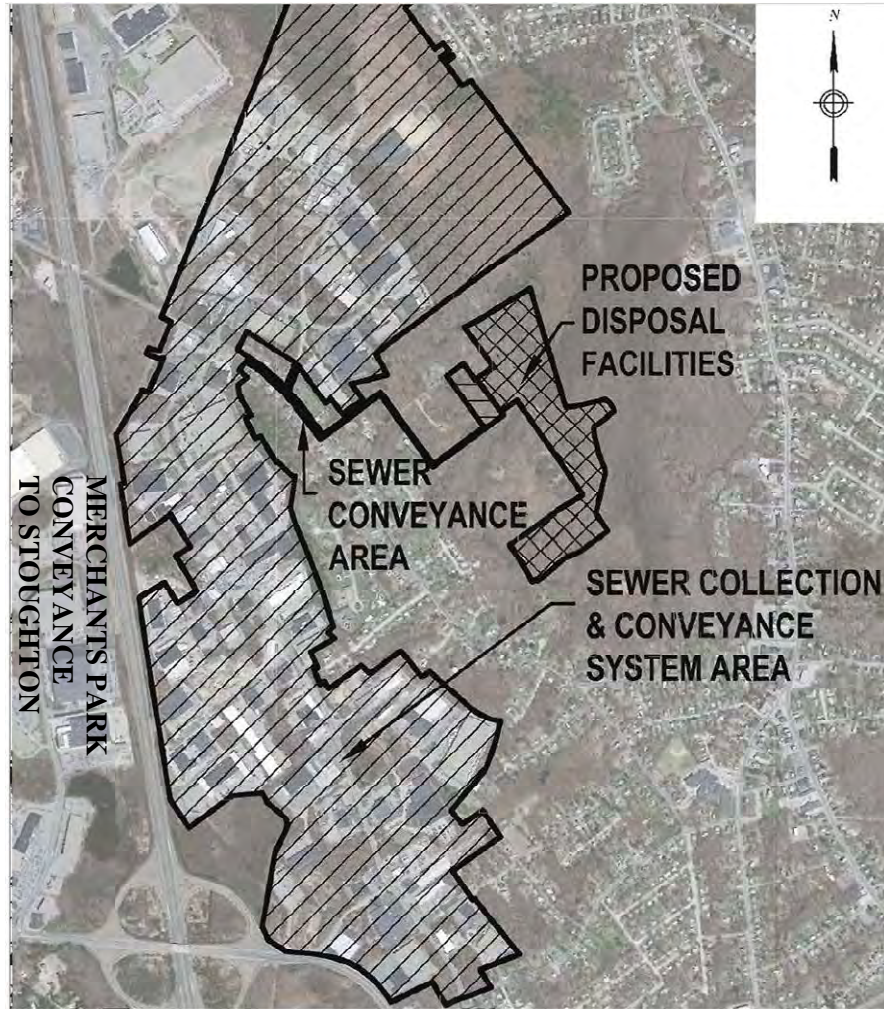


Avon Industrial Park Smart Redevelopment

Town of Avon
Under the Direction of the Avon Department of Public Works



Wayne Feiden, FAICP
Center for Resilient Metro-Regions at the University of Massachusetts-Amherst
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Executive Summary

The Avon Industrial Park is an incredible resource. It provides a great tax base to Avon, and it creates jobs for a wide variety of the workforce (e.g., services, distribution, and manufacturing), from high end jobs requiring advanced training (e.g., Cumings Microwave) to jobs available to those with lower educational attainment. Its easy access to highways and the Boston Metropolitan market coupled with relatively lower land rents have provided unique opportunities.

There are two significant opportunities to expand what today is a largely built-out industrial park.

First, on-site sewage treatment and disposal (“septic”) systems can be replaced by a sanitary sewer collection system (sewerage). This would allow an expansion in the footprint of businesses, increasing the square footage of buildings and businesses, and an expansion in the kinds of uses that can be accommodated to include businesses and uses with greater sewage disposal demand.

Second, regulatory changes that can allow infill development and expansion, with many of these changes possible even before any sewerage capacity is added. These changes can improve the resiliency of the industrial park, both by concentrating development in areas with infrastructure and by reducing the climate and stormwater impacts of businesses.

Section 1. Project Partners

The **Center for Resilient Metro-Regions'** mission is to assist communities, like Avon, and regions develop more sustainable and resilient planning and design solutions to address changing climate, environmental, socio-demographic, and economic conditions. This mission is accomplished through technical assistance, community focused projects, applied research, and community, student, and faculty engagement. CRM is located within Landscape Architecture and Regional Planning at the University of Massachusetts, Amherst. Wayne Feiden, FAICP, serves as the Director of CRM and CRM's project manager for *Avon Industrial Park Smart Redevelopment*.

Massachusetts Energy and Environmental Affairs Planning Assistance Grant provided funding for this report. This grant program provides municipalities funding to support their efforts to plan, regulate (including zoning), and act to conserve and develop land consistent with the Massachusetts' Sustainable Development Principles, including reduction of land, energy, and natural resource consumption, provision of sufficient and diverse housing, and mitigation of/preparation for climate change.

The Town of Avon is a small town, 4.55 square miles with 4,777 people (2020 census). It has a modest population and development growth rate. Its population density (1,050 people per square mile) is typical of many communities in the area. Roughly two-thirds of Avon's housing units are detached single-family homes, with a median value lower than Plymouth County and the Commonwealth. Median age is 36.9, marginally younger than the county and the Commonwealth.

Avon is a median income community, with median household income slightly higher and the poverty rate slightly lower than Norfolk County and the Commonwealth. The entire community is mapped as an Environmental Justice area based on minority (global majority) status (i.e., minority status greater than 25%). Higher education (bachelor's degree and beyond) is significantly lower than the county and the Commonwealth.

Avon and the **Avon Industrial Park (AIP)** are on Route 24 (a limited access highway), approximately 20 miles from Boston. The Brockton Area Transit Authority and the MBTA provide bus transit service to Boston and Brockton. Avon is served by commuter rail in adjacent towns (Stoughton, Brockton, and Holbrook/Randolph), although there are no commuter rail stations within Avon.

Avon is a regional employment and business center. Avon Industrial Park, Route 24, and the Avon Merchants Park are the major employment centers. Avon's commercial and industrial areas are nearly built out under current regulations. There are, however, some opportunities in the industrial park and significant commercial redevelopment opportunities throughout town.

Avon Industrial Park Association, a non-profit, seeks to advance the interests and business of its members and other Industrial Park tenants in public and private affairs. The Association is interested in exploring sewerage opportunities and industrial park growth.



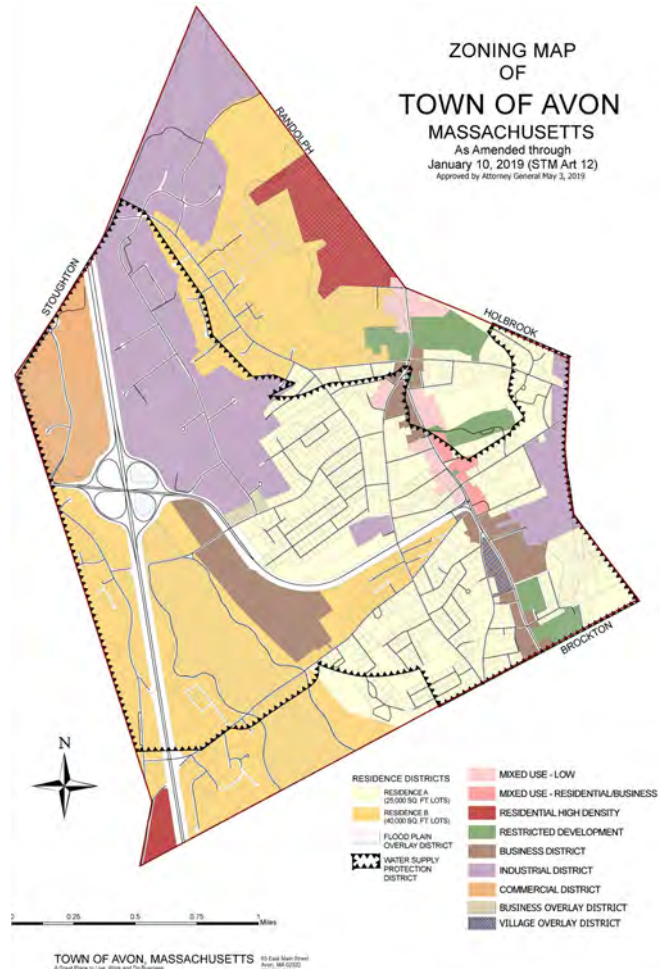
Section 2. Avon Industrial Park Smart Redevelopment - Introduction

The 435-acre *Avon Industrial Park (AIP)* has approximately 100 buildings with 3.3 million square feet of building space. 127 companies employ over 3,600 people in manufacturing, construction, research, distribution, retail, technology, and non-profit organizations.

The Industrial Park has direct access to Route 24. The site is all zoned Industrial (IND). The entire site is also in the Water Supply Protection District (WSPD) overlay and approximately half the site is within the Floodplain (FP) overlay.

