Freight Rail Planning Study and Feasibility Analysis

All Aboard:
Freight Rail-based Economic Development Opportunities Ahead

Freight Rail Pilot Project Final Report

Prepared by the Central Massachusetts Regional Planning Commission (CMRPC) for the towns of Auburn and Oxford and the Providence and Worcester Railroad Company

August 2015
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A District Local Technical Assistance (DLTA) Funded Project

Prepared in cooperation with the Massachusetts Department of Transportation and the U.S. Department of Transportation – Federal Highway Administration and the Federal Transit Administration. The views and opinions of the Central Massachusetts Regional Planning Commission expressed herein do not necessarily reflect those of the Massachusetts Department of Transportation and the U.S. Department of Transportation.
Freight Rail Project Identifies Potential Development Sites
and provides Tools to Balance Communities Concerns for such Development

Executive Summary

**Highlights**

- There are excellent economic development opportunities for freight-based economic development in Auburn and Oxford (p. i below).

- Auburn currently has more limited opportunities for freight rail uses; whereas the Town of Oxford currently has a wider range of opportunities for such development (see p. ii below).

- **28 Millbury Street in Auburn is a freight-based development ready site.** Upgrades to the existing rail spur will be required (see p. vii below).¹

- **Oxford has a number of large vacant industrial-zoned sites suitable for freight-based development,** but currently still require adequate infrastructure (see p. viii below).

- There are a series of regulatory tools available to communities to help buffer and mitigate freight-based uses from residential and other sensitive land uses. This report provides specific examples and a set of recommendations (see p. v-viii below).

- **Funding resources are available** for freight rail supporting infrastructure development in these communities (see p. viii below).

The recent relocation of the CSX Massachusetts Hub facility from Allston to Worcester brings new and exciting economic development and job creation opportunities to the Worcester County Region. Planning, policy development and sound investment decisions will be important aspects to make the most of these opportunities and balance other needs and concerns of communities. For this project, CMRPC staff utilized District Local Technical Assistance (DLTA) and Unified Planning Work Program (UPWP) funding sources to start the freight rail planning effort as a Pilot by working with the towns of Auburn and Oxford and the Providence & Worcester (P&W) Railroad in 2014. A summary outline of the report is as follows:

1) Assessment of community issues related to freight rail economic development
2) Examine obstacles to efficient freight operations
3) Evaluation of municipal practices in Worcester County and elsewhere
4) Assessment of regional regulatory environment
5) Enhancing municipal planning for freight
6) Develop recommendations for improving local review processes and procedures.

The nation’s privately owned freight railroads are investing record levels annually into maintaining and expanding the rail network. These investments have spurred huge growth in intermodal transportation

¹ The Town of Auburn has indicated there is interest in a company to lease/purchase 28 Millbury Street for distribution and office uses.
using multiple modes to optimize transportation efficiency, putting trailers and containers on rail for the long haul while trucks deliver locally.\(^2\)

**Community Issues Assessment and Examination of Efficient Freight Operations**

CMRPC assessed the opportunities and challenges regarding expanding freight rail economic development activity. This was done by assessing each community’s regulatory environment, determining the primary concerns of the community, and assessing their goals for freight rail-based economic development. CMRPC’s assessment of the Town of Auburn regulatory environment indicates that the Town has zoning that presently provides for only a limited range of opportunities for many freight-based uses (e.g., uses such as concrete/asphalt plants, heavy manufacturing and truck terminals are all currently prohibited). Freight-based uses that are permitted, such as warehousing and light manufacturing, are limited to a few areas of the community. Our review of the Town’s site plan approval performance standards which are a component of the Town’s Zoning Bylaws is that they appear to effectively exclude certain freight-based uses, as P&W staff noted that these requirements would be challenging for their customers to meet. Auburn’s Landscape Bylaw includes a buffer requirement that can be used to reduce the impact of freight-based uses. The Town does not currently have a specific noise bylaw, although they do adhere to the Commonwealth of Massachusetts Department of Environmental Protection (DEP) Noise Control Regulations (310 CMR 7.10). Auburn officials feel that a noise bylaw would be challenging to enforce effectively. Overall, Auburn’s primary concerns relate to potential negative impacts that could result from freight rail-based economic development and their goals are to encourage this type of growth provided that impacts could be effectively minimized or mitigated.

The Town of Oxford is far less limiting from a regulatory perspective and they are more open to land uses that “generates tax revenue”. The Town of Oxford presently has more permissive zoning for freight-based uses. Mining/Extractive industries are allowed in the Town’s two industrial districts (Industrial and Light Industrial) via Special Permit; Manufacturing is allowed by-right in the Industrial zoning district; Trucking terminals are allowed subject to Special Permit in the Industrial zoning district; and wholesale distribution is allowed by-right in the Town’s Industrial zoning district and by Special Permit in the Light Industrial zoning district. Overall, Oxford’s primary concerns relate to ensuring that the regulatory environment is not too limiting which could prevent growth and their goals are along the same lines as Auburn’s.

A number of industrial-zoned sites in both towns are in Zone II groundwater protection areas. Auburn has an existing Aquifer and Watershed Protection Overlay District, which further limits certain industrial uses on sites within such a district. They are exploring the adoption of more performance-based watershed protection zoning which would allow additional uses provided that adequate containment systems are installed. Oxford does not have any aquifer-related overlay zoning at this time. The Town is served by a private water provider (Aquarion). Massachusetts DEP Staff indicated since the Town of Oxford is served by a private water system they are not required to have the water resource zoning requirements in place. CMRPC recommends the Town of Oxford adopt such zoning, following the performance-based zoning approach.

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2 Using rail for the long haul means less highway congestion since a single train can haul as much as several hundred trucks. It also means less fuel consumption, as trains are four times more fuel efficient on average than trucks.
A review of the Master Plans of both communities found that Auburn did not address freight rail considerations while Oxford’s Master Plan indicated that businesses were not using the rail line to great advantage and saw the potential for additional service.

Evaluation of Municipal Practices in Worcester County and Elsewhere

To provide the assessment of municipal practices in Worcester County, CMRPC undertook two case studies of freight enterprises that worked with their host communities within the local regulatory structure. The two case studies were:

1. Intransit Container, Inc. (ICI) located in Worcester and
2. The New England Automotive Gateway (NEAG) located in both East Brookfield and Spencer.

ICI’s project involved an expansion of their Wiser Avenue facility located in two of the City’s industrial zoning districts, which splits the property. City of Worcester staff initially indicated the use was to require a Special Permit. However, it was determined by Staff that the ICI facility should be classified to a by-right use. Subsequently it was determined that two City approvals for the ICI expansion were required, which included a set of mitigation measures requiring landscaping along Greenwood Street and the installation of a gate/wall that adequately screens the site from Greenwood Street.

The New England Automotive Gateway (NEAG), located in East Brookfield and Spencer, initially opened in October 2004 but in 2013 expansion plans emerged. Our NEAG regulatory assessment focused on the Town of Spencer. The most recent expansion required a Zoning Board of Appeals Special Permit Amendment in June 2013 was followed by a Planning Board Site Plan Approval in July 2013. Mitigation included required shorter light pole height along with a stormwater management component.

Assessment of Regional Regulatory Environment

CMRPC identified other local regulatory provisions that can lead to restrictions on freight-based enterprises (notwithstanding that some may be exempt per the Federal Surface Transportation Board authority). The following are other municipal regulatory requirements that need to be considered: zoning, which regulates uses, building placements, among other performance-based requirements (most Site Plan Review bylaws are incorporated into a community's zoning bylaw); water resource protection; floodplain; wetlands; stormwater management; traffic / truck restrictions; and noise. Our regulatory assessment uncovered three sets of State regulations that can impact siting of freight-based land uses: the Massachusetts Wetlands Protection Act, Massachusetts Stormwater Standards and the Massachusetts Endangered Species and Priority Habitat.

Any discussion on state and federal regulations on freight must begin with the Surface Transportation Board (STB). Created by the Interstate Commerce Commission (ICC) Termination Act of 1995, the STB is the successor agency to the ICC. Federal Law expressly provides that the jurisdiction of the Board over “transportation by rail carriers” is “exclusive.” The STB statute defines “transportation” expansively to encompass any property, facility, structure or equipment “related to the movement of passengers or property, or both, by rail, regardless of ownership or an agreement concerning use.” 49 U.S.C. § 10102(9). Moreover, “railroad” “is defined broadly to include a switch, spur, track, terminal, terminal facility, freight depot, yard, and ground, used or necessary for transportation.” During CMRPC’s work on this project, the STB issued two decisions in favor of the Grafton & Upton Railroad (G&U). These decisions both involved communities within the Central Massachusetts Region. Grafton’s case involves
a proposed propane facility while Upton’s case involves a transloading operation for wood pellet materials.3

Enhancing Municipal Planning For Freight

This section provides a series of best practices and recommendations, based on different themes: development review, communication, traffic flow and congestion, noise and vibrations, buffers and setbacks, and making use of a freight village to consolidate and concentrate freight-based development. Our findings are as follows:

- As part of the development review process, municipalities could include truck operations and peak traffic analysis parameters outside commuter-oriented peak periods for traffic impact assessments for industrial sites using trip generation estimates from non-traditional resources such as the National Cooperative Highway Research Program (NCHRP) Synthesis 298: Truck Trip Generation Data. Table 2, on page 29, could be incorporated into a community’s site plan review requirements to help assess potential truck traffic.

- Communication can also be an effective means of ensuring that freight operations and facilities act as good neighbors within the community. Examples of successful efforts include efforts to undertake public education, hiring locally and facilitating meetings between communities and freight providers.

- The negative impacts on traffic flow and congestion from freight operations and facilities can be a significant issue to address. The balancing practices and solutions for mitigating the traffic flow and congestion issues related to freight facilities and operations include:
  
  o Replacing at-grade rail crossings with grade separated crossings (although not viable for the Central Massachusetts Region especially in the short run);

  o Requiring developers to make necessary highway access improvements for truck (planning boards can require developers to provide access improvements as a condition for project approval);

  o Encouraging mode shift from truck to rail, such as increased use of a short-line railroad;

  o Truck freight management approaches, which includes designating routes for heavy weight trucks, banning/limiting trucks on routes (given that MassDOT prohibits banning trucks on state numbered routes, our communities will have to utilize the former approach for such roadways) and building more truck rest areas/parking areas.

- Noise and vibration concerns focus on reducing the effects generated by freight operations and facilities. Examples of strategies to mitigate noise and vibrations include modifying the hours of freight operations to coincide with times when residents are not at home, installing sound walls, limiting the hours of loading dock operations, and creating whistlefree “quiet zones”. Another strategy is to use lower-emission locomotives/reducing locomotive idling: P&W Railroad did

3 Both decisions have been appealed to the First Circuit Court of Appeals. CMRPC Staff will continue to track these cases accordingly.
receive a grant from the Connecticut Department of Environment Protection and are implementing the reduction of engine idling for their fleet. CMRPC’s assessment of the quiet zone designation process is that it is complex and would be very time consuming to implement. Physical separations can also address noise and light issues. Sound walls, berms, and buffer zones can be mandated as part of zoning ordinances or constructed as part of an agreement between a freight facility and the surrounding community. An example of a zoning ordinance from Edison, New Jersey and a number of buffer examples from communities in the Central Mass. region (Charlton, Sturbridge and Sutton) are included in the full Report.

- Freight villages⁴ are areas where all manner of freight transportation and logistics take place. They should be located in close proximity to a highway interchange and in a location where other modes are present (e.g., rail and ports). Freight villages focus around light manufacturing and active warehouse/distribution center activity. CMRPC staff assessed the various sites as part of this project in Auburn and Oxford. One property in Oxford (currently owned by Mary Ann Lacki) of three contiguous parcels that total +/- 75 acres, is a site CMRPC believes would be the only suitable site for a freight village amongst the two towns. It is currently zoned Industrial and has access to I-395 for trucks without going into the Town Center. The land has significant property frontage along the P&W Railroad, where additional rail spurs could be created.

- The Commonwealth’s Industrial Rail Access Program (IRAP) provides infrastructure improvement funding for modest-sized rail access projects. Recent recipients in the region included the Grafton & Upton Railroad and the Providence & Worcester Railroad. IRAP could help fund projects in Auburn and Oxford that help make greater use of the railroad system.

CMRPC staff reviewed any existing available municipal marketing materials from the towns of Auburn and Oxford. The Town of Auburn has a “Doing Business in Auburn” flyer and although there is no mention of freight rail in this existing Auburn marketing material, Auburn Town Officials note that the brochure is general and intended to provide contact information for any type of economic or business development activity. The Town of Oxford does not have any marketing materials at this time. CMRPC recommends that any database developed for sites within Worcester County include more detailed rail access information. P&W railroad could play a role in increased marketing efforts. In fact, CMRPC staff has learned that P&W officials are looking to develop a marketing component to their website. The Morris County freight planning initiative had a database-related recommendation to replace the “Yes/No” format of the “Rail Access” item with additional information such as the name of rail line and “is the existing rail siding in place?”

Recommendations for Improving Local Review Processes and Procedures

The Freight Rail Pilot Report concludes with a set of Local Planning and Zoning Tools for Freight. The first subsection provides “Recommendations for local regulatory changes to facilitate and accommodate freight”. First are recommendations specific to the Town of Auburn and the Town of Oxford:

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⁴ A Freight village is generally defined based on the following criteria: Size: 50 to 100 contiguous acres and most are larger; General Location: in or near metropolitan area, but not close to residential areas; Access: excellent access by road, possibly with rail connections and secure with controlled access; Proximity: direct access or proximity to intermodal facilities, ports and waterfront, and/or airport operations; Design: planned layout with amenities and landscaping; and Buildings: state-of-the-art facilities with offices, advanced communications and information technology infrastructure; building size may vary, but typically smaller than traditional warehouses.
Given the demand for trucking facilities, the Town of Auburn should consider providing at least one industrial zone that would allow truck terminals provided that adequate performance standards can be developed.

The Town of Auburn should consider revising some of the existing Site Plan Review Performance Standards contained within the Town’s Zoning Bylaws. Recall that P&W staff indicated two of the existing performance standards (Section 9.4.6.6 and 9.4.6.7) would be challenging for any potential customer of theirs to meet.

The Town of Auburn now has a Landscape Bylaw with its performance standard approach for providing a buffer requirement. Perhaps the Town could address noise issues further by putting in a mitigation requirement for noise similar to the buffer requirement that is included in Edison, New Jersey’s zoning ordinance (see page 35).

Although the Town of Auburn currently adheres to the Massachusetts DEP Noise Control Regulations under 310 CMR 7.10, it could consider adopting a local noise bylaw that references those requirements, focusing on the standard of 10 dB over ambient noise levels. There are soundproofing techniques, such as noise-attenuating walls that could be incorporated into buffer designs.

The Town of Auburn should move forward in adopting the performance-based standards as part of updating the Town’s Aquifer and Watershed Protection Overlay District zoning provisions.

The Town of Auburn could update their traffic rules and regulations by adopting “Preferred Truck Routes” for heavy trucks.

The Town of Oxford should adopt a development buffer requirement that is incorporated into their Site Plan Review requirements. Examples are provided in the case studies presented in Section 5 along with the Town of Auburn’s buffer requirements included within their Landscape Bylaw. The Town of Sutton’s Route 146 Overlay District buffer requirement represents a good performance-based model, in that the buffer is required to address such impacts as noise and odors. The Town could also review the Edison, NJ requirement.

The Town of Oxford should adopt its first water resources protection zoning bylaw provisions, utilizing the performance-based model, which would not put further restrictions on freight-based uses as long as they comply with design elements to protect the Town’s drinking water resources, such as having adequate containment systems. Example bylaws from the towns of Millbury and Westborough are included in Appendix D.

The Town of Oxford should formalize their truck routes, especially with the goal of not wanting additional truck traffic in Oxford Center. Given that the Town cannot prohibit trucks on State Route 12 through the Oxford Center area, they could adopt “Preferred Truck Routes” based on the supplemental guide sign example provided on page 44 that directs trucks to the I-395 exits on the north (Exit #5) and south (Exit #3) portions of the community.

Recommendations relevant to both communities:
• Both communities should adopt the Daily Truck Trip Generation Rates, based on the National Cooperative Highway Research Program (NCHRP) Synthesis 298: Truck Trip Generation Data, which was presented in Table 2 on page 29, and incorporate the trip generation rates into their respective Site Plan Review requirements.

• Consider requiring analysis of highway-railroad at-grade crossing operations in development approval processes for rail-served industrial as well as nonindustrial land uses located near existing grade crossings as part of each town’s Site Plan Review and/or Special Permit review criteria process.

• Both towns should account for truck access and circulation within site plan approvals for nonindustrial sites with anticipated truck activity, such as retail centers. Include provisions for on-street and off-street loading zones in commercial and industrial districts.

• Based on the above three items, each Planning Board could have a mitigation requirement that would require developers to make necessary highway/roadway access improvements for trucks as a condition for project approval.

• Other mitigation measures that each Planning Board could consider as part of approving site plans and/or Special Permit applications for projects that involve freight-based uses include:
  
  o Ensuring that site drive areas remain clear of all obstacles such as large signs, street furniture, utility poles and overgrown vegetation.
  
  o Provide adequate truck turning radii at major intersections, optimally to fully accommodate the movement of fifty-three (53)-foot international intermodal containers.
  
  o Install noise attenuation walls and/or earthen berms to reduce noise while also shielding site operations.
  
  o Use vegetation and other plantings to not only beautify but also to shield site operations and reduce noise.
  
  o Consider facility hours of operation, the implementation of “quiet times” as well as procedures to reduce truck trip generation.
  
  o When considering overhead lighting fixtures, attempt to reduce light “spillover” to adjacent sites.

The next set of recommendations focused on non-regulatory recommendations to facilitate and accommodate freight.

• As part of future business development materials or when meeting with potential developers and businesses, the Town of Auburn should market 28 Millbury Street as a rail-served property (the switch needs to be installed; the IRAP program represents the funding source).
• The Town of Oxford should begin discussions with the owner of the parcels in Assessors Map 51, currently owned by Mary Ann Laki, to gauge interest in development of the property for freight-based uses.

• The Town of Oxford should continue planning for water and sewer infrastructure to service freight-based development. Section 6(c) on page 52, provides information on funding of infrastructure.

Recommendations relevant to both communities and/or requiring a region/state-wide solution:

• The freight rail site database concept discussed in Section 5 is seen by CMRPC as a significant and positive tool. However, this needs to be addressed as a regional initiative. Additional marketing of the development ready sites identified in the Worcester Regional Freight-based Economic Development Site Selection project was a CMRPC recommendation. This may be an initiative best led by the Worcester Regional Chamber of Commerce.

• The P&W railroad could also play a role in increased marketing efforts and CMRPC has learned that P&W officials are looking to develop a marketing component to their website.

• Exploring the ability for increased mode shift from truck to rail: The tax break provision discussed on page 31 could be explored further, perhaps as part of an additional freight-based UPWP project. CMRPC staff and the CMMPO Advisory Committee should assess if the Truck to Rail Modal Diversion Analysis concept has any viability for consideration to be incorporated into a UPWP Project.

• As part of each community’s roadway maintenance program, consider incorporating the following:
  
  o Maintain and resurface roadway pavement surfaces as deemed appropriate (CMRPC staff would like to note that the Town of Auburn already does this as part of their comprehensive Roadway Improvement Program).
  o Maintain all traffic control signs, signals and pavement markings.

• Prepare a document similar to “The Value of Freight to the State of New Jersey.” CMRPC and the CMMPO could discuss this idea with MassDOT officials to see if it is something that could be prepared at the State level, especially if freight-based economic development aligns with Governor Baker’s economic development initiatives. In the absence of a State-wide initiative, perhaps a UPWP project could be undertaken to prepare a document tailored to the Central Massachusetts Region.

• CMRPC should facilitate the incorporation of trucking and freight rail interests into the planning domain of the MPO Advisory Committee. A goal would be to have UPS join the Advisory Committee sometime in 2015.

The report concludes with a couple resources for infrastructure development: the State’s MassWorks and IRAP programs. While extremely competitive, MassWorks grants could help with infrastructure development to serve sites that currently lack adequate infrastructure to support freight-based
economic development if the grant criteria are met. MassWorks grant application rounds have been announced in the late spring or early summer with a September deadline. The Industrial Rail Access Program (IRAP) information is included within pages 42 and 43 in Section 5.
Introduction

The recent relocation of the CSX Massachusetts Hub facility from Allston to Worcester brings new and exciting economic development and job creation opportunities to the Worcester County Region. A key to success will be planning, policy development and sound investment decisions that will be necessary to make the most of these opportunities and also to balance the other needs and concerns of the communities. The Central Massachusetts Regional Planning Commission (CMRPC) initially had proposed a County-wide Plan that would address these requirements and create a strategy plan for future consideration and implementation. However, given that funding for the County-wide Plan was not available, CMRPC staff tapped into the CMRPC’s District Local Technical Assistance (DLTA) and Unified Planning Work Program (UPWP) funding sources to start the freight rail planning effort as a Pilot by working with the towns of Auburn and Oxford and the Providence & Worcester (P&W) Railroad in 2014. Auburn and Oxford were chosen as each expressed support for the project and identified opportunities related to freight rail-based economic development. The participation of P&W Railroad was also a critical component of the analysis.

Why Plan for Freight Rail?

While public funds for highway and bridge projects lag well behind repair and maintenance needs, the nation’s privately owned freight railroads continue to invest record levels each year into maintaining and expanding the rail network. These investments have brought huge growth in intermodal transportation – using multiple modes to optimize transportation efficiency, putting trailers and containers on rail for the long haul while trucks deliver locally. In addition to reducing infrastructure damage, using rail for the long haul means less highway congestion since a single train can haul as much as several hundred trucks. It also means less fuel consumption, as trains are four times more fuel efficient on average than trucks, resulting in less greenhouse gas emissions.

“We expect products to be available when we want them, at the price we want, and in the form that we desire. We expect availability and often forget the intricate ballet of vessels, aircraft, trucks, railroads, and infrastructure that must work efficiently and effectively to make all this happen.” A. Strauss-Wieder, testimony, U.S. Army Corps of Engineers hearing on dredging the Kill Van Kull, Bayonne, N.J., January 24, 2002).
I) invests more in the rail network each year than most state transportation departments spend on highways. Without these private investments by railroads, taxpayers would have to foot the bill for more roads and bridges. These investments also mean that the rail network is safer and more efficient than ever before, providing companies across the country with access to markets across the globe.¹

**Freight Rail Growth:** CMRPC’s staff’s literature review indicated freight rail usage increased even during the recession with additional growth anticipated in the years ahead. In 2012 the U.S. transportation system moved a daily average of about 54 million tons of freight valued at nearly $48 billion. After back-to-back declines in 2008 and 2009, the tonnage and value of freight moved in 2012 surpassed the previous highs reached in 2007, by just over four (4) percent each. Rail freight growth was two (2) times over truck freight growth from the period between 2007 and 2012. Rail freight growth is projected to increase by 37% from 2012-2040²

<p>| Table 1: Nation-wide Weight of Shipments by Transportation Mode: 2007, 2012, and 2040 (millions of tons) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|</p>
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<th>2012</th>
<th>2040</th>
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<td>Total</td>
<td>18,879</td>
<td>19,662</td>
<td>28,520</td>
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<td>Domestic</td>
<td>16,851</td>
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<td>Exports</td>
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<td>Imports</td>
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<td>Rail</td>
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<td>% Rail</td>
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<td>Other &amp; Unknown</td>
<td>36</td>
<td>47</td>
<td>34</td>
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</tbody>
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The Association of American Railroads (AAR) reported increased U.S. rail traffic for November 2014, with both carload and intermodal volume increasing compared with November 2013. U.S. Class I railroads originated 1,161,820 carloads in November 2014, up 1.4 percent, or 16,396 carloads, over November 2013. November 2014 was the ninth straight month of year-over-year increases in carloads. Intermodal traffic in November 2014 totaled 1,035,054 containers and trailers, up 2.7 percent, or 27,463 units, over November 2013. The weekly average volume was 258,764 for the month, the highest for any November in history.

