Freight Rail Planning Study and Feasibility Analysis

All Aboard:
Freight Rail-based Economic Development Opportunities Ahead

Freight Rail Pilot Project Final Presentation
December 16, 2014
Freight Rail Planning Study

- Introductions
- Project Summary
- Q&A
- Next Steps

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Why Plan for Freight Rail?

• Privately owned freight railroads investing record levels into maintaining and expanding rail network
  – Investment:
    • On track to invest a record $26 billion to maintain, grow, and modernize their networks in 2014
    • Each of the large railroads invests more in the rail network each year than most state transportation departments spend on highways
  – CMRPC Literature Review indicated freight rail usage increased even during recession and more growth anticipated in years ahead:
    • Rail Freight growth was 2x over Truck Freight from 2007-2012
    • Rail Freight Growth Projected 37% from 2012-2040
Why Plan for Freight Rail?

• Rail use for long haul freight means less highway congestion
  – A single train can haul as much as several hundred single-trailer tractor trailer trucks
  – Environmental benefits too, as on average, trains are four (4) times more fuel efficient than trucks.
  – lower greenhouse gas emissions, and reduced pollution.
Impetus for Freight Rail Planning Study

• CSX Hub Facility Relocated to Worcester
  — Economic Development and Job Creation Opportunities
  — Planning, Policy and Investment Decisions
  — Balance of other Community Needs/Concerns

• Countywide Plan Initially Envisioned
  — Funding for full Plan not available
  — CMRPC tapped existing funding sources:
    • UPWP (Transportation)
    • DLTA (CDAP)
  — 2014 Pilot with towns of Auburn and Oxford and Providence and Worcester Railroad (P&W)
Freight Considerations in Municipal Planning and Policy

• Assessment of Community Concerns
  – Review existing Freight and Transportation Plans/Studies (Literature Review)
  – Meetings with Project Participants: Auburn, Oxford and P&W
  – Field Visits

• Examine Efficient Freight Operation Obstacles
  – Build on the Literature Review
  – Assessment of Local Regulations and Practices
  – Transportation System Assessment
  – Industry Concerns and Issues
Freight Considerations in Municipal Planning and Policy

• Evaluation of Municipal Practices in Worcester County and Elsewhere
  – Case Studies: ICI Wiser Ave Facility; New England Automotive Gateway to assess local and other regulations/permitting that may have impacts/restrictions on freight + mitigation measures

• Assessment of Regional Regulatory Environment
  – Assessment of State/Federal Regs on Freight (Federal Surface Transportation Board)

• Enhancing Municipal Planning for Freight
  – Providing a series of recommendations with a Planning/Zoning Toolbox
Project Meetings/Site Visits Summary

• Kick Off Meeting: April 15, 2014
• Series of Individual Meetings:
  – Auburn May 12th
  – Oxford May 13th
  – P&W May 15th
• Site Visits in Auburn and Oxford, June 10th
• CMRPC Staff Literature Review
• Case Study Meetings:
  – ICI, Worcester June 24th
  – NEAG, Spencer/East Brookfield July 15th
• Business Roundtable, September 24th
Literature Review Key Findings

• Increase in Freight Rail Usage
• State Rail/Freight Plan
• To date few States/Regions actively planning, but there are some Case Studies:
  – Morris County, NJ
  – Minnesota’s FRED (Freight Rail Economic Development) Plan
  – Valdosta, GA Region
  – Delaware Valley Planning Commission (Philly Metro Area)
Freight Rail Economic Development: Site Identification and Assessment

- Use of GIS to locate sites adjacent to the P&W Rail
- CMRPC asked input from towns and P&W for potential sites
- GIS mapping provided:
  - Aerial Photo Map
  - Zoning Map
  - Environmental Constraints
- GIS mapping information provided to towns/P&W
- Selected a series of sites to investigate
Example of a Potential Site in Auburn:
28 Millbury Street

- Vacant 400,000 square foot building
- Former Filene’s Basement Warehouse
- Identified as Opportunity both by the Town of Auburn and P&W
- Zoned General Industrial (GI)
- P&W siding remains but would need a switch
Regulatory Assessment

