UMASS DONAHUE INSTITUTE

Preliminary Market Assessment for Brockton CSX Rail Site

For the Metro South Chamber of Commerce

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September 2013



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Introduction

This report presents the findings and analysis from conducting a preliminary market assessment of the over 30 acre CSX-owned site in downtown Brockton. This site, along an active commuter and freight rail line running north-south through Brockton, provides a unique and rare redevelopment opportunity as Brockton continues its efforts for economic revitalization. While a previous study for CSX focused on evaluating the site for potential residential and retail uses, this market assessment is explicitly considering if and how this site could be used for freight rail-related uses (e.g., re-purposed rail yard, warehousing, manufacturing, etc.). The market assessment started from the perspective that this site is a strategic asset in terms of the size and location, and that redevelopment opportunities should be better understood to help make the site productive once again. Ideally, a strategic and realistic redevelopment plan could result in increased property tax revenue for the City, contribute to positive development and prevent the site from becoming an obstacle to growth in the downtown area.

This preliminary assessment focused on:

- Understanding the site's physical, environmental and infrastructure strengths and weaknesses and how those features relate to redevelopment;
- Conducting interviews with a range of stakeholders (local and state development experts, CSX, freight rail experts) to gain a comprehensive view on potential re-uses;
- Gathering some basic data and information on the freight rail corridor, nearby freight rail customers, and the status of environmental assessments; and
- Brainstorming potential redevelopment opportunities, understanding CSX's current redevelopment perspective for the site, and identifying issues and opportunities.

The results of the preliminary market assessment can be used by the Metro South Chamber of Commerce and its partners to develop more specific next steps towards developing a strategic plan for the site, and identifying key needs and missing data that could help support redevelopment.

Existing Conditions and Freight Rail Context in Massachusetts

As shown in Figure 1, the site is large (approximately 31 acres) and somewhat irregularly shaped with a long frontage on the active rail line but relatively little direct connection to the local roadway system. The site is roughly bordered by Elliot Street on the north side and Court Street to the south. As described in a Phase III environmental assessment report to the Massachusetts Department of Environmental Protection: "The Property occupies an area of approximately 31 acres and is located in an area that is characterized by mixed residential and industrial use. The Property contains several out-of-service railroad tracks that run east to west but former buildings have been demolished. There are no other improvements on the Property with the exception of the bridge that crosses Trout Brook. Trout Brook flows north to south through the middle portion of the Property. The locations of the former railroad spurs on the northwestern portion of the Property are still visible. The Property has vegetated and non-vegetated areas."[1]

Based on a site visit conducted with Marc Resnick of the Brockton Redevelopment Authority and officials from MassDevelopment, we observed that:

- The site is mostly flat and dry except for the small hill in the eastern part of the site, and the area near the Trout Brook.
- The rail tracks are mostly overgrown and there's some evidence of off-road vehicles or bikes that have used parts of the site.
- There is a wide mix of uses surrounding the site from a metal scrap yard to auto repair, a Verizon office, a religious center, and residential areas.
- The stone arch bridges that connect from the site under the rail line to Montello Street are a potential barrier in terms of vertical height as full-size freight trucks apparently must drive down the center of the road to avoid hitting the overpass.
- The site is a relatively easy, quick walk from the MBTA commuter rail station.

This site is known as the Former Brockton Freight Yard as part of CSX's freight rail network but this site has not been used as a rail yard since the 1980s.[2] There also used to be a warehouse facility that received freight rail service at the site but that operation also ended many years ago.

When considering the potential to have renewed freight rail use at the site, it is important to understand: a) possible categories of freight rail users for this site; b) the locations and purposes of other freight rail facilities in Massachusetts; and c) any site-specific operational or rail corridor capacity issues that might impact the viability and attractiveness of the site.

[1] "Phase III Identification, Evaluation, and Selection of Comprehensive Remedial Alternatives and Remedial Action Plan" for the Former Brockton Yard, to Massachusetts DEP, by Arcadis U.S., Inc. December 2011.
[2] Local planners state that CSX has owned the site since 1978 and most likely it was owned by the former Conrail prior to that.

