employee of the combined employment of the two largest successive shifts, whichever is larger.

Build-Out Analysis Methodology

Figure 1 illustrates the methodology utilized for the build-out analysis. The analysis utilizes two parallel approaches for estimating maximum gross square footage. The first approach is based on the maximum building footprint per existing Town of Stoughton zoning. The total lot area for each parcel is multiplied by the maximum allowable lot coverage (**50 percent**) and then by an assumed number of stories (up to a **3 story maximum**) for each of the three principal uses in the park.

The second approach **calculates a maximum number of parking spaces** that can be accommodated on each lot, then applies the requirement relating building square feet to parking for the three principal uses in the park. This approach **begins with the total lot area, subtracts the estimated lot area occupied by wetlands, easements, and the estimated lot area required for front and rear yard setbacks** to get an estimated number of square feet of unconstrained land. The maximum permitted building footprint is subtracted from the unconstrained land area to arrive at a maximum area available for parking. This is divided by an assumption of 300 square feet per parking space (including circulation) to yield an estimated maximum number of parking spaces that can be accommodated on the site. As indicated above, existing zoning requires that **one parking space be provided for every 600 square feet of manufacturing or industrial use**. These figures are multiplied by the maximum number of parking spaces to yield a maximum building size. The analysis does not consider loading requirements. Factoring in loading area would nominally decrease the maximum build-out potential for certain uses.

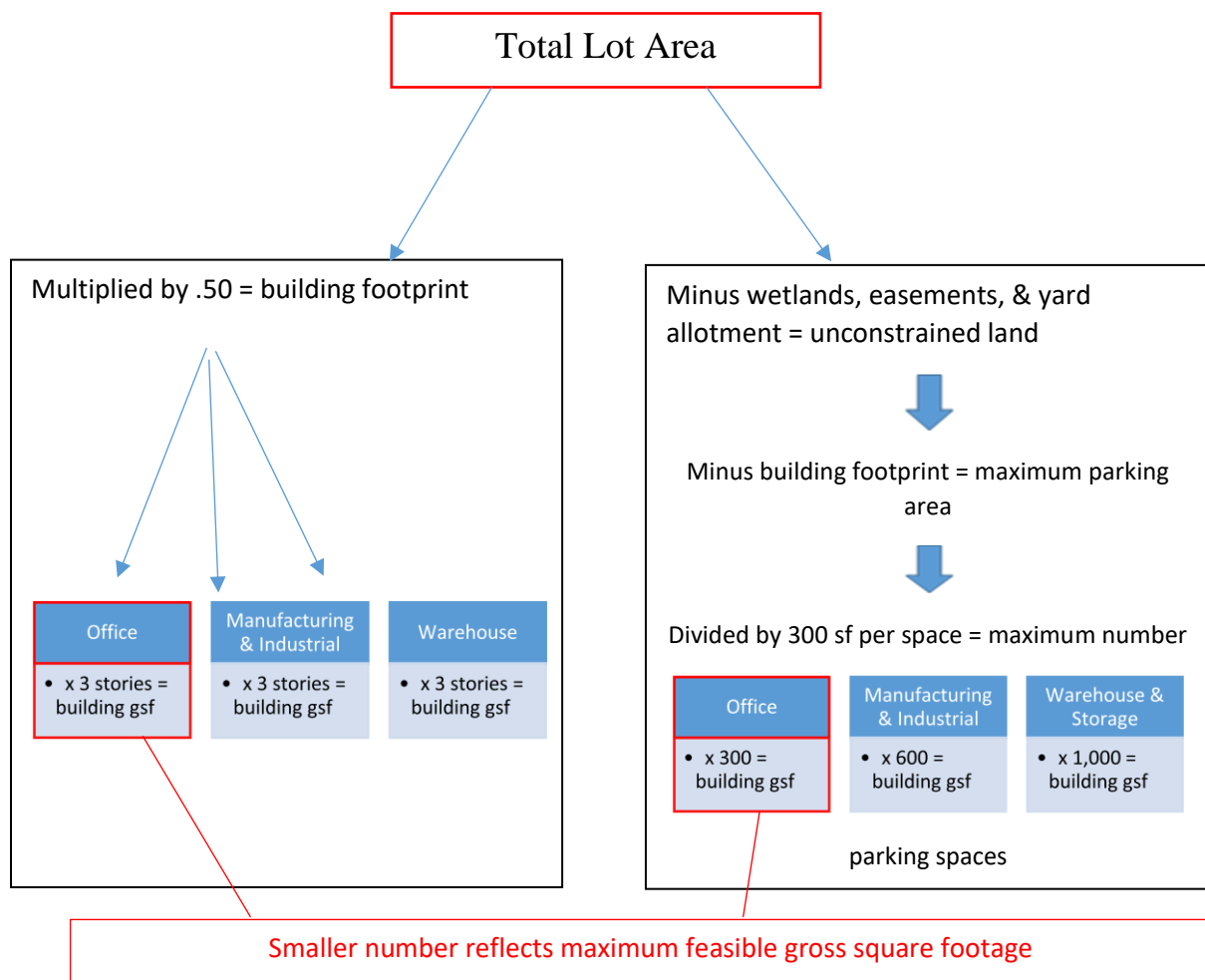


Figure 2 Build-Out Analysis Methodology

The model runs these calculations for each parcel in the Park, and chooses the lower number for each parcel. This lower number reflects the estimated maximum feasible building size for the lot because it takes into consideration both the building footprint constraints and the parking constraints. For some lots, the model calculates a building size associated with a maximum number of parking spaces for the lot, but this building size is not feasible because it would require a larger building footprint than what is permitted under existing zoning. In these instances, the model chooses the building size calculated with the building footprint as the primary driver. For other lots, the model calculates a building size based on the allowable footprint but this building size is not feasible because it would not leave sufficient lot area for the required parking. In these instances, the model chooses the building size calculated with parking as the primary driver.

If all parcels in the Park were developed to their maximum potential, regardless of the use, with single story buildings, building space would decrease by about -13.84 percent, to approximately 1,195,833 square feet. In part this decrease is due to the fact that two of the parcels in the park currently have two story buildings.

Developing the Park with office/retail two-story buildings would yield between approximately 2,391,666 SF a 72.31 percent increase and a three-story rebuild would yield 2,836,784 SF or a 106.77 percent uptick in square footage. Although office and retail space may be a more desirable outcome, it require significant parking requirements, which yield less buildable square footage under the existing zoning.

Developing the park to better the Manufacturing/industrial use would yield 3,248,259 SF or a 134.02 percent increase and three-story construction would yield 4,877,389 SF or an uptick of 251.04 percent under existing zoning.

Warehouse and Storage uses have the lease potential as many modern wholesale warehouse buildings have ceiling heights of 30 feet or more and most are single story. Given the typical single story format for wholesale warehouse buildings, and that the Town zoning bylaws specifies a maximum building height of 40 feet, it is unlikely that the park would ever accommodate buildings classified as wholesale warehouse that are more than one or two-stories. This would limit the maximum two-story build out potential to 2,391,666 F or a 72.31 percent increase.

While the district wide build out analysis is useful in establishing a theoretical ceiling for development in the Park and understanding the relative differences between amount of development that could be accommodated with different types of business tenants under existing zoning, the analysis is illustrative and does not entirely reflect market realities.

Overall, based on existing businesses and land use in Campanelli Business Park, development patterns and densities in surrounding industrial parks, and building specifications required by certain tenants (e.g., ceiling heights), the maximum development potential for the park, including a mix of office, manufacturing, and wholesale/warehouse space, is likely to be in the range of 2,391,666 SF to 4,872,389 SF.