The Town of Avon received a Massachusetts EEA Planning Assistance Grant to help it plan for the Avon Industrial Park's sustainable growth opportunities, especially focused on proposed sanitary sewer in the Industrial Park. With a Floor Area Ratio (FAR) of 0.174 (i.e., the total square footage of all building space is 17.4% of the square footage of the entire Industrial Park) and a moderate amount of wetlands, there is significant buildout potential if sewage demand can be met and a much smaller but still significant additional buildout potential even without new sewerage facilities.

Extending sanitary sewerage to the AIP, with centralized sewage treatment and disposal, which would replace the current on-site sewage disposal systems on each lot, will create a potential for infill growth and more water intensive processing operations, increased tax base, and increased jobs.



Avon Industrial Park Smart Redevelopment assesses the opportunities to improve and adopt new land use regulations that allow additional growth, while emphasizing environmental and economic sustainability. The findings are divided into seven sections:

1. **Projected baseline buildout of the Avon Industrial Park**, a high-level generalized approximation comparing on-site sewage disposal with centralized wastewater collection and disposal.
2. **Potential land use opportunities** with sewerage, town regulatory revisions, and other actions.
3. **Zoning and regulatory approaches** to maximize quality development to provide both economic growth and sustainability opportunities.
4. **Preferred zoning and regulatory approach** building on the above.
5. **Buildout potentials** of proposed zoning and land use regulations, using a generalized high-level analysis and including technical limits (e.g., sewer capacity, market conditions).
6. **Recommended zoning and land use regulations** with proposed language.
7. **Findings and recommendations** for next steps.

Section 3. EEA Planning Assistance Grant

In their application for a Massachusetts Energy and Environment planning assistance grant, Avon reported:

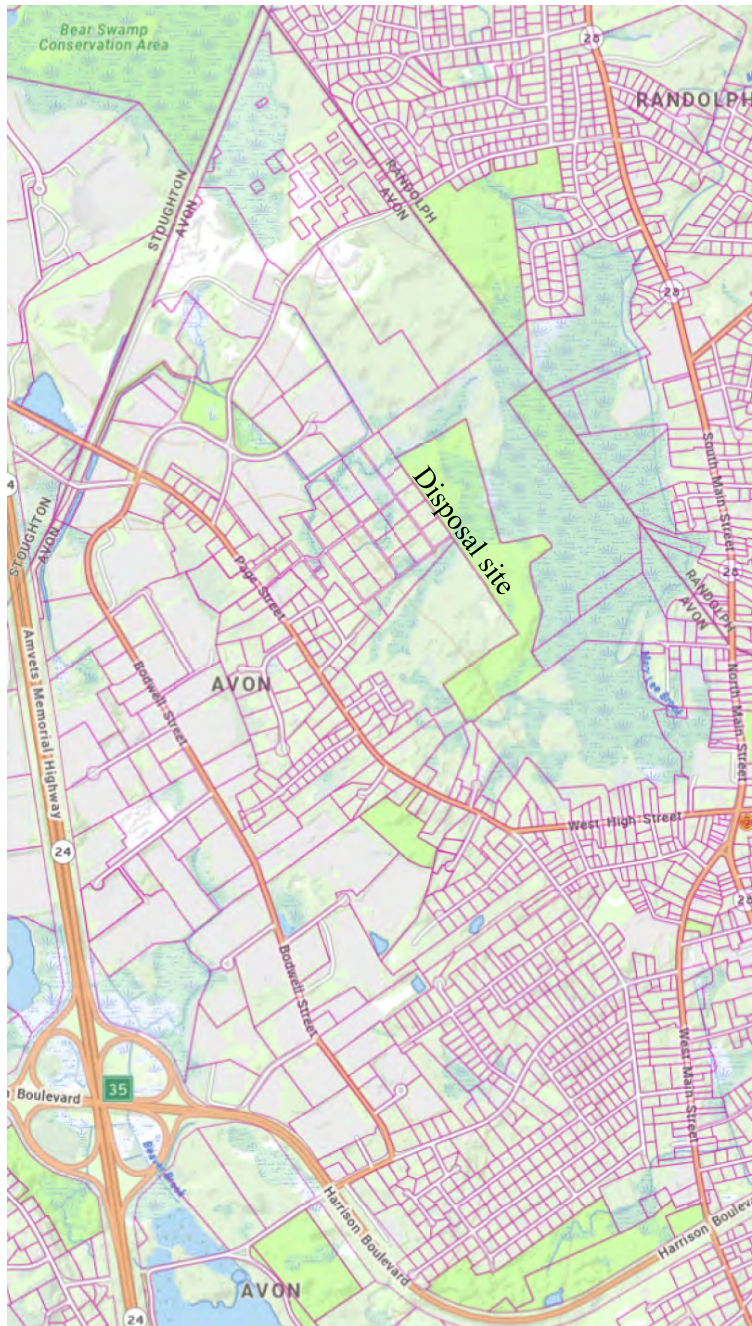
Due to lack of sewer, Avon estimates that development intensity in the Avon Industrial Park (AIP) and Avon Merchants Park is only about three-quarters of the density of neighboring commercial centers that have sewer service. Without sewer, businesses in the Park rely on onsite sewage disposal (“septic systems”).

Redevelopment potential to match commercial uses in the larger market area is severely constrained. The Avon Route 24 interchange is five miles from I-93/Rte. 128; 12 miles from I-495; and nine miles from the I-95/I-93. One has only to travel one exit in either direction on Route 24 to see the multi-story office buildings, restaurants, hotels, and other higher

intensity uses the area market supports. As an indicator, current water use is about 10 gallons per day per square foot of building area. Under one scenario, “the proposed AIP sewer disposal package plant is based on redeveloping to a more standard 75 gallons per 1,000 sf of building space. The design for the AIP sewer facilities is based on a 4-to-5-fold increase in intensity of use, including [water use,] job creation, and tax revenue.”

This aligns with the Commonwealth's sustainable development principles, as developed land is utilized as opposed to green field development. Transportation is direct to highways and avoids residential areas. Many local and regional studies have identified this strategy as a regional priority.

The town has spent about \$200,000 on due diligence feasibility, treatment facility and disposal area evaluation and collection system design. Funding is in place to complete the groundwater disposal permit and move to design and eventually bidding. Based on the Park's topography, the project design includes 12,100 linear feet of gravity sewer main, 9,000 linear feet of pressure force main, and 11 pump stations. Currently the Avon Industrial Park dispersed private on-site sewage disposal systems treat approximately 30,000 gallons per day. Plans for a treatment plant would easily accommodate all that current demand with enough capacity to handle any likely growth in the industrial park. The treatment plant and the groundwater disposal system will be located on town land designated for the project.



Section 4. Projected baseline buildout of the Avon Industrial Park

The Avon Industrial Park is largely built-out under current zoning, wetlands, and on-site sewage disposal limits. Given those challenges, development opportunities are limited, although in recent years that has been some limited development and intensifications of uses.

The primary development opportunities, if sewage capacity was not limited, are discussed in Section 5, potential land use opportunities. There are primarily five ways in which expansion could occur.

Table 4.1 Possible baseline development opportunities

Development Opportunity	Limiting factor
Replacing one- and two-story buildings with taller buildings.	<ul style="list-style-type: none"> • Limited market demand. Development is likely as buildings become physically and functionally obsolete and/or when the market demand is high enough to drive new development that can pencil out. • Limited sewage disposal capacity.
Expansion, usually with small offices, between buildings and wetlands and property lines.	<ul style="list-style-type: none"> • Limited space without zoning changes. • Limited sewage disposal capacity.
Land extensive businesses (e.g., truck storage and dispatch, contractors processing yard) could be redeveloped as buildings.	<ul style="list-style-type: none"> • Limited demand, especially given that easy access to Boston Metro's drives demand for such business. As market demand rises, however, that will drive new market demands for redevelopment. • Limited sewage disposal capacity.
More water intensive uses (e.g., redevelopment of warehouses for manufacturing)	<ul style="list-style-type: none"> • Limited market demand. • Limited sewage disposal capacity.
Conversion of current low occupancy surplus parking areas and snow storage to new uses development. (Surplus parking is primarily car and small truck parking. Truck parking and loading areas are currently much more heavily utilized.)	<ul style="list-style-type: none"> • Limited market demand, especially for low water use development. • Zoning limits. • Limited sewage disposal capacity.

High Level Existing Buildout Analysis

Based on a sampling of properties (remote analysis from MassGIS and remote imagery with ground truthing and on-site field analysis), there is limited expansion capacity under the current regulatory and sewage capacity environments.

It is theoretically possible, under all the existing limits, that the Avon Industrial Park could expand by approximately 25% of building space (3.3 million square feet to 4.12 million square feet) if all new developments were warehouse commercial pallet racking with no processing, with the only water use for bathrooms and warehouse cleaning. It is virtually impossible, however, to assume that the market would remotely have the demand in the foreseeable future to support the demolition of good



The reliance on septic systems for wastewater disposal is a significant limit to growth

functional office, processing, and older warehouses to be replaced with modern 36' tall racking-focused warehouses.

Absent that, it is realistic to imagine that buildout is less than a 10% expansion (3.3 million to 3.6 million square feet), with a combination of warehouse, docks, and modest expansions of existing buildings) over some number of years.

Given the large number of available properties, modest expansions are the most likely scenario under current conditions. Many sites are already at or close to their sewage disposal capacity, but collectively there is some potential for expansion throughout the industrial park.