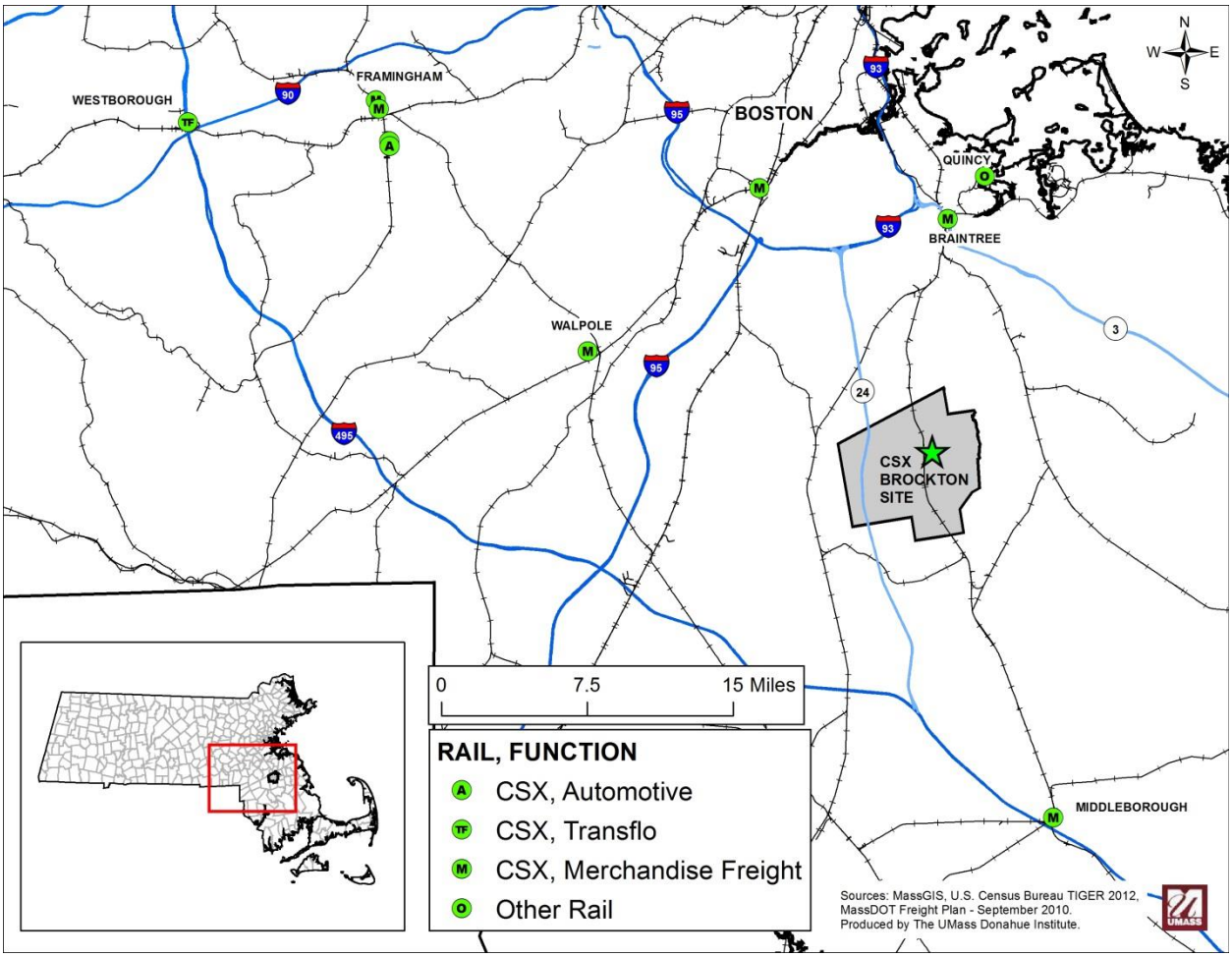
Figure 1. Aerial of CSX Site in Downtown Brockton