Land Use

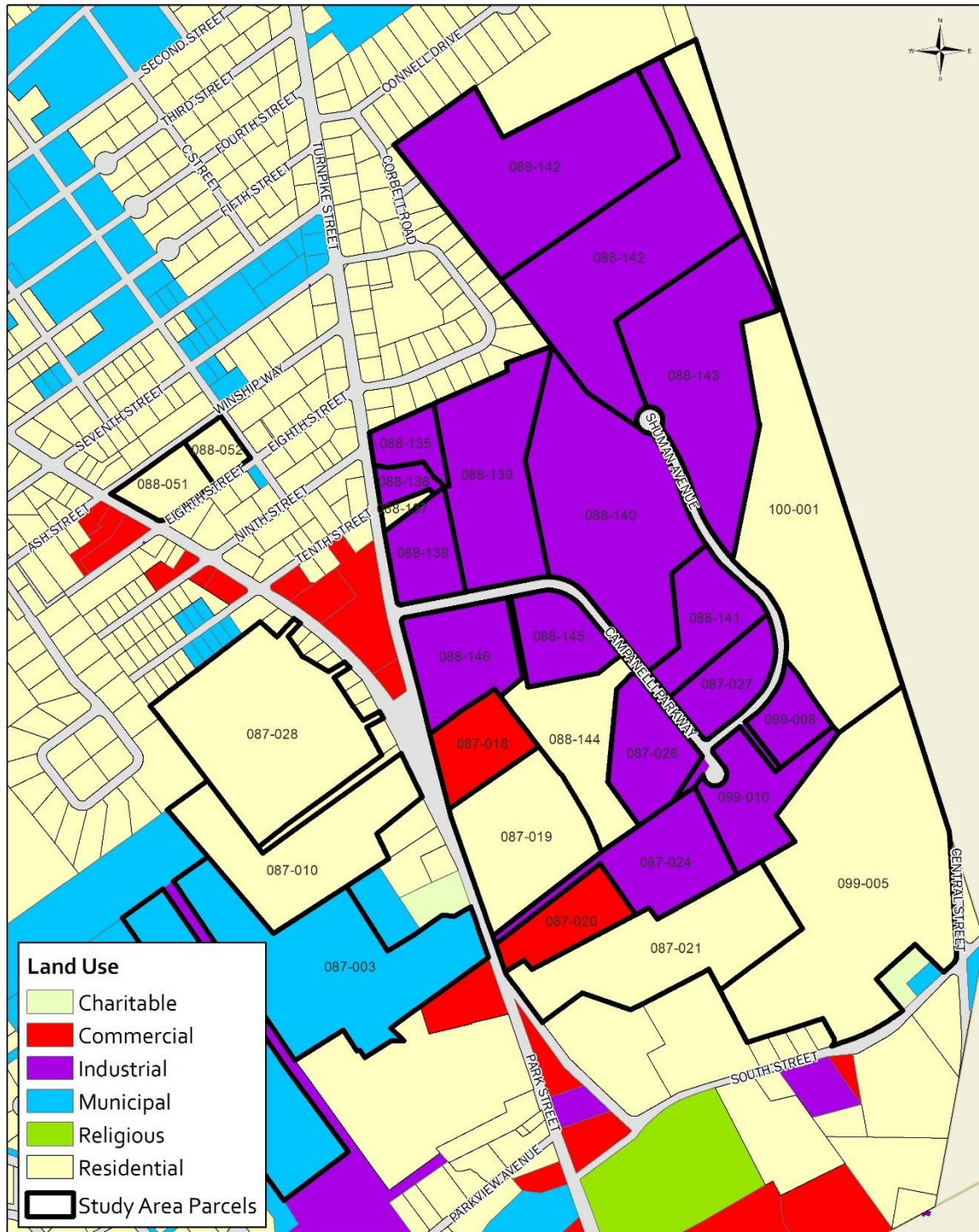


Figure 3 Land Use Map

Park-Wide Illustrative Build-Out

Tables 9 presents results from the district-wide build-out analysis. Given the range of uses permitted in the park and the different parking requirements associated with each use, it is not possible to arrive at a single estimate for maximum build-out potential. The table below is intended to highlight the full range of maximum build-out potential under various scenarios in which the Campanelli Business Park is occupied with all manufacturing and industrial businesses, all wholesale and warehouse, or all office, retail and services businesses. While the park is expected to retain a mix of business types in the future, the build-out analysis highlights the relative differences in build-out potential for the park’s main categories of business.

Table 9: Total Estimated Maximum Build-Out Potential

Office/Retail, Service, Finance, Insurance, Real Estate – Campanelli Parkway, Shuman Avenue, Park Street, South Street, and Turnpike Street

	1 Story	2 Stories	3 Stores
Office/retail, service, finance, insurance, real estate	1,624,130	3,248,259	3,861,241
Less: South Street parcels with residential zoning restrictions	(422,961)	(845,923)	(976,612)
Less: Turnpike Street residential zoning restrictions	(5,335)	(10,671)	(14,735)
Total Estimated Maximum Build-Out Potential	1,195,833	2,391,666	2,869,894

Table 10: Total Estimated Maximum Build-Out Potential Manufacturing Industrial – Campanelli Parkway, Shuman Avenue, Park Street, South Street and Turnpike Street

	1 Story	2 Stories	3 Stories
Manufacturing Industrial Uses	1,624,130	3,248,259	4,872,389
Less: South Street parcels with residential zoning restrictions	422,961	845,923	1,268,884
Less: Turnpike Street residential zoning restrictions	5,335	10,671	16,006
Total Estimated Maximum Build-Out Potential	1,195,833	3,248,259	4,872,389

Table 11: Total Estimated Maximum Build-Out Potential Wholesale Warehouse and Storage – Campanelli Parkway, Shuman Avenue, Park Street, South Street, and Turnpike Street

	1 Story	2 Stories	3 Stories
Wholesale Warehouse and Storage Uses	1,624,130	3,248,259	4,872,389
Less: South Street parcels with residential zoning restrictions	422,961	845,923	1,268,884
Less: Turnpike Street residential zoning restrictions	5,335	10,671	16,006
Total Estimated Maximum Build-Out Potential	1,195,833	2,391,666	3,587,499

As indicated under Existing Conditions, the Campanelli Business Park currently contains approximately 1.4 million square feet of building space, located primarily in single-story buildings.

Office Retail

As shown in Table 9 if all parcels in the Park were developed as **Office/Retail** to their maximum potential with single-story buildings, building space would decrease by about 13.84 percent, to approximately 1.2 million square feet. If all parcels were developed as Office/Retail to their maximum potential with two-story buildings, building space would increase by 72.31 percent. If all parcels in the Park were developed to their maximum potential with three stories of Office/Retail, building space would increase by 106.77 percent.

Manufacturing/Industrial

If all parcels in the Park were developed as Manufacturing/Industrial uses to their maximum potential with single-story buildings, building space would decrease by 13.84 percent. If all parcels were developed as Manufacturing/Industrial uses to their maximum potential with two-story buildings, building space would increase by 134.02 percent. If all parcels in the Park were developed to their maximum potential with three stories of Manufacturing/Industrial uses, building space would increase by 251.04 percent.

Wholesale Warehouse and Storage Uses

If all parcels in the Park were developed as Wholesale Warehouse and Storage Uses to their maximum potential with single-story buildings, building space would decrease by 13.84 percent. If all parcels were developed as Wholesale Warehouse and Storage Uses to their maximum potential with two-story buildings, building space would increase by 72.31 percent. Due to the height restriction in the Zoning Bylaws of 40 feet, three-stories of Wholesale Warehouse and Storage Uses would not be applicable.

Developing the park with two-story buildings would yield between approximately 2.3 and 3.2 million gsf depending on the mix of businesses.

The Campanelli Business Park could accommodate up to 4.8 million gsf of space under existing zoning, if it were built out entirely with Manufacturing Industrial uses located in 3-story buildings.