Higher end spaces that would generate a significant number of jobs and/or tax base (manufacturing and processing, hotels, and restaurants) are all extremely limited by zoning, wetlands, and most of all sewage disposal capacity, so that even the modest expansions possible are unlikely to be those uses, all of which use significant amounts of water and sewage disposal capacity.



Section 5. Potential land use opportunities

Development of sewerage capacity in the industrial park will immediately increase redevelopment potential. As a result, this will add significant value to industrial park parcels, even if current businesses have no immediate plans to use that capacity beyond discontinuing their septic systems and hooking into the sewer.

The ability of sewerage to catalyze development, however, will vary significantly on market demand and the potential for redevelopment to create a higher return on investment than current uses.

A significant portion of the Avon Industrial Park is occupied by low water and sewage users, such as truck storage, laydown and contractors' yards, warehousing, recycling, and truck storage areas. While these uses provide lower tax base than other uses, they provide an excellent return to the property owner. Given the shortage of such affordable space adjacent to limited access highways in the Boston metropolitan region, the demand for such space remains high. As a result, at least some property owners may not support paying more for centralized wastewater collection if a significant amount of the capital cost is passed onto the owners and/or tenants. On some parcels it will take a very long time for the redevelopment potential made possible by centralized wastewater to be fully realized.



Many successful uses have little incentive to redevelop even if centralized wastewater collection/ disposal becomes available.

Other higher property value, but still relatively low jobs generators, are in warehouse and distribution facilities, services, non-water intensive manufacturing, and certain offices. These uses, except the few that involve washing or processing, are also low water and sewage users. Again, given the need in the Boston metropolitan area for these facilities, warehousing, with its relatively low water demands, is going to remain a significant component of the industrial park even with wastewater collection.

Many property owners with low wastewater demand, predictable income and expenses, and low sewage demand are not going to change their short to medium term plans even with sewerage services. Over the longer term, however, as demands shift, many property owners will eventually want to redevelop their properties and take advantage of increased sewage disposal capacities.



Warehouses generate relatively little sanitary sewage, remain in demand in the area, and pay significant taxes.



Current warehouses, however, come in a wide variety of flavors, from highly functional warehouses that are likely to be around for a couple of decades to warehouse that may be in the process of becoming functionally obsolete, with lower rack heights and other limitations, and excess parking areas. Allowing greater density through changes in height, setback, lot coverage, and parking requirements can encourage redevelopment to more intense warehouse or other uses even absent centralized sewerage systems.

Short term redevelopment opportunities are modest, with or without centralized wastewater collection and disposal. Even without new sewage facilities, however, there are significant opportunities for expansions in the Avon Industrial Park with relatively low water/wastewater disposal demand. Some opportunities will be for relatively small expansions, but collectively they can add up. These opportunities can increase the tax base, generate jobs, and make existing businesses more successful. This includes, for example, warehouse and distribution facility expansions, small offices, contractors' yards, recycling, and truck dispatch. It is impossible to project with any accuracy the potential of industrial park expansion with regulatory changes and without sewerage facilities, but even a 10% increase in activity (far more on some sites and no changes on others) would provide the town with significant benefits.

There are currently a number of for-sale and for-lease properties indicating a softer demand for industrial park land. Several of these properties may be redeveloped with low water uses and, with new leases, may not benefit from new sewerage capacity. Others of these parcels, however, might find that new sewerage capacity would greatly increase their prospects to sell or lease their properties. Regardless, the other recommendations in this report for improving the cachet or prestige of the industrial park and other marketing, promotional, and financing actions are also critically important to create new opportunities.

Large water users (e.g., processing facilities, bottling facilities), development on many constrained lots, large scale developments, and possibly restaurants and hotels, are stalled or severely challenged by the lack of centralized wastewater collection and disposal. As a result, centralized wastewater collection is critical to the long-term buildout of the industrial park to take advantage of the land base. That buildout will take many years, in some cases decades, as current buildings and/or uses become obsolete and new investments in the sites are made.

Although it will take many years for all of the benefits to be realized, some uses could happen much faster. For example, there may be an opportunity for a hotel on either the north or south end of the industrial park. With the combination of property tax and hotel/rooms tax, hotels in many communities often pay the highest local taxes per dollar of property investment and create spin off benefits for local restaurants and retail. Given the access to the highway, the relatively low property values, and the lack of a strong immediate draw (e.g., a downtown, university, hospital, and recreation facility), the Avon Industrial Park hotel niche might well be an extended or long-term stay hotel, which rely less on immediate area amenities and more on access to destination and a larger footprint than urban core hotels.

Section 6. Zoning and regulatory approaches

For a small community, Avon has a strong and modern zoning code and regulatory system and an effective development review approach. These bylaws, regulations, and development reviews generally serve Avon. The strategic objectives of those regulations, however, are not always clear nor always consistent with the goals of maximizing economic potential and sustainable development.

There are various options for regulatory revisions to improve the buildout potential of the Avon Industrial Park for both economic development and sustainability. Many of these changes can be adopted without extending sanitary sewer to the industrial park. Some of the changes, however, will need to await a definite date for when sewerage will be available.

The relevant regulatory system includes:

- Zoning Bylaws (Code, Division 1: Bylaws, Chapter 255)
- Wetlands Bylaws (Code, Division 1: Bylaws, Chapter 239)
- Wetlands Rules and Regulations (Conservation Commission, not codified in Code)
- Construction and Post-Construction Stormwater Management Bylaw (Code, Division 1: Bylaws, Chapter 120)
- Stormwater Regulations (Planning Board, not codified in Code)
- Subdivision of Land Regulations (Code, Division 2: Regulations, Chapter 350)

Many of the potential changes would involve only minor tweaks, while some would require more substantive changes in vision and approach. Zoning, wetlands, and stormwater bylaw changes require Town Meeting approval. Subdivision regulations and Stormwater regulations only require Planning Board approval. Wetlands Regulations only require Conservation Commission approval.

Taxes, fees, and other policies are also very important. They are only discussed briefly here, however, because these are not police power regulatory issues, the focus of this analysis:

- **Avon has a split tax rate**, with commercial and industrial properties taxed (\$27 per \$1,000 of assessed value for FY23) at over twice the rate of residential properties (\$13.62 per \$1,000 of value). This gives Avon the 21st highest industrial tax rate in Massachusetts, while allowing its residential rate to be only the 171st highest. Some nearby communities (e.g., Brockton, Taunton, and West Bridgewater) have similar rates while some (e.g., Foxborough and Stoughton) have somewhat lower rates. This can discourage some businesses, but it is highly unlikely that these differences in tax rate, however, are going to be a primary or even a secondary reason in keeping businesses away. It is difficult to change a split rate since it would lead to significant increases in residential tax rates.
- **Avon's website does not list a Tax Increment Financing (TIF) policy**, whereby some proportions of new investments are not fully taxed for some grace period. Absent changing the split tax rate, which would be very difficult because of the effect on residential taxes, a clear TIF policy with authority from Town Meeting would send a clear message to investors that would allow them to plan. Currently TIFs require individual votes from Town Meeting (e.g., Karas Glass) without clear pre-request guidelines. TIFs are often appropriate for industrial uses and footloose businesses that have the ability to locate wherever they want. They are far less applicable to site-dependent uses like restaurants and retailers who develop where the market is and



Karas received tax increment financing, but there was no clear town policy. It was a one-off Town Meeting approval.

not based on tax rates. While a TIF can attract investment in what is otherwise a high industrial and commercial rate, care must be taken so that existing businesses who have been supporting jobs and taxes for years are not frustrated when only new investments get to pay low taxes. TIFs are often more important in leveraging Commonwealth industrial and commercial incentives by showing that the Town has skin in the game than the actual relatively small savings that might be provided to an investor.

- **Avon water rates are based on increasing block rates**, the more you use the higher your rate. This encourages conservation and reflects the costs that Avon faces in needing to have large volumes of water available on demand, regardless of actual use. This approach, however, can discourage large water processing manufacturers (e.g., bottling plants, manufacturing enterprises with high volume water use). As long as that is consistent with Avon’s economic development policies there is no problem with this approach. High water rates encourage warehouses and distribution, offices, contractors’ yards, and other lower water users. High water and sewer rates, however, can discourage some high-water users, potentially some of the users who might benefit from expanded sewage disposal capacity.
- **Avon electricity supply is provided by National Grid**, so Avon has no ability to influence their default rates. The Avon Community Electricity Aggregation Program (CCA), however, is within Avon’s control. Because most large users will opt out of Avon’s CCA and National Grid’s default offerings, the only way to serve larger users is to have rates and services attractive to those users. Small users, however, like residential and small commercial tenants may be influenced by the structure of Avon’s CCA. For example, Avon CCA could offer to sign long-term power purchase agreements for a certain percentage of their expected future load from industrial park warehouses who install solar photovoltaics or even potentially offer a lower rate for renewable distributed energy production and storage and for buildings that do not burn fossil fuels for space and water heating. Their capacity is limited, however, because if CCA rates are not competitive with National Grid, the CCA can lose those customers.
- **The Avon Industrial Park has only a modest obvious presence** at its entrances, no signs or presence of any kind on Route 24 or the Route 24 exit. Even away from Route 24 on Pond and Page Streets, there is a weak presence at the industrial park gateways. An improved presence does not directly lead to investment, but anything that lends gravitas adds cachet, or prestige. Such things help put the industrial park on the map and in the minds of investors.