The former Brockton freight yard acted as a secondary freight rail facility for CSX (and the former Conrail railroad), meaning that it served regional markets in southeastern Massachusetts, with the larger facilities on the east-west "main line" that roughly follows the Mass Turnpike (I-90) from the New York state line into Beacon Park Yards in Allston. The size, shape and number of staging rail lines limit the use of the site such that it will never become a major intermodal (truck-train) logistics hub.[3] Further, CSX and the Massachusetts Department of Transportation (MassDOT) have agreed on a re-shuffling of rail assets that has resulted in CSX relocating its rail yard activities near Boston to Worcester (for intermodal containers) and Westborough (for bulk/carload shipments). While it's possible that intermodal containers could be handled in Brockton on a smaller scale, the expanded Worcester facility (which now has double-stack capacity to/from New York) is intended to be the focal point for containers, with trucks "draying" containers to ultimate destinations.[4]

[3] Other limitations are that the size of the site is much smaller than most intermodal facilities and the highway access is not strong at the site.
[4] See http://www.railresource.com/content/?p=3088 and http://www.railworcester.com/

Figure 2 provides a map with the locations of other regional rail yard facilities in eastern and southeastern Massachusetts. Most notably, CSX has invested in expanding its Westborough facility to handle bulk transfer shipments with its TRANSFLO subsidiary. Bulk shipments can include liquids, lumber and other industrial commodities that then require loading onto trucks.[5] Other regional rail yards were identified in Middleborough, Framingham, Walpole, and Braintree.

Figure 2. Regional Rail Yards in Southeastern Massachusetts



Based on the current market and past uses at the site, the most likely types of freight rail uses at the Brockton site would include:

- Secondary freight rail yard for bulk commodities that are not time sensitive[6]
- Warehousing/distribution center (rail access is often a benefit for these facilities)
- Manufacturing company that requires rail shipments, such as a food producer that requires bulk products (this is increasingly rare in MA as most manufacturing companies no longer use rail for inbound or outbound shipments)

[5] See http://www.railwestborough.com/ and http://www.railwestborough.com/Commonwealth_of_Massachusetts_Executive_Department.pdf

[6] CSX stated that they don't envision this site as a secondary rail yard option given their other facilities and would need an identified rail customer for the site to really move forward with redevelopment.

- Commodity-specific transfer facility from rail to truck for local company (e.g., to handle flour, corn syrup, rock salt, or other bulk commodities)