Table 12: Build Out Potential based on building use and current zoning

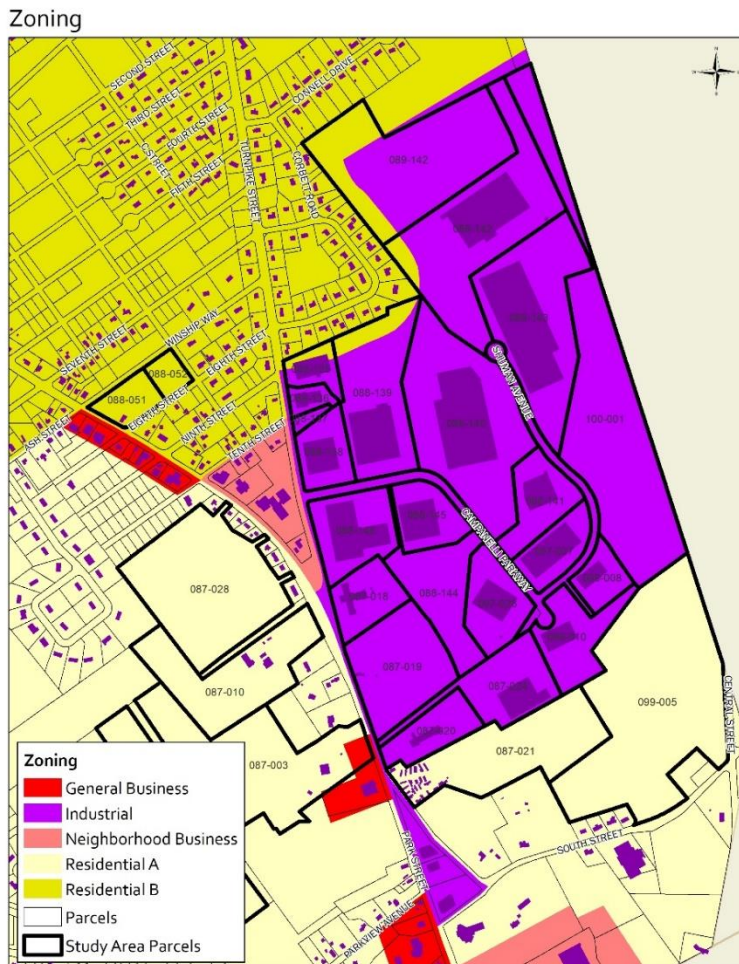
Built Type	1 story	Percent Change	2 story	Percent Change	3 Story	Percent Change
Office Retail	1,195,833	-13.84%	2,391,666	72.31%	2,836,894	106.77%
Manufacturing/Ind	1,195,833	-13.84%	3,248,259	134.02%	4,872,389	251.04%
Warehouse/Storage	1,195,833	-13.84%	2,391,666	72.31%	N/A	

Zoning

The Business Park is located entirely within Industrial zoned district, as is the small triangle of frontage along Park Street, north of South Street. With the exception of the Industrially-zoned triangle north of South Street and the extensive R.K. Plaza area, the land on either side of South Street south of the Business Park is in the Residential A District.

The Industrial District allows most “Wholesale, Transportation and Industrial” uses as of right, but requires a special permit for quarrying and raw material processing. It also allows undefined “other transportation services” (beyond bus, rail, helicopter, and trucks) and Planned Industrial Development, home occupations and accessory stores in an industrial or warehouse building. It does prohibit general waste, hazardous waste, and radioactive waste treatment and disposal facilities, accessory professional offices within 100 feet of a hospital, and various specialized recreation-oriented education activities. The reasons for some of these exclusions are not apparent, except possibly to save industrial land for industrial uses, and to avoid possible use conflicts.

The site contains the twenty-two acre medical marijuana treatment and dispensing facilities and cultivation overlay district (Map 88 Lot 141 and Map 88 Lot 143).



Medical Marijuana Treatment and Dispensing Facilities and Marijuana Cultivation Overlay District

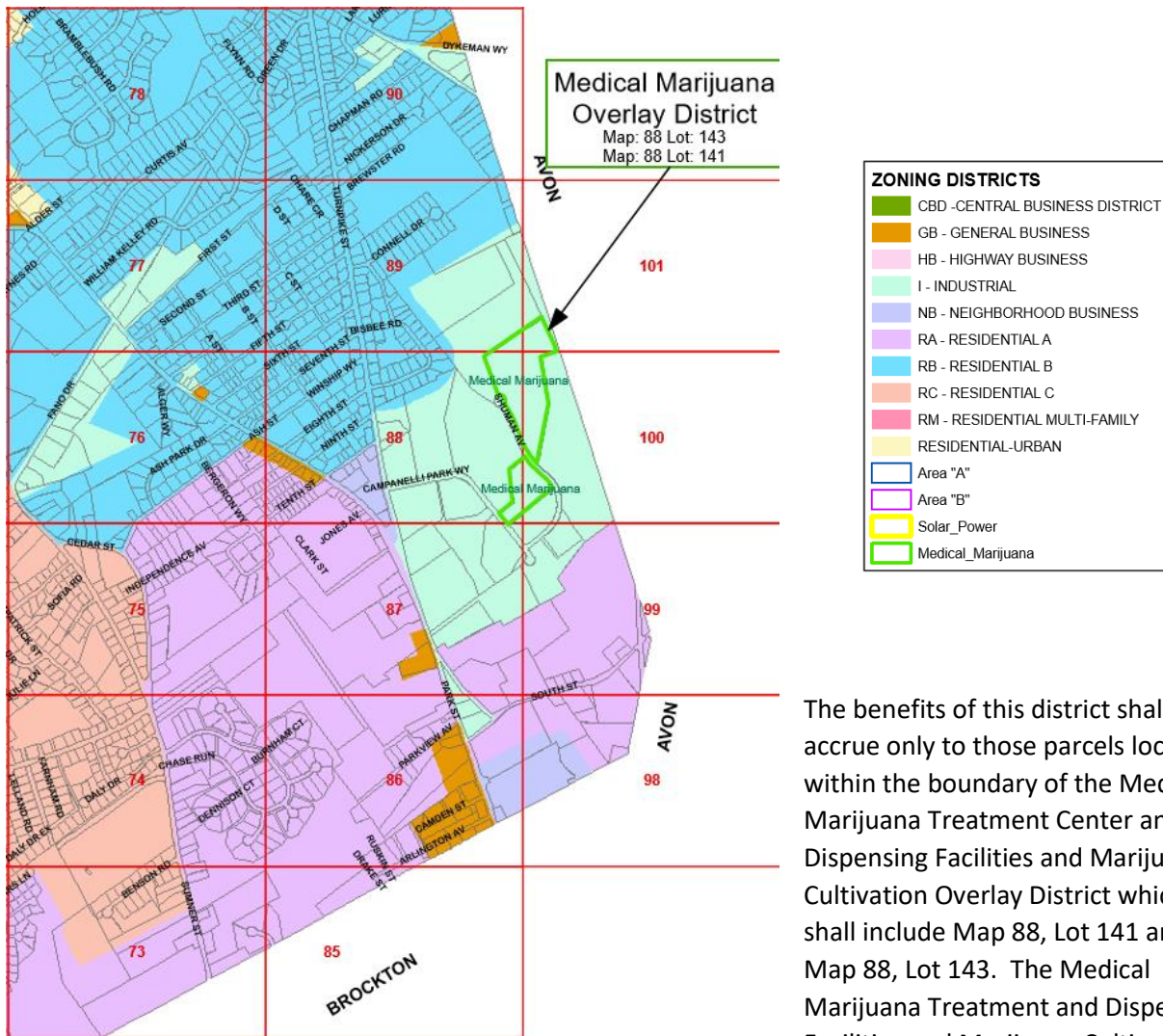


Figure 5 Medical Marijuana Overlay District

The benefits of this district shall accrue only to those parcels located within the boundary of the Medical Marijuana Treatment Center and Dispensing Facilities and Marijuana Cultivation Overlay District which shall include Map 88, Lot 141 and Map 88, Lot 143. The Medical Marijuana Treatment and Dispensing Facilities and Marijuana Cultivation Overlay District is intended to apply

only to a portion of the Industrial Zone as shown on the overlay zoning district map.

The Medical Marijuana Treatment and Dispensing Facilities and Marijuana Cultivation Overlay District shall not restrict the owner's right relative to the underlying zoning districts. If the owner elects to use the Medical Marijuana Treatment and Dispensing Facilities and Marijuana Cultivation Overlay District for development purposes, the development shall conform to the requirements of the Medical Marijuana Treatment and Dispensing Facilities and Marijuana Cultivation Overlay District. Regulations governing the Medical Marijuana Treatment and Dispensing Facilities and Marijuana Cultivation Overlay District are located within the Stoughton Zoning Bylaws, Section 9.5.

Issues and Constraints to Development

For an industrial park to attract development, it must have adequate infrastructure in place. There should be good transportation access to allow for the circulation of goods and people to and from the park, and within the park. For many businesses, access to sewer and water infrastructure is required to support manufacturing processes. Having natural gas infrastructure in an industrial park is also considered an advantage for development. Access to broadband services is also very important for manufacturers and other businesses and is improving as significant public and private investments are being made in broadband infrastructure in the region (for more information, go to www.massbroadband.org).

Identification and remedies to constraints that limit the industrial use of the site.

Major constraints that limit development include natural environment, size and area, access (proximity to highways, rail and roadway capacity), setting, slopes, encumbrances (slopes, wetlands, endangered species, water resources), availability to infrastructure (water, wastewater), legal and regulatory issues, and titles.

Natural Environment: watersheds, topography, geology and soils, wetlands, floodplains, natural habitats.

Size: Generally larger sites (over 25 acres) are more suitable for commercial development than smaller sites. A large site can include greater buffers, setbacks, and building square footage. In addition, if off-site improvements (road, water and wastewater) are required, larger developments with greater building square footages are better able to absorb the costs associated with such improvements.