• Auburn:
  – More Restrictive Zoning (vs. Oxford):
    • Concrete/Asphalt Plants, Heavy Manufacturing, Truck Terminals All Prohibited
  – Allows Warehousing by Site Plan Approval
  – Light Manufacturing by-right (General Industrial)
  – Lack of Large Vacant Industrial-zoned rail served sites
  – More Professional Planning Staff (vs. Oxford)
  – Interacts with the Business Community via quarterly roundtable event
Regulatory Assessment

• Auburn:
  – Performance Standards for Site Plan Approval: *So restrictive they effectively prohibit certain freight-based uses?*
    • 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

  – Landscape Bylaw: *A Buffer example to provide from Freight-based uses to residential uses*
    • “A” = 25 feet; 6 ft. high wall or fence or 4 ft. high berm; vegetative planting requirements
Regulatory Assessment

• Oxford:
  – More permissive zoning for Freight-based Uses (vs. Auburn):
    • Mining/Extractive Industries allowed in the two Industrial Districts via Special Permit (Industrial and Light Industrial)
    • Manufacturing Allowed by-right (Industrial)
    • Trucking Terminals via Special Permit in the Industrial Zone
    • Wholesale Distribution by-right (Industrial); SP (LI)
  – Have Large Vacant Industrial-Zoned Parcels
    • Though Not Necessarily Development Ready
  – Part-time Planning Staff but host monthly Staff-level meeting for Project Review
Regulatory Assessment

• Auburn’s Aquifer and Watershed Protection Overlay District
  – Importance of Protection of Drinking Water
  – Aquifer’s Zone II covers a lot of their Industrial land, which further restricts certain uses
  – Town wants to move forward Performance-based Watershed Protection Zoning
    • That would lessen some restricted uses as long as adequate containment systems are installed
    • Could become a model approach
  – Oxford does not have Aquifer Overlay Zoning but a Zone II – CMRPC recommends Town adopt such zoning
    • Dana Transportation is an area of this Zone II (looking to expand)
Regulatory Assessment

• Other Regulatory Considerations:
  – Mass. Wetlands Protection Act
  – Mass. Stormwater Standards
  – Mass Endangered Species and Priority Habitat

• Federal Surface Transportation Board (STB)
  – Created in the ICC Termination Act of 1995
    • 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”...
Regulatory Assessment

• Federal Surface Transportation Board (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.”
• “Railroad” is defined broadly to include a switch, spur, track, terminal, terminal facility, freight depot, yard, and ground, used or necessary for transportation
Regulatory Assessment

• Federal Surface Transportation Board (STB):
  – STB Statute provides that “the remedies provided ...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
  – The Board and the courts have found that it prevents states or localities from intruding into matters that are directly regulated by the Board
Case Study: ICI

- Intransit Container, Inc., located at 53 Wiser Avenue (off of Greenwood Avenue)
- Initially moved to location in 1990
- Undergoing a significant expansion, that triggered City of Worcester Regulatory Review
Case Study: ICI

• Property Split into two zones:
  – ML 0.5 (170 feet off Greenwood) and MG 2.0 (Interior)

• Staff initially indicate use requires a Special Permit
  – But “Rail freight Terminal & Accessory Storage Place” by-right

• Two City Approvals Required:
  – Conservation Commission
  – Parking Plan (Planning Board)

• Mitigation
Case Study: NEAG

- New England Automotive Gateway (NEAG):
- Located on 254 acres in East Brookfield and Spencer; Entrance from Spencer side (Rte. 49)
- Site of interest as it is along 7-mile stretch of CSX Railroad that has double track (passing track)
Case Study: NEAG

• Site was zoned Agricultural/Residential
• Operator approached each Town for Rezoning
• First Spencer approval was a Special Permit from the ZBA in 2003
• NEAG Expansion:
  – ZBA Special Permit Amendment, June 2013
  – PB Site Plan Approval, July 2013
• Site Plan Approval includes shorter height for light poles, stormwater management
CENTRAL MASSACHUSETTS METROPOLITAN PLANNING ORGANIZATION (CMMPO)