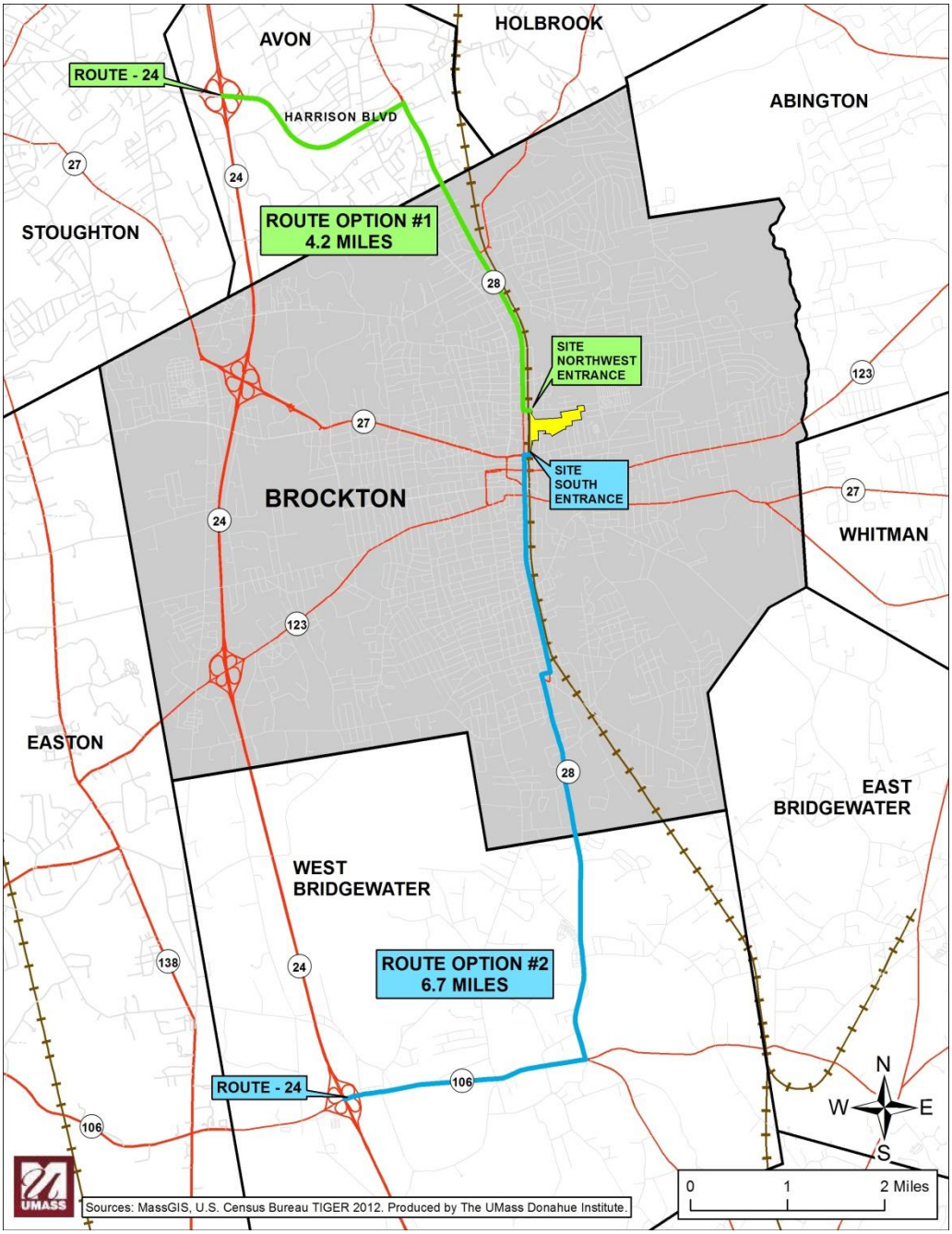
Although not shown on the maps, another factor for freight rail customers is the weight-on-rail capacity of rail corridors. As profiled in detail in the MassDOT state rail plan, the informal industry standard has increased over the past 10-15 years to 286,000 pounds, meaning that a rail line (and its bridges) can handle rail cars that are up to 286,000 pounds in weight. This allows more "product" (the commodity being shipped) per rail car, lowering costs for rail shippers and receivers, and making rail lines with 286K capacity more competitive. As depicted in the MassDOT rail (and freight plans), most corridors south of the CSX main line are less than 286K (typically 263,000 pounds), meaning that freight rail shipments to Brockton face that weight-on-rail limitation, which can be a competitive disadvantage when companies seek rail-served sites. Further, CSX has stated that the tracks at/to the site (Plymouth Industrial Track) have some limitations in terms of the number of rail cars that can be accommodated primarily due to competition with commuter rail.

That said, and even with active MBTA commuter rail service, the CSX rail line does continue to serve rail customers in and near Brockton. Based on interviews conducted for this project, CSX runs one train per day (five days per week) on this corridor with typically 12-14 rail cars. So, there is active service which can be leveraged and improved if a new rail customer is found for the site. However, because this rail line has been prioritized for commuter rail service, CSX typically runs its freight trains at off-peak hours to avoid conflict with the passenger service. While it's possible to add additional freight rail service to this line, the shipping volumes and logistics will need to "fit" within the commuter/freight rail shared operations and require discussion and approval from MBTA.

Another key factor is truck access to/from the site and to major highways. The most advantageous sites for freight rail uses also have nearby access to major highways with minimal local traffic impediments. The downtown Brockton site has two different truck access issues. First, the stone arch bridges (for the rail line above) that connect the site to Montello Street provide a local traffic issue for full-size freight trucks. Local experts state the height is 13 feet 6 inches at Elliot and Court streets and that a full 14 feet is needed for clearance. And depending on the user, if there were a lot of daily trucks in/out of the site, this could cause issues both with the low overhead bridges and conflicts with local/downtown traffic and pedestrians.