Shape/Configuration: Symmetrically shaped sites with ample road frontage are more desirable than asymmetric areas. It is more difficult to site a building and associated parking facilities on sites that contain narrow strips of land or land separated by roads. However, narrow strips of land can serve as open space or buffers. Undeveloped parcels separated by existing residential neighborhoods are also difficult to develop. Such land requires multiple setbacks and buffers for each neighborhood.

Proximity to Highways: One of the most important criteria for commercial development is easy and convenient access to the state and interstate highway systems. Sites that are visible from or within ½ mile of an interchange are most desirable. The greater the distance to an interchange the less desirable is the site.

Commercial Areas: Areas with existing commercial development and employment base are also conducive to commercial development. However, many commercial zones are in close proximity to residential neighborhoods. Because of potential conflicts, a lower rank should be placed on commercial areas that are adjacent to residential neighborhoods and zones.

Developed Neighborhood Areas: Vacant land located in or adjacent to residential neighborhoods has similar challenges to the situation noted above. A lower ranking should be placed on areas that are adjacent to residential neighborhoods.

Rural Areas: In addition to potential conflicts with abutting neighborhoods, rural areas also have limited infrastructure and are often the location of rare and endangered species. However, rural areas with few or no residential abutters could provide a suitable location for some types of commercial development.

Slopes: Steep slopes and varied topography require significant amounts of work to prepare sites for development. Significant costs and extended construction time can be significant constraints to development on such sites.

Wetlands: Wetland vegetation tends to occur around pond shores, along stream and river corridors, in depressions (where the land may contact the groundwater) and in salt marshes.

Table 13: Campanelli Parkway Parcels – Built Type and Constraints

Parcel ID	Address	Built Type	Constraint
087 025 0	Campanelli Parkway	vacant land	roadway parcel
088 144 0	Campanelli Parkway	vacant land	BVW Stormwater MGT
088 138 0	12 Campanelli Parkway	1969 Warehouse 1 story	Buffer zone to BVW
088 146 0	17 Campanelli Parkway	1971 warehouse 1 story	septic adequate for 70 employees, portion of property within setback for BVW
088 139 0	44 Campanelli Parkway	1975 Industrial Lt. 1 story	forested wetlands- half of structure within setback of BVW
088 145 0	75 Campanelli Parkway	1979 Warehouse 1 story	large percentage of open space on parcel within BVW setback and floodplain
088 140 0	100 Campanelli Parkway	1977 Warehouse 2 stories	Significant portion of lot within jurisdiction of BVW
088 141 0	146 Campanelli Parkway	1969 Warehouse 1 story - Marijuana	
099 010 0	175 Campanelli Parkway	1979 Industrial Lt. 1 story	no constraint, room for expansion
087 026 0	179 Campanelli Parkway or 37 Shuman Avenue	1984 Industrial 1 story	Not an issue. No process water used, no plans to expand, most of lot within BVW jurisdiction
087 027 0	180 Campanelli Parkway	1968 Warehouse 2 stories	no wetlands on site
087 024 0	181 Campanelli Parkway	1989 Warehouse 1 story	2 areas of wetlands

Table 14: Shuman Avenue Parcels – Built Type and Constraints

Parcel ID	Address	Built Type	Constraint
099 009 0	Shuman Avenue	Roadway layout	
100 001 0	Shuman Ave	all wetlands Town of Stoughton	
099 008 0	37 Shuman Avenue	1986 Warehouse 1 story	wetlands and BVW impact development
088 143 0	139 Shuman Avenue	1984 Warehouse 1 story marijuana district	
088 142 0	200 Shuman Avenue	1980 Warehouse 1 story	2 areas of BVW jurisdiction
089 142 0	Turnpike St	land locked parcel behind 200 Shuman	19 acres requires frontage/access

Table 15: South Street Parcels – Built Type, Zoning District and Constraints

Parcel ID	Address	Built Type	Zoning District	Constraints
086 064 0	39 South St	1960 Old Style Church	100% res 55	adaptive reuse, residential zoning
086 063 0	50 South St	1900 Old Style 2 story	100% res 55	Residential zoning
087 023 0	78 South St	1956 Ranch 1 story	100% res 55	large area of BVW
099 005 0	South St	vacant land	100% res 55	Residential zoning
098 004 0	Central St	vacant land BVW	84% Res 55 16% Neigh Bus	Residential zoning
098 006 0	South St	vacant land	100% res 55	all area within BVW
099 013 0	161 South St	2003 Colonial 2 story	100% Res 55	Residential Zoning
099 015 0	143 South St	vacant land	100% res 55	Residential Zoning
099 016 0	143 South St	1937 Industrial light 1 story	100% res 55	Residential Zoning

Table 16: Turnpike Street Parcels – Built Type, Zoning District and Constraints

Parcel ID	Address	Built Type	Zoning District	Constraints
088 137 0	175 Turnpike St	1900 Old Style 1.75 stories	100% Industrial	small area BVW rear
088 136 0	199 Turnpike St	1978 Industrial 1 story condo	100% Industrial	area at rear within BVW setback
088 136 1	199 Turnpike St	1978 Industrial 1 story condo	100% Industrial	
088 136 2	199 Turnpike St	1978 Industrial 1 story condo	100% Industrial	
088 135 0	213 Turnpike St	1969 Industrial 1 story	63% Industrial 37% residential	BVW at rear of property, 37% of parcel residential

Table 17: Park Street Industrial Zoned Properties, Zoning District and Constraints

Parcel ID	Address	Built Type	Zoning District	Constraints
077 105 0	600 Park St	1925 Repair Garage	81% Industrial 19% res 55	100% of lot within BVW
077 106 0	614 Park St	repair garage 1 story	86% Industrial 14% residential 55	most of the lot is within BVW
077 107 0	630 Park St	1900 office 3 stories	100% Industrial	wetlands greater than 50%
076 072 0	653 Park St	1875 Multi-conv 2 stories	76% Industrial 24% residential 55	
076 082 0	720 Park St	1950 Cape 1.75 story	100% Industrial	
087 018 0	1044 Park St	1966 Nursing Home 1 story	100% Industrial	
087 019 0	1096 Park St	1900 Old Style 1.5 story	100% Industrial	
087 020 0	1148 Park St	truck terminal 1 story	100%b Industrial	
087 022 0	1214 Park St	Office Pro 2 stories	100% Industrial	
086 061 0	1228 Park St	Repair Garage 1 story	100% Industrial	
086 062 0	1256 Park St	Office 2 Stories	100% Industrial	

Environmental Constraints

Campanelli Park is a relatively mature park, with few vacancies and limited available vacant land. Development potential throughout the Park is constrained by wetlands and/or irregular lot shapes. The commercial structures were constructed between the late 1960s and mid 1980s and may not be built to the extent permitted by existing zoning regulations.

Large areas of the Business Park are environmentally constrained with wetlands and/or a high water table. Like much of the Town, properties within the Park are reliant on private septic systems for wastewater disposal, since no municipal sewers currently serve the area. The existing water line is an eight inch line, which is not looped. In addition, there are no fiber optic lines serving the park at this time.