A presence and gateway signage reminds visitors and investors that Avon cares about the Industrial Park. The Industrial Park has no presence on Route 24 and a limited presence at its Page and Pond Streets gateways.

Zoning

What	Discussion
<p>Adopt Form Based Code (FBC) or Character-Based Districts in Industrial Areas.</p>	<p>Form Based Code is typically more focused on the form of building and site development (private realm) and the streetscape (public realms) and less on regulating uses. In industrial areas, they are most useful in places working to attract retail and commercial uses, such as old New England mill building industrial areas. In the Avon Industrial Park, however, while some tweaking of the existing code is desirable, there is probably no need for a major new focus on form, the form of business, or ensuring compatibility with residential and retail uses. (FBC, however, is a powerful approach and could be benefit to other Avon retail and commercial areas in Avon, such as the Business, Business Overlay, Commercial, and Village Overlay Districts.)</p>
<p>Adopt Mixed Use Development (without residential) in Industrial Areas.</p>	<p>Mixed use development allowing limited commercial uses, but not residential uses, allows different compatible use, adding overall value to areas, more flexibility, and creating more attractive areas. While extremely important in retail and commercial areas of Avon (e.g., the Business, Business Overlay, Commercial, and Village Overlay Districts), any residential use in the AIP would be counter-productive if it reduced the land base for industrial and office development. (See below, however, for liberalization of allowed uses in the Table of Use regulations and for potential map changes.)</p>
<p>Section 255-5.3 Table of Use Regulations Reduce discretionary Special Use Permits and instead clarify what is desired, for example allow Eating Places and hotels by-right in certain areas within the Industrial District and otherwise eliminate the Special Permit option.</p>	<p>Special permits create uncertainty that discourages investment and creates uncertainty for all parties, and sometimes creates greater legal liability from permit appeals. This could be simplified by revising the 27 uses that currently require special permits in the Industrial Park. For example:</p> <ul style="list-style-type: none"> • Site Plan approval only for uses that are appropriate anywhere in the park (e.g., public utilities, town uses, trade schools, and wind energy conversation). • Site Plan approval only in certain areas and not allowed in the rest of the Industrial Park. Hotels, motels, and restaurants, for example, are among the highest job generating and taxpaying properties with property, room occupancy, and meals taxes. (See map change suggestion, below.) • Site Plan approval only with new specific standards for trucking and freight terminals, but with limits such as the expanse of pavement cannot exceed twice the size of the building

	<ul style="list-style-type: none"> • Special Permit and site plan only for uses that require a site-by-site assessment. • Prohibited uses such as outdoor sports facilities, which would consume so much land, or extraction of materials except for as needed for developing a site).
<p>Section 255-5.3 Table of Use Regulations Merge and simplify use categories and rationalize the decision. For example, “Place for exhibition, lettering or sale of gravestones” should not be its own use.</p>	<p>Categories do not need to be so specific, and there should be rationalizing what is allowed where. Why ban gravestone lettering and sales in the AIP when car washing is allowed?</p>
<p>Zoning Map changes or overlay to allow uses currently allowed by special permit (e.g., hotels, restaurants) and not allowed (e.g., housing) on the edge of the AIP and otherwise eliminate the Special Permit option (e.g., expand the business overlay district at Harrison Blvd/Pond Street intersection to any other sites especially suitable for hotels).</p>	<p>Many of the special permit options are for uses that instead could be site plan approval only on the edge of the industrial park (e.g., restaurants, hotels) and not interior (e.g., at the Pond and Page Streets entrances to the Industrial Park on both sides of the current zoning boundaries). Mixed use and higher value uses should be encouraged but not threats to industrial land or new conflicts.</p>
<p>Zoning Map changes to include all areas within the Industrial Park within the general industrial zone, specifically the slivers of lot B8-4-4, -5, and -6 (655, 660, and 675 Bodwell Street Extension) that is within the Industrial Park but is currently zoned residential.</p>	<p>Portions of these three parcels are only accessible from the Avon Industrial Park and are largely built out as industrial land but are zoned residential. This will make redevelopment or expansions of these parcels easier. (See map, below this table.)</p>
<p>Section 255-6.4. Dimensional and Density Reduce the 200-foot frontage and 40-foot front setback requirements (e.g., to 50’ and 15’ respectively to match Business Overlay). Increase maximum building height to 45 feet. Replace 60% maximum building lot coverage with 85% maximum impervious area or eliminate in its entirety, instead using performance standards:</p> <ul style="list-style-type: none"> • No increase in post-development peak stormwater flow. • Green infrastructure such as vegetated swales, rain gardens. • Sumps and gas hoods in all catch basins, even existing ones. • Street trees and on-site trees • Impervious area caps or green roofs 	<p>There is no clear strategy behind the current requirements. Some of the current standards simply consume land that could otherwise provide economic and environmental benefits without providing meaningful alternative benefits. Reducing the frontage allows more flexibility. Reducing front setback provides more developable space without making industrial development less attractive and might incentivize moving parking behind and adjacent to buildings instead of in front of them, which is more attractive. With warehouse heights increasingly at 36 feet, getting close to the 40-foot zoning maximum (rooftop mechanicals are already excluded), a slight increase provides flexibility for special needs warehouses or a four-story office building. A cap on impervious cover, a stormwater runoff performance requirement, or a minimum tree planting area is far more important to softening the appearance and environmental impacts of a site than a cap on building coverage.</p>
<p>Section 255-8.6. Off-Street Parking Regulations. Eliminate off-street parking requirements or dramatically reduce in Industrial zones, privatizing the requirement and leaving it to each</p>	<p>The current standards require more parking than is typically needed (especially for businesses with two shifts), as evidenced by the large number of empty parking areas in the AIP, adding cost, consuming land, adding impervious area. Unlike other areas in Avon,</p>



<p>land owner to decide how many spaces they need and how they share their parking with abutting properties.</p> <p>Reduction in parking can help meet resilience performance standards, for example from reduced setback requirements and increased stormwater performance site plan requirements.</p>	<p>there is no spillover into sensitive neighborhoods if there is not enough parking, so each business can decide what they need. This could allow alternative investments that might reduce expensive to provide parking for single-occupancy vehicles.</p>																								
<p>Section 255-12.2. Permits; site plans. Shift to on-line permitting and permit review collaboration as the Town builds out the necessary software and hardware. Reduce or eliminate the number of paper copies provided, provide that plans are provided in PDF at scale and with CAD versions.</p>	<p>Paper and printing add costs and environmental impacts. Reduce the number of copies or eliminate paper filings, if board member reviewers have adequate access to computers, and technical staff reviewers have access to large monitors.</p>																								
<p>Section 255-12.2. Permits; site plans. Clarify that adequate sewage disposal capacity is required for Industrial District projects.</p>	<p>Zoning changes can happen now so long as projects that will generate new sewage needs have adequate sewage disposal capacity, on-site or into a centralized system. It allows owners to plan, even if they don't currently have disposal capacity.</p>																								
<p>Adopt resilience, green infrastructure and green industrial requirements and incentives in site plan approval or environmental performance standards. These include addressing heat island effect, rooftop or parking lot solar photovoltaics and/or green roofs, pervious pavement, rain gardens, shade trees and on-site trees and tree pits or constructed soil, outdoor seating areas for employees, increased stormwater treatment and retention standards. Reduced parking requirements, reduced setbacks, and, eventually, freeing up land currently supporting on-site sewage disposal help meet this standard.</p> <p>Standards would apply equally to private development and private roads.</p> <p>(See also Stormwater Bylaws section, below, for possible stormwater utility.)</p>	<p>Incentivize or require green infrastructure. This would probably include:</p> <ol style="list-style-type: none"> 1. Minimum standards and performance standard (e.g., X trees per square foot, no increase in pre-development to post-development peak stormwater). 2. Incentives (e.g., for green roofs). 3. Assign points for green infrastructure measures and require a minimum number of points, allowing site designers to customize, over and above the minimum standards, based on their needs and site opportunities. (The table below is to illustrate this and is not designed for Avon or to equalize the cost per point.) <table border="1" data-bbox="792 1312 1421 1837"> <thead> <tr> <th>Improvement</th> <th>Points Available</th> </tr> </thead> <tbody> <tr> <td>Trees with tree boxes or structured soil</td> <td></td> </tr> <tr> <td>Hours that water is retained after a one-year design storm</td> <td></td> </tr> <tr> <td>Nutrient removal beyond DEP stormwater standards</td> <td></td> </tr> <tr> <td>Maximum parking spaces below...</td> <td></td> </tr> <tr> <td>Solar photovoltaic installation</td> <td></td> </tr> <tr> <td>Green roofs</td> <td></td> </tr> <tr> <td>Fossil fuel free for space and water heating</td> <td></td> </tr> <tr> <td>Ground source heating and cooling</td> <td></td> </tr> <tr> <td>Transportation demand management (see below)</td> <td></td> </tr> <tr> <td>EV charging above any building code requirements.</td> <td></td> </tr> <tr> <td>Total points required</td> <td>100</td> </tr> </tbody> </table>	Improvement	Points Available	Trees with tree boxes or structured soil		Hours that water is retained after a one-year design storm		Nutrient removal beyond DEP stormwater standards		Maximum parking spaces below...		Solar photovoltaic installation		Green roofs		Fossil fuel free for space and water heating		Ground source heating and cooling		Transportation demand management (see below)		EV charging above any building code requirements.		Total points required	100
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Trees with tree boxes or structured soil																									
Hours that water is retained after a one-year design storm																									
Nutrient removal beyond DEP stormwater standards																									
Maximum parking spaces below...																									
Solar photovoltaic installation																									
Green roofs																									
Fossil fuel free for space and water heating																									
Ground source heating and cooling																									
Transportation demand management (see below)																									
EV charging above any building code requirements.																									
Total points required	100																								