¹ GoRail May 2014 E-Newsletter and American Association of Railroad (AAR) (https://www.aar.org/newsandevents/Press-Releases/Pages/2014-12-04-railtraffic.aspx)
For the first 11 months of 2014, U.S. railroads reported cumulative volume of 13,992,560 carloads, up 3.4 percent from the same period last year, and 12,494,133 intermodal units, up 5.2 percent from last year. Total U.S. traffic for the first 11 months of 2014 was 26,486,693 carloads and intermodal units, up 4.3 percent from last year. CMRPC staff notes the volume increase experienced nationwide trickled down to our region, as P&W had the largest monthly volume in October 2014 at any point in modern history.

High fuel costs in recent years have been one factor in the increase in freight rail traffic. P&W officials were concerned with the sharp decrease in the price of oil experienced in the 2\textsuperscript{nd} half of 2014, which could make rail less competitive. CMRPC staff will keep abreast of these trends as we continue our freight rail-based planning work in 2015.

Outline of the Report / Process

CMRPC staff developed a scope of services for this project. Based on the scope, we developed the following outline for the development of this report. An outline of the process based on the tasks associated with the report is as follows:

1. Assessment of Community Concerns
   - Literature review of existing freight and transportation plans/studies
   - Individual meetings with project participants: Auburn, Oxford and P&W Railroad
   - Site assessment and field visits

2. Examine Efficient Freight Operation Obstacles
   - Build on the literature review in Section 1
   - Assessment of local regulations and practices
   - Transportation system assessment
   - Industry concerns and issues (this task included two business roundtable-related events)

3. Evaluation of Municipal Practices In Worcester County and Elsewhere
   - CMRPC staff undertook two case studies to assist in this task to assess local and other regulations and permitting that may have impacts/limitations on freight, along with potential mitigation measures. These two case studies were:
     a) The Intransit Container Inc. (ICI) Wiser Avenue Facility in Worcester, and
     b) New England Automotive Gateway (NEAG) in Spencer/East Brookfield

4. Assessment of Regional Regulatory Environment
   - Assessment of State/Federal regulations on freight (including the Federal Surface Transportation Board)

5. Enhancing Municipal Planning for Freight
6. Recommendations for Improving Local Review Processes and Procedures

1. Assessment of Community Concerns

   a. Review of Literature

The literature review provided documentation of the increase in freight rail usage, which was noted in the Introduction. As indicated in the 2010 Commonwealth of Massachusetts Rail Plan: “Trains are being used to ship cargo through the Nation’s various rail systems. US Department of Transportation forecasts an 88% rise in rail freight demand by 2035.” Specific figures showing the increase of freight rail usage were provided in the introduction.

The Commonwealth of Massachusetts prepared both a State Rail Plan and a State Freight Plan in 2010. As noted in the State Freight Plan related to rail access, “Many businesses along rail lines need to build or upgrade the rail sidings that serve them. This infrastructure expense is generally far higher that most highway connections and thus limits opportunities to ship by rail. Development pressures on rail-adjacent land have also reduced the potential pool of rail-served businesses and many new industrial sites do not have rail access.” (CMRPC includes information on potential funding sources for new rail sidings within this Report.)

Then as noted in the State Rail Plan:

“There is a renewed recognition of the importance of rail for goods movement, and an increased awareness by public officials at the national and state levels of the benefits of providing an efficient, integrated multi-modal infrastructure system. Freight moved by rail results in less highway pavement damage, less highway congestion, fewer air pollutants, and less energy consumed – all reasons to consider public-private partnerships to enhance the opportunities for freight rail.”

There are potential freight-based economic development sites identified in both the State Rail Plan and State Freight Plan, but no specific information about these sites is provided (they are just circles on a map). CMRPC had sought this information for this report but it was not available as of the completion time of this report. If there were ever any specific sites identified in future State-wide freight rail-related planning efforts, then CMRPC could help facilitate understanding exactly where such sites were identified within the Central Massachusetts Region. CMRPC staff notes that a set of sites were identified in both this Pilot Project and the Worcester Regional Freight-based Economic Development Site Selection Project.

To date, there are few states or regions actively involved in freight rail planning, but there were some case studies identified:

- Morris County, NJ (the County, specifically the Transportation Division and the Economic Development Corporation, along with the North Jersey Transportation Planning Authority, had a number of freight-related reports. Information from the New Jersey-based freight planning work was incorporated into this Report, especially related to helping develop recommendations for improving local review processes and procedures.)
• Minnesota’s FRED (Freight Rail Economic Development plan)

• Valdosta, GA Region (which focused the Region’s Comprehensive Economic Development Strategy, or CEDS, on freight rail planning opportunities).

• Delaware Valley Planning Commission (DVPC, which services the Philadelphia Metro Area) is active in freight-related planning. Among their recent efforts included “PhillyFreightFinder” which "is a dynamic, web-based mapping application that pinpoints freight facilities and freight activity in the Philadelphia-Camden-Trenton region. In addition, this tool also highlights how the various freight system components intertwine and complement one another." In addition, DVPC completed a study in April 2011 showing the need for additional truck parking in the greater Philadelphia region.

CMRPC staff integrated the findings of our literature review analysis in the appropriate sections of this report. All sources are cited within the bibliography included as Appendix A.

b. Meet with Municipal and P&W Railroad Officials

Project Kick-off Meeting: On April 15, 2014 CMRPC staff met with representatives of the towns of Auburn and Oxford as well as P&W Railroad to learn more about their expectations with this Pilot Project and also begin to understand their concerns and interests in freight-rail economic development. The Town of Auburn was represented by Town Manager, Julie Jacobson, and Assistant Town Planner, Eric P. L’Esperance. The Town of Oxford was represented by their Town Planner, Nancy Runkle. P&W was represented by Charlie Rennick, General Counsel, and Chris Guzzi, Director of Business Development. The meeting provided an opportunity for CMRPC staff to provide the impetus of this initiative and outline the project framework to the participants. It also gave the participants their first opportunity to talk about potential opportunities and various constraints associated with making greater use of P&W railroad in the communities of Auburn and Oxford.

Mr. Guzzi indicated that CSX can move (freight) traffic long distance, but that trucks provide last mile delivery. For CSX’s business model, they bring freight to a centralized area where trucks can serve deliveries for the last mile; P&W is more affordable for more local-based freight delivery (ies).

The initial sites for potential freight rail-based economic development were identified. For example, P&W staff mentioned the former Filene’s Basement warehouse as an example of a site of economic development opportunity. Located at 28 Millbury Street in Auburn, it is currently vacant and has a unique layout. It is a two-story building with 18-foot ceilings. It was custom built to fit clothing and shoes.

Series of Individual Meetings: The next step in this process was to hold a series of individual meetings with the set of stakeholders to learn the interests of each entity and expectations for the project. These meetings were held as follows:

• Town of Auburn, May 12, 2014
• Town of Oxford, May 13, 2014
• P&W Railroad, May 15, 2014

3 http://www.dvrpc.org/webmaps/phillyfreightfinder/
Town of Auburn’s Individual Meeting: CMRPC staff (Christopher J. Ryan and Eric R. Smith) met with Adam R. Burney, MPA, Director of Development and Inspectional Services/Town Planner, along with Eric P. L’Esperance, Assistant Planner, and Julie Jacobson, Town Manager.

The vacant building at 28 Millbury Street was further considered at this meeting and CMRPC staff inquired on the possibility of demolition. Mr. Burney noted it was “cost prohibitive to demolish”. Mr. Smith wondered if it is theoretical to consider removing the 2nd floor and just have one floor with a high-bay ceiling. The property is in the Town’s aquifer-protection zone and there are some wetlands nearby.

The Town of Auburn does not have any specific set of design guidelines at this time, although the Town has a Landscape Bylaw (CMRPC staff reviewed this Bylaw as part of the regulatory assessment, see page 12). The Landscape Bylaw is geared more for new development, although Town staff will review redevelopment plans with the idea of having redevelopment sites move towards compliance with the Landscape Bylaw.

CMRPC staff asked the Town of Auburn staff what types of uses/businesses they would like to see. The Town Planner noted medical and bio-tech uses, manufacturing, processing, and distribution, but not heavy industry (such opportunities are limited in their Zoning Bylaw as indicated in Section 2). The Town Planner made reference to Barry Bluestone’s presentation at Devens regarding Advanced Manufacturing and 3/D Printing. Manufacturing will be done on a smaller scale than in the past. The Town Planner was unsure if Auburn has the presence related to demographics and sites for prototype advanced manufacturing and/or collaborative workspaces. One such location may be along the Town’s border with the City of Worcester.

The Town would support and encourage distribution uses. In fact Auburn has some of these businesses already such as Polar Beverages, Imperial Distributors, Atlas Distributing off of Southbridge Street, and Consolidated Beverages off of Saint Marks Way. The Town would encourage distribution for 28 Millbury Street even if it meant breaking-up the facility (floor area) into smaller spaces that could allow for more users. Such redevelopment would not have an impact on the exterior portion of the site.

Auburn does not have a Noise Bylaw at this time. It does adhere to the Commonwealth of Massachusetts Department of Environmental Protection (DEP) Noise Control Regulation 310 CMR 7.10, unless the Planning Board or Zoning Board of Appeals approves of specific conditions related to hours of construction on a project, then the Town defers to the hours of operation in 310 CMR 7.10. Town officials indicated the lack of existing local regulatory procedures to address noise considerations from parcels in the Town’s industrial zoned areas, especially those that run 24-hour operations.

During CMRPC staff’s review of the Auburn Zoning Bylaw, it was noted that truck terminals are currently not allowed. Town officials noted that in the past the zoning was changed to prohibit certain transportation and freight-related uses, after negative experiences with such uses at certain locations. CMRPC staff notes how this Report includes a set of performance and mitigation measures within Section 5 that can offer a guide for the Town of Auburn to reconsider outright prohibition in favor for allowing greater freight and transportation-related uses but with clear performance standards and allowing for the local regulatory boards to mitigate any such developments accordingly.

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4 Mr. Burney is no longer employed by the Town of Auburn.
In addition, the Town’s Aquifer Protection Bylaw is in need of an update, of which is discussed in greater detail in Section 2(c). CMRPC staff learned that the protection of the Town’s aquifer is an important planning consideration, given the Town relies on groundwater as their drinking water supply. In regard to the use of rail and the materials that are going through the Town, the Auburn Town officials felt the Town needs to have some level of protection, given the aquifer is the Town’s drinking water source.

**Town of Oxford’s Individual Meeting:** CMRPC staff (Eric R. Smith) met with Joe Zeneski, Oxford Town Manager; and Nancy Runkle, Town Planner. From this meeting CMRPC began to learn of the vast differences between the two towns of Auburn and Oxford. The Town Manager noted the Town is open to any business that increases the tax base. As indicated in the Regulatory Review Section (Section 2), CMRPC notes that Oxford’s zoning regulatory environment provides a wide range of opportunities for freight-related businesses. The Town of Auburn is more limited regarding uses that could relate to freight or freight rail.

Joe indicated a key site are parcels in Assessors Map 51 currently owned by Mary Ann Lacki, who now controls the property once owned by her father (discussed further in the Site Visits section below). The property is Industrial-zoned. CMRPC staff also revisits this site later in the report as it represents the only potential site in either Auburn or Oxford that meets the site selection criteria for a freight village (see pages 36 for more discussion on the freight village concept).

The Town of Oxford does not currently have a noise bylaw, and the Oxford officials noted that the Town would not really be in favor of one. Then when asked “What is the Town’s primary concerns related to enhancing freight rail capacity and associated development opportunities in the Town of Oxford?” it was indicated that infrastructure is the limiting factor for development. Water and sewer infrastructure is limited. During discussions about sewer service, it was noted the Town had looked into bringing sewer service from Route 12 (via the Town of Webster); instead it could bring the sewer down from Route 20 (North Oxford), as the cost estimate is about two times less.

Town officials indicated the importance of not seeing any additional truck traffic in Oxford Town Center and also not wanting to see freight-related development in the Town Center or have any truck traffic added in this area and with Exit #4 off of I-395. Freight-based development to the north and south would be ok as trucks can use Exit #3 (south) and Exit #5 (north).

**P&W’s Individual Meeting:** On May 15, 2014 CMRPC staff (Rich Rydant and Eric Smith) met with Charlie Rennick, Chris Guzzi and Bernard A. Cartier, Director of Engineering, of Providence and Worcester Railroad (P&W). CMRPC staff understood that P&W believes there are challenges to local land use matters. Therefore, we asked P&W “what are some of the specific challenges with local land use matters that concern P&W Officials?”

P&W staff noted their response is not specific to Auburn and Oxford. In general, P&W and, in fact, many other railroads have experienced some resistance from municipalities regarding the construction, use, and operation of certain facilities within certain zones of a town/city. For example, a town/city may: (i) change the zoning of a formerly industrial/commercial site or site adjacent to a formerly rail-served facility impacting its future use; (ii) attempt to limit the type or scope of railroad or industry operations through specific bylaws/ordinances/orders; (iii) attempt to regulate railroad or industry operations/activities based on its interpretation of its Table of Use Regulations (e.g., if the regulations

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5 Mr. Zeneski has since retired.
currently do not provide for a specific use then it would be deemed prohibited); or (iv) impose burdensome limitations on industry operations limiting their viability.

P&W indicated there are no specific regulations or policies in the towns of Auburn and Oxford that are related to these challenges that P&W Railroad identified. Fortunately from P&W’s standpoint they have not had any difficulty working with either Auburn of Oxford.

P&W was able to provide CMRPC staff with detailed information on the role of the Surface Transportation Board (STB). This information has been incorporated into Section 4 of this report.

c. Field Visits and Site Identification and Assessment

Site Identification and Assessment: One key aspect of the Freight Rail Pilot Project is the identification of sites for potential freight rail-based economic development. The literature review phase of this project was an important component in the site identification process. Both the State Freight Plan and State Rail Plan from September 2010 had some guidance and CMRPC staff felt it was important to include a discussion of the elements that help identify the best sites from the freight rail-based economic development perspective. This information helped frame sites assessed under this study.

A good reason for this study is provided from text within the September 2010 State Rail Plan:

“There is a renewed recognition of the importance of rail for goods movement, and an increased awareness by public officials at the national and state levels of the benefits of providing an efficient, integrated multi-modal infrastructure system. Freight moved by rail results in less highway pavement damage, less highway congestion, fewer air pollutants, and less energy consumed – all reasons to consider public-private partnerships to enhance the opportunities for freight rail.”

The following information is from the September 2010 State Freight Plan from the “Current Conditions and Considerations” section:

“Although comprehensive information is lacking, it is clear that a broad range of industrial and distribution sites exists in Massachusetts, many of them with rail access and good highway access for trucks. They range from urban sites that have been developed for industrial uses since the 19th century—many with buildings on them—to sites near highway interchanges, both vacant and with industrial or distribution facilities on them.

The latest data from the Massachusetts Alliance for Economic Development (MassEcon) SiteFinder database on large sites (10 acres or more) and rail-served sites and buildings currently being marketed for development opportunities are presented in Figure 23 and Figure 24 (both are provided as Appendix B to this report). As shown in Figure 23, there are no large sites above 100 acres in the Boston metropolitan area (within I-495). Clusters of larger industrial sites are near Worcester and the Massachusetts Turnpike / CSX Main Line.”

Freight-intensive land use conditions are identified in the State Freight Plan:

“Although there is obviously a significant range of site characteristics, it is useful to consider some site conditions to make the discussion of regulatory issues and incentives more specific.
For example, not all existing industrially-zoned buildings with rail access are good candidates for future multi-modal freight use as the building size or location in relation to other uses may not be conducive to freight.

Additionally, it may be beneficial to identify and preserve some larger-scale sites for larger-scale freight activities such as intermodal or transload sites.

However, the demand for these large-scale sites is relatively limited and other smaller-scale sites with rail access could be appropriate for a wider range of manufacturing and distribution businesses (emphasis added).

The three (3) sets of sites identified in the State Freight Plan are as follows:

**Urban “Mill Sites”**

“Many of the urban sites in Massachusetts are commonly known as — mill properties - located at historic railroad junctions and or sources of water power. This class of sites, many of which are still in industrial use or storage, are adjacent to rail rights of way but may not be currently using rail service. These sites are often candidates for conversion to non-freight-intensive use for a number of reasons. The buildings, which may be historic, were designed for a production system that is now outmoded for industrial use. They may have two or more floors connected by elevators and floor plates that are quite small by current standards for either industrial production processes or goods distribution. Many of these buildings are attractive and may be suitable for conversion to residential, office, research and development, or small scale light manufacturing, or mixtures of these uses. The New Bedford Growth District is a good example of this kind of industrial conversion.

Further, demolition of existing buildings to make a site suitable for industrial or distribution buildings of modern design is likely to be constrained by competition from smart-growth uses, generally smaller site dimensions, and potentially the historic status and urban location of the existing buildings.”

CMRPC staff has found that the other two sets of sites will be of most interest to this Freight Rail Pilot Study:

**Highway Interchange Sites**

“There are also many existing industrial sites designated and zoned for industrial use that are located at the edges of municipalities. Many were built to take advantage of an expanding highway system. These sites are often large enough to accommodate modern industrial or distribution facilities and generally have adequate roadway connections to major highways.

Because of their location at the periphery of the municipality, there may be less competition over their continued or expanded use for industrial purposes. However, many of these sites lack rail access. The sites that are currently vacant may be undeveloped because they are not well located for industrial use,

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6 CMRPC staff notes the State Freight Plan states the Urban Mill sites are not identified as sites likely for freight-based development.
particularly with regard to workforce proximity. For some sites rail access may be possible, but generally the connections would be expensive to construct and therefore unlikely to be done without a guarantee of use of the service.” CMRPC staff notes that some of the sites that meet this criteria are suitable to the CSX model, which is the focus of the Worcester Regional Freight-Based Economic Development Site Selection Project. CSX is looking for sites that are at least 20 acres that are located in the 10-15 minute timeframe from the CSX intermodal facility in Worcester.

**Freight-Conducive Sites**
“A third existing condition is sites that have remained vacant despite industrial zoning and local efforts to encourage their development. These sites are generally larger (5-10+ acres), are situated adjacent to rail with a possible rail spur entering the property, are truck accessible, have buildings that may be usable for today’s industrial or distribution uses, or can be easily redeveloped. Many currently have some level of freight-intensive use, although they are not necessarily using rail at present. **These sites may have the greatest potential for freight-oriented development** (emphasis added).”

In addition, the Morris County Freight Infrastructure and Land Use Analysis used four (4) criteria for the identification of freight-based economic development sites:

1. Large land areas (the sites that made the cut were at least 10 acres)
2. Industrial zoning and current/pending brownfields designation
3. Proximity to existing rail alignments and major highways
4. Low I/L ratios (Improvement-to-land value ratios); “The ratio of assessed improvement value to assessed land value is another important metric for identifying underutilized land parcels. Higher improvement-to-land (I/L) ratios generally indicate that the land is being utilized more productively than parcels with lower I/L ratios, due to the latter’s small lot coverage, economic or physical obsolescence, etc.).”

CMRPC staff notes that of these four criteria, elements of the first three are incorporated into the State Rail Plan, but not the fourth. As of the completion date of this report, CMRPC staff have not investigated I/L ratios, but future freight rail planning work may want to investigate accordingly, given this information is readily available through towns’ assessors records.

**Site Assessment and Site Visits**

To facilitate the site visit process, CMRPC staff asked officials for input from both participating towns (Auburn and Oxford) and P&W for potential freight-based economic development sites of interest. The methodology included utilizing GIS mapping prepared by CMRPC’s GIS Analyst, Matt Franz, which resulted in a series of aerial photo maps (one such map in the Auburn area is shown as Figure 1 on the following page), zoning maps and maps of environmental constraints. The GIS mapping information was then provided to the towns and P&W.

The various project partners then selected a series of sites to investigate. The set of sites investigated are indicated on the agendas from the site visits, which are provided as Appendix C. The site visits in Auburn and Oxford were held on June 10, 2014.

One site that emerged as a potential site for freight-based development, which was discussed previously under the local meetings section is 28 Millbury Street. This is a site identified by both the Town of Auburn and P&W Railroad. This 21.72-acre General Industrial-zoned property contains a large vacant
building that was most recently home of Filenes Warehouse’s Distribution Center. In fact this site was one of seven sites marketed at the 2014 Build North East Conference, as it was identified as one of the development ready sites in the Worcester Regional Freight-Based Economic Development Site Selection Project.\(^7\)

P&W railroad was able to provide detailed information on the rail infrastructure indicating how 28 Millbury Street “...was served by a single spur line for approximately 900-1000 feet. This switch was taken out of service (not sure of the date). (A) rough estimate to return to active service: “$100k to re-install the switch and rehab the track.” A P&W inspector was able “to look at the bridge/culvert for this spur to assess its condition and this bridge/culvert is in good shape.”

P&W officials then noted how “importantly, the right of way still exists for all of these spurs and the track bed is in good condition. Therefore, the overall work needed is fairly minor (e.g., track rehab and switch installation). Both of these items could be addressed in short order (3-7 days) depending on time of year, weather, etc. Additionally, for economic development purposes, IRAP funds could be used to supplement the costs.” More information on the IRAP program is provided on pages 42-43.

CMRPC staff, along with the Auburn Town Planner, Assistant Town Planner and P&W Railroad officials had a follow-up site visit to the Liqui-Box site in Auburn July 22, 2014. The July site visit provided the assessment that the Liqui-Box site is too small and does not have enough room for additional spur track(s).

![Figure 1: Aerial Photo GIS Map from Town of Auburn](image)

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\(^7\) The Worcester Regional Freight-Based Economic Development Site Selection Project was a collaboration between CMRPC, the Worcester Regional Chamber of Commerce, the Worcester Business Development Corporation and the City of Worcester. The White Paper that was prepared as part of this Project is available for review at: [http://www.cmrpc.org/freight-rail-planning-studies#ED_Site_Selection](http://www.cmrpc.org/freight-rail-planning-studies#ED_Site_Selection)
One finding of the site assessment process is that the Town of Auburn lacks the availability of sites with large (acreage) vacant land that is industrial-zoned and rail served. Whereas in the Town of Oxford there are a number of large vacant industrial-zoned parcels, most are not necessarily development ready, as they lack readily available infrastructure. The set of parcels owned by Mary Ann Laki in the Town of Oxford have the potential for a “freight village” development. See pages 36 for more discussion on this matter.