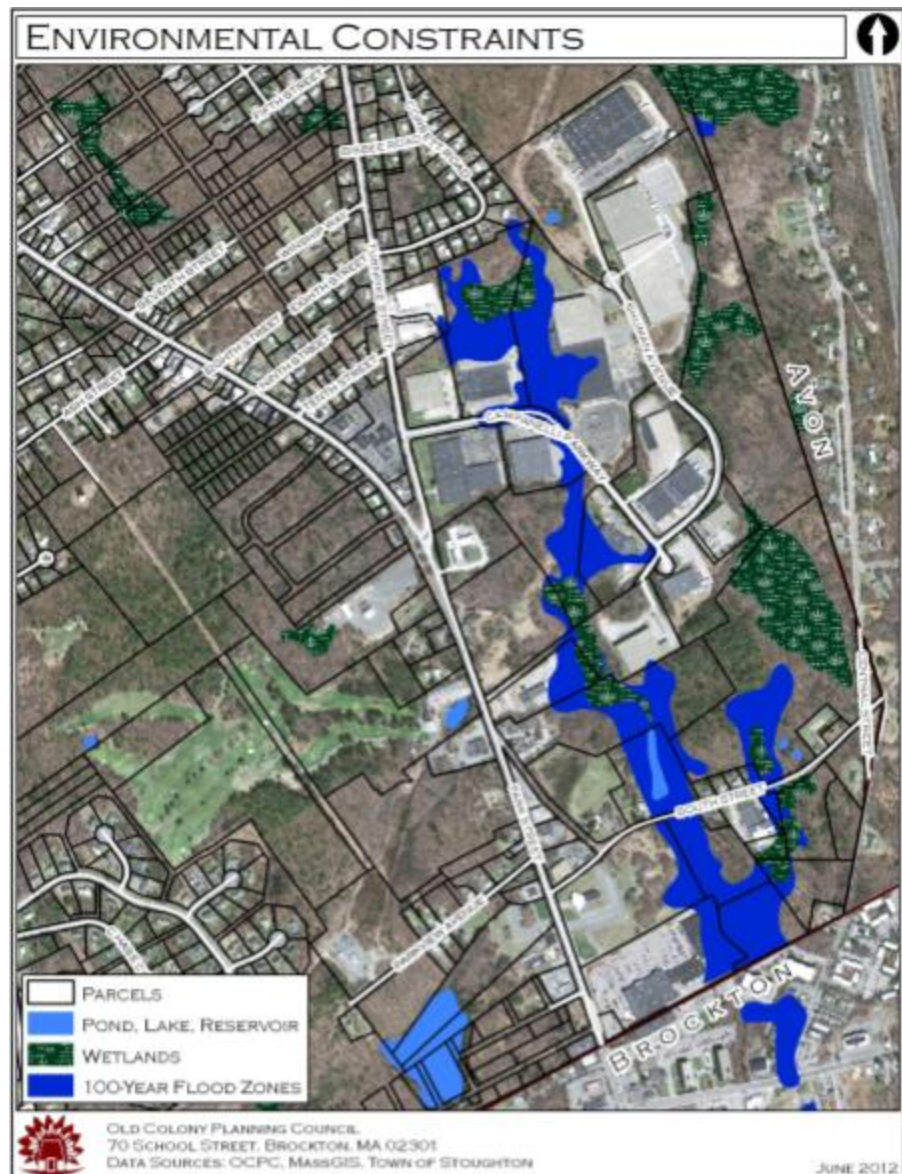


Figure 6 Environmental Constraints

The Business Park could benefit from development of an overall infrastructure improvement plan for the area addressing both public and private utilities and increased utilization of Town owned conservation properties for walking paths or other passive recreation activities. When improvements to the water, sanitary or storm sewers in the area are made, the potential future use for fiber optics to improve telecommunications should be explored. Much of the Business Park is located within jurisdiction of wetlands or has significant limitations for septic systems. It should be noted that land within 100 feet of a wetland may not be filled or altered without a Notice of Intent to the local Conservation Commission and in conformity to subsequent Order of Conditions. As a practical matter, it

is best to consider wetlands to be undevelopable except when a small area of less than 5,000 square feet is altered to allow access to a major project, and a comparable area of wetlands is replaced.

Stoughton's local regulations include the protection according to flood areas and wetlands by the wetlands protection provisions of the Zoning By-Law and the stand alone Chapter 191 of the Town Code, the Non-Zoning Wetlands Protection Bylaw. Although the present Wetland District provisions within the Zoning Bylaw do defer to "all federal, state, or local regulations governing construction in Flood Hazard or Wetland Areas", the existing language can cause confusion. There are provisions within the bylaw that potentially conflict with state level protections and Stoughton's "stand-alone" Wetland Protection Bylaw. The Stoughton Zoning Bylaw provides another local regulatory layer for flood zones, including not only the same protection from alteration as the Wetlands Protection Act, like compensatory flood storage for unavoidable fill, but also creating a 100-foot buffer zone around all land subject to flooding, requiring a Conservation Commission filing for any proposed alterations within this zone.

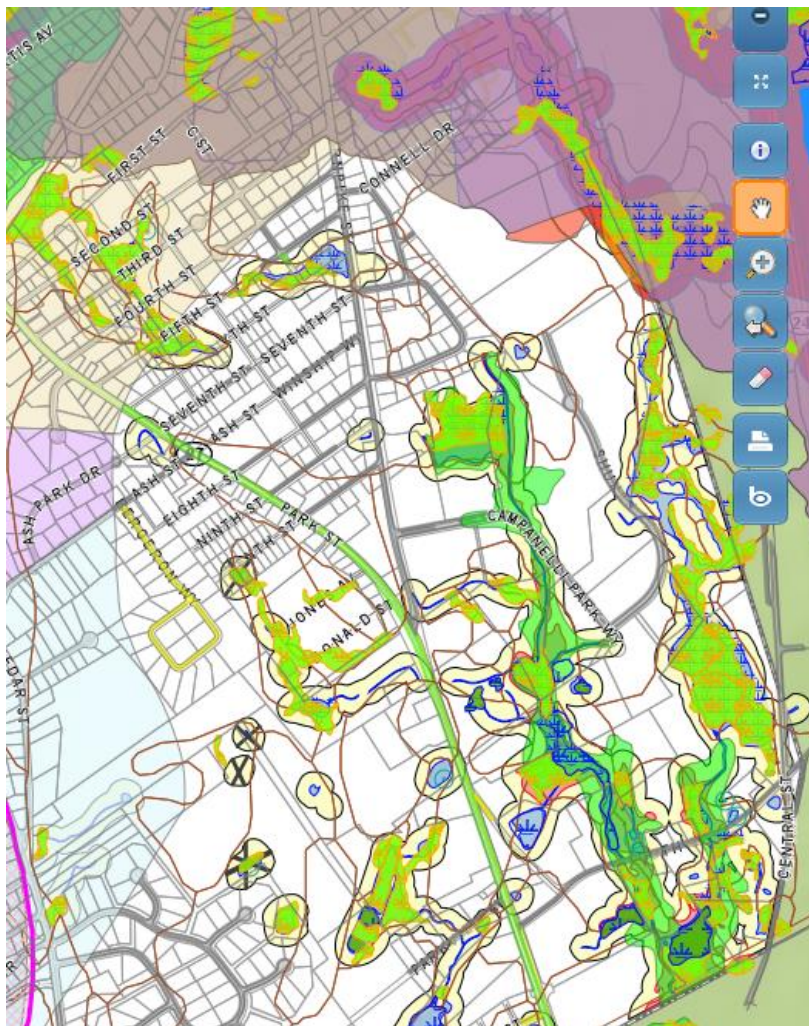


Figure 7 Wetlands

Wetlands

Wetlands occupy an estimated 22.7 acres of the Business Park, generally along its eastern edge, east of the 181 Campanelli Parkway building and north of the building at 44 Campanelli Parkway. Of these, an estimated 10.5 acres are outside of the flood plain. Some of the wetlands and flood plain are on developed or partially-developed parcels. Thus, such land can sometimes be used to make up required lot area or to provide an attractive setting for a business.

Two streams are shown in and around the Business Park. One stream emerges in the wetlands north of South Street and southwest of 181 Campanelli Parkway. The other, longer stream emerges in wetlands west of the bend in Campanelli Parkway along the Avon line. The two streams join just north of the

Brockton city line east of the R.K. Plaza to form the headwaters of Brockton's Lovett's Brook. There is also a small pond on the first stream just north of South Street.