Second, the site is not near an Interstate highway – the closest major roadway is Route 24, which is a limited access four-lane highway with good connections to Boston and other interstates. Based on preliminary discussions with the Old Colony Planning Council (OCPC), Route 24 can be reached to the north or south via the routes depicted in Figure 3. The truck route to the north along Route 28 and then west on Harrison Boulevard to Route 24 is 4.2 miles, and the route to the south is estimated to be 6.7 miles (other more direct routes are possible by car (e.g., Route 27) but were not advised as truck routes. OCPC has mentioned that other truck routes are possible from the site, but more investigation and traffic analysis may be needed to clarify this potential issue for the site.

Figure 3. Brockton Area Highway Network and Truck Routes to Route 24

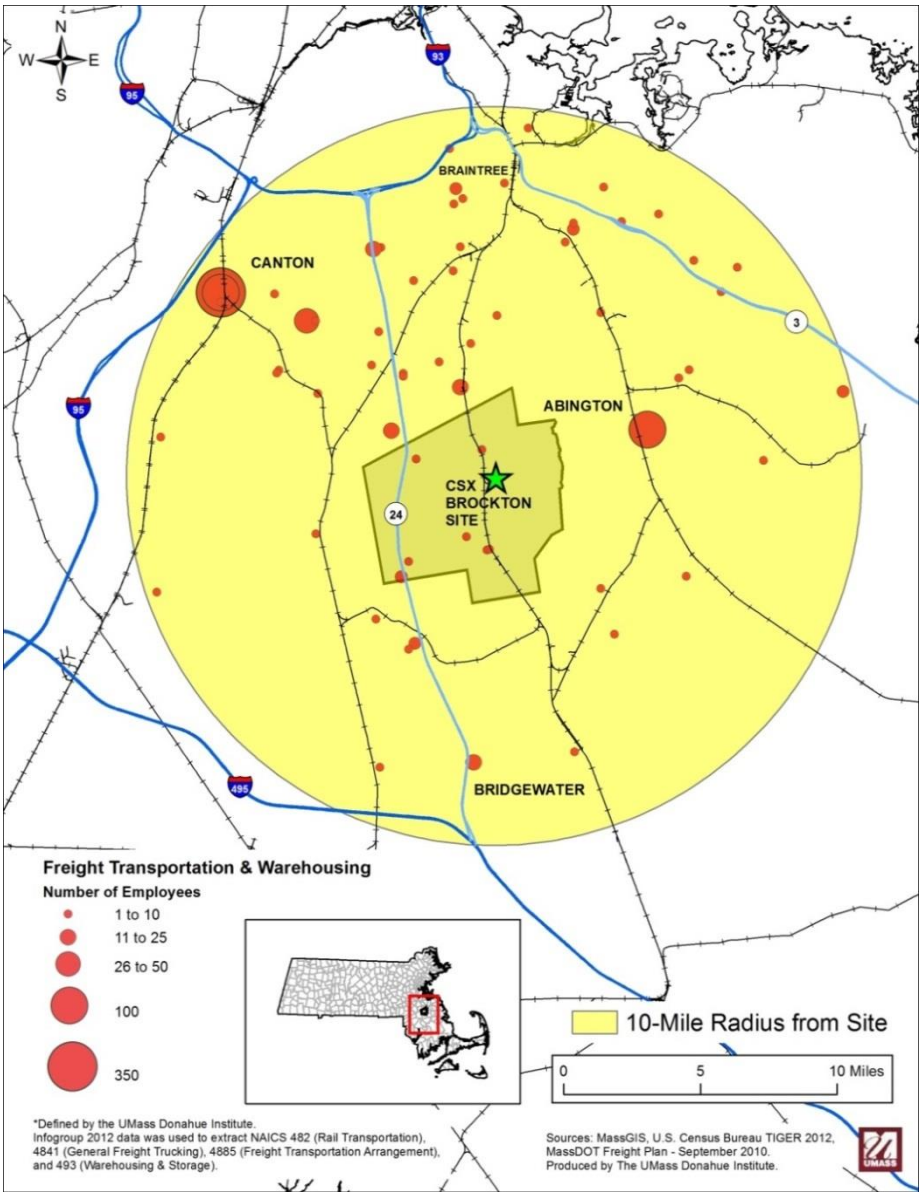


Another consideration is the number, size and location of nearby freight transportation companies in the Brockton area. For example, the presence of a large warehousing distribution center cluster could indicate strong demand for inbound freight shipments that could most cost-effectively travel to the area by rail (off-loaded to truck for local delivery). Or, an existing freight company in the area could expand its operations by adding a location with direct rail service. Based on a very preliminary assessment of freight transportation (trucking, rail) and warehousing companies within a 10 mile of the CSX site, it does not appear that there is a particularly large cluster of companies that would likely demand rail service (see

Figure 4). A larger cluster exists near Canton as well as in the Foxborough and Mansfield areas (not depicted), partly based on stronger highway access (I-495) and land availability.

It is important to note that this data on freight-related companies is very preliminary and does not include manufacturing companies in the area that might benefit from nearby rail facilities. In particular, local development experts note food-related manufacturing and distribution companies (salad dressing, candy, etc.) that are located in the area as possible freight rail users. A second phase of market analysis could go deeper into industry establishment data, conducting interviews with some of the area's larger freight shippers and receivers to explore if/how a rail facility in Brockton could benefit their business.

Figure 4. Freight Transportation and Warehousing Companies Within 10 Miles of CSX Site



As mentioned earlier, a multi-phase environmental assessment of the CSX site has been on-going for multiple years with the latest report posted on the MassDEP web site a document notifying a delay related to the Submission of Phase IV Remedy Implementation Plan (December 2012). Based on the assessment to

date, a number of soil contaminants have been found at the site with significant soil sampling complete. At least partially due to the inactivity at the site and the unknown costs of clean-up, the Phase III report stated:

"The findings of this Phase III report are to implement a Temporary Solution at the Property by: (1) removing soils containing PCBs at or greater than 50 mg/kg; and (2) containing the Site by installing a fence around PCB and metals-impacted soil to eliminate exposure to soil. The selected remedial action alternative presents a feasible approach to achieve a Temporary Solution (i.e. a level of no significant risk) at the Site and will ensure the elimination of substantial hazards at the Site."