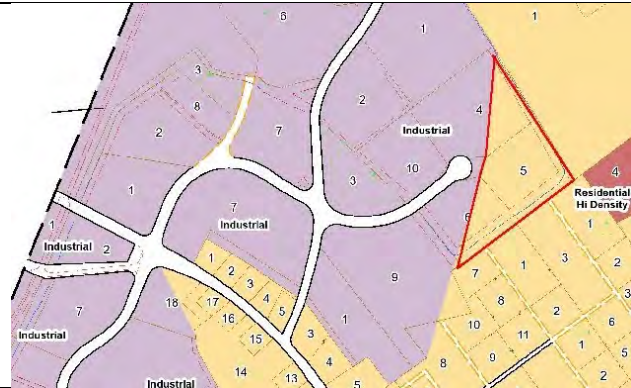
Adopt Transportation Demand Management

Medium to large uses (e.g., 20,000 square feet and above) can be required to minimize transportation and parking demand by maximum parking spaces, requiring transit and/or shared car investments, employee buyout of free parking benefits, subsidizing transit passes at least as heavily as subsidizing free parking.

Require that major projects going through site plan conduct an alternatives analysis of how they can reduce peak hour trips generated by their use, though measures such as remote working, and flexible work hours. Adoption of such measures would earn points:

- Towards resilience requirements (above)
- If zoning is not changed to eliminate parking requirements, could be used to justify less parking.
- If the town ever adopted traffic mitigation fees, as many communities have done, such analysis could be used to reduce such fees.

Zone all areas of the Avon Industrial Park as Industrial (#655, 660, and 675 Bodwell Street Extension)



Deep front yard setbacks limit development options, but do not make buildings more attractive. The land ends up vacant or used for parking or drainage, uses that are often best hidden behind or next to a building.



Instead of restaurants and hotels by special permit in the entire Industrial District, the Town could expand the business overlay to appropriate locations, and allow the uses there by-right with only site plan approval. No expansion will be possible without sewerage capacity



Many areas of the Industrial Park has empty seas of parking. Privatizing or removing parking requirements would have no spillover effects on other users, could reduce winter snow removal costs, and potentially open redevelopment opportunities

Wetlands Bylaws

What	Discussion
<p>Section 239-3 Exceptions could exempt land within the Industrial District from having stricter performance standards or buffer zones than required under the Massachusetts Wetlands Protection Act. (Currently the Conservation Commission has the authority and uses it to create town-wide buffer requirements.)</p>	<p>Industrial areas are not pristine and there is less flexibility in siting uses. Allowing the industrial part to be built to the Massachusetts Wetlands Protection Act standards (which still provide a fair amount of protection), may have a smaller total environmental footprint than forcing development to spread out.</p>
<p>Section 239-7(C) permits can be amended to change the default period of permit validity from the current two-year period to the three-year period allowed under the Massachusetts Wetlands Protection Act. (This could be town-wide or only for the Industrial District.)</p>	<p>A two-year permit period can be a challenge for any project, but especially for industrial and large projects that have a long lead time. It is common for construction drawings and financing to take two years after a permit is issued. While the Conservation Commission can currently issue a permit for a longer period or extend a permit, they don't have to: Uncertainty is the enemy of</p>

	investment. (Note: during the Great Recession and the Covid emergency, the Commonwealth adopted a time-limited permit extension act automatically extending permit periods.)
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Wetlands Regulations

What	Discussion
Correct scrivener's error – The minutes show the Regulations adopted 2/10/22 not 3/10/22 in the Regulations). Add date of required public hearing.	Ensure regulations are enforceable. Confirm that the required public hearing was held.
Article XV – Buffer Zone has town-wide buffer zone requirements. Use smaller buffer zones and allow larger standards for small disturbance areas in the AIP, but not in residential areas or pristine areas.	Smaller buffers in targeted development areas, but not pristine or residential areas, avoid pressures to force development into more pristine areas. A denser industrial park has a smaller total environmental footprint than developing new areas. Buffers are less of a challenge, and should be maintained, in residential areas which support more flexible layouts, tend to have smaller development pads, and are more likely to be in more pristine areas that the Avon Industrial Park.
Put the Wetlands Regulations in the Code (Division 2: Regulations).	Improve transparency. Health, subdivision, and water department regulations are already in the code.

Construction and Post-Construction Stormwater Management Bylaws

What	Discussion
Section 120-4 Administration – Either formally move permit granting authority to DPW or as allowed under this section, delegate the DPW director as the "reviewing agent."	Stormwater regulations are highly technical and approval authority might be more suited to trained staff and/or consultants. The authority to write regulations, however, requires a less technical and more balanced focus on all town needs. Writing the regulations should be collaborative between the citizen Planning Board and DPW technical staff or consultants.
Allow off-site stormwater mitigation such as from narrowing excess roadway pavement or on other properties in the same watershed reach.	This provides designers with alternatives ways of meeting the same stormwater standard. For example, if a property owner narrowed a roadway pavement to the standards in the proposed stormwater regulations, below, they could use the land they free up for a vegetated swale maintained by the stormwater utility (see stormwater bylaw recommendations below), to help meet their own drainage obligations.
Add robust green infrastructure standards to Stormwater Management bylaws and/or regulations.	Grassed swales, bioswales, rain gardens, and other green infrastructure reduces flooding and improves sustainability.
Adopt a stormwater fee, utility, and enterprise fund (per MGL Chapter 83, Section 1, et seq. with specific authority in Section 16) with a fee based on	A stormwater utility can provide funding for the town to: <ul style="list-style-type: none"> • Maintain its own stormwater gray and green



What	Discussion
impervious area. This could be town-wide or only in the Avon Industrial Park.	<p>infrastructure in the area where it collects fees.</p> <ul style="list-style-type: none"> • Ensure that private operations and maintenance obligations are fulfilled. • Potentially take over the maintenance of some privately developed critical stormwater facilities.
Put the Stormwater Regulations on Avon’s website , ideally in the Code (Division 2: Regulations).	Improve transparency. Regulations are available on the town’s website and not readily available in town hall. Health, subdivision, and water department regulations are already in the Code (Division 2: Regulations).



Bioswales, grassed swales, and pervious pavement for parking (but not traveled ways) can be cost effective ways of improving stormwater quality and reducing local flooding, allowing a greater percentage of the industrial park to be developed and reducing adverse impacts.

Subdivision of Land

What	Discussion
Section 350-5.2(B) Minimum width – narrow required pavement width (for public and private roads).	Wide pavement widths create more impervious areas, heat islands, runoff, construction cost, and on-going maintenance cost.
Section 350-5.2(B) Minimum width – allow projects to narrow existing local streets and replace with pervious surfaces (for public and private roads).	This could provide project developers with an easier path to meet stormwater requirements. It would also reduce Town maintenance burdens.
Section 350-5.2(J) Storm drains – require low impact drainage/green infrastructure (for public and private roads).	Grassed swales, bioswales, rain gardens, and other green infrastructure reduces flooding and improves sustainability.

Section 350-5.2(R) Shade trees – require more shade trees with structural or other tree pits (for public and private roads).

Shade trees add value, lower heat island, improve aesthetics. Structural soil and other treatment extend the life of shade trees and allows roots to go deep, reducing pavement and sidewalk cracking.



Even with heavy truck movement, the subdivision required street pavement width, especially for local streets, is often wider than needed, generates more storm water runoff that needs to be treated, and adds to maintenance costs.

Section 7. Preferred zoning and regulatory approach

There are five regulatory design principles applicable to selecting the preferred zoning and regulatory approach for Avon.

1. The regulatory system needs to align with available professional and support staff and available on-call or special consultant.
2. The “right path,” the route that best aligns with town goals, should be the easy regulatory path.
3. Uncertainty is the enemy of good investment, discourages investment, and increases Avon’s legal exposure from permit appeals.
4. A robust sustainability focus, with clear rules and minimum interpretation, does not add significant cost and can add to the industrial park’s cachet or prestige.
5. There should be an easy to articulate reason for each requirement.

The regulatory system needs to align with available professional and support staff.

Any regulations require both professional and support staff to complement the work of volunteers. The more complex the regulations and the development issues, the greater the need for such professional and staff time. Overly complex regulations can waste town and investor resources. At the same time, over simplification can create uncertainty, legal and reputational risks, and discourage investment.

Avon would benefit from investment in new professional line positions:

- **Avon has very limited professional positions** who can coordinate planning efforts and regulatory reviews. For example, the DPW Director provides strong professional support for grant-funded planning projects, ranging from the future comprehensive plan to the Avon Industrial Park Smart Redevelopment project, but does not have the time for broader day-to-day regulatory review or management of private consultants. The Building Inspector does zoning enforcement but does not always have enough time to work as closely with the regulatory boards (Planning, Zoning, and Conservation).
- **Land use and regulatory have dedicated members and chairs** who do the daily work, but as volunteer board members they do not have the time or training for in-depth regulatory reviews or to streamline the process while improving the long-term investment and sustainability.
- **Board staff time is limited to staff support** (e.g., to prepare minutes), with limited time and expertise for new projects.
- **Consultants and the Old Colony Regional Planning Commission (RPA)**, usually grant funded, can support specific projects, but not provide day-to-day regulatory support.
- **There is no single point of contact** to facilitate the permit and coordination process.