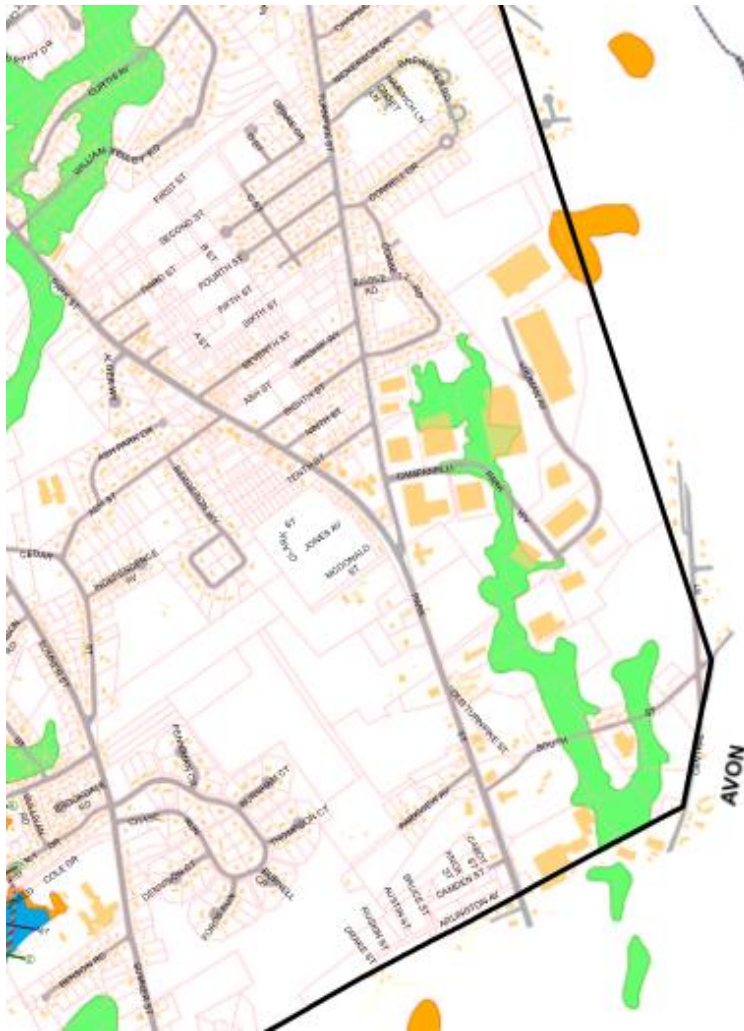


Figure 8 Floodplain

Floodplain

The Town of Stoughton straddles two major watersheds: the Neponset River Basin and the Taunton River Basin. The northeast corner of town lies within the Weymouth River sub-watershed, which drains uplands off towards Bear Swamp, through several wetland systems. The southern part of town, which lies within the Taunton River Watershed, feeds wetlands through Dorchester Brook, Lovett Brook, Beaver Brook, Whitman Brooks, and their minor tributaries, including several small pond systems and Ames Long Pond.

Additionally, there are an estimated 40.2 acres of 100-year flood plain (including 10.2 acres of the wetlands) within the study area. One is along the western stream and on lowland running north to Campanelli Parkway, and on to the northern edge of the

Business Park. The other is on the southernmost portion of the eastern stream, just north of the Brockton city line and east of the R.K. Plaza. Such flood plains are commonly treated as unbuildable unless the Zoning Board of Appeals finds that the specific area is not actually in a flood plain or otherwise hazardous.

FEMA National Flood Hazard Layer Flood Zone Designations

- A: 1% Annual Chance of Flooding, no BFE
- AE: 1% Annual Chance of Flooding, with BF
- AE: Regulatory Floodway
- X: 0.2% Annual Chance of Flooding
- S_XS - Cross Section Line
- S_BFE - Base Flood Elevation

The area has common compact sandy loam soils and fine sandy loam soils absorb water slowly, which enhances septic treatment, but limits its ultimate disposal.

The area has a typically high water table, particularly along Campanelli Parkway.

The area possibly has underlying ledge, which would limit water flows and require blasting for the installation of septic systems, as has occurred elsewhere.

These features traditionally have been mapped as severe limitations for septic systems. However, with varied soils and large parcels, engineers can usually find some approvable soils on a site unless it is in severe wetlands. Use of these soils may lead to future maintenance problems, particular with high flows as at restaurants but they will probably allow 75 percent of the otherwise possible development.

In all, the areas of wetlands, 100-year flood plain, and surface water should be considered to be unbuildable while the potential in areas which only have severe septic limitations may be reduced by as little as 25 percent. In this case, the severe limitations reported on much of the site and its wetlands and flood plain suggest a much greater reduction in overall potential. In particular the mapped flood plain may significantly limit the contiguous eastward expansion potential of the R.K. Plaza.

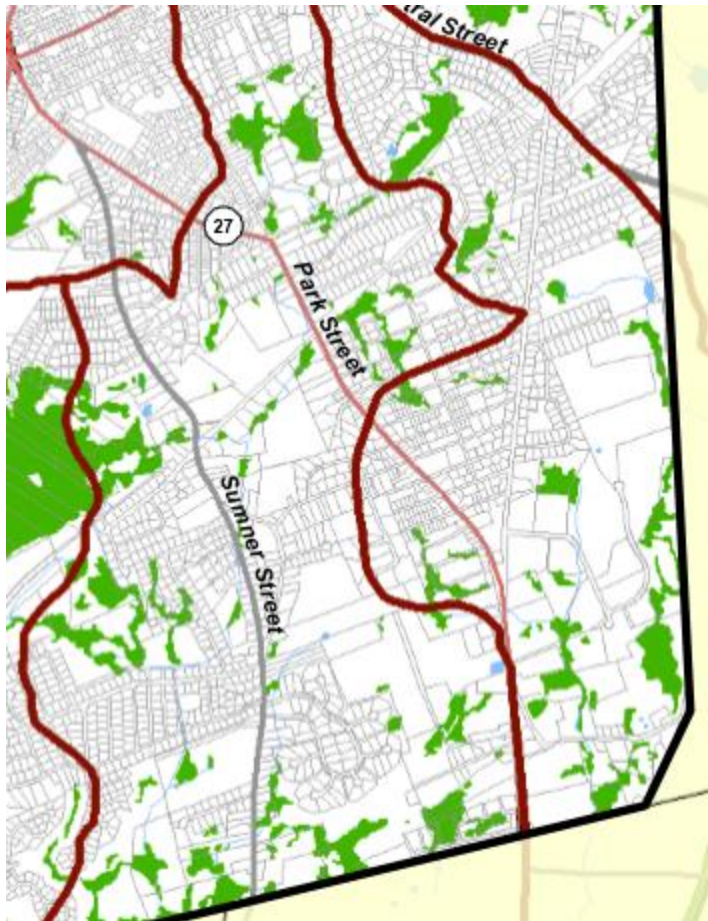


Figure 9 Stormwater

An industrial park can affect the environment in several ways. Impervious surfaces, vehicle traffic, water and energy use, solid wastes, and emissions from facilities within an industrial park would all impact local environmental quality. The level of impact would depend on the size, location, design and operation of such a park. Reducing the environmental impact would require increased investment but the added costs would be offset by future savings in energy and environmental management.

Managing stormwater and wastewater and restoring sensitive areas (wetlands) appear to be the main environmental challenges. Environmental impacts could be mitigated through innovative site and building design and through the use of innovative technologies such as green roofs, water harvesting and wastewater recycling. The creation of jobs in Stoughton could reduce out-commuting and thus offset some of the environmental impacts, such as air pollution from vehicles.

New facilities should be designed and operated to minimize energy and water use, reduce/recycle wastes, use renewable energy, minimize impervious surfaces, manage stormwater on-site, and restore wetlands. Given the size of the Town's revenue base, funding the infrastructure improvements would require assembling a financing package that relies heavily on external funding sources. No single existing grant program would likely cover the investment shortfall needed for this project. The economic benefit to the community should be the primary concern for infrastructure improvements in

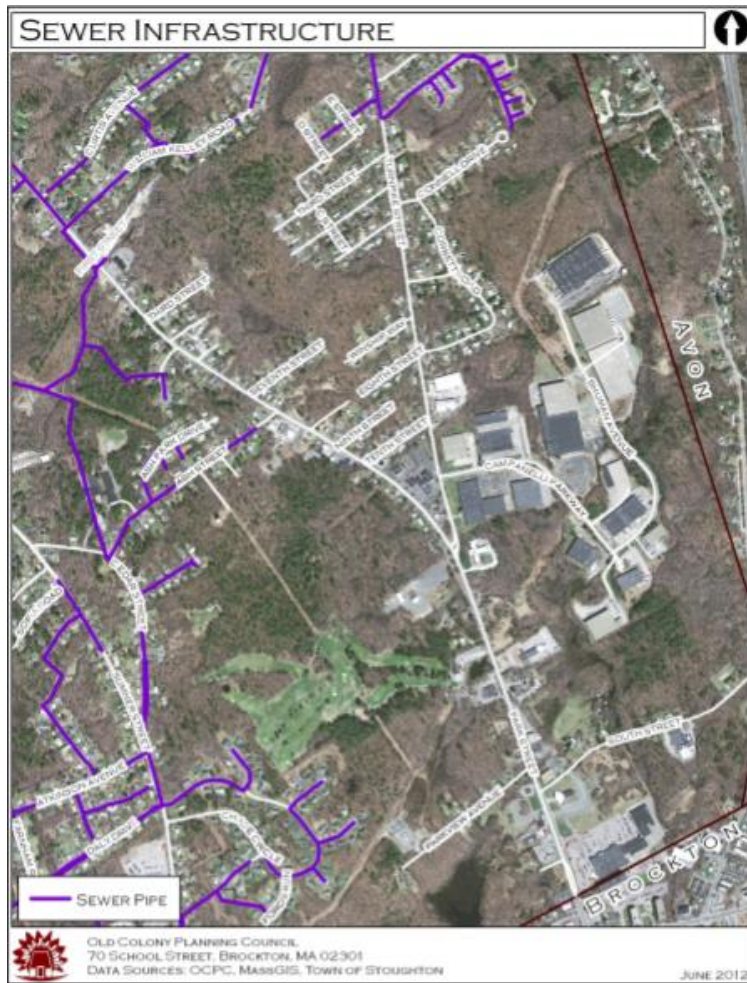


Figure 10 Sewer Infrastructure

the Park, followed by the reduction of any impacts on wildlife, stormwater runoff, or light, noise or chemical pollution.