2. Examination of Obstacles to Efficient Freight Operations

a. Review of Literature

CMRPC staff built on the literature review conducted in Step #1. Information from this step then focused on review of the towns of Auburn and Oxford’s regulatory documents, such as zoning and general bylaws. We also reviewed the Master Plan of each community. Our assessment is provided below.

b. Initial review of local regulations and practices

Town of Auburn Regulatory Assessment:

CMRPC staff assessment of the Town’s regulations and practices is that overall the Town of Auburn’s zoning requirements limit opportunities for freight rail-based economic development. For example, concrete/asphalt plants, heavy manufacturing and truck terminals are all prohibited. There are some freight-based uses allowed, as the Town does allow warehousing by Site Plan Approval and light manufacturing by-right (although only in the Town’s General Industrial zoning district).

CMRPC’s assessment included a review of the Town’s Performance Standards for Site Plan Approval contained within the Town’s Zoning By Laws. We note that the two appear to effectively prohibit certain freight-based uses from the Town. P&W officials noted that these requirements would be challenging for their customers to meet. These two Performance Standards are as follows:

- 9.4.6.6: “No persistent noise shall be detectable beyond the property line in excess of the average level of street and traffic noise generally heard at the point of observation, and no noise below such level shall be objectionable with respect to intermittence, beat frequency or shrillness.”

- 9.4.6.7: “No inherent or recurrently generated vibration shall be perceptible beyond the property line.”

The Town’s Landscape Bylaw does include an example of a buffer requirement that can be provided from freight-based uses to residential uses. Included in the Landscape Bylaw is a table that provides standards/dimensions depending on type of use and adjacent use, which varies by types of use. The largest/biggest set of buffer requirements are for series “A” which requires a buffer of 25 feet; 6 feet high wall or fence or 4 feet high berm; plus vegetative planting requirements. Among the uses/zones that require this set of buffer requirements includes business, commercial and industrial uses from all residential zoning districts.
The Town of Auburn does have more professional planning staff versus the Town of Oxford. There is the full-time Town Planner, a part-time Assistant Town Planner and clerical staff as part of the Department of Development and Inspectional Services.

On page 7, the importance of protecting the Town’s drinking water source was identified by Town of Auburn Officials. A review of the Town’s industrial-zoned sites then found that a lot of such sites are located in the Town’s aquifer recharge zone. See Section C on page 14 for a more detailed discussion on water resource and aquifer protection zoning considerations.

As previously indicated in the individual community meetings section, the Town of Auburn does not have a noise bylaw. While the Town of Auburn does not have a specific noise bylaw, it does adhere to the Commonwealth of Massachusetts Department of Environmental Protection (DEP) Noise Control Regulation 310 CMR 7.10, unless the Planning Board or Zoning Board of Appeals approves of specific conditions related to hours of construction on a project, then the Town defers to the hours of operation in 310 CMR 7.10. However, during that meeting CMRPC staff and Auburn officials talked about implementation of a noise bylaw in Auburn (Note the Mass. Department of Environmental Protection noise regulations have a standard of an increase of 10 dB over ambient noise levels). The Town is redoing their General Bylaws at this time. It is possible that a Noise Bylaw could be considered for adoption when the Town undertakes the Zoning Bylaw Review process in 2016 (An important point to consider for zoning revision recommendations included in Section 6).

The Town of Auburn staff interacts with the Auburn Business Community via quarterly Business Roundtable meetings. CMRPC was able to attend the June 18, 2014 Business Roundtable meeting. This meeting allowed us to present the findings to date on the project and hear any concerns from the local business community related to freight rail.

The Town of Auburn also offers an informal and voluntary ‘Pre-Application’ meeting between Town staff and the project proponent to help answer developers’ questions and advise them of any Town approvals that may be required. Known as the Development Coordinating Group (DCG), this informal Town team offers a preliminary review of a project so that a developer does not have to track down a representative from each department individually to identify required approvals, possible roadblocks, or other permits that may be required. The initial DCG consultation can usually clarify whether a project qualifies as ‘By-Right’ or whether it requires additional approvals – such as Site Plan Approval and/or Special Permits. It should be noted that this informal meeting does not, however, substitute for any required administrative or necessary Board or Commission reviews.

The DCG meets on the first and third Thursday of every month as needed. The Group is comprised of a multi-disciplinary staff from the Department of Development & Inspectional Services, the Department of Public Works, the Fire Department and the Police Department, as well as the Auburn Water District. The DCG will answer questions, define potential issues, and explain what approvals may be needed. To schedule an appointment for a DCG review a developer should contact the Department of Development & Inspectional Services at 508.832.7703 or visit in person on the second floor of the Town Hall at 104 Central Street. For more information contact Eric P. L’Esperance at elesperance@town.auburn.ma.us or via phone at 508.832.7704. The Town of Auburn is developing a “Development Guide” and that is the source of information for the DGC.
Town of Oxford Regulatory Assessment:

CMRPC staff had indicated earlier, based on our Town of Oxford individual community meeting, that the Town (according to now retired Town Manager Joe Zeneski) would welcome any use that “generates tax revenue”. This statement is accurate related to zoning. Oxford’s zoning allows much more heavy industry related uses compared to the Town of Auburn. Indeed, the Town of Oxford has more permissive zoning for freight-based uses when compared to Auburn. Mining/extractive industries are allowed in the Town’s two industrial districts (Industrial and Light Industrial) via Special Permit; Manufacturing is allowed by-right in the Industrial zoning district; Trucking terminals are allowed subject to Special Permit in the Industrial zoning district; and wholesale distribution is allowed by-right in the Town’s Industrial zoning district and by Special Permit in the Light Industrial zoning district.

The Town of Oxford has a part-time Town Planner (office hours every Tuesday), although the Town does have clerical/administrative staff to the Town Planner and Planning Board. The Town does facilitate a meeting for Project Review via a Staff-level Technical Review meeting that is scheduled every Tuesday starting at 9:40 a.m. The Building Inspector, Fire Chief or Captain, Conservation, DPW, Planning, Assessor, and Water are normally in attendance with Historical, the Town Manager and others invited if it's known their input is needed.

c. Other local research and analysis

Aquifer and Water Resource Protection Zoning:

As previously noted, a number of industrial-zoned sites in both towns are in Zone II\(^8\) areas. CMRPC staff definitely understands the importance of the protection of drinking water supplies. To facilitate such protection, the Town of Auburn has adopted an Aquifer and Watershed Protection Overlay District. Given that the Town’s Aquifer’s Zone II area covers a lot of the Town’s Industrial-zoned land, the Aquifer and Watershed Protection Overlay District further limits certain uses of such lands.

Speaking to the Auburn Planning Department about this issue, CMRPC staff learned that the Town wants to move forward with the adoption of more performance-based aquifer/watershed protection zoning. This would allow additional uses provided that adequate containment systems are installed. In 2014, the Town of Auburn had an Intern research a number of communities with such performance-based watershed protection zoning bylaws. Of these communities, the towns of Westborough and Millbury (both communities are within the Central Massachusetts Region) include the containment system language within their respective watershed protection zoning bylaw (see Appendix D for these Bylaws). CMRPC staff believes that ultimately the performance-based approach for aquifer and watershed protection zoning could become a model for all our communities to consider adopting.

The Town of Oxford does not have any aquifer-related overlay zoning at this time, but has locations within the community overlaid with Zone II areas, including portions of the industrial-zoned areas. The Town is served by a private water provider (Aquarion). Mass. Department of Environmental Protection

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\(^8\) A Zone II is a wellhead protection area that has been determined by hydro-geologic modeling and approved by the Department of Environmental Protection’s (DEP) Drinking Water Program (DWP), Source: http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/dep-wellhead-protection-areas-zone-ii-iwpa.html
Staff indicated to CMRPC staff that because the Town of Oxford is served by a private water system the Town is not required to have the water resource zoning requirements in place. But they noted it is a good practice and usually the private water system would work with the Town to adopt such zoning. If the Town were to purchase the Water Company (The Town Manager had wanted to purchase Aquarion; however the measured failed at the 2014 Annual Town Meeting), then the Town would be required to adopt such zoning. CMRPC recommends that the Town of Oxford consider adopting such zoning, following the performance-based model that would allow certain uses as long as adequate containment systems are provided. For example, Dana Transportation, is an area of one of the Town’s Zone II’s, and is looking to expand their Oxford operations.

Auburn and Oxford’s Master Plans:

CMRPC staff reviewed the master plans of the respective pilot project communities. Auburn’s Master Plan was prepared in 2006. Interestingly, or perhaps just a sign of the times and/or reflecting the types of uses that Auburn Town officials/residents had indicated they would support, CMRPC observed how the Auburn Master Plan is completely silent on freight rail considerations.

Though prepared back in 1985, freight rail considerations were identified in Oxford’s Master Plan:

“The second rail line is operated by the Providence and Worcester Railroad which contains 6.2 miles in Oxford and runs between Gardner, Mass. and New London, CT. This is classified as a Class II line (Gross revenues between $10-50 million) and carries less than three million tons per mile (State Rail Plan, 1984).

“Along much of its length, the Town has zoned abutting land for industrial purposes. In some cases the presence of a rail line is an important factor in locational analysis by manufacturing industrials who receive many raw materials by rail and ship finished products by truck. However, such industries typically require public water and sewer services as part of their manufacturing facilities. The final chapter will examine the Town’s industrially zoned land for all of these factors and make recommendations for district change where appropriate.”

“Rail service along the P&W consists of one train each way per day which usually travels at night. Thus, there is little disruption to automobile traffic along this route and most of the at-grade crossings are in very good condition. The track is also in good condition and trains can attain speeds of 40mph. This compares favorably to unimproved track on some lines in the region where trains are limited to 8-10mph.”

The Master Plan authors noted how “Oxford industries do not use the (P&W rail) line to great advantage but the potential for additional service is there. In Connecticut, for example three new plants do receive substantial raw materials by rail: Frito-Lay and Glass Container in Killingly and International Paper in Putnam.”

From Chapter 6 Land Use Development Strategy: This section starts with “Significant Findings” of which there are seven (7) in all. Three (3) were identified as important/relevant to this Freight Rail Pilot Project:

1. Only a small area of the Town is serviced by sanitary sewers, without such service development of high density is effectively precluded. While presence of a sewer line is not the only factor governing suitability of sites for high density uses, serious consideration should be given to proposals where a connection can be readily achieved to an existing system (CMRPC notes how the Town was able to connect to Webster’s sewer system in the southwest portion of Oxford).
2. The Town is well situated with regard to regional transportation networks. I-395 provides ready access to three (3) interchanges for rapid transport to the entire New England region. It also provides short travel times to Worcester, the employment center of the region, and quick access to the Massachusetts Turnpike. Two rail lines operated by Conrail and the Providence and Worcester Railroad provide north-south and east-west freight services. **The highway and rail lines are important considerations in industrial locational analysis** (emphasis added).

3. Much of the roadway system within the Town is not designated for high traffic volumes. Congestion already exists during peak periods in Oxford Center (indeed CMRPC Staff were told by the Oxford Town Administrator not to identify sites for freight-based economic development that would send additional truck traffic into Oxford Center).

The Chapter concludes noting that “Of all these development factors, poor soils and lack of sewers have the greatest impact on the future development of the Town.” Almost thirty years later the continued lack of widespread sewer availability still poses the biggest challenge for additional freight-based economic development within the Town of Oxford. MassWorks does represent one funding source for infrastructure development, details of which are provided in Section 6.

d. **Traffic analysis**

See the “Freight Rail Pilot Study & Feasibility Analysis: Management System Community Profiles for Towns of Auburn and Oxford” prepared as a separate report in August 2014 by the CMRPC Transportation Planning Staff for this information.

e. **Road network design and capacity analysis**

See the “Freight Rail Pilot Study & Feasibility Analysis: Management System Community Profiles for Towns of Auburn and Oxford” prepared as a separate report in August 2014 by the CMRPC Transportation Planning Staff for this information.

f. **Industry concerns and issues**

CMRPC hosted a September 24th Business Roundtable event as part of assessing industry-related concerns and issues. The September 24th Business Roundtable was well attended by Auburn and Worcester Municipal Officials, P&W Railroad, Chambers of Commerce and other Railroad-related representatives. Steve Cotrone of Intransit Container, Inc. (ICI) was unable to attend, therefore CMRPC staff followed up with him individually.

The participants identified some potential business opportunities. Chris Guzzi of P&W Railroad noted “that he was looking at gaining market share: converting truck shipments to rail shipments.” Chris also noted how the propane market has flipped in recent years; now bringing domestic supplies by rail. A second growth area identified was construction and demolition (C&D) debris.

David Swart of Pioneer Valley Railroad (PVRR) remarked on “the migration of business back to the United States because of cheaper energy costs.” Scott Conti of P&W Railroad noted how New England has seen a growth in plastics “traffic because of the concentration of manufacturers which make plastic products.” Participants then discussed various materials and products made with the plastic pellets.
Related to concerns and issues, it was noted there is a shortage of drivers for trucking companies (this was reiterated by Steve Cotrone of ICI on November 11th). Additionally there are the new electronic log records requirements coming for truck drivers. The example was provided of the trip from Montreal to Worcester. Steve noted same issue facing New York for the round-trip from Syracuse to the Port of New York. It is expected to be about another year for the electronic log records to be implemented. There will be speed monitoring too. Though there has been some pushback at the U.S. Congressional level on implementing all these new requirements.

The participants also discussed a concept of providing tax benefits/breaks for businesses that convert truck freight over onto rail (See section 5 for more discussion of this concept). There was then an organic discussion of participants that included identifying the need for technical and vocational schools to have greater capacity to train students for advance manufacturing positions.

3. Evaluation of Municipal Practices in Worcester County

a. Assessment of Community Site Plan Review Regulations and Processes

To provide the assessment of evaluation of municipal practices in Worcester County, CMRPC staff utilized two case studies of freight enterprises that decided to work with their host communities, including within the local regulatory structure. The two case studies are (1) Intransit Container, Inc. (ICI) located in Worcester and (2) the New England Automotive Gateway (NEAG) located in both East Brookfield and Spencer. Therefore, besides Auburn and Oxford, CMRPC staff reviewed Worcester and Spencer’s regulatory framework given their hosting and permitting of these two case studies.

Case Study One: ICI and the City of Worcester

Intransit Container Incorporated (ICI) is a carrier of international containerized freight and maintains a customs bonded inland port in the city of Worcester. ICI is New England’s leading “double-stack” terminal operator and intermodal service provider. Routing international containers via “the port of Worcester” assures supply chain integrity while reducing overall costs. ICI provides direct daily double-stack rail service between West Coast ports and Worcester along with daily service to and from the Port of NY&NJ. The Corridor Rail Shuttle connects New England importers and exporters to the Port of NY&NJ, the largest East Coast port, allowing New England companies to effectively compete in global markets.

Much more than a rail terminal operator, Intransit Container is a fully integrated intermodal service provider. Augmenting rail services, ICI trucking is a premium quality, competitive priced trucking company serving all of New England along with the Ports of NY&NJ and Philadelphia. In addition, ICI operates a neutral chassis pool, a trans-load warehouse, a full service maintenance shop, a Foreign Trade Zone (FTZ) and a 365,000 square-foot public warehouse.

ICI first started up in 1987 and had been located on Southbridge Street previously. ICI initially moved to the Wiser Avenue location in 1990. When ICI was looking to expand it was a three-year process from their initial plans, which included meetings with the neighborhood, to construction. CMRPC staff learned that the City of Worcester had helped facilitate discussions between ICI and the neighborhood residents during the initial phase of the City review process. Julie Jacobson, now Auburn Town Administrator, indicated that she helped facilitate such meetings when she was still working with the City of Worcester. Figure 2 on the following page shows the location of ICI.
Once the proposed ICI expansion project plans were firmed up, the project then was ready for City of Worcester staff review. The project was sent to the City of Worcester’s “Interdepartmental Review Team (IRT)” with representatives of the City’s Division of Regulatory and Planning Services (DRPS), Division of Inspectional Services (DIS) and Department of Public Works (DPW) in attendance at a meeting held on January 1, 2013.

**Figure 2: Intransit Container, Inc. Site Location in Worcester**

*Intransit Container Incorporated (ICI), City of Worcester: The ICI expansion is located to the west of the existing operations in the area where Lundberg St is shown on the aerial photo above, as the aerial photo shows pre-expansion construction conditions.*

Since this was an expansion of ICI’s Wiser Avenue facility, the subject parcels were those where the expansion was to occur. At the IRT meeting it was noted that 187 and 181 Greenwood Street was the address. The expansion area is located in two of the City’s Industrial zoning districts. ML 0.5 for the first approximately 170 feet off of Greenwood Street and then the interior is located in the MG 2 Zoning District.

When the City of Worcester staff reviewed the use of the expansion, staff initially indicated the use was to require a Special Permit from the City’s Zoning Board of Appeals. This decision had been based on the designation of the use as a “Motor Freight Terminal; truck/trailer/bus storage or servicing” under the City’s Zoning Bylaw. That use is allowed by Special Permit in the ML-0.5 zoned portion of the property. However, as the regulatory review process continued, it was determined by the staff that the ICI facility should be classified as a “Rail freight terminal & accessory storage place.” Such use is allowed by-right.

Therefore it was determined that two City approvals for the ICI expansion were required: a) Conservation Commission (ConCom) and b) Planning Board for a Parking Plan. The ConCom required approvals noted were a Notice of Intent (NOI) and addressing an Enforcement Order (EO).
CMRPC staff’s review of the City of Worcester’s documents indicated that the City apparently found that ICI had done some site work in 2011 as the City discovered “the property’s wetlands and the associated 100-ft buffer zone were filled and altered when the existing storage yard was expanded without seeking Conservation Commission approval and an Enforcement Order (EO) was issued in January 2012.”

**Worcester Planning Board Review**

Ultimately, the Worcester Planning Board voted 5 to 0 on July 17, 2013 to approve the Parking Plan, dated December 21, 2012, as last revised on June 28, 2013, based on the submittal by Greenwood, LLC (the corporate entity that owns the ICI property, with the parent company based in Mansfield). The Planning Board’s decision notes that “The application involved the construction of 4.8 acres of a paved parking area in association with a Rail Freight Terminal & Accessory Storage place (the use determined by City staff for zoning purposes, as noted on the previous page; the decision then goes on to provide the location and zoning district information).”

The Worcester Planning Board’s decision provided a set of conditions, which included:

- Submission of 8 sets of final revised plans, which were to show:
  - That there will be no stacking of containers/trucks along or viewable from Greenwood Street (western property line) for 150 feet from the Greenwood Street property line.
  - The specific location of any stacking and the no stacking areas be identified on the plans
  - Shrubbery shall be planted between the trees along Greenwood Street
  - Access to Greenwood Street is for emergency access only
  - Install a gate that adequately screens the site from Greenwood Street

Six (6) months after the parking plan decision was issued, “on January 22, 2014 the Worcester Planning Board voted 4 to 0 to approve the Amendment to the Parking Plan dated December 18, 2013...The application involved the relocation of a proposed fence northerly, addition of a 2′-4′ wall along the precast fence and installation of a 4′ retaining wall along the site’s northerly boundary...” In the fall of 2014 the wall and landscaping were installed and the stormwater management system was completed (see the photos provided as Figure 3 and Figure 4 on the following page).

CMRPC staff learned that the wall being installed is not for noise; just aesthetics. CMRPC staff notes how a Site Plan Review as defined/regulated under the City of Worcester’s Zoning Ordinance was not required for ICI’s expansion. In most communities it would likely have been. Worcester has a provision for when a “Parking Plan” review and approval is required. A Parking Plan is required “for the approval of parking lots of more than eight (8) spaces.” Authority comes under Article IV, Section 7 which is the “Off-Street Parking and Loading” section. In section 2, Jurisdiction, it states:

“The Planning Board shall be the approving authority for parking lots with 16 or more spaces. Such approval shall be required prior to the issuance of the building permit. The Planning Board shall examine said parking plans with respect to access, drainage, capacity, circulation, compatibility, safety to pedestrians and vehicles using the facilities and using abutting streets and shall integrate such

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9 From the Abby McCabe, Chief Planner, June 25th 2013 (revised 7/12 and 7/16/2013) Memo to the Planning Board re: 169, 170, 181, 187 Greenwood Street & 1 Lundberg Street – Parking Plan
considerations into the review process. Any projects that have received approval under the site plan review procedures, Article V, shall be deemed to have received parking lot approval under this Article.

Any projects that have received approval under the site plan review procedures, Article V, shall be deemed to have received parking lot approval under this Article. Parking plans and loading plans submitted for approval should identify elevations and contours of the finished site, existing rights of way, entrances and exits, driveways, aisles, parking spaces, loading spaces, circulation, capacity, drainage, lighting, berms, curbing, fences, walkways, landscaped areas and other design features. The procedures provided in Article V, including those for administration, fees, powers, hearing, and time limits shall apply to approvals by the Planning Board for parking lots under its jurisdiction.”

Figure 3: Wall adjacent to ICI and Greenwood Avenue

Figure 4: Stormwater Management On-site at ICI

**Worcester Conservation Commission Review**

CMRPC staff’s assessment of the Worcester Conservation Commission (ConCom) review and approval process for the ICI expansion project have led us to conclude that the local ConCom regulatory process is a more important regulatory consideration than had been thought of when the scope of services was developed for this Pilot Project. See Section 4a related to the Mass. Wetlands Protection Act discussion for additional details on this matter.

As previously indicated on pages 18-19, Abby McCabe of the City of Worcester staff had already noted that ICI had done some site work in 2011. In that referenced June 25, 2013 Memo, Ms. McCabe went on to say that “In July 2012, a Notice of Intent (NOI) application that included the restoration work was submitted to the Commission...Also at the October 1, 2012 meeting, the Commission authorized the wetland restoration and wetland restoration and mitigation work. On December 3, 2012, the restoration work was completed and the Commission requested quarterly updates for two growing seasons from the applicant...On February 20, 2013, a new NOI application was filed and the applicant requested a withdrawal of the NOI application submitted in July 2012 (CC-2012-037). In February 22, 2013, the applicant has filed a petition with the City Council to remove Beck Street from the Official City Map.”

City staff had “Recommendations and Requirements” outlined in the March 11, 2013 Memo. “DPRS...recommends that the NOI for 169-187 Greenwood be continued until the applicant can submit revised plans showing the stone dispersion area located out of the 15’ and 30’ buffer zones and that there be stormwater detention prior to discharging into the wetland per DPW&P’s comments.”
was concern raised at the March 11, 2013 about the demolition work and the 15-foot and 30-foot buffer zone concerns were raised then.

The Public Hearing was closed on April 22, 2013 and an Order of Conditions was issued with date of May 3, 2013. Page 3 of the Order notes that the shortest distance between limit of project disturbance and the wetland resource area is 40 feet. Page 7, includes Condition C, 19 applies as the Project is subject to the Mass. Stormwater Standards (CMRPC notes stormwater mitigation is a feature of the NEAG Case Study as well). Ultimately “On June 24, 2013, the Conservation Commission voted to approve the Applicant’s Notice of Intent for this project and voted to issue an Order of Conditions for the project with conditions (CC-2013-030).”

Case Study 2: NEAG and the Town of Spencer

The East Brookfield & Spencer Railroad (EB&S RR) is a switching railroad that serves the New England Automotive Gateway (NEAG) intermodal transload facility located in the namesake communities of East Brookfield and Spencer. Long distance deliveries to the site are made by CSX. CSX uses special railcars loaded with finished vehicles, cars and trucks manufactured in the American heartland while the EB&S RR works to unload these railcars and ready them for the return trip to automotive plants. Final “last mile” delivery of the finished vehicles throughout the greater New England area is completed by a number of trucking companies that serve the NEAG site. The operator of the NEAG and owner of the EB&S RR has participated in the regional transportation planning process since the early 1990’s. Recently a project to expand on-site railroad tracks needed to unload and store railcars has been approved through the MEPA process. The CMRPC staff has been monitoring the expansion process. This Case Study assesses the regulatory considerations of both the initial and expansion and our findings are provided below.