Avon’s new investment in a planning, land use and regulatory professional position should pay off in terms of reduced legal and reputational risk, increased investment, productive use of grant funds, improved sustainability, and an improved quality of life.

The “right path,” the route that best aligns with town goals, should be the easy regulatory path.

In some areas, town regulations should create a floor, a minimum requirement, for development (e.g., one shade tree for every 20 parking spaces or a maximum of paved area equal to twice the size of distribution building). The outcome that is most desirable from the town’s perspective should always be the easiest regulatory path (e.g., allow a hotel by right, with only a site plan approval, in the areas where a hotel would benefit Avon). Projects that create more investment, more jobs, more tax base, and increased sustainability should be allowed-by-right, with only a site plan approval required. Projects that provide less of those things should require a special permit or not be allowed. For example, a hotel is pure gold in terms of taxes (property tax plus hotel tax), co-benefits from visitor spending, and employment. Currently, because it only makes sense in some areas of the industrial park, this use is by special permit. Making the right path the easy



path could mean identifying the area of the industrial park where a hotel makes sense (as discussed in the regulatory options chapter) and zoning that area to allow a hotel with only a site plan approval.

Uncertainty is the enemy of good investment. Uncertainty also increases Avon’s legal exposure

As discussed above, in some areas, Avon relies heavily on zoning special permits and regulatory waivers. While this can appear to make the town flexible, with most special permit applications approved and many unnecessary standards waived, it creates uncertainty. Avon will never know the investments that didn’t happen because investors or their attorneys and consultant teams did not pursue a project due to uncertainty. Every special permit or waiver issued or denied creates legal and reputational risk from property owners (for permits denied) and abutters or other interests (for permits approved). Creating more certainty, for example a site plan approval process that creates a guaranteed path to approval when clear conditions are met, avoids this uncertainty.

A robust sustainability focus, with clear rules and minimum interpretation, does not add significant cost and can add to the industrial park’s cachet or prestige.

Currently, there are environmental regulatory requirements in wetlands and stormwater regulations, with the practice being tying special permits and waivers to better performance. Instead, the town could simply require environmental standards be met, but with multiple compliance paths for the regulated community.

Every regulatory requirement needs an articulate reason.

Most of the regulatory requirements have obvious rational reasons. There are some areas, however, where the regulations seem arbitrary. There is nothing wrong with a tight regulatory structure that serves the town, but there should always be a reason for every standard. The example cited and illustrated earlier in this report is the 40-foot setback requirement in the industrial district. 40 feet does not create more attractive development than 30 or 20 feet, and because it incentivizes parking in front of buildings to maximize available space, it could be making industrial development less attractive.

Section 8. Projected buildout potential

Section 4, Baseline Buildout (above) concluded that while it is **theoretically** possible under existing conditions (zoning, wetlands, and on-site sewage disposal) for the Avon Industrial Park to expand by approximately 25% of building space (3.3 million square feet to 4.12 million square feet), that will not happen without sewerage and regulatory changes. The only way for that expansion would be breaking leases and demolishing buildings in good condition structurally and functionally and that already provide a significant Return on Investment (ROI) to replace them with new warehouses optimized for commercial pallet racking and no processing or value added. Not only does that not reflect market demand, but it would also not be a desirable outcome because it could reduce the number of jobs in the industrial park.

In the Baseline Buildout, we found that, under existing conditions (e.g., zoning and on-site sewage disposal), buildout is likely around a 10% expansion (3.3 million to 3.6 million square feet), with some combination of warehouse, docks, and modest expansions of existing buildings). Even that buildout, however, would take a very long time to achieve and could well create a path dependency that would prevent future expansions, as expansions would use existing setbacks and lock in uses which have low water use and low sewerage generation.

Any projection requires certain assumptions about future market conditions and opportunities and about site conditions that could only be apparent with much more detailed site-level analysis and assumptions about market conditions. All of the examples provided will be incorrect for some specific sites. The overall conclusions, however, assume that errors average out and the conclusions are adequate for planning purposes and regulatory reform. Detailed analysis attempting to provide exact projections are of limited utility because they, of necessity, require assumptions about future market conditions and would be very expensive because they require far more detailed site analysis than this high-level analysis.

With the recommended regulatory changes but before the installation of a centralized sewerage system, a 10% expansion in the total building square footage is far more likely. That expansion would happen in a far shorter time period than without these changes. As market demand shifts, over time the expansion with just regulatory changes but no sewerage could be significantly greater. These regulatory changes would require no capital investment, could take place within a year, and would not compromise the integrity of the Industrial Park.

With the recommended regulatory changes and centralized sewerage system, a 35% expansion in the total building square footage is realistic, without an expansion focused only on warehousing. (Warehousing generates good jobs and tax base, but focusing only on warehousing and not the higher value-added businesses leave higher end jobs, a higher tax base, and a mix of businesses that are more likely to thrive during downturns.)

There are two key decision points for Avon that are reflected in this buildout analysis

- First, does Avon want to implement regulatory reform, as recommended here, to allow for increased density and more sustainable practices (stormwater and green infrastructure) even absent new sewage disposal capacity? Development under this scenario would be a combination of new buildings and expanded buildings, but would not include water and sewage intensive uses. There is almost no downside to these changes, and therefore the accuracy of buildout scenarios is not critical. There will still be enough development opportunities for additional expansion later when sewage disposal capacity is added.
- Second, does Avon want to invest in new sewage disposal capacity to allow for increased water and sewer usage? Avon has advanced the engineering analysis of this solution and, as they focus on sewage disposal



that would serve the foreseeable future and not building in excess capacity that will never be tapped, this solution is clearly viable. This is still a large investment, and because the benefits will accrue over many years, the capacity to fund it with sewer fees, betterment and special assessments, and tax increment financing (TIF) or district improvement financing (DIFs) is limited, requiring more grant financing and town bonding to make it possible. There is no question that additional high value-added buildout, with more jobs and a larger tax base, is possible with this investment. There is also no question that there is a long-time horizon for that buildout.

Buildout analysis findings

1. **The development footprint is largely built out**, with significant wetlands and site constraints that limit expansion regardless of the availability of new sewage disposal facilities.
2. **Many existing buildings are in good condition structurally and functionally** and are unlikely to generate a significant expansion for the foreseeable future, even with the availability of new sewerage.
3. **There are numerous small opportunities for expansion into zoning setbacks** with regulatory reform, even absent centralized sewerage.
4. **There are significantly larger opportunities for development on current parking lots** with regulatory reform, even absent centralized sewerage.
5. **Sustainability and resilience requirements can be added today** without impeding new investments. This can address heat island problems (heat is the biggest killer from climate change in New England), flooding and water quality challenges, add amenities that further add to the value and the cache of the industrial park, and position the industrial park to serve its future tenants.
6. **A centralized sewerage system with regulatory reform will dramatically add new development, tax base, and employment opportunities.** The costs for such improvements are significant and the easier opportunities should not wait for a centralized sewerage system.

The development footprint is largely built-out

Under existing conditions, wetlands, poorly drained soils, on-site sewage capacity, stormwater treatment capacity, and the current regulations result in few significant opportunities for growth.

Many properties have already been developed to the edge of wetlands and the development area cannot expand. Based on experiences in other areas and a random sampling of some of the undeveloped areas within the Avon Industrial Park, there are significantly more wetlands than mapped on GIS maps (mapping is based on remote sensing and not more detailed site analysis). Centralized sewerage would not make more of this land available.

There are, however, a few small areas of vacant land available.



There are relatively small amounts of undeveloped land without wetlands or severe site constraints



Many sites are developed to the wetlands edge with little or no buffer, creating no opportunity for expansion in that direction.

Many existing buildings are in good condition structurally and functionally

Replacement of buildings and properties at all ends of the market that are providing a significant Return on Investment (ROI) is unlikely to occur in the foreseeable future unless the market changes significantly.

This reduces the benefit of new sewerage investments and may reduce the willingness to have property and business owners pay for some of these costs. A sewerage system, however, will add significant value to properties and remove the need to maintain septic systems, so many property owners will still be willing to pay for some of these costs. A betterment or special assessment, especially if it is paid as a surcharge on property taxes over a number of years, might well have the support of enough property owners to be enacted.



Buildings in good physical and functional condition with decent Returns on Investment are unlikely to be replaced by higher value investments in Avon's market. There are plenty of other investment opportunities on lower priced properties.



Even lower price properties with what is likely a good Return on Investment and lower sunk costs are unlikely to be replaced unless and until the current use wants to leave, creating an opportunity but an unpredictable time frame that could be years or decades in the making. These properties owners are probably aware that they will eventually need sewerage for future tenants. Many of the owners might also support a betterment or special assessment for this purpose.



In the Boston metropolitan area, it is hard to find reasonably priced space for land extensive businesses on a highway, so some apparently lower land rent businesses are likely to stay until property values rise much higher than they are today in Avon.

There are numerous small opportunities for expansion into zoning setbacks with regulatory reform

Setbacks are more aggressive than required for environmental or quality of development reasons. Changing the setbacks would create many, albeit most of them small, development opportunities such as for front offices that do not require much water or sewage even absent centralized sewerage.