Freight Rail Pilot Study & Feasibility Analysis: Management System Community Profiles for Towns of Auburn and Oxford

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September 24th Business Roundtable

• Well attended by Municipal, P&W, Chamber, Other Railroad-related representatives
• Identified Some Potential Business Opportunities
• The Truck Driving Hour Issue (8-hour; Electronic Logging)
• Idea of Tax / Tax Benefit/Break for converting over freight over to rail.
• Organic discussion moved into need for tech schools to have greater capacity to train students for advance manufacturing positions
Enhancing Municipal Planning for Freight

- Develop recommendations for improving local review processes, procedures
- Identify opportunities for regional rail system expansion
- Identify regional infrastructure improvements that would enhance freight system
- Identify measures to reduce local impacts from expanded freight capability
- Identify public relations, marketing, and outreach measures
Enhancing Municipal Planning for Freight

- Develop recommendations for improving local review processes and procedures:
- Began with review of Case Studies/Lit Review Best Practices and Recommendations
- Different Themes/Subject Areas Emerged:
  - Development Review
  - Communication
  - Traffic Flow and Congestion
  - Noise and Vibration
  - Buffers and Setbacks
  - Freight Village
Development Review

• 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 NCHRP Synthesis 298: Truck Trip Generation Data.

<table>
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<tr>
<th>Industrial Land Use</th>
<th>Daily Truck Trip Rates per 1,000 ft²</th>
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<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>

• 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.
Communication

- **Undertaking public education**
  - Public not always having understanding of role of freight in their lives:
    - “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
  - NJ DOT published “The Value of Freight in NJ”
- **Hiring locally: NEAG Promoted Local Jobs**
- **Facilitating meetings between communities and freight providers**
  - Julie Jacobson had done this while in Worcester as part of the ICI Expansion Initiative
  - CMMPO has P&W on the Advisory Committee; want to get trucking representation
Traffic Flow and Congestion

• Replacing at-grade rail crossings with grade separated crossings – *Uneconomical likely within Central Mass Region and a long term measure*
  – Almost all CSX Crossings are grade separated crossings in the Region
  – No major incidents in recent history along P&W’s Norwich Line through Auburn and Oxford
Traffic Flow and Congestion

• Requiring developers to make necessary highway access improvements for trucks (*Dev Review Strategy*)

• **Motivating mode shift from truck to rail**
  – Was discussed at the Sept 24th Roundtable
  – Brainstormed a Chapter 61 taxation approach
  – Would require further study: regional/state level

• Undertaking an integrated freight/economic development program — *marketing related too*
Traffic Flow and Congestion

• Truck Freight Management Approaches:
  – Designating routes for heavy weight trucks
  – Banning/limiting trucks on routes: State #’d Routes?
  – Building more truck rest areas/parking
    • Auburn Bans Truck Terminals
    • The Wal-Mart Issue

• Developing new Rail Spurs or Connections?
Noise and Vibrations

• Using lower-emission locomotives/reducing locomotive idling: P&W applying for grant; are implementing reduction of engine idling

• Creating a “no whistle” rail zone (e.g. “Quiet Zone”)
  – 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.
  – Process to implement seems complex, time-consuming
Noise and Vibrations

• Modifying train whistles at grade crossings
  – Directional Sound Blasts
• Limiting truck/loading dock hours of operation in neighborhoods – difficult for 24-hour operations like Polar Beverages
Buffers and Setbacks

• Incorporate minimum buffers and setbacks between industrial sites and nearby sensitive land uses
  – Auburn has such standards within the Landscape Bylaw as previously noted
  – Charlton, Sturbridge and Sutton Regional Examples
  – Edison, NJ specific to Freight-based uses
Buffers and Setbacks

- Auburn standards: 25 feet; 6 foot high wall or fence; or 4 foot high berm; has min. planting materials; no sound proofing mentioned
- Charlton: 100-foot buffer from BEP and Industrial zoned properties to R-40 or Ag District
- Sturbridge: 50-foot screened buffer where C&I uses are adjacent to R uses.
- Sutton: Route 146 Overlay District, 100-foot detailed planning requirement to address noise.
- Edison, NJ specific to Freight-based uses:
  - “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”
Freight Village

What is a Freight Village?