In other words, as of this date, it is known that the site does include various forms of contamination, but there is no specific plan or funding to remediate the environmental issues and costs to clean-up the site for different potential re-uses also remain unknown.

Findings from Interviews with Local Development and Freight Rail Experts

In addition to the information presented above as existing conditions, we conducted interviews and meetings with: a) freight rail experts in Massachusetts; b) state and local development experts; and c) representatives from CSX. The interviews generated a range of perspectives on the current strengths and weaknesses of the site, and redevelopment opportunities and priorities. Findings from these interviews are summarized in the following bullet points:

- Consistent with recommended land use development policies in the MassDOT freight and rail plans, there is recognition that a vacant, industrially-zoned 30+ acre site with direct rail access is a rare strategic asset. These kinds of sites are unusual in the densely developed metro Boston area, and it is worth exploring re-use with a freight rail customers or rail yard facility.
- That said, the relatively poor truck access from the site to Route 24 means that the site is at a competitive disadvantage compared to locations in places like Mansfield, Middleboro, Taunton, and Attleboro. And it is likely that aggressive/creative marketing would be needed, along with other site improvements, to make this site more competitive for freight rail uses.
- In terms of rail operations, it is worth knowing that freight trains do *not* travel between Braintree to Boston (i.e., north of Brockton). In other words, freight trains access Brockton via a route that takes them south from Framingham, past Attleboro, then north from Middleboro to Brockton. But there is only passenger rail from Braintree to Boston and double-stack is *not* allowable on the route to Brockton based on overhead catenary (electric power) lines on the rail line from Mansfield to Attleboro.
- CSX's investments in Worcester and Westborough, while focusing their major operations at those locations, potentially open the possibility for smaller-scale freight rail support services in the Boston metro area for specific commodities (e.g., ethanol, oil, food/produce) or more general commodities (e.g., small transload or intermodal facility).
- There are three CSX rail customers in Brockton (just to the north and south of downtown), and they each receive shipments via processing/handling at the Middleborough rail yard. Two of the rail customers are trash/recycling operations and the other is propane gas.
- CSX does work actively to recruit rail customers to sites near their railroad lines and generally observes a lack of larger, industrially-zoned sites in the northeast. They have had some inquiries from prospective rail customers for the Brockton site but they haven't progressed, possibly because other sites are better positioned in terms of being market ready (e.g., environmental process, truck access, local support). CSX has explored converting the site into residential uses (if purchased by a residential developer), primarily with focus on the eastern part of the site (farther from the rail line). In situations like this, if the freight rail use is deemed highly unlikely, they often hire local/regional developers to market the site and CSX is seriously considering this option. Converting the site to other industrial uses (given the current site status) is often the most likely outcome.