The New England Automotive Gateway (NEAG) is located on 254 acres in East Brookfield and Spencer. The entrance is from the Town of Spencer side, off of Route 49 (see Figure 5 on page 22). CMRPC staff learned this site became a site of interest as it is along a 7-mile stretch of CSX Railroad that has double track (which acts as a passing track during a section of steep grades, as the area is within a location between the divide of two watersheds: Quinebaug and Quaboag). 80 acres are located within Spencer with the balance in East Brookfield.

NEAG opened in October 2004 and are now moving 400,000 vehicles a year through the facility. The current facility includes 50 acres of paved vehicle yards, and loading, support and setout tracks capable of holding 240 railcars. Private switching is used to provide continuous service to a 30-railcar spot loading ramp alongside the CSXT mainline track. Additional phased expansions will eventually bring the terminal area up to 90 developed acres within the industrial park property boundary. The Gateway project features state-of-the-art surveillance and security systems, a dedicated compressed air network to allow rapid train departures from the site, and a rail support and maintenance compound separated from vehicle handing areas.

The site was initially zoned Agricultural/Residential in both East Brookfield and Spencer. The Operator approached each Town for rezoning. Of note is how East Brookfield Town Meeting voted down the initial zoning change (it received a majority vote, but missed the 2/3 vote required to pass Zoning Bylaws warrant articles.). East Brookfield voters ultimately approved the rezoning when the acreage amount was scaled back from the initial proposal. This regulatory assessment that follows focuses on the Town of Spencer, as CMRPC staff was concurrently working on another planning project for that community.
As stated above, the NEAG project required Town Meeting voter approval for the zoning change. After the zoning change was complete the first Spencer approval was a Special Permit from the Town’s Zoning Board of Appeals (ZBA) in 2003. Adam Gaudette had laid out the various local and state approvals as of his Memo date of April 4, 2009. The most recent expansion had a ZBA Special Permit(s) and Planning Board Site Plan Approval, both of which were granted by the Town of Spencer in 2013.

Local Approvals: The initial Town of Spencer approval was the “Original ZBA Special Permit Decision” issued by the Spencer ZBA on March 22, 1994 (recorded as Bk 16216, Pg 276. CMRPC staff notes this document is a two-page handwritten decision on the ZBA’s standard decision template; It does provide reference to the property deed (Bk 12722, Page 48)). Just the following two conditions were issued:

1. “The Project shall be generally constructed according to plans, specifications and information provided at the meeting of 3/22/94.

2. All Buffers and required zones of protection are to be constructed as specified.”

The project had received State approval a year earlier (April 16, 1993) when the Mass. Executive Office of Environmental Affairs (EOEA) issued its “Certificate of the Secretary of Environmental Affairs on the Final Environmental Impact Report.”

The NEAG expansion initiative required a ZBA Special Permit Amendment in June 2013. This approval was followed by a Planning Board Site Plan Approval in July 2013. One feature of the July 2013 Site Plan Approval includes shorter height for light poles along with a stormwater management component (see the photo in Figure 6 on page 24 that provides the newer poles along with the taller light poles initially
constructed). A summary of the 2013 Special Permit and Site Plan Review decisions is provided for below.

The NEAG project expansion was handled as a two-step regulatory process under Spencer’s Zoning Bylaws:

1) A Special Permit Amendment was issued on June 11, 2013. The approval was for “Automotive Processing Facility under Section 4.2.G.12 of the Spencer Zoning Bylaws.” Summary of this approval decision is as follows:

- The current Facility has been operation since 2004.
- The site as previously permitted in 1994 and 2003 consisted of 91 acres.
- In 2012, an approx. 11 acre parcels permitted as part of the 91 acre site was permitted for a truck maintenance facility (Diversified Automotive Case #684).
- The applicant is proposing a two-phase expansion of the facility.
- Phase I will addition of eight (8) new rail tracks and a net of 797 new vehicle transfer bays/parking spaces (construction of 1,050 spaces in new area and removal of 253 spaces where rail tracks are proposed to be added), as well as installation of a stormwater management system.
- Phase II will include construction of 940 new vehicle transfer bays/parking spaces.
- The full project site (including land in Spencer and East Brookfield) currently has 4,468 parking spaces.
- The total number of spaces on site after construction of both Phase I and II will be 6,205.
- Under Finding #3: the ZBA notes that “…A substantial vegetated buffer physically and visually separates the project area from Route 49 and abutting properties. Provisions have been made for the management of stormwater. As conditions, light impact is minimized.”
- Conditions include “All light poles in Phase I and Phase II shall be sixty (60’) feet in height. [It is understood that the total number of light poles will be increased because of the reduction in light pole height from 100 feet to sixty feet, and that the total number of new parking spaces will be slightly reduced.]…”

2) The Planning Board approved with conditions, a Site Plan Review for the NEAG Phase I Expansion on July 16, 2013. Summary of this approval and conditions is provided for below:

- Indicates parking net is 795 new parking spaces.
- The Site Plan Review Approval is for Phase I (of the expansion) only.
- Most of the other findings and conditions are standard and typical conditions.
- The Town did ask for a final version of the Plans and Stormwater Management Report to be provided in hard copy and PDF format within 30 days of the decision date.
- One condition specifying a change to the stormwater management design was provided.

CMRPC’s review of the local regulatory review process indicated that there was no Site Plan Review required for the initial building phase of the NEAG facility.
b. Assessment of other community regulatory restrictions on freight

Section 4(a) was intended for discussion on Site Plan Review. CMRPC has noted that there are a number of other local regulatory provisions that can lead to restrictions on freight-based enterprises (notwithstanding that some may be exempt per the Federal Surface Transportation Board authority). Some of these were noted in the regulatory assessment of the towns of Auburn and Oxford; while others were discussed in the two case studies above. The following is a list of various other municipal regulatory requirements that need to be considered:

- Zoning, which regulates uses, building placements, among other performance-based requirements (most site plan review bylaws are incorporated into a community’s zoning bylaw)
- Water resource protection and associated zoning
- Floodplain
- Wetlands
- Stormwater management
- Traffic / truck restrictions
- Noise

4. Assessment of Regional Regulatory Environment

a. Assessment of state and federal regulations on freight

State Regulations:

During CMRPC staff’s regulatory assessment and review of the identified case studies, we identified three (3) sets of State regulations that can impact siting of freight-based land uses. These are the Mass. Wetlands Protection Act, Mass. Stormwater Standards and the Mass. Endangered Species and Priority Habitat.

i. Mass. Wetlands Protection Act
According to Mass DEP, the Wetlands Protection Act [Massachusetts General Laws (MGL) Chapter 131, Section 40] protects wetlands and the public interests they serve, including flood control, prevention of pollution and storm damage, and protection of public and private water supplies, groundwater supply, fisheries, land containing shellfish, and wildlife habitat. These public interests are protected by requiring a careful review of proposed work that may alter wetlands. The law protects not only wetlands, but other resource areas, such as land subject to flooding (100-year floodplains), the riverfront area (added by the Rivers Protection Act), and land under water bodies, waterways, salt ponds, fish runs, and the ocean.

At the local level, the community's conservation commission administers the Wetlands Protection Act, which was discussed in the ICI Case Study. The conservation commission is a volunteer board of three to seven members appointed by the Town Manager, selectmen or city council in accordance with the municipal Charter, By Laws or Ordinances. On the state level, the Department of Environmental Protection (MassDEP) oversees administration of the law. MassDEP develops regulations and policies, and provides technical training to commissions. MassDEP also hears appeals of decisions made by commissions. The conservation commission ensures that proposed activities will not alter resource areas and the public interests they provide by reviewing projects on a case-by-case basis according to regulations [310 Code of Massachusetts Regulations (CMR) 10.00]. The regulations describe how each type of resource area provides one or more of the public interests. The regulations also spell out the type and extent of work allowed in resource areas. Proposed work must meet these standards. This information helps landowners and developers plan their work and helps commissions apply the law to specific projects. The law regulates many types of work in resource areas, including vegetation removal, regrading, and construction of houses, additions, decks, driveways, and commercial or industrial buildings. If any property owner/developer wants to work in a wetland resource area or within 100 feet of a wetland (an area called the buffer zone), they should contact the conservation commission before starting such work.

If a landowner/developer is unsure whether their proposed work site is in a resource area or whether the work will alter a resource area, they can apply for a Request for Determination of Applicability. If the conservation commission determines that the work will alter a resource area, then the landowner/developer must file an application, called a Notice of Intent (NOI), and pay an application fee. The NOI requires a plan describing the details of the proposed project, location of wetland resource areas and buffer zones, and measures to be taken to protect them. This information can be found in the regulations and application instructions. Contact the local conservation commission for guidance on the content and detail needed in plans. The commission will visit the site to verify the resource area boundaries on the property. At a public hearing on the project, the applicant may present information, and abutters and other members of the public may ask questions. Following the hearing, the commission will issue a permit, called an Order of Conditions. The Order will either approve the project -- with special conditions that will protect the public interests -- or deny the project if impacts to resource areas cannot be avoided or mitigated. The applicant, landowner, any aggrieved person, abutter, group of 10 citizens, or MassDEP may appeal the local commission's decision to MassDEP.

For more details background of the Wetlands Protection Act, CMRPC staff has provided the following website link: http://www.mass.gov/eea/agencies/massdep/water/watersheds/protecting-wetlands-in-massachusetts.html.

ii. Mass. Stormwater Standards
In 1996, the Massachusetts Department of Environmental Protection (the “Department” or “MassDEP”) issued the Stormwater Policy that established Stormwater Management Standards aimed at encouraging recharge and preventing stormwater discharges from causing or contributing to the pollution of the surface waters and groundwaters of the Commonwealth. In 1997, MassDEP published the Massachusetts Stormwater Handbook as guidance on the Stormwater Policy. MassDEP has revised the Stormwater Management Standards and Massachusetts Stormwater Handbook to promote increased stormwater recharge, the treatment of more runoff from polluting land uses, low impact development (LID) techniques, pollution prevention, the removal of illicit discharges to stormwater management systems, and improved operation and maintenance of stormwater best management practices (BMPs). MassDEP applies the Stormwater Management Standards pursuant to its authority under the Wetlands Protection Act, M.G.L. c. 131, § 40, and the Massachusetts Clean Waters Act, M.G.L. c. 21, §§ 26-53. The revised Stormwater Management Standards have been incorporated in the Wetlands Protection Act Regulations, 310 CMR 10.05(6)(k) and the Water Quality Certification Regulations, 314 CMR 9.06(6)(a).

For additional information of the Mass. Stormwater Standards, CMRPC staff has provided the following website link:

iii. Mass Endangered Species and Priority Habitat

A State-wide initiative has identified Priority Habitat Areas (for more information visit http://www.mass.gov/eea/agencies/dfg/dfw/natural-heritage/regulatory-review/). Priority Habitats are for use with the MA Endangered Species Act Regulations (321 CMR 10). A primary responsibility of the Natural Heritage and Endangered Species Program is the regulatory protection of rare species and their habitats as codified under the Massachusetts Endangered Species Act (MESA) (M.G.L. c.131A) and Wetlands Protection Act (WPA) (M.G.L. c.131 s.40). In order to protect rare species and their habitats NHESP reviews projects and activities proposed within Estimated or Priority Habitat. The Massachusetts Endangered Species Act (MESA) was enacted in December 1990 (M.G.L. c.131A). Implementing regulations were promulgated in 1992 and most recently revised and implemented as of October 15, 2010 (321 CMR 10.00).

The Massachusetts Endangered Species Act protects rare species and their habitats by prohibiting the "Take" of any plant or animal species listed as Endangered, Threatened, or Special Concern by the MA Division of Fisheries & Wildlife. "Take" is defined as, "in reference to animals to harass, harm, pursue, hunt, shoot, hound, kill, trap, capture, collect, process, disrupt the nesting, breeding, feeding or migratory activity or attempt to engage in any such conduct, or to assist such conduct, and in reference to plants, means to collect, pick, kill, transplant, cut or process or attempt to engage or to assist in any such conduct. Disruption of nesting, breeding, feeding or migratory activity may result from, but is not limited to, the modification, degradation or destruction of Habitat." Permits for “taking” rare species for scientific, educational, conservation, or management purposes can be granted by the Division of Fisheries & Wildlife.

The Massachusetts Endangered Species Act and its implementing regulations establish procedures for the listing and protection of rare plants and animals and outline project review filing requirements for projects or activities that are located within a Priority Habitat of Rare Species (“Priority Habitat”). The MESA regulations also provide clear review timelines and establish an appeal process for agency
actions. For more information on the Mass. Endangered Species Act, visit the following website link:


Endangered Species and Priority Habitat Considerations: The CSX facility in Westborough, which handles bulk materials for transloading (Materials handled include corn syrup, chemicals, pellets and other commodities), is at a prime location near the intersection of interstates 495 and 90. A yellow spotted salamander was found on the property. That limited the expansion potential (which may have assisted in keeping the Worcester CSX Intermodal Facility expansion a reality). A second example is the Worcester landfill, located to the south of the ICI facility. Redevelopment of the landfill maybe limited as it has been identified as habitat for rare and endangered grassland birds, such as the grasshopper sparrow.

Federal Regulations:

Any discussion on state and federal regulations on freight must begin with the Surface Transportation Board (STB). CMRPC staff thanks Charles Rennick of P&W Railroad, who as General Counsel for the P&W Railroad was able to provide a set of detailed information and resources, including current court cases, related to STB matters.

Created in the ICC Termination Act of 1995, the STB is the successor agency to the Interstate Commerce Commission. Federal Law expressly provides that the jurisdiction of the Board over “transportation by rail carriers” is “exclusive.” It is important to note that the STB statute defines “transportation” expansively to encompass any property, facility, structure or equipment “related to the movement of passengers or property, or both, by rail, regardless of ownership or an agreement concerning use.” 49 U.S.C. § 10102(9). Moreover, “railroad” “is defined broadly to include a switch, spur, track, terminal, terminal facility, freight depot, yard, and ground, used or necessary for transportation.”

Within 49 U.S.C. § 10102(6), Section 10501(b) expressly provides that “the remedies provided under [49 U.S.C. §§ 10101-11908] with respect to regulation of rail transportation are exclusive and preempt the remedies provided under Federal or State law.” Section 10501(b) thus is intended to prevent a patchwork of local regulation from unreasonably interfering with interstate commerce. See Bos. & Me. Corp.—Pet. For Decl. Order, FD 35749 (STB served July 19, 2013); H.R. Rep. No. 104-311, at 95-96 (1995).

In interpreting the reach of § 10501(b) preemption, the Board and the courts have found that it prevents states or localities from intruding into matters that are directly regulated by the Board (e.g., rail carrier rates, services, construction, and abandonment). It also prevents states and localities from imposing requirements that, by their nature, could be used to deny a rail carrier’s ability to conduct rail operations. Thus, state or local permitting or preclearance requirements, including building permits, zoning ordinances, and environmental and land use permitting requirements, are categorically preempted as to any facilities that are an integral part of rail transportation. See Green Mountain R.R. v. Vermont, 404 F.3d 638, 643 (2d Cir. 2005). Other state actions may be preempted as applied—that is, only if they would have the effect of unreasonably burdening or interfering with rail transportation, which is a fact-specific determination based on the circumstances of each case. See N.Y. Susquehanna & W. Ry. v. Jackson, 500 F.3d 238, 252 (3d Cir. 2007) (federal law preempts “state laws that may reasonably be said to have the effect of managing or governing rail transportation,” while permitting

During CMRPC’s work on this Freight Rail Pilot Project, the STB issued two decisions in favor of the Grafton & Upton Railroad (G&U). These decisions both involved communities within the Central Mass. Region. Grafton’s case involves a proposed propane facility. On January 27, 2014 the STB’s “decision declares that preclearance regulations of the Town of Grafton, Mass., that would prohibit or unreasonably interfere with the proposed construction and operation of an additional rail yard and storage tracks in the town are preempted by federal law.” Upton’s case involves a transloading operation for wood pellet materials. On December 4, 2014 the STB’s “decision find that certain operations conducted at a bulk transloading facility in the Town of Upton, Mass. constitute ‘transportation by rail carrier’ and that therefore, federal preemption applies to those operations."

b. Reconciliation of local versus state/federal regulations re: freight

The federal pre-emption of local and state regulations provided by the Surface Transportation Board (STB) is pretty clear. The STB ruled with the railroad in the two recent cases involving Grafton and Upton Railroad, as noted in the text above. Since the STB decisions were issued, the towns of Grafton and Upton have both appealed the STB’s ruling to the First Circuit U.S. Court. One finding that CMRPC notes from our work on this Pilot Project is how the two freight providers discussed as part of our case studies in Section 3 (ICI and NEAG) both decided to work within the local regulatory process. By doing so, they seemed to have been able to harbor good relations with the respective host municipality.

5. Enhancing Municipal Planning for Freight

a. Develop recommendations for improving local review processes, procedures

CMRPC staff began this phase of this report with the review of literature review and case studies to assist in the identification of best practices and recommendations. The review of various case studies was intended to include possible tools for municipal freight planning that are ultimately provided for in Section 6, which starts on page 47. CMRPC divided the various best practices and recommendations into different themes: development review, communication, traffic flow and congestion, noise and vibrations, buffers and setbacks, and making use of a freight village to consolidate and concentrate freight-based development.

**Development Review**

- Municipalities could include truck operations and peak traffic analysis parameters outside commuter-oriented peak periods for traffic impact assessments for industrial sites using trip generation estimates from non-traditional resources such as the National Cooperative Highway Research Program (NCHRP) Synthesis 298: Truck Trip Generation Data. Table 2, provided on the following page, which is taken from the NCHRP Synthesis 298 Report, could be incorporated into a community’s Site Plan Review requirement to help assess potential truck traffic:
Table 2: Daily Truck Trip Generation Rates

<table>
<thead>
<tr>
<th>Industrial Land Use</th>
<th>Daily Truck Trip Rates per 1,000 ft²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing</td>
<td>0.385</td>
</tr>
<tr>
<td>Heavy Industrial</td>
<td>0.280</td>
</tr>
<tr>
<td>Light Industrial</td>
<td>0.300</td>
</tr>
<tr>
<td>Industrial Park</td>
<td>0.180</td>
</tr>
<tr>
<td>Truck Transportation</td>
<td>2.363</td>
</tr>
<tr>
<td>Warehouse / Distribution</td>
<td>0.185</td>
</tr>
<tr>
<td>Wholesale Trade</td>
<td>0.224</td>
</tr>
</tbody>
</table>

- Municipalities could require the analysis of highway-railroad grade crossing operations in development approval processes for rail-served industrial as well as nonindustrial land uses located near existing grade crossings. CMRPC staff notes that this recommendation does differ from a latter suggestion of “Replacing at-grade rail crossings with grade separated crossings.”

- Municipalities should account for truck access and circulation for site plan approvals for nonindustrial sites with anticipated truck activity, such as retail centers. Include provisions for on-street and off-street loading zones in commercial districts. Even local businesses that produce and attract very little freight have growing needs for small truck access related to overnight deliveries and parcel shipments.

Communication

- Communication can also be an effective means of ensuring that freight operations and facilities act as good neighbors within the community. Having a common understanding of the issues, educating and building awareness, keeping an open dialogue, and organizing and working together to craft solutions can help to avoid misconceptions and foster mutual cooperation. Examples of successful efforts have been identified in the NCHRP Synthesis 320: Integrating Freight Facilities and Operations with Community Goals Report, which was prepared in 2003. CMRPC staff has reviewed this report for best practices and recommendations of interest and we have integrated this document’s recommendations in this study where appropriate.

Practices and solutions that were found to aid in communication and discussion include:

- Undertaking public education—As previously discussed, the public may not have an understanding of the role of freight in their lives and businesses (see quote on page 1, for example). Based on the survey responses and Internet reviews conducted as part of the NCHRP Synthesis 320 Report, this understanding is a necessary foundation for discussing the best ways of balancing freight operations and facilities with community goals. Efforts have been undertaken to generate a better understanding of freight-related processes. For example, the New Jersey DOT published The Value of Freight to the State of New Jersey in February 2001, with the goal of creating a better awareness of how New Jersey’s freight system worked. This nontechnical document was designed for use with the general public and elected officials. Although outside of the reach for the towns of Auburn and Oxford to prepare, perhaps CMRPC could either work to prepare a similar document at the regional level or talk to officials in the new Baker
administration to see about the opportunity for a “Value of Freight to Massachusetts” study to be prepared.

- **Hiring locally**—Similarly, by hiring locally a freight facility or operation becomes more of a known quantity to the surrounding communities. The facility is no longer just a presence; rather, it is also a place of community employment. As examples, the practice was carried out at the CSX facility in Chicago and is part of the corporate philosophy for Petro Truck Stops. CMRPC notes how NEAG promoted the fact they hired locally, e.g. Spencer/East Brookfield residents. ICI was not as explicit in the October 5, 2014 Worcester Telegram article but job creation is a component of their expansion project in Worcester, noting that they “currently employ about 200, (and) will add 25 to 30 jobs with the latest expansion.” CMRPC staff understands that truck drivers usually would not be driving long hours/miles to a job that involves trucking / hauling freight.

- **Facilitating meetings between communities and freight providers**—Public transportation agencies can facilitate communication between communities and freight transportation providers in their areas. Many MPOs have active freight advisory committees. The Port of Los Angeles has a Port Community Advisory Committee, with members from neighborhood councils, community organizations, business and industry groups, organized labor, and local colleges. The Advisory Committee, approved by the City of Los Angeles Board of Harbor Commissioners, has as one of its purposes to “Assess the impacts of Port developments on the harbor area communities and to recommend suitable mitigation measures to the Board for such impacts.” CMRPC does have freight representation on the MPO Advisory Committee; currently P&W Railroad is represented. But CMRPC would like to have trucking interests represented, including the shipping company, UPS.

**Traffic Flow and Congestion**

The negative impacts on traffic flow and congestion from freight operations and facilities was the issue most often cited by survey respondents as reported in the NCHRP Synthesis 320 Report. Because the issue is so widespread, numerous solutions and means for balancing freight transportation movements and community goals have evolved. The balancing practices and solutions for mitigating the traffic flow and congestion issues related to freight transportation facilities and operations include:

- **Replacing at-grade rail crossings with grade separated crossings**—Congestion and safety issues related to at-grade rail crossings were among the most often cited by survey respondents. The significance of the issue has been confirmed in other recent reports. For example, a survey of access conditions at U.S. ports conducted in 2000 found unacceptable conditions at at-grade rail crossings on port, local, state, and interstate roads. The July 2000 NHS Intermodal Freight Connectors—A Report to Congress also reported that delays were among the most common railroad crossing deficiencies. The solution most often cited by survey respondents is to replace the existing at-grade rail crossings with grade separated crossings.

This strategy is likely to be uneconomical within the CMRPC region and the timeframe to install new bridges is long-term. The City of Worcester did work to separate MLK Blvd. (Central Street) from the north-south P&W line when the Medical City (St. Vincent’s) was built in the early 2000s. The at-grade crossing at Central Square in Auburn has the potential to be negatively
impacted in terms of vehicular traffic flow if there was greater use of the P&W Norwich line due to additional freight-rail services. However, no major incidents in recent history along P&W’s Norwich line through Auburn and Oxford have been recorded. In addition, almost all CSX’s crossings are grade separated crossings in the region.