Sewer Infrastructure

The town faces a number of challenges as its system tries to accommodate growth. System capacity restriction due to inadequate coordination between multiple private developments leading to numerous small pump stations is one major challenge for Stoughton. The lack of public sewer in some densely populated residential and industrial locations is also problematic. The most devastating example of failing private on-site sewage disposal facilities serving multiple commercial sites characterized by high water usage and high daily sewage flow. This is on the southern portion of Park Street (Route 27) south of the intersection of Ash Street and Park Street. Those large daily sewage flows require frequent pumping to the extent that qualifies

these sites for system failure under applicable Board of Health Regulations.

Campanelli Parkway and Shuman Avenue are located in an industrial zoning district and feature multiple buildings with greater than 20,000 square feet of floor space served by on-site sewage disposal facilities. The construction of the industrial park pre-existed before the most substantial amendments of Title 5 of the State Environmental Code, the regulations governing the design, location and construction of on-site sewage disposal facilities.

Approximately 60 percent of the buildings in town are on the municipal sewer service; the remaining stock is serviced by on-site septic systems. Residential and business developers have easier access to sewer service in Stoughton than to the municipal water system. All of this water leaves town to be processed by the MWRA, effectively transporting water from one watershed to another. This inter-basin transfer prevents wastewater effluents from recharging the municipal water supply via natural filtration.

Campanelli Industrial Park is unable to attract certain types of tenants due to its private septic system/lack of public sewer infrastructure. Many businesses in industries like biotechnology R&D, medical laboratories, and biopharma-manufacturing require treatment of their wastewater, prohibiting

them from draining into septic systems. If Stoughton is to tap into regional trends, capture growth from industries of regional focus, and be assured a competitive position going forward, installation of sewer may be advisable. Nevertheless, the Park is currently functioning well, with limited land for additional development.

The southern end of Park Street and the existing Park do not have sewer service; business and homes within this area rely exclusively on private on-site treatment and disposal systems, most commonly Title V septic systems. These residential neighborhoods have a number of small pre-existing non-conforming lots that have both a well for private drinking water supply and nonconforming on-site sanitary disposal systems. Dimensional and setback requirements may present engineering challenges in siting new or existing private drinking water wells and new upgraded on-site sewage disposal facilities.

The nearest sewer lines, discharging to the MWRA system, are to the north and west of the study area. The MWRA system treats the wastewater at its expanded/upgraded Deer Island treatment plant, separates and treats the sludge for agricultural use, and discharges the effluent to Massachusetts Bay just outside of Boston Harbor via a long diffuser pipe system. It recycles the sludge, but can neither recharge ground water nor augment stream flows as septic systems or upstream treatment plants can. A number of existing sewer lines in Stoughton come very close to the study area:

- One sewer line on Park Street comes as close as First Street and then turns and runs southwesterly towards an interceptor on Summer Street.
- Sewer lines on Ash Street and Ash Park Street are within an estimated 960 feet of the study area, but flow west to Cedar Street and the above-mentioned interceptor.
- One sewer line on Turnpike Street comes as close to Brewster Road ending about 2,870 feet from the nearest portion of the study area.
- One sewer line running from Summer Street to Thompson Court comes within about 1,700 feet of the study area.

All of these lines are understood to be separated from the study area by significant high ground. Thus, sending sewage from the study area to the above-described town sewer lines feeding the MWRA system would generally require pumping stations or lift stations.

In contrast, much of the study area could flow to the Brockton system at Pearl Street by gravity. However, the lowest parts of the Business Park might also require initial pumping even if ultimately flowing to Brockton by gravity according to the Brockton Department of Public Works.

Some of the study soils are compact sandy loams or fine compact sandy loams, which pass water slowly and have limitations for septic systems. They may function adequately with the light flows characteristic of the business park's generally un-intensive uses, but they require very frequent pumping when handling high flows like those from nearby restaurants.

Most of the study area has moderate to severe soil limitations for septic systems, with some unclassified soils. These types of soils prohibit additional intensive long-term development and cause some current businesses in the area with functioning on-site systems to pump very frequently. The lack of sewers in some areas (only 60 percent of the town benefits from municipal sewer), as well as capacity restrictions as a result of inadequate coordination between multiple private developments proves challenging in accommodating new growth.

Recommendations

A summary of slides from Kleinfelder, the Engineering Firm who has served as a consultant on this project for many years, are included within this presentation.

Although six alternatives are offered for contemplation, alternative one is preferred by both the consultant and the Town. Alternative one includes bidding and constructing all three phases at once or in close succession to reduce mobilization costs and take advantage of the economy of scale. This preferred alternative capitalizes on MWRA discharge and relies on conventional sewer vs widespread low pressure sewer. Alternative one would also avoid opening up MassDOT Route 27 twice, which would delay the project, increase permitting requirements and cause more commuter delays and inconvenience. The residential areas/side streets would be the last phase to be complete, which will allow homeowners more time to plan financially.

Technical Evaluation – Summary of Alternatives 5

Alternative	Sewering Methodology				Discharge Location			
	Phase 1A		Phase 1B		Phase 1A		Phase 1B	
	Conventional	Low Pressure Sewer	Conventional	Low Pressure Sewer	MWRA	Brockton	MWRA	Brockton
1	◆		◆		◆		◆	
2	◆		◆			◆	◆	
3	◆		◆			◆		◆
4	◆			◆	◆		◆	
5	◆			◆		◆	◆	
6	◆			◆		◆		◆

- Phasing
- Discharge Location
- Sewering Methodology



Other alternatives would require intermunicipal agreements and negotiations with the City of Brockton to purchase water and shoulder financial responsibility for some upgrades to the City's water and wastewater infrastructure.

Technical Evaluation – Phased Implementation

6

Construction Phasing

- Phase 1A – Lower Park Street
- Phase 1B – Campanelli & Turnpike
- Phase 1C – Upper Park Street

Benefits

- Spreads out construction costs
- Side Streets to be sewerated later

Negatives

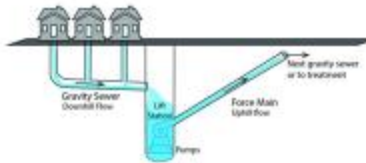
- Loss of economy of scale
- Opens up MassDOT Rte. 27 twice



Technical Evaluation – Construction Methodology

7

Conventional →



Low-Pressure Sewer →



Technical Evaluation – Discharge Location

8

MWRA

- Town already has existing account
- Ample System Capacity
- Requires additional pump station
- Local collection system to be evaluated

Brockton

- Ample WWTF capacity
- Upgrades to City's wastewater system required
- City would require Stoughton to purchase water
- Upgrades to drinking water booster station
- Schedule delays to develop Inter-Municipal Agreement



Technical Evaluation – Projected Flows

19

Phase	Existing Buildout (No Side Streets)		Existing Buildout (Including Side Streets)		Max Buildout	
	AVERAGE DAILY FLOW (GPD)	PEAK FLOW (GPD)	AVERAGE DAILY FLOW (GPD)	PEAK FLOW (GPD)	AVERAGE DAILY FLOW (GPD)	PEAK FLOW (GPD)
Phase 1A	62,000	310,000	66,000	330,000	144,000	720,000
Phase 1B	57,000	285,000	91,410	457,000	171,000	855,000
Phase 1C	16,000	80,000	23,100	116,000	15,000	75,000
TOTAL FLOW	135,000	675,000	180,510	903,000	330,000	1,650,000



Conclusion

The Town should consider all alternatives, but give credence to the advice of the experts they have engaged. Other practical considerations include potential loss of business and commuter disruptions and delays. Extending construction can have unknown cost implications due to ever changing costs of materials, labor, the availability of grants and other funding programs and fluctuating interest rates.