- The majority of the site is developable and there are fewer environmental concerns on the "Uplands" eastern part of the site. However, even with 31 acres, CSX does *not* think that the site could accommodate *both* a residential developer and a freight rail user. CSX also made it clear that they do not intend to invest any more of their own funds at the site (they have paid for the environmental assessments to date).
- From the City's perspective, any proposed change in use would need to gain approval by the City Council. The recent downtown development planning effort effectively stopped at the rail line, meaning that it focused on sites and buildings to the west of the rail. Currently, other areas of the downtown are higher priorities for residential redevelopment.
- One consideration is if/when downtown Brockton does revitalize, having a major freight transportation user so close to downtown could be inconsistent, creating possible conflicts with pedestrians, local traffic, and local residential/retail development (e.g., transit-oriented development).
- Brockton is a Gateway City and has worked closely with the state in recent years to leverage this status for a series of public infrastructure related investments in the downtown area, including streetscape projects, new lighting, enhanced public spaces, etc. The city is also eligible for a number of programs to incentivize economic development with more information available through the Brockton Redevelopment Authority and Brockton 21st Century Corporation.[7]
- Related, Massachusetts has combined a number of infrastructure-related programs into a consolidated MassWorks Infrastructure Program.[8] This is a competitive application process to obtain state funding to improve infrastructure that directly benefits development opportunities. The most recent addition to this program is an industrial rail access program (IRAP) administered by MassDOT to help fund various rail spur, rail siding and other rail improvements (with requirements for matching funds).[9]
- Other uses that the City and development experts have suggested are:
    - Solar panel farm – this kind of use could be accomplished with relatively modest investment and modest environmental remediation, providing a clean energy source for Brockton (and a source of revenue), and CSX indicates that they have received inquiries about this site for a solar project. At the same time, these projects often involve a long-term lease such as 20 years, which would severely limit other active redevelopment uses (and would require purchase of the site from CSX), and the city's supply of renewable energy credits to apply to a new solar farm project may currently be unavailable based on informal guidance received so far.
    - Sports/recreation facility – Brockton only has one hockey rink and this site could be large enough for multiple sports/recreation activities (indoor soccer, batting cages, basketball,

[7] http://www.brockton.ma.us/Business/Economic/BRA.aspx and http://www.brockton21.com/
[8] http://www.mass.gov/hed/economic/eohed/pro/infrastructure/massworks/
[9] http://www.massdot.state.ma.us/transit/main/tabid/1083/ctl/detail/mid/980/itemid/302/Patrick-Murray-Administration-Supports-Freight-Rail-Infrastructure-Projects-to-Spur-Economic-Development.aspx

etc.) within walking distance of downtown. On the plus side, this kind of activity could bring more people downtown (local residents and from the surrounding towns) but it also would eliminate the possible future use for freight rail and could result in relatively low property value per acre.