• 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
Freight Village

• One Site Emerged During Pilot:
• Mary Ann Lacki property, Oxford:
  – Owns three (3) parcels, total 75.87 acres
  – Significant Property Frontage along the P&W Line
  – Industrial Zoned
  – Access to I-395 w/o TC
Public Relations, Marketing and Outreach Measures

• Review existing municipal marketing data/information/materials
• Review case studies/lit review of such
• Recommendations
Public Relations, Marketing and Outreach Measures

• Review of existing municipal marketing materials:
  – Auburn’s “Doing Business in Auburn” Flyer:
    • No mention of freight rail currently (recommend update; think 28 Millbury Street)
    • Website link in flyer currently does not work:
      – “404 Page Not Found: Reference Error Code 1015”
  – Oxford: Does Town have any marketing materials?
Public Relations, Marketing and Outreach Measures

• Two Case Studies:
• Morris County, NJ Case Study
• PA DOT’s Freight Rail Site Locator
Morris County, NJ Case Study

• Industrial development should be promoted and marketed on active 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 marketing efforts.
• 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.
Morris County, NJ Case Study

• Relevant Recommendations:
  – 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
  – Relates to their database:
    – Replace the “Yes/No” format of the “Rail Access” item with a more descriptive menu of options with name of rail line to include:
      • Existing Rail Siding in Place
      • No Siding in Place, but track in place within ¼ mile
Morris County, NJ Case Study

• Develop and enhance promotional efforts for general industrial development in the County.
• This would be done in addition to the traditional marketing efforts of real estate brokers and industrial developers by highlighting Morris County’s industrial properties and infrastructure. The MCEDC should lead this effort. Some possible measures for this could include:
  (a) Generating press releases for available listings and recent transactions;
  (b) Creating a branding strategy for industrial properties in the County, particularly with regard to sites along the various freight rail lines;
  (c) Advertising at relevant local and regional events, as well as in trade publications;
  (d) Interacting extensively with local real estate brokers.
PA DOT’s Freight Rail Site Locator

Purpose and Content of this Directory

- The purpose of the Rail Freight Properties Directory is to identify properties located along the regional and shortline railroads in Pennsylvania that have the potential to be rail served. The creation of this Directory is important because it serves as a valuable resource to promote economic development, to increase the traffic base of the regional and shortline railroads and to foster ongoing collaborative efforts and communication between the railroads, economic development contacts, chambers of commerce, planning agencies, industrial real estate agents, developers, property owners, and all others that were a resource for the development of this Directory. It also serves as a marketing tool to attract prospective businesses who are looking to locate or expand in Pennsylvania. This Directory complements the directories of the Class I railroads.

- This Directory identifies 205 properties that have the potential to be rail served. These 205 properties are located in 45 counties in the Commonwealth and are served or have the potential to be served by 51 regional or shortline railroads in Pennsylvania. Each property is described in a site report and is accompanied by a location map and a site map with property boundaries.

Organization of this Directory

- This Directory is organized into three geographic regions - Western, Central and Eastern Pennsylvania. Each begins with a map that shows the region within Pennsylvania and in relation to neighboring states and cities. This map is followed by an enlarged map that shows the numbered locations of the industrial properties within that region. The sites are then listed in tabular form with the map code, site name, size, county and serving railroad. The counties within each region are listed in alphabetical order and within each county the sites are listed alphabetically by site name.

Select County: Erie
CMRPC’s Regional Transportation Plan and Freight Planning

Mobility 2040
Invest in Your Transportation Future

Central Massachusetts Metropolitan Planning Organization
Long Range Transportation Plan

www.cmrpc.org/mobility2040
Conclusion

• Additional Questions or Comments?
• Your input will be incorporated into Report
• Report will include Summary of Recommendations Identified Today
• Look for Final Report Forthcoming!