Recommendations

13

1. Technical Recommendations – Alternative 1:
 - Do not discharge to Brockton
 - Conventional Sewer Preferred
 - Design assuming all 3 phases constructed at once
2. Approve Sewer Connection and Betterment Policies
3. Explore Alternative Construction Funding
4. Review Zoning
5. Appropriate funds for Design



Alternative 1 – Project Costs

12

Cost Category		Cost (\$)
<i>Proposed New Infrastructure</i>	<i>Gravity Sewer (ft) Pump Stations</i>	17,000 2
Phase 1A - Construction Costs		\$2.9 M
Phase 1B - Construction Costs		\$3.4 M
Phase 1C - Construction Costs		\$1.1 M
Construction Contingency (25%)		\$1.9 M
Construction Sub-Total		\$9.3 M
Engineering Design, Survey, and Borings		\$0.8 M
Engineering Support During Construction		\$0.7 M
Project Total		\$10.8 M



In 2017, it was estimated that it would cost approximately 13.5 million dollars to extend the sewer line. In December 2018, the town’s consultant provided additional alternatives and phasing options that reduce the projected cost to 10.8 Million dollars.

Financial Model - Approach
9

COSTS



- Construction Costs
- O&M Costs
- MWRA and Brockton Sewer Assessment Fees
- Brockton Water Assessment Fees
- Improvements to Brockton’s Wastewater and Water Systems

REVENUES

- Betterments
- Sewer User Charges
- Tax Levy

*** Construction Grants/Loans not considered in financial model*

- CWSRF
- MassWorks
- Municipal Water Infrastructure Investment Fund (Ch. 40 §39M)
- 23L
- MassDev Site Readiness

Should the Town decide to expand the study area or any portion of the area, the funding options are grants/loan programs, capital investment or a betterment. Grants might include MassWorks and loans programs might include the CWSRF Program.

In 2016 the Town reviewed its connection and betterment policies. The Connection Policy establishes the requirements to connect to sewer, defines exceptions, overrides to exceptions and sewer usage charges.

CONNECTION POLICY
17

Policy Element	Current Draft Policy										
Requirement to Connect to Sewer	Required within one (1) year: - Permit Fee and Sewer Connection Fee waived										
Exceptions	Owner has a newly installed septic system (within prior 10 years): - connection requirement extended by 10 years Hardship as approved by the discretion of the Board of Selectmen										
Exception Overrides	Failed Cesspool or Septic System Transfer of Property Ownership										
Sewer User Charges	Sewer User Charges will be assessed according to the following schedule if a property owner does not connect within one (1) year: <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 5px;"> <thead> <tr style="background-color: #0056b3; color: white;"> <th style="text-align: left; padding: 2px;">Time Since Date of Official Notice to Connect</th> <th style="text-align: left; padding: 2px;">Prorated Sewer User Charge (Billed Quarterly)</th> </tr> </thead> <tbody> <tr> <td style="padding: 2px;">0-1 years</td> <td style="padding: 2px;">\$0</td> </tr> <tr> <td style="padding: 2px;">>1 year and up to 5 years</td> <td style="padding: 2px;">25% * current minimum sewer user charge</td> </tr> <tr> <td style="padding: 2px;">>5 years and up to 10 years</td> <td style="padding: 2px;">50% * current minimum sewer user charge</td> </tr> <tr> <td style="padding: 2px;">>10 years</td> <td style="padding: 2px;">100% * current minimum sewer user charge</td> </tr> </tbody> </table>	Time Since Date of Official Notice to Connect	Prorated Sewer User Charge (Billed Quarterly)	0-1 years	\$0	>1 year and up to 5 years	25% * current minimum sewer user charge	>5 years and up to 10 years	50% * current minimum sewer user charge	>10 years	100% * current minimum sewer user charge
Time Since Date of Official Notice to Connect	Prorated Sewer User Charge (Billed Quarterly)										
0-1 years	\$0										
>1 year and up to 5 years	25% * current minimum sewer user charge										
>5 years and up to 10 years	50% * current minimum sewer user charge										
>10 years	100% * current minimum sewer user charge										

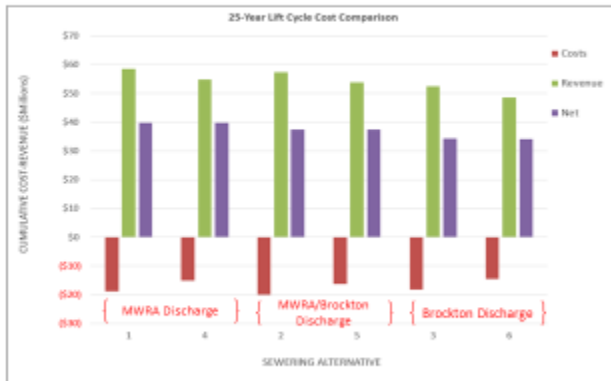
Policy Element	Current Draft Policy
Applicability	Direct abutters or within 100-feet of a new public sewer
Basis of Assessment	Abutters may be assessed up to 100% of the cost, based on a vote of the Board of Selectmen
Methodology of Calculating Assessment	Per MGL Ch. 83 §15 - Frontage & Area - Uniform Unit Method
Timing of Assessment	As early as practicable, but not until final construction costs known.
Lump Sum Payment	<u>Allowed.</u> Due within 30 days.
Apportioned Payment	<u>Allowed.</u> 20 Equal payments at 5% interest annually or 2%+project bond rate
Abatement	<u>Allowed.</u> Request must be filed within 4 months
Deferral	<u>Allowed.</u> if Town adopts MGL Ch. 59, S. 5, Clause 41A

The betterment policy was also reviewed for applicability, basis of assessment, methodology of calculating the assessment, timing of assessment, payment terms and abatement and deferral rules. A betterment is a legal assessment by the town to those property owners who benefit from a public project intended to partially or completely recover the cost of the project. It is governed by MGL and the betterment amount depends on the final size of the project area, project cost, the calculation method utilized, the percentage of contribution by users, town and other sources, off-set by grants, interest rate and term (years of betterment). Mass Development, the Commonwealth’s development agency, works with businesses, nonprofits, financial institutions, and communities to stimulate economic growth throughout Massachusetts. They offer a Local Infrastructure Development Program (Chapter 23-L) which involves bonds that are issued by Mass Development and debt service paid through special assessments levied on private property within development zone established by Town. The Town pursued 23L in 2016, but an inadequate number of abutters signed the petition. This program is used to finance public infrastructure.

Special obligations are payable solely from infrastructure assessments. It is not a debt of the Commonwealth or municipality, payable solely as special obligations collected from infrastructure assessments. The betterment for the study area has been estimated to cost \$138 per month for residential and \$671 per month for non-residential. The interest rate is estimated to be 5 percent over 23L term of 25 years. It is important to note that Stoughton’s FY 2019 residential tax rate is \$15.34 per thousand of evaluation. The rate for Commercial and personal property is \$25.73 per thousand of evaluation.

The Town should also investigate other funding sources to offset the cost including a capital investment from the Town’s budget, grant or loan programs like the CWSRF loan program, MassWorks Grant program, the economic development administration assistance program.

The Town will need to continue to investigate all options in order to get the necessary buy-in from the commercial and residential property owners in the study area, many of whom have made investments in private septic system improvements and others who have already signed private agreements with the City of Brockton to provide service.



Findings

- MWRA Discharge Preferred
- Conventional Preferred
 - Facilities last longer than 25-years
 - Widespread LPS not preferred
- Avoid Phasing the Project
- Overall Alternative 1 Preferred



Next Steps

The Town should continue to work with their consultant to develop and establish a design budget during the winter of 2018/2019 and seek an appropriation at Town Meeting in May of 2019. Design would take place during a one year period during which time zoning would be reviewed and funding opportunities should be sought out. In the first half of 2020 permits would be sought and a town meeting appropriation would be requested. Plans would be put out for bid for construction in the third quarter of 2020.

Schedule

Project Task	2018		2019				2020			
	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Establish Design Budget	█	█								
Town Meeting Appropriation			█							
Design				█	█	█	█			
Review Zoning				█	█					
Research Funding				█	█					
Obtain Permits						█	█			
Town Meeting Appropriation							█	█		
Bid Ready Plans for Construction								█		

Preliminary Schedule – subject to changes due to funding cycles or discovery during design



Appendix

Final Stoughton Business Park Analysis – Spreadsheet