Summary of Findings and Next Steps

Based on the research and data analysis conducted in support of this preliminary market assessment, the potentially viable redevelopment opportunities include:

- **Freight rail facility** – as outlined above, this would most likely take the form of a smaller scale support rail yard for bulk commodities (transload) and/or containers, a warehouse distribution center, a bulk commodity specific rail off-loading operation, or a manufacturing business that would benefit from rail access. The site has significant strengths (large, vacant site, direct rail access, zoned industrial) and weaknesses (truck/highway connections, environmental conditions and surrounding uses).
- **Residential** – as mentioned, CSX has entertained various inquiries for the site from residential developers, primarily focused on the less contaminated eastern part of the site. CSX considers this property part of their "excess real estate portfolio" given the relatively meager interest from rail customers in recent years and the number of years the site has been vacant. On the plus side, more residential development within walking distance of downtown and the MBTA commuter rail station is desirable. On the other hand, residential use would eliminate this as a viable freight rail site and might result in only partial use of the site (e.g., splitting up the site with redevelopment on only a portion of the site).
- **Sports/recreation business venture** – this could fill a gap in the set of local amenities and provide a means to attract more people downtown, and this kind of use could be compatible with some residential development. But it would require some level of environmental clean-up, better multi-modal access points for parking, walking, biking to/from the site, and would result in no longer having a rail-served site as a future asset.
- **Multi-tenant industrial park** – rather than focusing on one large tenant with large volumes of freight movement, the site could be redeveloped as a small, multi-tenant industrial park. This would maintain the industrial classification of the land, but focus redevelopment on small to medium sized firms with less daily truck moves. Improved road access would be needed for the site, including likely development of an internal roadway connecting to available sites, creating a "Class A" industrial park for the city.
- **Solar farm** – a market study could evaluate the power and revenue generation potential of clearing the site for a farm of solar panels, which is happening across Massachusetts on a variety of larger, underused sites. In addition to the upfront costs of this project, the lease terms of a deal for a solar farm would help define the flexibility of redeveloping the site for a "higher and best" use in the future. Recent discussions have raised the potential issue of renewable energy credits (RECs) that may no longer be readily available in Brockton based on other projects already implemented in the city.

Potential next steps are to:

- Develop a more refined truck route and traffic plan for how vehicles, namely trucks, could safely and efficiently access the site and reach Route 24. Included in this would be clarification of the

truck height limitations of the stone arch bridges, possible options to remediate this limitation (e.g., lowering the road), and evaluation of other access road options. Discussions to data have indicated that costs may not be insurmountable (i.e., less than $1 million) but would likely require state and/or private development funding for implementation. As mentioned elsewhere, the MassWorks Infrastructure Program is a possible partner and funding source.

- Clarify and identify the status of the environmental evaluation of the site, with more clarity on the approximate cost ranges that would be required for the redevelopment opportunities described above. During meetings, CSX has indicated that approximately 20 acres of the site (in particular the more eastern area further from the rail tracks) are essentially clean and ready for redevelopment, while other areas (closer to the rail), likely would need some plan for remediation. And CSX did specify that if they sold the site, they would want to ensure that any environmental issues were going to be cleaned up by a developer.
- Develop and communicate a more clear vision and set of priorities from the City to CSX and possible redevelopers for this site in context of downtown redevelopment. A specific idea is to engage with MassDevelopment on this project, requesting support for "pre-development planning" – this can include more market analysis (see next item), master planning (including road access), a stronger understanding of environmental conditions, limitations and opportunities, and other physical and financial planning. The best chance to have a proactive influence on redevelopment will likely be through a more well-defined, planned out vision for the site.
- Conduct additional market analysis and industry outreach to explore possible business opportunities for a rail facility in Brockton. For example, this could include identifying and interviewing some of the larger freight shippers and receivers in the region to better understand their possible demand for a rail facility (e.g., major food distributors that currently use trucks for shipments but could lower costs if they had rail service for bulk commodities). This could include company-focused interviews and/or a survey of businesses in the region.
- Meet with state development (EOHED, MassDevelopment) and MassDOT leaders in charge of the MassWorks Infrastructure Program to gauge the potential for state (or other) funding to help with infrastructure and/or environmental remediation to help improve the economic competitive position of the site for redevelopment.
- Another potential step, once plans to improve traffic access and environmental conditions for the site are complete would be to include it on the MassEcon Market Ready web site to increase the promotion and marketing of the site at a state-level.[10] There are currently no sites listed in Brockton on this web site.

[10] http://www.massecon.com/readymass/sitecriteria.html and http://massecon.com/readymass/