- **Requiring developers to make necessary highway access improvements for trucks**—Local planning boards can require developers to provide access improvements as a condition for project approval. CMRPC staff notes that this can be a Development Review strategy as well.

- **Encouraging mode shift from truck to rail**—One of the practices being pursued to reduce truck traffic and improve vehicular flows is to encourage the marketplace to shift from using trucks to using alternative freight transportation methods. Most commonly, the mode shift is from truck to rail freight. Shifting truck traffic to barge has also been used. The practice may be encouraged by public agencies or initiated by private-sector businesses.

One strategy to assist in facilitating the mode shift from truck to rail is to make “**Use of a short-line railroad**”—Based on the survey response from the Oregon DOT, in April 1999, Morse Brothers and the Portland & Western Railroad joined forces to eliminate approximately 30,000 truck hauls per year in the congested I-5 Corridor. The short-haul, high-volume train moves 700,000 tons of stone and sand annually. Similarly, Georgia Pacific uses the short-line railroad to ship the equivalent of 4,000 truckloads of wood fiber annually.

To help increase usage of the short-line railroads, especially by increasing the switch and spur infrastructure required for properties adjacent to such railroads, the State’s Industrial Rail Access Program, or “IRAP”, represents a potential funding source. More details of the IRAP Program are included on pages 42-43.

Frank DeMasi had made CMRPC staff aware of proposal he submitted to the Boston Region MPO to assess potential mode shift from truck to rail further. His proposal was for a “Truck to Rail Modal Diversion Analysis” to be incorporated into that Region’s UPWP (Unified Planning Work Program). The objective of this Analysis, as stated by Mr. DeMasi is “to outline in a UPWP study the basic methodology for constructing a modal diversion model for increasing the amount of freight carried on Massachusetts’s railroads and to define the data elements required for conducting the detailed analysis.” The requirements to undertake a Truck to Rail Modal Diversion Analysis seem pretty complex, based on CMRPC staff’s review of the Power Point presentation file Mr. DeMasi authored. But CMRPC and the CMMPO could review this concept further and see if the idea is worth considering to be incorporated into a future UPWP for the Central Massachusetts Region, in order to help increase usage of the Region’s freight rail system.

As previously noted on page 17, a tax break concept was identified at the September 24, 2014 Business Roundtable. CMRPC staff noted that the idea is similar to the Commonwealth’s Chapter 61 programs\(^{10}\), in which someone could get a reduced property tax rate if they shifted...

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\(^{10}\) Massachusetts current use programs (Ch. 61, Ch. 61A, and Ch. 61B) were created to give preferential tax treatment to those landowners who maintain their property as open space for the purposes of timber production, agriculture or recreation. Chapter 61 was designed to classify forestland. Chapter 61A was designed to classify agricultural land which may include forestland and Chapter 61B was designed to classify recreational land which can also include forestland. For more information: [http://www.mass.gov/eea/agencies/dcr/conservation/forestry-and-fire-control/ma-current-use-forest-tax-program.html](http://www.mass.gov/eea/agencies/dcr/conservation/forestry-and-fire-control/ma-current-use-forest-tax-program.html).
their freight usage from truck to rail. The Roundtable participants seemed supportive of this idea, but it would require State Legislative action.

P&W staff also noted there is the environmental benefit associated with use of railroads, which could be promoted as part of motivating the mode shift from truck to rail, especially related to the taxation program concept. Information about environmental benefits was provided in the introduction section.

- **Undertake an integrated freight/economic development program**—Traffic flow and congestion can also be mitigated when freight transportation improvements are coordinated with an economic development initiative or project in the planning stage. For example, the Pennsylvania DOT reports that the state Bureau of Rail Freight, Ports, and Waterways has conducted several marketing and outreach efforts in coordination with the commonwealth’s economic/industrial development agencies to promote the use of rail freight as a cost-effective means for moving freight, and in April 2002 introduced a Rail Freight Properties Directory that contained a listing of available industrial sites served by short-line and regional railroads. CMRPC staff has reviewed this online directory, and it also represents a good marketing strategy. But we note that at this time, the PDF documents of individual sites are not available. Of interest is that they indicate those properties that have all public utilities. CMRPC notes that this marketing approach would likely benefit from a regional or even state-wide database (Morris County, NJ has a regional database as well). More on marketing considerations is found in Section 5(c) of this Report.

- **Truck Freight Management Approaches**: Designating routes for heavy weight trucks, banning/limiting trucks on routes (given that MassDOT prohibits banning trucks on state numbered routes, our communities will have to utilize the former approach for such roadways) and building more truck rest areas/parking are identified as truck freight management approaches.

An inadequate supply of available rest areas, truck stops, or truck parking may result in trucks parking on ramps, side streets, and highway shoulders. Such truck parking can affect the capacity and safety of the roadways. The solution is to increase the amount of available secure parking or rest areas. However, this practice can be difficult to implement. Survey respondents noted instances of community resistance to developing new parking capacity. However, several alternate approaches were offered including:

- Increasing available parking spaces at existing rest stops;
- Creating truck parking at existing weigh station facilities. Use of weigh stations to provide additional truck parking capacity is also being pursued or implemented in Michigan, Maryland, Iowa, Florida, Montana, and Kentucky; and
- Improving signage to identify truck parking areas.

CMRPC staff note the Delaware Valley Planning Commission’s Freight Planning work identified lack of truck rest areas and parking areas as a concern in the Philadelphia Metro Area.

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11 According to Sarah L. Gulick, Director, PA Department of Transportation, Bureau of Rail Freight, Ports & Waterways, “In the new year, we will begin the task of updating this directory since it appears that it has not been updated over the past few years. When the new info is available, we will post it to our Web site.”
During a discussion with P&W Railroad officials, CMRPC learned that trucks and RVs are welcome to park at some Wal-Marts across the country, although this practice has not been widespread in the New England states. CMRPC staff did find some weblinks about this issue and one with Massachusetts Wal-Marts where parking is not allowed. RVs appear to be banned at some Wal-Marts (see link http://www.walmartatlas.com/no-park-walmarts-in-massachusetts/) including the North Oxford and the Worcester Wal-Mart.

- **Developing rail spur or connection**—Similar to providing truck access for a facility, railroads and/or public-sector entities can develop rail spurs or connections to provide service directly to freight facilities, removing truck traffic from roads. Construction of a spur can also shift rail traffic from one route to another, potentially permitting the closure of one or more at-grade rail crossings and/or the shifting of rail traffic from routes through residential areas. The IRAP program, discussed on pages 42-43 does represent one potential funding source to help develop new rail spurs. This approach could be related to the Freight Village concept discussed on page 36.

**Noise and Vibrations**

Noise and vibration concerns focus on reducing the effects generated by freight operations and facilities. Examples of strategies to mitigate noise and vibrations include modifying the hours of freight operations to coincide with times when residents are not at home, installing sound walls, limiting the hours of loading dock operations, installing hush kits on cargo aircraft, and creating whistlefree quiet zones. Some of the practices and solutions have been discussed previously. Additional practices found to address these concerns include:

- **Using lower-emission locomotives/reducing locomotive idling**: P&W Railroad did receive a grant from the Connecticut Department of Environment Protection (after not receiving a similar one from the U.S. EPA) and are implementing the reduction of engine idling for their fleet.

- **Creating a “no whistle” rail zone (e.g. “Quiet Zone”)**—Train whistles can be an irritation to communities but a necessary safety practice. A new approach—the creation of a quiet zone—is being tested. For example, the Louisville Quiet Zone\(^\text{12}\) was the first project in the United States to reduce noise pollution and increase safety in a residential community. This quiet zone reduces the need for trains to blow their whistles along a specified corridor through a series of improvements, including redesigned highway rail at-grade crossings and street closures. The additional safety improvements were necessary to compensate for reducing the use of whistles.

Local governments may (emphasis added) seek to stop railroad engineers from blowing the whistle when they are approaching a highway-rail grade crossing. The federal government created railroad quiet zones to allow communities to have crossings where the whistle does not blow. Alternative safety measures must be made to the crossing before a quiet zone can be put in place. For more information on grade crossings and quiet zones, visit the Federal Railroad

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\(^{12}\) A quiet zone is a section of a rail line at least one-half mile in length that contains one or more consecutive public highway-rail grade crossings at which locomotive horns are not routinely sounded when trains are approaching the crossings.
CMRPC staff’s assessment of the quiet zone designation process is that it seems complex to implement and would be very time-consuming. Our assessment identified the starting point for this process, which is as follows:

- One step requires “Update the USDOT Grade Crossing Inventory Form” which CMRPC Staff reviewed from a document entitled “Guidance_on_the_Quiet_Zone_Creation_Process.pdf.” From this document; CMRPC Staff learned that there are two categories for approval of Quiet Zones:
  
  - Section I. Pre-Rule Quiet Zones: Qualifying for Automatic Approval (Chart 1A) Here you need to check whether each crossing qualifies as a pre-rule crossing (horns not sounding on October 9, 1996 and December 18, 2003 because of state/local law or community agreement with the railroads). If all crossings do not qualify as pre-rule crossings, then the proposed quiet zone does not qualify as a Pre-Rule Quiet Zone, and you should refer to Section III, New Quiet Zones.
  
  - If each public crossing in the proposed Quiet Zone is equipped with one or more Supplementary Safety Measures (SSMs) as defined in Appendix A of the Rule, the Quiet Zone qualifies for Automatic Approval. To complete the process of creating the Quiet Zone, notify the parties listed in rule section 222.43 by December 18, 2004.

P&W noted they would not necessarily be against the use of this technique but it seems like a very complex process and would be a mid to long term for implementation. CMRPC's staff initial assessment is that there are no such intersections that qualify for automatic approval within the towns of Auburn and Oxford. In the absence of creating Quiet Zones, a couple other identified strategies are.

- Modifying train whistles at grade crossings—Re-directing the whistles is another approach to reducing the impact of train whistles on local communities.

- Limiting truck/loading dock hours of operation in neighborhood—Freight operations in the evening hours can create concern. In response, through noise ordinances and agreements, some communities have limited the hours during which trucks can load or unload. For example, an agreement between the community and the Toys ‘R’ Us Distribution Center in Morris County, New Jersey, bans truck deliveries and pickups from the facility between 10 P.M. and 7 A.M. Similar agreements have been reached between facilities and municipalities throughout the United States. CMRPC staff notes this approach may be difficult to implement for companies that run 24 hour operations.

**Buffers and Setbacks**

- Incorporate minimum buffers and setbacks between industrial sites and nearby sensitive land uses, along with minimum horizontal clearance between road and rail freight corridors and non-industrial land uses. As noted in Section 2, the Town of Auburn has buffer requirements beyond minimum building setbacks whereas Oxford only has the minimum building setback
requirements as this time. CMRPC staff notes how this strategy also relates to addressing the “Noise and vibrations” issues previously discussed.

- Building sound walls and berms or including buffer zones—Physical separations can also address noise and light issues. Sounds walls, berms, and buffer zones can be mandated as part of zoning ordinances or constructed as part of an agreement between a freight facility and the surrounding community. One example of a zoning ordinance from Edison, New Jersey, includes the following requirements:

  "A buffer consisting of earthen berm, solid fencing, and plants, or any combination of the same, shall be installed along any lot line of a freight yard use which coincides with a residential zone boundary. The buffer shall have an effective height of no less than ten (10) feet and shall provide an effective noise and visual barrier of the freight yard use to the adjacent residential zone" (emphasis added). Existing trees of three inches or more caliper shall be incorporated into the buffer design.”

CMRPC staff has also provided a number of buffer examples from communities in the Central Massachusetts region, based on our review of other case studies presented in this Report or from our review of other communities’ practices undertaken as part of our Priority Development Area (PDA) planning initiative. These are presented below:

- The Town of Charlton requires a 100-foot buffer from development in the Town’s Business Enterprise Park and Industrial-zoned properties to their Residential-40 or Agricultural zoning districts.

- The Town of Sturbridge requires a 50-foot screened buffer where commercial and industrial uses are adjacent to residential uses.

- Within the Town of Sutton’s Route 146 Overlay District, there is the following detailed buffer requirement:

  "When a proposed development abuts a Residential district in any community, whether presently developed or not, landscaped buffers shall be employed to shield the residential property from view of the proposed development, and to minimize negative impacts such as glare, noise, and odors. Such a buffer shall contain a screen of plantings not less than three feet (3') in width and six feet (6') in height at the time of planting. Individual shrubs or trees shall be planted not more than three feet (3') on center, and shall thereafter be maintained by the owner or occupant so as to maintain a dense screen year-round. At least fifty percent (50%) of the plants shall consist of evergreens. A solid wall or fence, not to exceed six feet (6') in height, complemented by suitable plantings may be substituted for such landscaped buffers.”

**Freight Village**

At the September 24, 2014 Business Roundtable, Frank DeMasi suggested that CMRPC give consideration to promote the development of one or more freight villages in the region. As a first step, CMRPC wanted to provide a definition of what is a freight village to assist in facilitating of potential siting:

- Size – From 50 to 100 contiguous acres; most are larger
• General location – In or near metropolitan area, but not close to residential areas
• Access – Excellent access by road, possibly with rail connections; secure with controlled access
• Proximity – Direct access or proximity to intermodal facilities, ports and waterfront, and/or airport operations
• Design - Planned layout with amenities and landscaping
• Buildings – State-of-the-art facilities with offices, advanced communications and information technology infrastructure; size may vary, but typically smaller than traditional warehouses

The literature review phase indicated municipalities, with abundant contiguous land that are looking to create high rateable development, may consider working with a developer to create a freight village. Freight villages are areas where all manner of freight transportation and logistics take place. Due to high activity levels, freight villages should be located in close proximity to a highway interchange and in a location where other modes are present (e.g., rail and ports). Freight villages focus around light manufacturing and active warehouse/distribution center activity. They also include support activities such as office space, retail (restaurants, banking, stores), and hotels.

With the Pilot Study focused on Auburn and Oxford, CMRPC staff assessed the various sites reviewed in the first stage of this Project. One property in Oxford currently owned by Mary Ann Lacki, which has a total of three (3) contiguous parcels that total +/- 75 acres, is a site CMRPC believes would be the only suitable site for a freight village amongst the two towns, based on the criteria indicated above. It is currently zoned Industrial and has access to I-395 for trucks without going into the Oxford Town Center. The land has significant property frontage along the P&W Railroad, where additional rail spurs could be created.

b. Identify opportunities for regional rail expansion

Preface

In general, opportunities for expansion of the rail system in the greater region were considered broadly in both a micro and macro scale. Focusing on the major intermodal facilities located throughout the region, some identified opportunities are Worcester centric while others have the potential to directly pertain to the host communities of Auburn and Oxford.

CSX

In Worcester, eastern railroad giant CSX reconstructed and modernized the carrier’s intermodal transfer yard. The Worcester facility mainly handles domestic containers and trailers on flatcar. Similarly, in nearby Westborough, another intermodal freight yard was improved within its existing footprint to handle bulk materials transloading. Materials handled include corn syrup, chemicals, pellets and other commodities. Economic spin-off is anticipated from the presence of both modernized CSX yards. In response to a request from the Worcester Regional Chamber of Commerce, a parallel CMRPC agency effort focused on the potential for rail served freight opportunities within a 10 to 15-mile radius of the Worcester yard. The White Paper that was prepared as part of this Project is available for review at: http://www.cmrpc.org/freight-rail-planning-studies#ED_Site_Selection.

East Brookfield & Spencer Railroad (EB&S RR)
East Brookfield & Spencer Railroad (EB&S RR) serves as the switching railroad for the New England Automotive Gateway (NEAG) located in the namesake host communities. Since the site was developed as a major automotive rail-to-truck transload facility serving all of southern New England, a range of mitigation measures have been implemented. Recent site improvements included expansive earthwork to provide additional railroad track capacity for railcar staging and storage. Clearance improvements along the CSX Boston Line will allow for “AutoMax” railcars to serve the site, increasing capacity. Also, EB&S worked closely with CSX to reduce the number of train whistle blasts in vicinity of the yard using a radio & flag person arrangement. It is likely that other future improvement projects are planned for the NEAG site.

_Grafton & Upton Railroad (G&U)_

The Grafton & Upton Railroad (G&U) is a short line railroad operating in the region. As noted on page 28, the railroad is planning for the construction of a new propane transfer facility in North Grafton after the STB ruled in the railroad’s favor on January 27, 2014. In Upton, a proposed bulk transloading facility for wood pellets was also ruled in favor of G&U, based on a December 4, 2014 STB Decision. Both decisions have been appealed to the First Circuit Court of Appeals. CMRPC Staff will continue to track these cases accordingly. Other efforts by the G&U include work to reestablish a severed rail connection to CSX in Milford. This would allow the railroad to transfer freight with CSX in Milford in the south in addition to CSX in North Grafton. Further, freight yard improvements are ongoing in both Hopedale and West Upton.

_MassCentral Railroad (MC)_

Rural carrier MassCentral Railroad (MC), operating in the Ware River Valley between Palmer and South Barre, recently benefited from state-funded track improvement work. The MassCentral operates over trackage owned by the Commonwealth. Various rail-related activities continue at the South Barre Industrial Park known as Phoenix Plaza. This facility allows for convenient last mile delivery in this rural part of the planning region.

_North Brookfield Railroad (NBRR)_

The North Brookfield Railroad (NBRR), long dormant, is planning to restore track infrastructure and reestablish operations in its namesake community. The NBRR is viewed as the resurrection of a community-owned rail line dormant since the 1970’s. In order to generate railcar traffic, a number of line side industries are envisioned. As an example, perhaps a paving stone manufacturer located along the line’s right-of-way would one day reestablish rail service. As part of the rail line’s envisioned restoration, an at-grade crossing over Route 9 in East Brookfield will need to be reestablished.

_Providence & Worcester Railroad (P&W)_

Regional freight carrier the Providence & Worcester Railroad (P&W) is headquartered in Worcester. The P&W’s namesake rail line in the Blackstone Valley requires replacing five (5) aging bridge structures in excess of 100 years in age. The replacement of the structures is necessary to accommodate fully loaded modern freight cars weighing 286,000 pounds. At this time, freight cars must be “light loaded” in order to pass over the line. The cost of replacing these structures is estimated at $30M. The P&W has been unsuccessful in obtaining US DOT TIGER funding for this project on the national level. As such, other opportunities for funding the replacement of the five bridges are being investigated.
In addition, other P&W lines may need to be cleared in order to accommodate full double stack container service in the future, increasing system capacity. In the host community of Auburn, the under-clearance of the Route 20 bridge over the P&W Railroad is insufficient to accommodate full double stack service. If necessary, clearance increases would be required for this structure in the future. Elsewhere on the P&W rail network in the greater region, modest improvements are planned, such as the repair, replacement or installation of switches and rail sidings.

Pan Am Southern (PAS)

Further, the P&W Railroad may determine the need to implement clearance increases on the carrier’s line between Worcester and Gardner. In Gardner, the P&W interchanges with Pan Am Southern (PAS). PAS is a freight rail carrier operated jointly by Pan Am Railways and Norfolk Southern (NS). Along the PAS line in the northwest corner of Massachusetts is the Hoosick Tunnel, 5 miles in length. Engineering studies are now underway to determine the effort necessary to undertake a project to increase clearances in the tunnel to accommodate full double stack service. Preliminary estimates indicate an investment ranging from $30-50 million. When the envisioned improvements are completed, double stack trains from the west could be interchanged in Gardner and then proceed to Worcester on the P&W. With the planned Hoosick Tunnel double stack clearance improvements, as well as necessary clearance improvements on the Gardner Branch, P&W will have the ability to receive containers from both CSX and NS.

Intransit Container Incorporated (ICI)

Intransit Container Incorporated (ICI) operates the Wiser Avenue intermodal container yard in the city of Worcester. The ICI facility is served by the P&W Railroad. ICI’s focus is international container traffic from around the globe. The site is a customs-bonded, inland port. Yard expansion at the Wiser Avenue site is underway and many recent improvements have been made. In addition to more property for container and chassis storage, the yard will also have improved lift capabilities, speeding operations. Overhead power lines on the site are planned for burial, increasing the maneuverability of the lift equipment. Further, along with the expansion, ICI has implemented a range of mitigation measures, including an impressive wall shielding site operations as well as environmental work associated with identified wetlands.

Preface

Various improvements to the multimodal transportation infrastructure in the greater region that would enhance the freight movement across the system have been identified. These improvements range from the restoration of existing infrastructure, to new construction, to the deployment of various technologies. For the purposes of this summary, the “freight system” is viewed to consist of the region’s network of major highways and railroads. In addition, planning efforts also focus on the region’s previously identified, primary National Highway System (NHS) freight routes serving major intermodal facilities, particularly in the region’s core. Further, some focus is also placed on the major federal-aid roadways serving the region’s rural areas that are also important to the movement of freight.
The following recommended improvements are discussed at the regional level in this section as opposed to being directly locally beneficial to Auburn and Oxford. Where local improvements are identified, we include such recommendations within Section 6.

HIGHWAY

Interstate Maintenance (IM) Program

The FHWA first became involved with funding for maintenance activities on the Interstate System as a result of the Federal-Aid Highway Act of 1976 that established the 3R program to fund Interstate resurfacing, restoration and rehabilitation. The Federal-Aid Highway Act of 1981 expanded the program by adding a fourth “R”, reconstruction.

The 1991 Intermodal Surface Transportation Efficiency Act (ISTEA) terminated the I-4R program, except for a small discretionary set aside, and established a new IM program and a separate NHS program which includes the Interstate System. The IM funds may be used on the Interstate System for 3R work and for reconstruction of bridges, interchanges and overcrossings along existing Interstate routes, but may not be used for the construction of new travel lanes other than high occupancy vehicle lanes or auxiliary lanes.

The 1998 Transportation Equity Act for the 21st Century (TEA-21) expanded eligibility for funding under the IM program to the 4th R, reconstruction. As a result, the addition of new interchanges, new rest areas, new noise walls, etc. became eligible for IM funding. However, IM funding of added lanes, except HOV and auxiliary lanes, are not allowed.

In the greater region, likely future Interstate highway interchange reconstruction is anticipated at I-495/Route 9 in Westborough and, within the MAPC planning region, I-495/MassPike (I-90) in Hopkinton and I-495/I-290 in Marlborough. In Worcester, future envisioned projects include the reconstruction of the I-290/Vernon Street interchange and the potential expansion of the I-290/Route 12 (Hope Avenue) interchange to accommodate all movements. At this time, traffic cannot exit I-290 eastbound nor enter I-290 westbound. Further, at this time, the reconstruction of the Route 9 (Belmont Street) bridge over I-290 is soon to be underway. A host of construction period mitigation measures are included as part of this major project which will result in a widened Route 9 bridge over I-290.