This would not apply, however, to sites where on-site sewage disposal facilities, stormwater facilities, or extensive underground utilities occupy those setback areas. Avon could apply reduced setbacks only to building, to encourage development and help frame the street and improve the attractiveness of the Industrial Park, or they could allow any use, including parking, to increase the useable area within the Park.

Because the opportunity to build within the setback areas that are possible with a zoning change are limited, the only benefit would be for buildings who have a layout where they might be able to take advantage of the new space, most office for small front office expansions.

These limits would eliminate most sites from benefiting. If the new setbacks are well designed, however, there is no disadvantage to Avon, and even small investments in low water/low sewer uses, like front offices, would create jobs and taxes at no cost to Avon.



A zoning change could make portions of the current front and side lot setbacks available for redevelopment. This would only appeal to a few businesses, however, who don't have on-site sewage disposal systems, drainage systems, and extensive infrastructure in those setback areas and whose building layout would allow them to take advantage of those small areas with such uses as front office.

There are significantly larger opportunities for development on current parking lots

Zoning regulations require far more parking than required for business use and protection of adjacent properties, and properties are often developed with even more parking than zoning requires. A reduction in these parking areas can provide significant development opportunities. In addition, since large parking lots create heat island effect (increases in local ambient temperatures that make it uncomfortable to be outside and increase air conditioning costs), and problems with stormwater quality and quantity, these redevelopment opportunities are, almost by definition, more resilient and sustainable than unnecessarily oversized parking fields.

Some of the parking lots are on top of on-site sewage and/or stormwater disposal areas, limiting their utility for other use. Even in those cases, however, removing asphalt advances stormwater and heat island solutions and makes the Park more attractive.

In many cases, uses such as offices and warehouse, which use relatively small amounts of water and sewage disposal capacity, can be developed without a centralized sewerage system.



Some parking lots are heavily used and are needed, but that is the exception and not the rule in the Avon Industrial Park

Many businesses already have significantly more parking than required by zoning but have not been developing these parking lots. That implies a limited market demand for the space, but over time, especially with less stringent parking requirements, the space will be absorbed.

Avon could speed this transition by obtaining approval to offer Tax Increment Financing (TIF) for parking lot redevelopment, in essence a tax abatement for this purpose, which would still increase local property tax receipts. This would require staff or consultant time be allocated to administer this program.



Some businesses, even very successful businesses with a great deal of traffic, have more parking than needed, and no need of that space for truck storage. That provides some of the easiest redevelopment opportunities in the Industrial Park, especially when the parking is not on top of on-site sewage or stormwater disposal areas.

Sustainability and resilience requirements can be added today

Reducing the empty seas of parking and allowing more intense uses within the industrial park would dramatically improve industrial park sustainability, especially as compared to the current situation that potentially diverts new uses and expansions to new previously undeveloped sites outside of the industrial park.

In addition, the most important sustainability and resilience needs, more trees, green infrastructure, and water quality improvements, are inexpensive in the context of new development. They can be added, often with a regulatory incentive, so that the cost is minimal enough to not discourage any development.

It would be easy to add low-cost resilience improvements as a requirement of any new development, redevelopment, or building expansion. These include, but are not limited to:

- Providing voluntary incentives to reduce excess parking (empty seas of asphalt) discussed above.
- Creating a cap on the number of new parking spaces provided for a project.
- Requiring that drainage systems catch, retain, and treat stormwater, often with nature-based solutions, before releasing it, even for redevelopment of existing sites (this is already common for new development on greenfield sites, but those are rare in the Industrial Park).
- Increasing the standards for tree plantings in and adjacent to all new or expanded parking lots.
- Increasing the standards for tree plantings to mitigate any new roof that is not either covered with solar photovoltaics or a green roof.
- Require tree plantings in structured soils or tree boxes to provide maximum opportunities for trees to grow and thrive, while not having roots destroy roads, sidewalks, and parking areas.

Some more expensive improvements, such as solar photovoltaics and/or green roofs, can still often pay for themselves and can be justified as a good long-term investment that can pencil out.

These shorter-term resilience investments and the higher cost sewerage project are especially important not only because of their resilience and redevelopment benefits but, because the Industrial Park drains towards the Brockton Reservoir and Brockton’s water supply, all of these investments help protect that water supply.

If the Town adopts a stormwater utility (see discussion in Zoning and regulatory approaches, Section 6, above), it could potentially be designed to include maintenance of public and private facilities (with easements to avoid private inurement issues), which can provide the economy of scale to lower overall maintenance costs.





All sites with heavy truck traffic will have minor fluid leaks and debris on pavement.

To address water quality, all new development, redevelopment, and expansion projects could be required to retrofit catch basins with sumps (to catch sediments) and hoods (to catch floatable gas and scum), while direct outfalls off pavement could be required to build pre-treatment pools, vegetated swales, or artificial wetlands.



A centralized sewerage with regulatory reform will add significant development opportunities.

While Avon can move immediately on the zoning and regulatory changes that will encourage more incremental development opportunities.

Sewerage system will add three immediate benefits to all property owners that, presumably will increase the willingness of some property owners to pay a share of the sewer extension costs:

- First, the availability of sewer will immediately add to the value of the land in the industrial park.
- Second, owners hooking onto the sewer will no longer need to maintain their own septic systems, some of which may be undersized for current uses.
- Third, land currently in use or reserved for on-site sewage disposal systems would be available for expanded buildings and intensive site uses.

For many property owners, however, many of the most important benefits of the sewerage network, significant new development, and redevelopment opportunities, will take years if not decades to be relevant. As a result, for many property owners, it would be very difficult to pass **all** of these capital costs to developers in the form of sewer hookup fees, sewer use fees, and district improvement or tax increment financing.





Land currently used for on-site sewage disposal would be available for development if sewerage is installed.

Sewerage will create some immediate opportunities for development on undeveloped or previously developed land. Pond Street, in the Business Overlay and not the Industrial Park, may provide the easiest redevelopment potential and the greatest value added as a result of a sewer. The site could be well suited for a hotel or extended stay hotel, for example, which provides high property taxes and room taxes, but only with a sewer.



Pond Street is in the Business Overlay, not the Industrial District. The value added to this land, because of the ability to develop a hotel or other high end and high water and sewer uses, might be among the greatest from the entire project.

Longer term, sewerage creates the potential for a redevelopment of many currently developed buildings and sites. It is difficult, however, to project which buildings are underperforming since even a functionally out-of-date building with a lower value may be providing an excellent return on investment. For example, modern warehouses are 36 feet to the rafters, to maximize rack space, but many older lower warehouses are working well for their tenants and providing a good return for their owners. Such building can remain in use for many decades to come, if they continue to attract tenants and if there are no other higher value added tenants looking for space, especially if there was sewerage and if there was demand for processing.



Six Kiddie Drive is an older building that does not meet modern standards, but it has many tenants and a significant amount of traffic and activity. Buildings like this can remain vibrant for decades.

The demand for uses which require large volumes of water for processing is not huge, however. In addition, one of the most valuable attributes of the Avon Industrial Park is its easy access to the Boston metropolitan area. That favors land extensive businesses that need to be near that market like warehousing, truck dispatch, distribution, services, contractors' yards, recycling, and value-added products needed in the Boston metro-area, few of which require large volumes of wastewater. Even high-end distributors (e.g., Ophthalmic Instrument, Boston Orthotics, and Asaman pharmaceutical), high end services (e.g., IPC Lyndon) and high-volume distributors (e.g., Restaurant Supply and the US Post Office) are low volume sewage generators.

The kinds of businesses that would benefit from centralized wastewater collection and disposal, however, are among the highest value businesses for property tax and jobs. For example, Cuming Microwave, already located in Avon with 118,000 square feet, would most likely require sewer if this were a brand-new site for them, and it is the kind of business with very high values and excellent well-paying jobs. Likewise, Avon was fortunate to attract Karas Glass to the industrial park, as the kind of business that often requires sewerage systems. Extending sewer will have limited effects for many properties, but it is a game changer for attracting the next Cuming Microwave or Karas Glass.

Section 9. Recommended zoning and land use regulations

Zoning and regulatory approaches (Section 6) provided an overview of zoning and other regulatory changes that could promote a smart industrial park expansion. This section provides a discussion for each of the possible actions that are listed below as recommended changes.

Preferred zoning and regulatory approach (Section 7) provides a framework of what approaches could benefit Avon.

All of the following changes could be made immediately and not wait for the centralized sewerage project. Without adequate sewage disposal, of course, some of these uses will not be able to proceed, but adopting the zoning now allows investors to make rationale investment decisions and will hopefully increase interest in eventually developing sewerage services in the Industrial Park.

Recommended immediate corrections by staff and boards:

- Add the date of the required wetlands regulations public hearing to the wetland regulations.
- Put both the stormwater regulations and the wetlands regulations on Avon’s website or, ideally, in Avon’s on-line Code (eCode).

Recommended zoning map changes by Town Meeting to encourage uses that generate a larger tax base.

- Include all areas within the Industrial Park in the Industrial District, specifically the portion of B8-4-4, -5, and -6 (655, 660, and 675 Bodwell Street Extension) that are not currently zoned industrial.
- Add the southwest corner of the Page Street/Bodwell Street intersection to the Business Overlay District (while keeping the underlying zoning Industrial District).

Recommended zoning text changes by Town Meeting to promote resilience and free up more land for a sustainable industrial park.

- Section 255-6.4. Dimensional and Density. {Make changes for the Industrial row as shown}

Minimum Lot Frontage	200 50
Minimum Yard Depth – Front	40 15
Minimum Yard Depth – Rear	40 15
Minimum Yard Depth – Side	25 15
Maximum Building Height	40 45
Maximum Lot Coverage	60 85*

***Any increase in lot coverage over 60% of the lot must show green infrastructure and stormwater facilities to ensure no increase in peak stormwater flow during 2- or 10-year design storm and one tree for every 20 parking spaces.**

- Section 255-8.6. Off-Street Parking Regulations. {Insert new row at bottom of table.}

21. Any use within the Industrial District	No parking is required (privatized requirements. Owners can decide what they need.
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- Section 255-12.2 Permits; site plans. {Amend subsection (b), vehicles, as shown.}

The convenience and safety of vehicular and pedestrian traffic movement within the site and movement to and from the site, considering adjacent streets, property and improvements and alternate routes between the site and nearby destinations. **New development of 20,000 square feet and above should demonstrate a plan to minimize transportation and parking demand by setting a maximum number of parking spaces, providing employee buyout of free parking benefits, and/or providing transit, bicycle, or carpool subsidies of the same amount as the marginal cost of a parking space.**
- Section 255-12.2 Permits; site plans. {Amend subsection (c), stormwater, as shown.}



Adequacy of the methods for controlling surface water during and after construction, particularly the potential for minimal or zero increase in storm runoff for storms of up to the twenty-five-year interval. **Specifically, projects shall include an analysis of whether fewer parking spaces and asphalt than existing conditions are viable, what is the least number of new parking spaces required for a project, and the drainage systems shall catch, retain, and treat stormwater for stormwater quality and not only for flood control.**

- Section 255-12.2 Permits; site plans. {Amend subsection (d), vehicle operation, as shown.}
Provision for the off-street loading and operation of vehicles incidental to the normal operation of the establishment **including a minimum of one electric vehicle charger per 20 new parking spaces.**
- Section 255-12.2 Permits; site plans. {Amend subsection (h), landscaping, as shown.}
Landscaping. An area designed and developed using a combination of trees, shrubs, ground covers, grass, and other elements such as natural features of the site, walks and terraces for the purpose of enhancing the natural, scenic, and aesthetic qualities of a site. **There shall be a minimum of one tree per 20 parking spaces, with tree boxes, filters, or structured soil anytime the tree planting area is less than seven feet by seven feet, exempting any parking spaces covered by a photovoltaic canopy.**

Recommended wetlands bylaw changes by Town Meeting that can encourage sustainable development on the contained footprint of the Industrial Park, and reduce pressure for new development to locate in more sprawling development patterns in pristine areas

- Wetlands bylaw § 239-3 Exceptions. {Insert a new subsection C and rename the current C to D.}
C. In the Industrial District there shall be no additional Avon performance standards and buffer zones over and above the Massachusetts Wetlands Protection Act and related regulations.
- Wetlands bylaw § 239-7(C) A permit shall expire... {Amend subsection C as follows}
C. A permit shall expire two years from the date of issuance (**three years for projects in the Industrial District**). Notwithstanding the above, the Commission in its discretion may issue a permit expiring five years from the date of issuance for recurring or continuous maintenance work, provided that annual notification of time and location of work is given to the Commission. Any permit may be renewed once for an additional one-year period, provided that a request for a renewal is received in writing by the Commission prior to expiration.

Recommended wetlands regulation changes by the Conservation Commission that can encourage sustainable development on the contained footprint of the Industrial Park, and reduce pressure for new development to locate in more sprawling development patterns in pristine areas

- Wetlands Regulations Article XV. {Insert a new paragraph 5 after the current paragraph 4.}
Provided however that there are no additional buffer requirements over and above the Massachusetts Wetlands Protect Act and related regulations.

Recommended construction and post-construction stormwater management bylaw change by Town Meeting to streamline the regulatory process and improve resilience measures.

- Stormwater § 120-4 Administration. {Amend section by inserting the language as shown.}
A. The Planning Board shall be the permit granting authority (PGA) for this bylaw **for any site plan approval issued under Zoning Section 255-12.2. The Director of Public Works shall be the permit granting authority and reviewing agency for projects not involving site plan approval or within authority granted by the Planning Board as part of a site plan approval.** Any powers granted to, or duties imposed upon the Planning Board may be delegated in writing by the Planning Board to any Town employee, board, commission, committee, or agent, hereby known as the "reviewing agent."
- Stormwater § 120-5 Amendments and regulations. {Insert new paragraph at end of current section.



The Planning Board may adopt, and periodically amend, the Stormwater Management Rules and Regulations relating to the terms, conditions, definitions, enforcement, fees (including application, inspection, and/or consultant fees), procedures and administration of this bylaw by majority vote of the Planning Board, after conducting an advertised public hearing to receive comments on any proposed revisions. The hearings shall be duly advertised in a paper of general circulation in the Town of Avon no less than 14 days prior to the date of the public hearing. Failure by the Planning Board to promulgate such rules and regulations shall not have the effect of suspending or invalidating this bylaw. **All such regulations shall create a provision to encourage and/or require green infrastructure and nature-based solutions including, but not limited to, vegetated swales, bioswales, rain gardens, and other green infrastructure reduces flooding and improves resilience.**

- Stormwater § 120-6 Applicability and exemptions. {Insert new subsection (C) as shown.}
C. Stormwater standards may be addressed with mitigation on the site of the property obtaining the approval, off-site on other properties or, with the approval of the Avon Director of Public Works, within Town of Avon road rights-of-way, if such off-site improvements meet the same performance and on-going operations and maintenance standards of on-site mitigation.

Recommended subdivision regulation change by the Planning Board to address stormwater, heat resilience, and increase green infrastructure opportunities on areas formerly paved, while allowing streets wide enough for parking on one side.

- Subdivision § 350-5.2(B) Minimum width {amend as shown, with no other changes.}

Street Class	Pavement (feet)	
Arterial (without center strip)	50	36
Collector	36	30
Residential and minor	30	28
- Section 350-5.2(J) Storm drains {add new subsection (8)}
(8) Storm drain systems shall be designed to maximize green infrastructure such as vegetated swales, bioswales, and rain gardens that reduce flooding and improve sustainability, with a focus on very low maintenance green infrastructure.
- Section 350-5.2(R) Shade trees {amend as shown}
Such trees as are suitable, in the opinion of the Board, shall be preserved. **Shade trees, new or preserved, must be an average of every 30 feet on each side of a street,** ~~Where, in the opinion of the Board, existing trees are inadequate, shade trees having a diameter of at least two inches and of a variety suitable, in the opinion of the Board, shall be planted not more than 50 feet apart,~~ in 1/2 cubic yard of topsoil satisfactory to the Board. **Tree filters, boxes, or structural soils shall be used when there is less than seven feet by seven feet of unobstructed area for tree root growth.**

Some Section 255-5.3 Table of Use Regulations changes might be better to wait for a definite funded plan for bringing sewerage to the Industrial Park and understanding what the sewerage capacity would be. We have not written proposed code for those more distant changes:

- Allow and encourage mixed use development in industrial areas
- Reduce discretionary special use permits and instead clarify what is desired, which might require a better understanding of eventual sewerage capacity.
- Merge and simplify use categories and rationalize the decision. For example, “Place for exhibition, lettering or sale of gravestones” should not be its own use.

Some Section 255-12.2. Permits: site plans changes require more conversation and preparation:

- Reducing the number of paper copies (which requires administrative changes, a robust permit tracking system, and, in some cases, new monitors).



- Creating a point system, with a minimum number of points required, for green infrastructure improvements that might apply to all site plan approvals.



Section 10. Findings and recommendations

The buildout of centralized wastewater collection and disposal is likely to take many years. Avon should start today, however, on revising its zoning, land use, and environmental regulations and undertaking some of the other tax, fee, and other non-regulatory items discussed in this report.

In 2023-2024, Avon will be updating their *Avon Master Plan (2001)*. The *Avon Industrial Park Smart Redevelopment* project should be reflected in both the Land Use and the Economic Development elements of that plan.

There are several reasons why starting now is important:

First, and perhaps most importantly, there are significant investment opportunities that become available as soon as the new rules are in effect for low sewage generators (e.g., warehouses and small office expansions). Absent an ability to dispose of sewage on-site, these uses cannot move forward, so there is only a very limited downside of modernizing the other limiting aspects of the regulatory code.

Second, updating the regulations sends a clear message to property owners and business investors, a message that may help when they think about whether to come to, stay in, or leave the Avon Industrial Park and whether or not they support a betterment or special assessment and/or sewer hookup fees to pay for some of the sewerage costs.

Third, having the Avon Industrial Park shovel ready for new growth except for wastewater disposal will highlight the role of wastewater disposal as the limiting factor for growth, making it easier to get grants and funding.

Finally, even small and symbolic steps, for example installing Avon Industrial Park signs on Route 24 and working with Industrial Park tenants and the Avon Industrial Park Association to talk up expansions, understand any necessary tax and fee incentives (primarily tax increment financing, changes in the structure of water rates), regulatory reforms, and future sewage investments can build momentum and encourage new investments.