Deployment of Intelligent Transportation System (ITS) Technologies

MassDOT is now in the process of finalizing the design for the installation of real-time guide signs on I-290 and other roadways to inform the travelling public of travel times in the greater region. In particular, MassDOT’s new underway I-290 Intelligent Transportation System (ITS) Implementation Project includes 16 Closed Circuit Television (CCTV) cameras and 4 overhead Changeable Message Signs (CMSs) from the MassPike (I-90) to I-495. Another aspect of the I-290 project includes the installation of Real Time Travel Monitoring (RTTM) devices. (The RTTM signs will be different from those on the MassPike; they will be in the form of a green Guide sign.) Eventually, similar technologies are anticipated for deployment along I-395 in the host communities of Auburn and Oxford.
**All Electronic Toll System (AETS) on the MassPike (I-90)**

MassDOT is currently in the process of converting and replacing the MassPike (I-90) cash and electronic EZ Pass toll collection systems with a new system of tolling relying only on All Electronic Tolling (AET). The project will include both roadway tolling infrastructure and toll collection system technology. With the planned removal of existing toll booths, vehicle delay may be reduced at a number of MassPike interchanges, including that in the host community of Auburn. CMPRC staff can provide interested persons with a copy of MassDOT summary materials for the All Electronic Toll System upon request.

**Primary National Highway System (NHS) Freight Routes**

The region’s previously identified, primary National Highway System (NHS) freight routes serving major intermodal facilities are a focus of ongoing freight planning efforts in the region. These priority freight routes, in many cases, provide a connection between major Interstate highways and major intermodal terminals, particularly in the region’s core. The CMRPC staff is currently in the process of updating a “Conditions & Investment” assessment of the region’s primary National Highway System (NHS) freight routes for inclusion in the Long Range Transportation Plan “Mobility 2040” (See Figure 7 below which indicates the Central Mass. Region’s major intermodal facilities.).

**Figure 7: Central Mass. Region’s Major Intermodal Facilities**
Regional Management Systems: Congestion, Pavement & Safety

The Management Systems maintained by the CMRPC transportation planning staff monitor both the usage and condition of the region’s federal-aid network of major roadways. The congestion, pavement and safety management systems have been ongoing and continually evolving for the past two decades. Observations are made in the field, data is collected, a range of analysis is conducted and annual progress reports are compiled. Based on the findings, a range of improvement projects are proposed for future year consideration for implementation.

**Congestion:** roadway segment travel time and delay monitoring, critical intersection Level-of-Service operations assessment, and identification of high delay locations. Program now includes FHWA-required Local Bottleneck Reduction Program (LBRP).

**Pavement:** windshield roadway distress surveys, subsequent analysis, determination of Overall Condition Index (OCI) and compilation of maintenance plans.

**Safety:** crash data compilation, GIS analysis identifying top crash locations as well as “crash clusters”. Staff now regularly participates in MassDOT sponsored “Roadway Safety Audits (RSA).

At this time, the Management Systems are evolving to meet the US DOT requirement for the transition to performance-based planning. Those projects that have the greatest return on the investment of transportation improvement funding will be identified and moved towards implementation by the CMMPO.

**“Complete Streets”: Designing for All Modes**

A “Complete Street” is one that provides safe and accessible options for all travel modes - pedestrian, bicycle, public transit, autos and trucks - and for all ages and abilities. While many existing roadways are designed to optimize auto travel, Complete Street efforts have sought to increase the role of non-motorized and transit options by providing continuous sidewalks, bicycle lanes, or wide roadway shoulders. Instead of simply focusing on main streets or downtown corridors, a Complete Street policy creates a safe, accessible environment throughout a transportation network.

Increasing the role of the pedestrian and bicyclist in roadway design and operation standards, Complete Street policies are meant to ensure that safe travel options exist for all users. MassDOT’s Project Development & Design Guide embraces this approach to roadway design, and serves as a useful guide on how to implement the Complete Streets design approach. As such, designers, planners, public officials and advocates have a responsibility to promote and improve public health, reduce traffic congestion, make places safer and more livable, while reducing environmental impacts.

Designing a Complete Street can be challenging without first identifying all the factors that may influence the design. Other than funding some of these factors include: number and type of users, available right-of-way, safety amenities, community needs and desires, parking needs, utilities, public transit, and sensitive land uses. Accordingly, the needs of trucking serving local businesses in the greater region as well as the host communities of Auburn and Oxford need to be accounted for early in the planning process.
CMMPO Transportation Improvement Program

One implementation option for highway-related improvement projects is the annual Transportation Improvement Program (TIP) administered by the Central Massachusetts Metropolitan Planning Organization (CMMPO). The CMMPO is the transportation policy and project selection for the planning region. Each year, eligible projects are selected for programming using the federal-aid funding targets provided by MassDOT. The TIP must be financially constrained for each of the listing’s four fiscal years. The TIP includes roadway, bridge, intermodal and bicycle & pedestrian projects. At this time, the TIP continues to evolve, transitioning to performance-based planning in an attempt to maximize the return on investments made in the region’s multi-modal transportation network.

RAILROAD

Industrial Rail Access Program (IRAP)

Most improvements to the infrastructure of the railroads are privately funded. However, MassDOT’s Industrial Rail Access Program, known as “IRAP”, provides infrastructure improvement funding for modest-sized rail access projects. Recent recipients in the region included the Grafton & Upton Railroad (G&U) and the Providence & Worcester (P&W) Railroad. Funding awarded within the planning region included the following useful projects that were implemented using a combination of public and private funding:

- **G&U Railroad**: improvements to the Hopedale yard, constructing a switching lead and several sidings, $221K state ($552K total)
- **P&W Railroad**: “Cargill Bridge” replacement, $313K state ($522K total)

In December 2014, the P&W submitted another application for IRAP funding for the proposed rehabilitation of an approximately four hundred linear foot (400’) “wye” track (and three (3) switches) connecting P&W’s Norwich Branch (which travels through Auburn and Oxford) and Main Line track in the Worcester classification yard. The project will facilitate a head-on move of Unit Trains, alleviating a freight rail bottleneck while also enhancing safer operating conditions.

The IRAP was established to address the following overarching economic goals:

1. Increase access for Commonwealth industry partners to freight rail distribution services;
2. Stimulate economic development, retain and grow Massachusetts corporations, retain manufacturing jobs and create new jobs through increased efficiency, production capacity and improved distribution logistics;
3. Preserve, rehabilitate and establish new and expanded industrial rail spurs and industry distribution rail sidings to increase the shipment of goods using freight rail, and
4. Provide pre-construction funding for promising projects to acquire portions of railroad rights of way and to support design and permitting services needed to ready projects for implementation

For the 2015 MassDOT IRAP program, the maximum grant award was capped at $500,000, and the MassDOT IRAP funding request could not represent more than 60 percent (60%) of the total project cost. Questions concerning the IRAP program requirements should be directed to Guy Bresnahan,
Identify measures to reduce local impacts from expanded freight capability

Freight Planning-Identified Mitigation Measures

In order to reduce the local impacts from expanded freight capability in the Central Massachusetts planning region, the following suggested improvement options were previously compiled as part of ongoing freight planning activities. The options are provided for further consideration by host communities, including Auburn and Oxford, intermodal facility operators, area freight transportation providers, and the CMMPO. CMPRC staff has incorporated these mitigation measures within Section 6 as appropriate.

- Prohibit on-street vehicle parking adjacent to and across from intermodal facility site drives.
- Keep site drive areas clear of all obstacles such as large signs, street furniture, utility poles and overgrown vegetation.
- Provide adequate truck turning radii at major intersections, optimally to fully accommodate the movement of 53 foot international intermodal containers.
- Maintain and resurface roadway pavement surfaces as deemed appropriate.
- Maintain all traffic control signs, signals and pavement markings.
- Consider identification and designation of “Preferred Truck Routes” throughout the greater region. Such an effort could be pursued by the host communities of Auburn and Oxford. As an example, Oxford officials have indicated that trucking activities in the community attempt to avoid the intersection of Route 12 with Sutton Avenue in the town center.
- A “Supplemental Guide Sign” plan should be considered for the region’s primary National Highway System (NHS) freight routes serving major intermodal facilities. These roadways provide access between the Interstate System, major regional highways and major intermodal terminals. Such Supplemental Guide Signs (as included in the MUTCD) would assist truckers and others unfamiliar with the area in following the primary NHS freight routes connecting to the region’s intermodal facilities. Supplemental Guide Signs are considered “trail blazing” or “wayfarer” signs. As indicated in the MUTCD, Supplemental Guide Signs can be used to provide information regarding destinations accessible from an interchange, over and above those shown on standard signing. A Supplemental Guide Sign example related to truck routing is provided in Figure 8 on the following page.
Worcester Regional Mobility Study Improvement Options

The Worcester Regional Mobility Study (WRMS) is a multi-modal transportation report that focused on the region’s core community of Worcester and the immediate surrounding towns. The WRMS was completed in 2011. Freight-related improvement options to reduce the local impacts from expanded freight capability in the region’s core included in the WRMS are summarized as follows:

- **Supplemental Guide Sign Plan:** Improve “wayfarer” or “trail blazing” on I-290 to/from the city’s major truck-rail intermodal yards. This includes the CSX Franklin Street yard, P&W’s Southbridge Street yard and Intransit Container’s (ICI) Wiser Avenue yard (See the supplemental guide sign example shown above.).

- **Route 122 Kelly Square Bypass:** A conceptual plan has been suggested to minimize regional truck traffic in this identified bottleneck location. Potential routing for the Bypass would use an extension of Winter Street adjacent to the elevated CSX railroad tracks to Gold Street, continuing to Madison Street.

- **Potential “Truck Routing” Assessment:** Suggested by the WRMS as a future effort, this proposed regional study would identify “Preferred Truck Routes”, identified bottlenecks to avoid, residential areas to avoid, low bridge clearances and other impediments to the efficient movement of freight. Pertinent examples in the City of Worcester include the low bridge on Cambridge Street as well as periodic flooding on Southbridge Street. Outreach to major trucking stakeholder UPS is anticipated.
Site-Specific Mitigation

In order to reduce the local impacts from expanded freight capability, the following suggested site-specific mitigation options were compiled based on various examples found in the greater region. They are included for the consideration of the host communities of Auburn and Oxford as well as intermodal facility operators. CMPRC staff has incorporated these mitigation measures within Section 6 as appropriate.

- Install noise attenuation walls and/or earthen berms to reduce noise while also shielding site operations.
- Use vegetation and other plantings to not only beautify but also to shield site operations and reduce noise.
- Consider facility hours of operation, the implementation of “quiet times” as well as procedures to reduce truck trip generation.
- When considering overhead lighting fixtures, attempt to reduce light “spillover” to adjacent sites.
- Consider use of “hostler” trucks to move trailer, chassis and containers internally on site, minimizing the need for full size trucking maneuvers, reducing both noise and emissions.
- At rail served sites, consider the use of low emissions locomotives and Auxiliary Power Units (APUs) to reduce emissions and unnecessary idling while improving local air quality.

   e. Identify public relations, marketing and outreach measures.

   i. Review existing municipal marketing data/information/materials

CMRPC staff reviewed any existing available municipal marketing materials from the towns of Auburn and Oxford. Our assessment indicated that the Town of Auburn has a “Doing Business in Auburn” flyer; Although there is no mention of freight rail in this existing Auburn marketing material, Auburn Town Officials note that the brochure is general – it does not mention any specific projects, industries, initiatives or strategies so it was not left out but it did not fit within the focus of the brochure which was to provide contact information for all businesses and developers. The Auburn Town Manager had provided CMRPC with the Town’s marketing text they use in bond report as well. CMRPC staff incorporated this text into the two (2) Auburn marketing flyers prepared as part of the Worcester Regional Freight-based Economic Development Site Selection Project (28 Millbury Street and 190 Washington Street were sites identified for marketing at the September 2014 Build North East Conference).

The Town of Oxford does not have any marketing materials at this time.

   ii. Review Case Studies/Literature Review of public relations, marketing, and outreach measures

CMRPC staff notes how communication was an important element of the NCHRP Synthesis 320 Report. Related to communication issues are considerations of public relation, marketing and outreach
measures. During the literature review stage, we found two case studies related to marketing: Morris County, NJ and PA DOT’s online Rail Freight Properties Directory (the PA DOT Rail Freight Properties Directory was already discussed on page 32).

One element of the Morris County Freight Planning effort was a Marketing Plan that was an outgrowth of the Morris County Freight Infrastructure & Land Use Analysis. The Marketing Plan provided a series of recommendations (some of which were based on the existing resources and various agencies involved in Freight Planning and Economic Development within Morris County). CMRPC has reviewed the most relevant series of recommendations for Auburn and Oxford (and potentially elsewhere in Worcester County) and these are highlighted below:

- Industrial development should be promoted and marketed on active and (if applicable) abandoned freight railroad alignments.

- Vacant or underutilized industrial sites located in areas where noise and truck traffic will have minimal community impacts should be given a high priority in the County’s marketing efforts. In general, industrial development should be located away from residential neighborhoods and other sensitive land uses (e.g., hospitals and schools), with buffer zones, noise restrictions and other regulations pertaining to industrial activity as documented under applicable municipal zoning codes.

- Industrial sites should be marketed in the context of a “best fit” assessment of industrial properties, depending on location, adjacent sensitive land uses, access to freight infrastructure, and other factors (emphasis added). Municipal zoning codes typically permit a range of different industrial and commercial business activity in industrial zones, including manufacturing, packaging, warehousing/storage, research & development, and some commercial recreation facilities. For marketing purposes, it would be helpful to distinguish between these different subsets of industrial land uses based on their specific business activities and infrastructure needs.

- Establish links between the County’s existing GIS data layers, parcel data compiled as part of this study, and the MCEDC’s database of available properties.

- Related to the Morris County database was a recommendation to replace the “Yes/No” format of the “Rail Access” item with a more descriptive menu of options with name of rail line that would include providing the following information:
  
  o Is the existing rail siding in place?
  o If no rail siding in place, but track in place within ¼ mile that can be linked to the site with a new siding
  o Proximity to nearest team track facility; or no rail access. These options would highlight the transload facilities and make prospective industrial users who deal in certain types of commodities aware that they can still ship materials via the railroad even without a direct rail siding.

CMRPC recommends that any database developed for sites within Worcester County (including Auburn and Oxford of course) include the more detailed rail access information as was suggested for Morris County. During our work on the Worcester Regional Freight-based Economic Development Site
Selection Project, CMRPC staff reviewed a series of Co-Star reports as part of identifying development ready sites and our assessment was that Co-Star’s database is currently designed with a simple “Yes/No” in regards that were just to rail access.

Develop and enhance promotional efforts for general industrial development. This would be done in addition to the traditional marketing efforts of real estate brokers and industrial developers by highlighting each community’s industrial properties and infrastructure. Some possible measures for this could include:

- Generating press releases for available listings and recent transactions;
- Creating a branding strategy for industrial properties in each community, particularly with regard to sites along the various freight rail lines;
- Advertising at relevant local and regional events, as well as in trade publications; (CMRPC staff notes the 2014 Build North East Conference provided the opportunity to market seven development-ready properties for freight-based uses)
- Interacting extensively with local real estate brokers.

iii. Recommend additional measures for Auburn/Oxford to consider

- Auburn: As part of future marketing materials, and when meeting with potential new businesses or developers, the Town should market 28 Millbury Street as a rail-served property (switch needs to be installed as previously noted; IRAP program could be the funding source).

- The freight rail site database concept is seen by CMRPC as a significant and positive tool. However this needs to be addressed as a regional initiative. CMRPC Staff notes Morris County, NJ and the PA Rail Freight Properties Directory are relevant examples. Additional marketing of the development ready sites identified in the Worcester Regional Freight-based Economic Development Site Selection project was a recommendation of CMRPC. This may be an initiative best led by Worcester Regional Chamber of Commerce.

- P&W railroad could also play a role in increased marketing efforts. In fact, CMRPC staff has learned that P&W officials are looking to develop a marketing component to their website. CMRPC staff identified such a component to the Morristown & Erie Railroad (M&E) during the literature review / case studies phase. Any P&W web-based marketing component could include sites within Auburn and Oxford. An example of how M&E uses their website for business relocation and marketing of sites can be seen by viewing their website at: http://www.merail.com/relocation.

6. Development of Local Planning and Zoning Tools for Freight

   a. Recommendations for local regulatory changes to facilitate and accommodate freight.

Recommendations specific to the Town of Auburn:

The Town of Auburn’s zoning bylaw currently provides limited opportunities for freight-based enterprises. Certain freight-related industries that could make use of the P&W Norwich rail line in some
fashion are prohibited outright. Given the need for trucking facilities, the Town should consider providing at least one industrial zone that would allow truck terminals provided that adequate performance standards can be developed.

It is suggested that the Town consider revising some of the existing Site Plan Review Performance Standards contained within the Town’s Zoning By Laws. CMRPC staff wants to reiterate that P&W staff had indicated two of the existing performance standards would be challenging for any potential customer of theirs to meet:

- 9.4.6.6: “No persistent noise shall be detectable beyond the property line in excess of the average level of street and traffic noise generally heard at the point of observation, and no noise below such level shall be objectionable with respect to intermittence, beat frequency or shrillness.”
- 9.4.6.7: “No inherent or recurrently generated vibration shall be perceptible beyond the property line.”

CMRPC staff notes that it is a positive element that the Town of Auburn now has the Landscape Bylaw with its performance standard approach for providing a buffer requirement. Perhaps the Town could address noise issues further by putting in a mitigation requirement for noise similar to the buffer requirement that is included in Edison, New Jersey’s zoning ordinance:

“A buffer consisting of earthen berm, solid fencing, and plants, or any combination of the same, shall be installed along any lot line of a freight yard use which coincides with a residential zone boundary. **The buffer shall have an effective height of no less than ten (10) feet and shall provide an effective noise and visual barrier of the freight yard use to the adjacent residential zone** (emphasis added). Existing trees of three inches or more caliper shall be incorporated into the buffer design.”

While the Town of Auburn does not have a specific noise bylaw, it does adhere to the Commonwealth of Massachusetts Department of Environmental Protection (DEP) Noise Control Regulation 310 CMR 7.10, unless the Planning Board of Zoning Board of Appeals approves of specific conditions related to hours of construction on a project, then the Town defers to the hours of operation in 310 CMR 7.10. The Town of Auburn could consider adopting a written local noise bylaw that references the Mass. DEP requirements, focusing on the standard of 10 dB over ambient noise levels, as well as specifying the hours of construction. There are soundproofing techniques too. CMRPC can advise the Town about noise-attenuating walls that could be incorporated into buffer designs.

The Town of Auburn should move forward in adopting the performance-based standards as part of updating the Town’s Aquifer and Watershed Protection Overlay District zoning provisions.

The Town of Auburn could update their traffic rules and regulations by adopting “Preferred Truck Routes” for heavy trucks.

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13 According to the 2010 State Freight Plan, “...truck stops in Massachusetts are not adequate to meet current needs – with truckers often expanding these areas by parking on entrance and exit ramps to the sites, or on shoulders in the vicinity of the rest areas. Unlike other states, there are presently no rest areas in Massachusetts with electrical connection capabilities to eliminate the idling required to maintain heat or air conditioning in parked sleeper cabs, which have environmental benefits.”
Recommendations specific to the Town of Oxford:

The Town of Oxford should adopt a development buffer requirement, which could be incorporated into the Town’s Site Plan Review requirements. The Town should review the case studies presented in Section 5 along with the Town of Auburn’s buffer requirements included within their Landscape Bylaw (which is provided within Section 2). The Town of Sutton’s Route 146 Overlay District buffer requirement represents a good performance-based model, in that the buffer is required to address such impacts as noise and odors. The Town could also review the Edison, NJ requirement presented above.

The Town of Oxford should adopt its first water resources protection zoning bylaw provisions. But in this case the Town has the opportunity to utilize the performance-based model, which would not put further restrictions on freight-based uses as long as they comply with design elements to protect the drinking water resources, such as having adequate containment systems. CMRPC directs Oxford Town officials to review the example bylaws from the towns of Millbury and Westborough, which are included as Appendix D to this report.

The Town of Oxford should formalize their truck routes, especially with the goal of not wanting additional heavy/large trucks in Oxford Center. Given that the Town cannot prohibit trucks on the State Route 12 through the Oxford Center area, they could adopt “Preferred Truck Routes” based on the Supplemental Guide Sign example provided on page 44 that directs trucks to the I-395 exits on the north (Exit #5) and south (Exit #3) portions of the community.

Recommendations relevant to both communities:

- Both communities should adopt the Daily Truck Trip Generation Rates, based on the National Cooperative Highway Research Program (NCHRP) Synthesis 298: Truck Trip Generation Data, which was presented in Table 2 on page 29, and incorporate the Rates into their respective Site Plan Review requirements. Both Planning Boards would then be able to assess potential truck traffic from freight-based and other development proposals. Such information could help tailor appropriate infrastructure mitigation requirements.

- Consider requiring analysis of at-grade crossing analysis of highway-railroad grade crossing operations in development approval processes for rail-served industrial as well as nonindustrial land uses located near existing grade crossings. Such a requirement could be incorporated into each community’s Site Plan Review and/or Special Permit review criteria process.

- Auburn and Oxford should account for truck access and circulation for site plan approvals for nonindustrial sites with anticipated truck activity, such as retail centers. Include provisions for on-street and off-street loading zones in commercial and industrial districts. Even local businesses that produce and attract very little freight have growing needs for small truck access related to overnight deliveries and parcel shipments.

- Based on the above three items, each Planning Board could have a mitigation requirement that would require developers to make necessary highway/roadway access improvements for trucks as a condition for project approval.

- Other mitigation measures that each Planning Board could consider as part of approving site plans and/or Special Permit applications for projects that involve freight-based uses include:
o Ensuring that site drive areas remain clear of all obstacles such as large signs, street furniture, utility poles and overgrown vegetation.

o Provide adequate truck turning radii at major intersections, optimally to fully accommodate the movement of 53-foot international intermodal containers.

o Install noise attenuation walls and/or earthen berms to reduce noise while also shielding site operations.

o Use vegetation and other plantings to not only beautify but also to shield site operations and reduce noise.

o Consider facility hours of operation, the implementation of “quiet times” as well as procedures to reduce truck trip generation.

o When considering overhead lighting fixtures, attempt to reduce light “spillover” to adjacent sites.

b. Non-regulatory Recommendations to facilitate and accommodate freight.

Town of Auburn

- As part of future business development and attraction activities, the Town should market 28 Millbury Street (provided the building remains vacant) as a rail-served property (switch needs to be installed as previously noted; IRAP program could be the funding source).

Town of Oxford

- The Town of Oxford should begin discussions with Mary Ann Laki, or any subsequent owner(s), to gauge interest in development of this property for freight-based uses. Perhaps a meeting could be facilitated by CMRPC that includes Oxford Town officials, P&W officials along with Ms. Laki or any subsequent owner(s).

- The Town should continue planning for water and sewer infrastructure to service freight-based development. Section 6(c), which follows on page 51, provides information on funding of infrastructure.

Recommendations relevant to both communities and/or requiring a Region/State-wide solution:

- The freight rail site database concept discussed in Section 5 is seen by CMRPC as a significant and positive tool. However, this needs to be addressed as a regional initiative. CMRPC Staff notes Morris County, NJ and the PA Rail Freight Properties Directory are relevant examples. Additional marketing of the development ready sites identified in the Worcester Regional Freight-based Economic Development Site Selection project was a recommendation of CMRPC. It is hoped that the Worcester Regional Chamber of Commerce could take a lead in such a marketing initiative.
• P&W railroad could also play a role in increased marketing efforts. In fact, CMRPC staff has learned that P&W officials are looking to develop a marketing component to their website. Any P&W web-based marketing component could include sites within Auburn and Oxford.

• Exploring the ability for increased mode shift from truck to rail: The tax break provision discussed on pages 31-32 could be explored further, perhaps as part of an additional freight-based UPWP project. CMRPC staff and the CMMPO Advisory Committee should assess if the Truck to Rail Modal Diversion Analysis concept has any viability for consideration to be incorporated into a UPWP Project.

• As part of each community’s roadway maintenance program, consider incorporating the following:
  o Maintain and resurface roadway pavement surfaces as deemed appropriate.
  o Maintain all traffic control signs, signals and pavement markings.

Community and Public Outreach-related:

• Prepare a document similar to “The Value of Freight to the State of New Jersey.” CMRPC and the CMMPO could discuss this idea with Mass DOT officials to see if it is something that could be prepared at the State level, especially if freight-based economic development aligns with Governor Baker’s economic development initiatives. In the absence of a State-wide initiative, perhaps a UPWP project could be undertaken to prepare a document tailored to the Central Massachusetts Region.

• CMRPC should facilitate incorporating trucking and freight rail interests into the MPO Advisory Committee. A goal would be to have UPS join the Advisory Committee sometime in 2015.

c. Resources for Infrastructure Development

MassWorks

MassWorks grants could help with infrastructure development to serve sites that currently lack adequate infrastructure to support freight-based economic development. The MassWorks Infrastructure Program provides a one-stop shop for municipalities and other eligible public entities seeking public infrastructure funding to support economic development and job creation. The Program represents an administrative consolidation of six former grant programs:

• Public Works Economic Development (PWED)
• Community Development Action Grant (CDAG)
• Growth Districts Initiative (GDI) Grant Program
• Massachusetts Opportunity Relocation and Expansion Program (MORE)
• Small Town Rural Assistance Program (STRAP)
• Transit Oriented Development (TOD) Program
The MassWorks Infrastructure Program provides a one-stop shop for municipalities and other eligible public entities seeking public infrastructure funding to support projects that are consistent with regional land use and development plans; and provide for transportation improvements which enhance roadway safety in small, rural communities. The program is highly competitive and may require job creation as an eligibility component. Gateway Cities receive preference in scoring. It should be noted that neither Auburn nor Oxford are Gateway Cities.

The MassWorks Infrastructure Program is administered by the Executive Office of Housing and Economic Development, in cooperation with the Department of Transportation and Executive Office for Administration & Finance. CMRPC staff is available to provide assistance to municipalities in preparing MassWorks grant applications. In the past, MassWorks grant application rounds are usually announced in the late spring or early summer with a September deadline.

For more information visit the State’s MassWorks grant program website at:

http://www.mass.gov/hed/economic/eohed/pro/infrastructure/massworks/

The Industrial Rail Access Program (IRAP)

See pages 41 and 42 in Section 5 for detailed information of the State’s IRAP.
Appendix A:

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Literature Review Bibliography
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Massachusetts Department of Transportation Freight Plan, September 2010; Prepared for the Massachusetts Department of Transportation; Prepared by HDR Engineering, Inc. 695 Atlantic Ave, Second Floor Boston, MA 02111; Accessed at: http://www.massdot.state.ma.us/portals/17/docs/freightplan/MAFreightPlanSeptember2010v2.pdf

Millis Community Downtown Development by F.S. DeMasi; prepared for Millis Town Administrator, June 2012

Morris County Freight Infrastructure & Land Use Analysis; North Jersey Transportation Planning Authority/Morris County Division of Transportation; Final Report: July 2011

Morris County Freight Infrastructure & Land Use Analysis: Marketing Plan; North Jersey Transportation Planning Authority/Morris County Division of Transportation; July 2011


Regional Truck Parking Study: A comprehensive Analysis of the Supply and Demand of Truck Parking in the Philadelphia-Camden-Trenton Region, April 2011; Delaware Valley Regional Planning Commission


The Value of Freight to the State of New Jersey; Prepared for the New Jersey Department of Transportation; Prepared by the Alan M. Voorhees Transportation Center, Edward J. Bloustein School of Planning and Public Policy, Rutgers, the State University of New Jersey and A. Strauss-Wieder, Inc.; February 2001.

Worcester Regional Mobility Study (WRMS): Improving the movement of people and goods through the urban core of Central Massachusetts, Final Report May 2011; Prepared for CMRPC in association with MassDOT; Prepared by Vanasse Hangen Brustlin, Inc. in association with Mullin, Associates, Inc. and Community Opportunities Group, Inc.

Municipal and Regional Land Use Plans and Regulatory Documents

Central Thirteen Prioritization Project; Prepared by the Central Massachusetts Regional Planning Commission, 2012

Town of Auburn Municipal Data and Document Review

Auburn, Massachusetts Master Plan (2006); Adopted by the Auburn Planning Board; With Technical Assistance by CMRPC. Accessed at: http://www.auburnguide.com/Pages/AuburnMA_Planning/masterplan


Town of Oxford Municipal Data and Document Review


Oxford, Massachusetts Zoning Bylaws, as amended through October 16, 2013

Other Municipal Data and Document Review

Aquifer and Watershed Protection District, Town of Westborough Zoning Bylaw (Section 4700); Town of Westborough
Aquifer and Watershed Protection Overlay District, Town of Millbury Zoning Bylaw (Section 47); Town of Millbury

City of Worcester Zoning Ordinance, as amended through February 6, 2007

City of Worcester Planning Board Rules and Regulations for Parking Plan Approvals, as amended through July 18, 2007

City of Worcester Planning Board Rules and Regulations for Site Plan Approvals, as amended through June 24, 2009

Zoning Bylaw, Town of Spencer, as amended through December 5, 2013
Appendix B:

Figures 23 and 24-
2010 Massachusetts Department of Transportation Freight Plan
Figure 23: Available Industrial Land Sites with 10 Acres or More

Legend
Available Industrial Land > 10 acres
- 10 to 50 ac
- 50 to 100 ac
- > 100 ac

Railroads - Freight
Interstate
U.S. Highway
State Route

Source: MassEcon SiteFinder database (2009)

Figure 24: Available Rail Served Sites and Buildings

Rail Served Sites and Buildings
Rentable Building Area (sf)
- 50K to 100K
- 100K to 500K
- > 500K

Source: MassEcon SiteFinder database (2009)
Appendix C:

June 10, 2014
Auburn and Oxford
Site Visits Agendas
Freight Rail Pilot Study and Feasibility Analysis DLTA Project

Site Visits with CMRPC, Providence & Worcester Railroad and the Town of Oxford

June 10, 2014
Meet at Oxford Town Hall
(CMRPC and P&W to arrive after Auburn Site Visits)

1. **41 Main Street and Vicinity** (Dana Transportation with surrounding properties; Identified by both Town of Oxford and P&W)

2. **122 Main Street** (Existing building formerly owned and used by Burger King as a cold storage Identified by both Town of Oxford and P&W)

3. **Maryann Lacki property south of Holbrook Road, east of Main Street** (Lacki owns three large, vacant adjacent Industrial-zoned parcels: Map 51 – A01, Map 51 – A05 and Map 51 – A06; These sites were identified by Town of Oxford and total 75.87 acres)

4. **204 Main Street** (Property owned by Farrar Auto Body, abuts P&W railroad line to the rear; CMRPC identified this site via Google and GIS Maps)

5. **8 Sutton Avenue** (P&W identified site noting “not considered ideal from an industrial development/freight rail standpoint” however “rail siding and switch remain in place.” Also located in Area identified by Oxford Town Administrator where the Town does not want to see freight-related development, given its location near Town Center.)

6. Suggested Lunch Break at Oxford Restaurant of Interest (offers debriefing opportunity)

7. **Dana Road / Main Line Intersection** (We will visit each quadrant with the set of four (4) properties located in the vicinity of where Dana Road intersects the P&W Railroad Line. Identified by both Town of Oxford and P&W)

8. **Two Large Light Industrial-Zoned Tracts in North Oxford**, identified by the Town of Oxford:
   a. Goldstein and Gurwitz, Inc., Millbury Road (no frontage; Property is between I-395 and the P&W Line) Map 13-B01; Goldstein and Gurwitz also own Parcels 5.4-5.6 and 5.8, which do have frontage along Millbury Road and abut the P&W line to the rear, which provides access to the larger 49-acre parcel.
   b. Kesmo Sand and Gravel, (no frontage, but has right of way off Millbury Street; Property is also between I-395 & the P&W Line, south of the 49-acre Goldstein and Gurwitz parcel; Chimney Pond, environmental constraint, on this 59.4-acre parcel)
Freight Rail Pilot Study and Feasibility Analysis DLTA Project:
Site Visits with CMRPC, the Town of Auburn and Providence & Worcester (P&W) Railroad

June 10, 2014

1. 28 Millbury Street (Site Identified by both the Town of Auburn and P&W Railroad; This 21.72-acre General Industrial-zoned property contains a large vacant building that was most recently home of Filenes Warehouse’s Distribution Center; According to P&W, “The siding remains in place (though some would be needed), however, the switch has been removed.”)

2. 10 Millbury Street (Site Identified by the P&W Railroad; This 2.27-acre General Industrial-zoned property contains a vacant building that was the home of, according to P&W, “Liqui-Box and was used as an injection molding plastic plant. The property has good rail/highway access, however, due to its size and the building configuration, it is probably best suited for a smaller customer. The siding and switch remain in place.”)

3. St. Mark Street (There are a series of Sites/Properties on St. Mark Street, which is zoned General Industrial, that CMRPC and P&W discussed on May 15th; P&W could provide status on either existing or potential opportunities for sidings to the P&W rail line. Two specific sites identified for the Site Visit are 12 St. Mark Street and 17 St. Mark Street). Any potential for the American Steel and Aluminum Company property at 27 Elm Street can be discussed as well.

4. 282 Southbridge Street (Site Identified by the Town of Auburn; This 11.3-acre Highway Business-zoned property is undeveloped. According to P&W, “the property is not considered ideal from an industrial development/freight rail standpoint.” The property sits at a significantly higher grade than the railroad...No siding or switch in place.” Town Assessors Data indicates property was once owned by Conrail and sold off on January 1, 1978.)

5. 160 Southbridge Street (Site Identified by the Town of Auburn; This 1.8-acre Highway Business-zoned property “currently houses a long rectangular building (oriented North to South) currently being used by Brady Built Sunrooms” that according to P&W “is not considered ideal from an industrial development/freight rail standpoint. It has limited parking, insufficient area for truck handling...No siding or switch in place.”)

After 160 Southbridge Street, we will adjourn upon returning to Auburn Town Hall (CMRPC and P&W Officials to continue to Oxford for Site Visits there).
Appendix D:

Westborough and Millbury
Aquifer and Water Resources Protection Zoning Bylaws
Section 47. Aquifer and Watershed Protection Overlay District

47.1 Purpose and Intent. The purpose of this Aquifer and Watershed Protection Overlay District is to:

1. Promote the health, safety and general welfare of the community by ensuring an adequate quality and quantity of drinking water for the residents, institutions and businesses of the Town of Millbury;

2. Preserve and protect existing and potential sources of drinking water supplies;

3. Conserve the natural resources of the Town of Millbury, and

4. Prevent temporary and permanent contamination of the environment.

47.2 Scope of Authority. The Aquifer and Watershed Protection Overlay District shall be considered as overlaying any other zoning district. This overlay district shall apply to all new construction, reconstruction or expansion of existing buildings and new or expanded uses. Applicable activities and uses in a portion of one of the underlying zoning districts that fall within the Aquifer and Watershed Protection Overlay District shall additionally comply with the requirements of the Aquifer and Watershed Protection Overlay District Bylaw. Uses prohibited in the underlying zoning districts shall not be permitted in the Aquifer and Watershed Protection Overlay District.

47.3 Definitions.

Aquifer — Geologic formation composed of rock, sand or gravel that contains significant amounts of potentially recoverable water.

Aquifer and Watershed Protection Overlay District — That area of land defined as such herein and shown on the Town’s zoning map.

CMR — Code of Massachusetts Regulations.

DEP — Massachusetts Department of Environmental Protection

Hazardous Waste — Any substance or mixture of physical, chemical or infectious characteristics posing a significant, actual or potential hazard to water supplies or other hazards to human health if such substance or mixture were discharged to land or water. Hazardous materials include, without limitation, synthetic organic chemicals, petroleum products, heavy metals, radioactive or infectious wastes, acids and alcalis, solvents and thinners in quantities greater than normal household use; and all substances defined as hazardous or toxic under M.G.L. c 21C and 21E and 310 CMR 30.00.
Impervious Surface – Material or structure on, above or below the ground that does not allow precipitation or surface water to penetrate directly into the soil.

Landfill – A facility established in accordance with a valid site assignment for the purposes of disposing solid waste into or on the land, pursuant to 310 CMR 19.00g.

M.G.L. – Massachusetts General Law

Petroleum Product – Petroleum or petroleum by-product including, but not limited to, fuel oil, gasoline, diesel, kerosene, aviation jet fuel, aviation gasoline, lubricating oils, oily sludge, oil refuse, oil mixed with other wastes, crude oils, or other liquid hydrocarbons regardless of specific gravity. Petroleum product shall not include liquefied petroleum gas including, but not limited to, liquefied natural gas, propane or butane.

Non-Sanitary Wastewater – Wastewater discharges from industrial and commercial facilities containing wastes from any activity other than collection of sanitary sewage including, but not limited to, activities specified in the Standard Industrial Classification (SIC) Code set forth in 310 CMR 15.004(6).

Open Dump – A facility operated or maintained in violation of the Resource Conservation and Recovery Act (42 U.S.C. 4004(a)(b)), or state regulations and criteria for solid waste disposal.

Potential Drinking Water Sources – Areas that could provide significant potable water in the future.

Recharge Areas – Areas that collect precipitation or surface water and carry it to aquifers. Recharge areas include DEP approved Zone I, Zone II, or Zone III areas.

Septage – The liquid, solid and semi-solid contents of privies, chemical toilets, cesspools, holding tanks, or other sewage waste receptacles. Septage does not include any material that is hazardous waste as defined by 310 CMR 30.000.

Sludge – The solid, semi-solid, and liquid residue that results from a process of wastewater treatment or drinking water treatment. Sludge does not include grit, screening or grease and oil which are removed at the head-works of a facility.

Treatment Works – Any and all devices, processes and properties, real or personal, used in the collection, pumping transmission, storage, treatment, disposal, recycling, reclamation, or reuse of waterborne pollutants, but not including any works receiving a hazardous waste from off the site of the works for the purpose of treatment, storage or disposal.
Very Small Quantity Generator – Any public or private entity, other than residential, which produces less than twenty-seven (27) gallons (one hundred (100) kilograms) a month of hazardous waste or waste oil, but not including any acutely hazardous waste as defined in 310 CMR 30.136.

Waste Oil Retention Facility – A waste oil collection facility for automobile service stations, retail outlets and marinas which is sheltered and has adequate protection to contain a spill, seepage, or discharge of petroleum waste produces in accordance with M.G.L. c.21, s.52A.

Zone I – The DEP designated protective radius around a public water system well or well-field.

Zone II – The DEP approved area of an aquifer which contributes water to a well under the most severe pumping and recharge conditions that can be realistically anticipated as defined in 310 CMR 22.00.

Zone III – That area beyond the Zone II from which surface water and groundwater drain into the Zone II, as defined in 310 CMR 22.00.

47.4 Establishment of Aquifer and Watershed Protection Overlay District and District Boundary Disputes.

1. There are hereby established within the Town of Millbury, as delineated on the Zoning Map, certain aquifer and watershed protection areas designated as A and B, consisting of aquifers or recharge areas, which together shall constitute the Aquifer and Watershed Protection Overlay District. The District includes all areas within the District designated by the DEP as “Zone II”, and one area designated as “Zone III”.

2. As necessary, the Building Inspector shall determine, by consulting the Zoning Map, what portion of a particular lot or parcel of land, if any, is located within the District. The Building Inspector's determination may be appealed to the Board of Appeals in accordance with M.G.L. c.40A, §8.

3. The burden of proof shall be upon the owner disputing the Building Inspector's determination. In response to such a dispute, the Board of Appeals may engage a professional engineer, registered land surveyor, hydrologist, geologist or soil scientist to confirm the boundaries of the District with respect to individual parcels of land, and may charge the owner(s) for the cost of the investigation.

4. Where the boundary line of the Aquifer and Watershed Protection Overlay District divides a lot or parcel, the requirements established by this bylaw shall apply only to the portion of the lot or parcel located within the District.
47.5 **Permitted Uses.** All uses expressly permitted in the underlying zoning districts, except as otherwise prohibited herein, are permitted within the Aquifer and Watershed Protection Overlay District, provided that all necessary permits, orders or approvals required by local, state or federal law are also obtained.

47.6 **Prohibited Uses.** The following uses are prohibited within the Aquifer and Watershed Protection Overlay District:

1. Landfills and open dumps as defined in 310 CMR 19.006.

2. Automobile graveyards and junkyards, as defined in M.G.L. c. 140B, s.1.

3. Landfills receiving only wastewater and/or septage residuals including those approved by the Department pursuant to M.G.L. c. 21 s. 26 through s. 53; M.G.L. c. 111 s. 17; M.G.L. c. 83, s. 6 and s. 7, and regulations promulgated thereunder.

4. Facilities that generate, treat, store or dispose of hazardous waste that are subject to M.G.L. c. 21C and 310 CMR 30.00, except for:

   (a) Very small quantity generators as defined under 310 CMR 30.000.

   (b) Household hazardous waste centers and events under 310 CMR 30.390.

   (c) Waste oil retention facilities required by M.G.L. c. 21, s. 52A.

   (d) Water remediation treatment works approved by DEP for the treatment of contaminated waters.

5. Petroleum, fuel oil, and heating oil stations and terminals including, but not limited to, those listed under Standard Industrial Classification (SIC) Codes 5983 and 5171, not including liquefied petroleum gas.
6. Storage of liquid hazardous materials, as defined in M.G.L. c. 21E and/or liquid petroleum products unless such storage is:

   (a) Above ground level and on an impervious surface; and

   (b) Either in container(s) OR above ground tanks(s) within a building OR outdoors in covered container(s) OR above ground tank(s) in an area that has a containment system designed and operated to hold either: ten percent (10%) of the total possible storage capacity of all containers OR one hundred ten percent (110%) of the largest container's storage capacity, whichever is greater.

7. Storage of sludge and septage, unless such storage is in compliance with 310 CMR 32.30 and 310 CMR 32.31.

8. Storage of deicing chemicals unless such storage, including loading areas, is within a structure designed to prevent the generation and escape of contaminated runoff or leachate.

9. Storage of animal manure unless covered or contained within a structure designed to prevent the generation and escape of contaminated runoff or leachate.

10. Earth removal, consisting of the removal of soil, loam, sand, gravel or any other earth material to within four (4) feet of historical high groundwater as determined from monitoring wells and historical water table fluctuation data compiled by the United States Geological Survey, except for excavation for building foundations, road or utility works.

11. Discharge to the ground of non-sanitary wastewater including industrial and commercial process waste water, except:

   (a) The replacement or repair of an existing treatment works that will not result in a design capacity greater than the design capacity of the existing treatment works.

   (b) Treatment works approved by the Department designed for the treatment of contaminated ground or surface water and operating in compliance with 3.14 CMR 5.05(3) or 5.05(13), and

   (c) Publicly owned treatment works.
12. Stockpiling and disposal of snow and ice containing deicing chemicals brought in from outside the district

13. Storage of chemical fertilizers, as defined in M.G.L. c. 128, s 64, unless such storage is within a structure designed to prevent the generation and escape of contaminated runoff or leachate.

14. All other uses not expressly permitted pursuant to this Bylaw, either by right or by special permit.

47.7 Uses and Activities Requiring a Special Permit. The following uses and activities are permitted only upon the issuance of a special permit by the Board of Appeals under such conditions as they may require:

1. Those activities that involve the handling of toxic or hazardous materials in quantities greater than those associated with normal household use, permitted in the underlying zoning (except as prohibited under Section 47.6). Such activities shall require a special permit to prevent contamination of groundwater.

2. Any use that will render impervious more than fifteen percent (15%) or two thousand five hundred (2,500) square feet of any lot or parcel, whichever is greater. A system for groundwater recharge must be provided which does not degrade groundwater quality. For non-residential uses, recharge shall be by storm water infiltration basins or similar system covered with natural vegetation, and dry wells shall be used only where other methods are infeasible. For all non-residential uses, all such basins and wells shall be preceded by oil, grease, and sediment traps to facilitate removal of contamination. Any and all recharge areas shall be permanently maintained in full working order by the owner.
47.8 Procedures For Issuance of Special Permit.

1. The Special Permit Granting Authority (SPGA) under this bylaw shall be the Board of Appeals. The SPGA may grant a special permit if it determines that the intent of this bylaw, as well as its specific criteria, are met. The SPGA shall not grant a special permit under this section unless the petitioners' application materials include, in the SPGA's opinion, sufficiently detailed, definite and credible information to support positive findings in relation to the standards given in this section.

2. Upon receipt of the special permit application, the SPGA shall transmit one copy to the Millbury Planning Board, Board of Health, Conservation Commission, Department of Public Works, and Water District for review and comment. Failure to respond in writing within thirty-five (35) days of receipt shall indicate approval, or no desire to comment. The necessary number of copies of the application shall be furnished by the applicant.

3. The SPGA may grant the required special permit only upon finding that the proposed use meets the following standards, those specified in Section 47.6 of this bylaw, and any regulations or guidelines adopted by the SPGA. The proposed use must:

   (a) In no way, during construction or thereafter, adversely affect the existing or potential quality or quantity of water that is available in the Aquifer and Watershed Protection District.

   (b) Be designed to avoid substantial disturbance of the soils, topography, drainage, vegetation, and other water-related natural characteristics of the site to be developed.

   (c) The applicant shall file ten (10) copies of a site plan and attachments. The site plan shall be drawn at a proper scale as determined by the SPGA and shall be stamped by a professional engineer. All additional submittals shall be prepared by qualified professionals. The site plan and its attachments shall at a minimum include the following information where pertinent:

   - Provisions to protect against the discharge of hazardous materials or wastes to the environment due to spillage, accidental damage, corrosion, leakage or vandalism, including spill containment and clean-up procedures.
• Provisions for indoor, secured storage of hazardous materials and wastes with impervious floor surfaces.

• Evidence of compliance with the Massachusetts Hazardous Waste Regulations 310 CMR 30.00.

• Proposed down-gradient location(s) for groundwater monitoring well(s), should the SPGA deem the activity a potential groundwater threat.

47.9 Dimensional Requirements.

Within Area B of the Overlay District, no lot shall be built upon or changed in size or shape except in conformity with the following:

Minimum Lot Area: 80,000 sf
Minimum Lot Frontage: 200 ft
Minimum Yards:
  Front – 25 ft
  Sides – 10 ft
  Rear – 10 ft
Maximum Lot Coverage: 30%
Maximum Bldg Height: 30 ft
47.10 Enforcement.

1. Written notice of any violations of this bylaw shall be given by the Building Inspector to the responsible person as soon as possible after detection of a violation or a continuing violation. Notice to the assessed owner of the property shall be deemed notice to the responsible person. Such notice shall specify the requirement or restriction violated and the nature of the violation, and may also identify the actions necessary to remove or remedy the violations and preventive measures required for avoiding future violations and a schedule of compliance.

2. A copy of such notice shall be submitted to the Town of Millbury’s Board of Appeals, Planning Board, Board of Health, Conservation Commission, Department of Public Works, and Water District. The cost of containment, clean-up or other action of compliance shall be borne by the owner and operator of the premises.

47.11 Severability. A determination that any portion or provision of this overlay protection district is invalid shall not invalidate any other provisions thereof, nor shall it invalidate any special permit previously issued thereunder.

(By-Laws 5-4-2010, Art. 26)
4700. AQUIFER AND WATERSHED PROTECTION DISTRICT

4710. Purpose of District. The purpose of this Aquifer and Watershed Protection District is:

1. To promote the health, safety and general welfare of the community by promoting an adequate quality and quantity of drinking water for residents, institutions, and businesses of the Town of Westborough;

2. To preserve and maintain the existing and potential groundwater supplies, aquifers and groundwater recharge areas of the Town and to protect them from adverse development or land use practices;

3. To preserve and protect present and potential sources of drinking water supply for the public health and safety;

4. To conserve the natural resources of the Town;

5. To prevent blight and the temporary or permanent pollution of the environment.

6. To ensure that only water supply related activities are permitted in the Zone 1 400 foot protective radius of Town wells.

(ATM 1996)

4720. Scope and Authority. The Aquifer and Watershed Protection District shall be considered as overlaying other Zoning Districts. This overlay district shall apply to all new construction, reconstruction or expansion of existing buildings and new or expanded uses. Any activities or uses permitted in the portion of the District so overlaid shall be permitted, subject to all the provisions of this District, unless expressly prohibited under this overlay district.

4730. Establishment and Delineation of Aquifer and Watershed Protection District. For the purposes of this District, there are hereby established within the Town certain Aquifer and Watershed Protection areas, consisting of aquifer and/or aquifer recharge areas, which are delineated on the overlay map referenced in Section 4732.

4731. District. The Aquifer and Watershed Protection District includes the aquifer itself, including the land above the most significant recharge areas for these aquifers and consists of:

Zone I, which includes land within the protective four hundred (400) foot radius around an existing or potential public water supply well or well field; and,

Zone II, which includes that area of an aquifer which contributes water to an existing or potential well under the most severe pumping and recharge conditions that can be or realistically anticipated (180 days of pumping at safe yield, with no recharge from precipitation). It is bounded by the groundwater divides which result from pumping he well and by the contact of the aquifer with less permeable materials such as till or
bedrock. In some cases, streams or lakes may act as recharge boundaries. In all cases, Zone II shall extend up gradient to its point of intersection with prevailing hydrogeologic boundaries (a groundwater flow divide, a contact with till or bedrock, or a recharge boundary); and,

Zone III, (Contributing Watershed), which includes that land area beyond the area of Zone II from which surface water and groundwater drain into Zone II. The surface drainage area as determined by topography is commonly coincident with the groundwater drainage area and is used to delineate Zone III. In some locations, where surface and groundwater drainage are not coincident, Zone III shall consist of both the surface drainage and the groundwater drainage areas.

4732. **Overlay Map.** The boundaries of this District are delineated on a map at a scale of one inch equals eight hundred feet entitled Aquifer and Watershed Protection Districts, Town of Westborough, Massachusetts dated January, 2001. These boundaries reflect the best hydrogeologic information available as of the date of the map. In the event of a discrepancy between the map and the criteria of Zones I, II and III above, the criteria shall control. Where the bounds as delineated are in doubt or in dispute, the burden of proof shall be upon the owner(s) of the land in question to show where they should properly be located. At the request of the owner(s), the Town may engage a professional hydrogeologist or engineer to determine more accurately the location and extent of an aquifer or recharge area or to review information submitted by the owner(s), for all or part of the cost of the investigation. (ATM1996, 2001)

4733. **Split lot Provisions.**

Zone I Boundary Line. Where the Zone I boundary line divides any lot of record, the portion of the lot within Zone I shall remain undeveloped with the exception of the land uses directly related to the operation and maintenance of a public water supply and the uses and regulations pertinent to Zone II shall be applied to the development of the remainder of such lot. (ATM 2001)

Zone II Boundary Line. Where the Zone II District boundary line divides any lot of record, the uses and regulations pertinent to Zone III shall be applied to the development of such lot provided that all structures and waste disposal systems are located in that portion of the lot lying in Zone III.

Zone III Boundary Line. Where the Zone III boundary line divides a lot of record in any underlying District, the requirements of the Westborough Zoning Bylaws applicable to the less restrictive District may be applied to the development of such lot, provided that all structures and waste disposal systems are located in that portion of the lot lying in the less restrictive District.

4734. **Recoverable water yield criteria.** Aquifers and aquifer recharge areas are defined by standard geologic and hydrogeologic investigations which may include drilling observation wells, performing pumping tests, water sampling and geologic mapping. An aquifer recharge area, to be considered significant for drinking water purposes must
generally be comprised of sand and gravel with at least twenty (20) feet of saturated thickness for transmissivity of at least ten thousand five hundred (10,500) gallons per day per foot and/or capable of continuous yield of at least one hundred (100) gallons per minute to a single well.

4740. **Use Regulations.** Within the Aquifer and Watershed Protection District, the requirements of the underlying Districts continue to apply as indicated in subsections 4741 and 4742, Use Regulations Schedule, or as exempted by this Bylaw or Statute.

Symbols employed shall mean the following:

Y - A permitted use

N - An excluded or prohibited use

S - A use authorized by the issuance of a Special Permit as provided for in Section 1330 and Section 4750 herein.

4741. **Permitted Uses.** The following uses are permitted within the Aquifer and Watershed Protection district, (provided that all necessary permits, orders, or approvals required by law are also obtained):

- Conservation of soil, water, plants and wildlife;
- Outdoor recreation, native study, boating, fishing, hunting;
- Foot, bicycle and/or horse paths, and bridges;
- Normal operation and maintenance of existing water bodies and dams, splash boards, and other water control, supply and conservation devices;
- Maintenance and repair of existing structures;
- Residential development, subject to Section 4742 (use regulations schedule) and Section 4740 (Special Permits);
- Farming, gardening, nursery, conservation, forestry, harvesting, grazing, subject to 4742 and 4750.
- Construction, maintenance, repair and enlargement of drinking water supply related facilities.
### 4742. Use Regulation Schedule

<table>
<thead>
<tr>
<th>Principal Uses</th>
<th>ZONE I</th>
<th>II</th>
<th>III</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disposal or treatment of toxic or hazardous wastes as a principal activity</td>
<td>N</td>
<td>N</td>
<td>N (ATM 2001)</td>
</tr>
<tr>
<td>Manufacture, use, transport, storage of toxic or hazardous wastes as a principal activity</td>
<td>N</td>
<td>N</td>
<td>N (ATM 2001)</td>
</tr>
<tr>
<td>Truck terminal:</td>
<td>N</td>
<td>N</td>
<td>S</td>
</tr>
<tr>
<td>Sanitary landfill, junk yard, open dump, salvage yard, other solid waste disposal:</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Landfilling of sludge or septage as defined in 310 CMR 32.05</td>
<td>N</td>
<td>N</td>
<td>S</td>
</tr>
<tr>
<td>Storage of sludge and septage, unless such storage is in compliance with 310 CMR 32.30 and 310 CMR 32.31;</td>
<td>N</td>
<td>N</td>
<td>S</td>
</tr>
<tr>
<td>Earth removal to within six (6) feet of high groundwater level, except for excavation for buildings, roads and utility works:</td>
<td>N</td>
<td>N</td>
<td>S</td>
</tr>
<tr>
<td>Motor vehicle service, station, car wash:</td>
<td>N</td>
<td>N</td>
<td>S</td>
</tr>
<tr>
<td>Automobile Service and repair shops, automotive body and paint shops:</td>
<td>N</td>
<td>N</td>
<td>S</td>
</tr>
<tr>
<td>Disposal of snow from outside District area:</td>
<td>N</td>
<td>N</td>
<td>S</td>
</tr>
<tr>
<td>Storage of commercial fertilizers and soil conditioners, as defined in MGL c.128,s.64, unless such storage is within a structure designated to prevent the generation and escape of contaminated runoff or leachate;</td>
<td>N</td>
<td>N</td>
<td>S</td>
</tr>
<tr>
<td>Industrial uses which discharge process wastewater on site; any commercial and service uses discharging wastewater on site containing contaminants other than domestic septic waste:</td>
<td>N</td>
<td>N</td>
<td>S</td>
</tr>
<tr>
<td>Storage of liquid petroleum products, except the following:</td>
<td>N</td>
<td>N</td>
<td>S</td>
</tr>
<tr>
<td>a. normal household use, outdoor maintenance and heating of a structure;</td>
<td></td>
<td></td>
<td></td>
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<td>b. waste oil retention facilities required by statute, rule, or regulation;</td>
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<td>c. emergency generators required by statute, rule, or regulation;</td>
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<td>d. treatment works approved under 314 CMR 5.00 for treatment of ground or surface waters;</td>
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<td>Provided that storage, listed in items a</td>
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through d above, is in free-standing containers within buildings or above ground with secondary containment adequate to contain a spill the size of the container's total storage capacity.

Storage of deicing chemicals unless such storage, including loading areas, is within a structure designed to prevent the generation and escape of contaminated runoff or leachate;

Storage of animal manure unless covered or contained;

ZONE I II III

Accessory Uses or Activities.

Disposal or treatment of toxic or hazardous materials as a secondary activity:

Manufacture, use, transport, storage of toxic or hazardous materials as a secondary activity:

Sanitary landfill, junk yard, open dump, salvage yard, other solid waste disposal:

Landfilling of sludge or septage as defined in 310 CMR 32.05

Storage of sludge and septage, unless such storage is in compliance with 310 CMR 32.30 and 310 CMR 32.31;

Storage of liquid petroleum products, except the following:

a. normal household use, outdoor maintenance, and heating of a structure;

b. waste oil retention facilities required by statute, rule, or regulation;

c. emergency generators required by statute, rule or regulation;

d. treatment works approved under 314 CMR 5.00 for treatment of ground or surface waters;

Provided that storage, listed in items a through d above, is in free-standing containers within buildings or above ground with secondary containment adequate to contain a spill the size of the container's total storage capacity.

Underground storage of fuel oil, gasoline or chemicals:

Disposal of snow from outside District area:
Storage of deicing chemicals unless such storage, including loading areas, is within a structure designed to prevent the generation and escape of contaminated runoff or leachate; N N S
Storage of animal manure unless covered or contained N N S
Storage of commercial fertilizers and soil conditioners, as defined in MGL c. 128 s.64, unless such storage is within a structure designated to prevent the generation and escape of contaminated runoff or leachate; N N S
Land uses that result in impervious surfaces of more than 15% or 2,500 square feet, whichever is greater, of any lot unless a means for providing ground water recharge is provided. N SP Y
Land uses on residential lots where impervious surfaces drain to pervious areas on the same lot do not require special permits in Zone II. (ATM 2001, ATM 1996)

4750. Special Permits shall be granted if the Special Permit Granting Authority determines that the intent of this Bylaw, as well as the specific criteria of Sections 4751 through 4753 are met. The Special Permit Granting Authority shall be the Zoning Board of Appeals, except that, where a Special Permit is required by Section 2300 (use Regulation Schedule), the Special Permit Granting Authority authorized by that Section shall also be the Special Permit Granting Authority for the Special Permit required herein. In making such determination, the Special Permit Granting Authority shall give consideration to the simplicity, reliability and feasibility of the control measures proposed and the degree of threat to surface and groundwater quality which would result if the control measures were to fail. The Special Permit Granting Authority shall not grant a Special Permit under this Section unless the application includes, in the Special Permit Granting Authority's opinion, sufficiently detailed, definite and credible information to support positive findings in relation to the criteria given in this Section.

4751. Special Permit Application.

1. Each application for a Special Permit shall be filed with the Special Permit Granting Authority and shall be accompanied by nine (9) copies of the plan and documents;

2. Said application and plan shall be prepared in accordance with the data requirements of the proposed development (e.g., Site Plan Review, Erosion and Sedimentation Control Plan, etc.);
3. The following documents shall also be submitted in applying for a Special Permit:

a. A complete list of all chemicals, pesticides, herbicides, fertilizers, fuels, and other potentially toxic or hazardous materials to be used or stored on the premises in quantities greater than those associated with normal household use.

b. A description of potentially toxic or hazardous wastes to be generated, indicating storage and disposal method.

c. For those activities using, storing, or generating such hazardous materials, an Aquifer Protection Management Plan shall be prepared and filed with the Board of Health, Building Department, and Fire Chief.

The Plan shall include:

- provisions to protect against the discharge of hazardous materials or wastes to the environment due to spillage, accidental damage, corrosion, leakage, or vandalism, including spill containment and clean-up procedures;
- provisions for indoor, secured storage of hazardous materials and wastes with impervious floor surfaces;
- evidence of compliance with the Regulations of the Massachusetts Hazardous Waste Management Act 310 CMR 30.00, including obtaining an EPA identification number from the Massachusetts Department of Environmental Protection.

d. Evidence of approval by the Massachusetts Department of Environmental Protection (DEP) for any industrial waste treatment and disposal system or any wastewater treatment system over fifteen thousand (15,000) gallons per day capacity as regulated by 314 CMR 5.00 Massachusetts Groundwater Discharge Permit Program.

e. For underground storage of toxic or hazardous materials, evidence of qualified professional supervision of system design and installation.

f. Analysis by a hydro geologist or engineer experienced in groundwater evaluation and/or hydrogeology to demonstrate that the proposed activity will not be detrimental to the purpose of the District as set forth in Section 4710.

g. Proposed and/or existing down-gradient location(s) for ground water monitoring well(s), should the special permit granting authority deem the proposed activity a potential groundwater threat, together with a monitoring schedule.

4752. Procedures. The Special Permit Granting Authority shall refer copies of the application to the Board of Health, Planning Board, Board of Selectmen, Building Department, Conservation Commission, Town Engineer, Department of Public Works and Fire Department which shall review, either jointly or separately, the application and shall submit their recommendations to the Special Permit Granting Authority. Failure to make recommendations
within thirty-five (35) days of the referral of the application shall be deemed lack of opposition.

The Special Permit Granting Authority shall hold a hearing, in conformity with the provisions of Massachusetts General Laws Chapter 40A, Section 9 within sixty-five (65) days after the filing of the application with the Special Permit Granting Authority and after the review of the aforementioned Town Boards/Departments.

Notice of Public Hearing shall be given by publication and posting and by first-class mailings to 'parties of interest' as defined in Massachusetts General Laws Chapter 40A, Section 11. The decision of the Special Permit Granting Authority and any extension, modifications or renewal thereof, shall be filed with the Special Permit Granting Authority and Town Clerk within ninety (90) days following the closing of the Public Hearing. Failure of the Special Permit Granting Authority to act within ninety (90) days shall be deemed as a granting of the Permit. However, no work shall commence until a certification is recorded as required by said Section 11.

4753. Approval Criteria. After notice and Public Hearing, and after due consideration of the reports and recommendations of the Planning Board, the Board of Health, the Conservation Commission, Board of Selectmen, Building Department, the Town Engineer, Department of Public Works and Fire Department, the Special Permit Granting Authority may grant such a Special Permit, only upon finding that the proposed use:

1. Will not cause groundwater quality to fall below the standards established in 314 CMR 6.00 Massachusetts Groundwater Quality Standards or for parameters where no standard exists, below standards established by the Board of Health and, where existing groundwater quality is already below those standards, upon determination that the proposed activity will result in no further degradation;

2. Is in harmony with the purpose and intent of this Bylaw and will promote the purposes of the Aquifer and Watershed Protection District;

3. Will not, during construction or thereafter, have an adverse environmental impact on any aquifer or recharge area in the Town and is designed to avoid substantial disturbance of the soils, topography, drainage, vegetation, and other water related natural characteristic of the site to be developed; and,

4. Will not adversely affect the quality or quantity of an existing or potential water supply.

4760. Violations. Written notice of any violation shall be provided by the Building Commissioner to the owner of the premises, specifying the nature of the violation and specifying a time for compliance, including cleanup of any spilled materials. The time allowed shall be reasonable in relation to the public health hazard involved and the difficulty of compliance, but in no event shall more than thirty (30) days be allowed for either compliance or finalizing of the plan for longer-term compliance. The cost of containment, clean-up or other action of compliance shall be borne by the owner and operator of the premises. (ATM 1986)
4800. Special Permits for Adult Uses:

A. Purpose and Intent: It has been documented in numerous other towns and cities throughout the Commonwealth of Massachusetts and elsewhere in the United States that Adult Entertainment uses are distinguishable from other business uses and that the location of Adult Entertainment uses degrades the quality of life in the areas of a community where they are located with impacts including increased levels of crime, blight, and late hours of operation resulting in noise and traffic late into the night. Therefore, this bylaw is enacted pursuant to MGL, Chapter 40A, Section 9 and Section 9A to serve the compelling Town interests by regulating and limiting the location of adult entertainment enterprises as defined herein. This regulation will promote the Town of Westborough's great interest in protecting and preserving the quality of its neighborhoods, commercial districts, and the quality of life through effective land use planning.

B. General: Special permits shall be required to authorize the establishment of adult bookstores, adult video stores, adult paraphernalia, adult live entertainment establishments or adult motion picture theaters or establishments which display live nudity for its patrons as hereinafter defined. Such permit shall require specific improvements, amenities and locations of proposed uses for which such permit may be granted.

4810. Definitions - As used in this section, the following words shall have the following meanings:

Adult Bookstore "Adult Bookstore": an establishment having as a substantial or significant portion of its stock in trade, books, magazines, and other matter which are distinguished or characterized by their emphasis sexual depicting, describing, or relating to sexual conduct or excitement as defined in MGL, Chapter 272, Section 31. For purposes herein, "substantial or significant portion of stock" shall mean more than twenty-five percent (25%) of the subject establishment's inventory or more than twenty-five percent (25%) of subject premise's gross floor area.

Adult Motion Picture Theater "Adult motion picture theater": an enclosed building used for presenting material distinguished by an emphasis on matter depicting, describing, or relating to sexual conduct or sexual excitement as defined in MGL, Chapter 272, Section 31.

Adult Paraphernalia Store "Adult paraphernalia store": an establishment having a substantial or significant portion of its stock devices, objects, tools, or toys which are distinguished or characterized by their association with sexual activity, including sexual conduct or sexual excitement as defined in MGL, Chapter 272, Chapter 31. For purposes herein, "Substantial or significant portion of stock" shall mean more than twenty-five percent (25%) of the subject establishment's inventory or more than twenty-five percent (25%) of subject premise's gross floor area.

Adult Video Store "Adult video store": an establishment having as a substantial or significant portion of its stock in trade, videos, movies, or other film material which are distinguished or characterized by their emphasis depicting, describing, or relating to sexual
conduct or sexual excitement as defined in MGL, Chapter 272, Chapter 31. For purposes herein, "substantial or significant portion of stock" shall mean more than twenty-five percent (25%) of the subject establishment's inventory or more than twenty-five percent (25%) of the subject premise's gross floor area.

**Adult Live Entertainment Establishment** Any establishment which displays live entertainment which is distinguished or characterized by its emphasis depicting, describing, or relating to sexual conduct or sexual excitement as defined in MGL, Chapter 272, Section 31 and which excludes minors by virtue of age.

**Establishments Which Displays Live Nudity For Its Patrons** Any establishment which provides live entertainment for its patrons, which includes the display of nudity, as that term is defined in MGL, Chapter 272, Section 31. (1996 STM)

4820. **Rules and Application Requirements:**

4821. The special permit granting authority, the Westborough Planning Board, shall adopt and from time to time amend rules relative to the issuance of the permits, and shall file a copy of said rules in the office of the Town Clerk.

4822. No special permit shall be granted by the Planning Board for an Adult Bookstore, Adult Video Store, Adult Paraphernalia Store, Adult Motion Picture Theater or establishments which display live nudity for its patrons, or Adult Live Entertainment Establishment unless the following conditions are satisfied:

a. When submitting a proposal for a special permit under Section 4800 of these bylaws, the applicant shall obtain a copy of the application and procedures from the Westborough Planning Board, the permit granting authority. The applicant shall file one copy of the application with the Town Clerk and deliver a second, date stamped copy of the application form to the office of the Planning Board. All applications shall be accompanied by fifteen copies of the permit applied for. Special Permits issued by a special permit granting authority shall require a two-thirds vote of boards with more than five members, a vote of at least four members of a five member board and a unanimous vote of a three member board.

b. Dimensional Requirements:
The proposed use shall observe the following minimum distance separations from all property lines of the proposed adult uses:

1. a minimum of one thousand (1000) feet from any residential district designated by Westborough zoning bylaws;

2. a minimum of one thousand (1000) feet from any public school, public library, day care facility, or religious facility;
3. a minimum of five hundred (500) feet from any public playground, park or recreational area where large numbers of minors regularly travel or congregate;

4. a minimum of one thousand (1000) feet from any other adult bookstore, adult video store, adult paraphernalia store, adult entertainment establishment, or adult motion picture theater or establishments which display live nudity for its patrons or from any establishment licensed under the provision of MGL, Chapter 138, Section 12.

c. No pictures, publications, videotapes, movies, covers, or other implements, items, or advertising that fall within the definition of adult bookstore, adult video store, adult paraphernalia store, adult motion picture theater or establishments which display live nudity for its patrons or adult live entertainment establishment merchandise of which are erotic, prurient, or related to violence, sadism, or sexual exploitation shall be displayed in the windows of, or on the building of any adult bookstore, adult video store, adult paraphernalia store, adult live entertainment establishment or adult motion picture theater, or establishments which display live nudity for its patrons or be visible to the public from the pedestrian sidewalks or walkways or from other areas, public or semi-public, outside such establishments.

d. No special permit shall be issued to any person convicted or violating the provisions of MGL, Chapter 119, Section 63 or MGL, Chapter 272, Section 28.

e. Adult use special permits shall only be issued following public hearings held within sixty-five (65) days after filing of an application with the special permit granting authority, a copy of which shall forthwith be given to the city or town clerk by the applicant. The special permit granting authority shall act within ninety (90) days following a public hearing for which notice has been given by publication or posting as provided in MGL, Chapter 40A, Section 11, and by mailing to all parties in interest. Failure by a special permit granting authority to take final action upon an application for a special permit within said ninety (90) days following the date of public hearing shall be deemed to be a grant of the permit applied for. Special Permits issued by a special permit granting authority shall require a two-thirds vote of boards with more than five members, a vote of at least four members of a five member board and a unanimous vote of a three member board.

4823. A special permit granted under this bylaw shall lapse after six months, and including such time required to pursue or await the determination of an appeal referred to in MGL, Chapter 40A, Section 17, from the grant thereof, if a substantial use thereof has not sooner commenced except for a good cause or, in the case of permit for construction, if construction has not begun by such date except for good cause.
4824. Existing Adult Entertainment Enterprises. Any existing adult bookstore, adult motion picture theater, adult paraphernalia store, adult video store or establishment which displays live nudity for its patrons, or adult video store shall apply for such permit within ninety (90) days following the adoption of this zoning bylaw. (1996 STM)

4830. Severability. If any section of this bylaw is ruled invalid by a court of competent jurisdiction, such ruling will not affect the validity of the remainder of the bylaw. (1996 ATM)

Note: Art. 26, 1990 ATM established Section 4800: Critical Resource Protection District. It was disapproved by the Attorney General and rescinded by Art. 11, 6/20/90 STM)