MEMORANDUM

TO: BELFAST COMPREHENSIVE PLAN STEERING COMMITTEE
FROM: NOEL MUSSON
SUBJECT: TRANSPORTATION
DATE: DECEMBER 11, 2019

The Transportation chapter has been updated to reflect current data:

- High Crash locations: updated to reflect updated MDOT data (p. 1)
- Updates to relevant observations and recommendations from 2006 Safety Audit (pg. 1-2).
- Customer service levels on roads in Belfast updated (p. 4) See CLS map attached.
- Updated information on DASH bus services.
- Updated various references to harbor walk and rail trail.
- Updated information on lighting.
- Updated information on municipal parking (removed downtown lot and added on-street parking).
- Updated airport construction information (p. 18).
- Updated subdivision information (pg. 23)
- Updated range-way improvement projects (pg. 24).

Information needing confirmation:

- “Add dedicated bike lanes, marked on roadway, shoulder or paths off Route 1 that provide linkages to East Coast Greenway project and which encourage and support bicycle use in Belfast.” (pg. 2 – confirm bike lanes are still needed here)
- Need updated traffic volumes (pg. 4+5).
- Most recent Ped/Bike/Hiking report 2008 – confirm that key concerns listed on pg. 7+8 are still relevant.
- Are there other community investments that should be made to expand or improve [parking? (pg. 16)
- “The waterfront supports two boat building operations (Front Street Shipyard established in 2011 and French & Webb established in the 1990s), a tugboat operation (serves Mack Point), three private marinas, a cadre of small restaurant and retail operations, and three public parks (Steamboat Landing, Heritage Park, and land near the Armistice Bride).” Confirm accuracy with committee – pg. 19
- Need to update: “In the last 15 years, the City has accepted only 1 newly constructed road as a City street, however, 4 additional roads are under construction which the City Council has agreed to accept provided all construction complies with City requirements.” (pg. 27)

Maps referenced:

- Transportation Network
- Transportation Network Downtown
• Transportation Posted Speeds and Compact Urban Area
TRANSPORTATION

Introduction

A safe and dependable transportation system is the lifeline of every community. This chapter details the current condition and usage of Belfast’s transportation system. The City’s main goal is to plan for the efficient maintenance and improvement of the transportation system so it is can accommodate and well serve existing and anticipated development.

A. State Goal and the Sensible Transportation Policy Act

(1). To plan for, finance and develop an efficient system of public facilities and services to accommodate anticipated growth and economic development.

(2). Sensible Transportation Policy Act (23 MRSA §73)

B. Analyses and Key Issues

(1). Roads, Bridges, Sidewalks, and Bicycle Routes

a. What are the concerns for transportation system safety and efficiency in the community and region? What, if any, plans exist to address these concerns, which can involve:

   1. Safety:

See the Transportation Network Map for high crash locations where eight or more crashes have been reported within a three-year period. Almost every major intersection with Route 1, including but not limited to the intersections at Congress Street, Route 52/Lincolnville Avenue, Route 3/Belmont Avenue and Route 141/Swan Lake Avenue, is a high crash location. In 2015, Maine DOT reported four intersections and one road section of high crash locations in Belfast including the section of Church Street between Beaver Street and Spring Street, the intersection of Head of the Tide Road and West Waldo Road, Belmont Ave/Route 3 ramp coming off Route 1 south, High Street ramp coming off Route 1 north, and Route 7 ramp off Route One bypass. In 2006, the City, in coordination with Maine DOT, HNTB (traffic consulting firm) and the Federal Highway Administration, conducted a transportation safety audit of Route 1 as a supplement to the Gateway 1 strategic planning process. Many of the observations from the 2006 Safety Audit are still relevant today. See the Safety Audit report for a full list of observations and specific recommendations. Corridor wide, general recommendations included:

   1. Intersection improvements should receive the highest priority. More specifically:
a. Congress Street and Route 1 – MDOT constructed improvements to this intersection in 2007. It appears that the improvements have addressed some key safety issues, however, the City believes that additional improvements are warranted. For example, for northbound traffic, there is no lane for through traffic if a vehicle is turning left onto Congress Street by the Business Park and another vehicle is turning right onto Congress Street by the Tall Pines facility. Further, there is no signal light at the intersection.

b. Lincolnville Avenue/Rte 52 and Route 1 – In 2009, long awaited pedestrian improvements were constructed. The City, however, believes the intersection requires additional improvements, particularly for traffic on the westerly side of the intersection.

c. Belmont Avenue/Rte 3 and Route 1 – Significant improvements were constructed to this road in 2005, however, the City believes that additional improvements are needed to the current on and off ramp system for the intersection. Also, the City’s 2009 experience with the transport of wind turbines from the port at Mack Point illustrated the need for an upgrade to the current overpasses in place along this stretch of Route 1 and the on and off ramps for the Route 1 and Route 137 (Waldo Avenue and High Street) intersection.

d. Swan Lake Avenue/Rte 141 and Route 1 – The City and MDOT constructed initial pedestrian oriented improvements to this intersection in 2010 through a $120,000 traffic calming grant. In 2012, the City worked directly with MDOT to conduct a follow-up Safety Audit that focused specifically on the Route 1/Route 141 (Swan Lake Avenue) intersection. In 2013 the City intends to use a $100,000 traffic calming grant to make additional pedestrian oriented improvements to the intersection, including a pedestrian signal. The City, however, believes that the long term approach is to reconstruct the intersection and that a roundabout could be a productive way to address current and future traffic volumes. Construction of a roundabout is the City’s highest road construction and traffic priority.

2. Enhance navigation signs, guide signs, and warning signs.
3. Adjust street name signs and/or replace with larger signs for better visibility for drivers and for emergency response.
4. Access management strategies:
a. Limit curb cuts by consolidating separate entrances that are close together, and regulating requests for new entrances.

5. Explore the feasibility of frontage roads to reduce congestion and increase capacity; for example, the use of the existing Old Searsport Ave in East Belfast and/or a new frontage road on the west side of Route 1 from the jughandle location to Perkins Rd. The City, however, recognizes that constructing a new road is a major cost. The City has much greater interest in obtaining funding to assist in addressing problems with existing intersections.

6. Install Maine Uniform Traffic Control Device compliant crosswalk warning signs.

7. Coordinate impact fees charged by State and City for needed transportation improvements resulting from proposed development.

8. Add dedicated bike lanes, marked on roadway, shoulder or paths off of Route 1 that provide linkages to East Coast Greenway project and which encourage and support bicycle use in Belfast.

9. Examine if it is appropriate to establish greater consistency in traffic speeds along the Route 1 corridor in Belfast, including the by-pass area.

Beyond Route 1, longstanding safety concerns exist for other state and municipal roads. The volume and traffic along Route 52 presents ongoing concerns. While improvements were made to Route 52 in recent years, the volume and speed of traffic presents ongoing concerns. Key other key concerns regarding other state routes include: speed of traffic on Route 141/ Swan Lake Avenue; and the lack of a viable emergency vehicle route if the Memorial Bridge is congested; and the transport of cargo from the port at Mack Point on Route 1, which reflects the City’s experience with such in 2009.

A concern which has often been voiced by residents for numerous City roads, particularly rural roads, is the speed of traffic, which people have stated has lessened their quality of life. In addition, the poor quality of initial construction (particularly a poor road base) of many local roads results in chronic problems for the City in trying to maintain a substandard road. The City faces high maintenance costs for such roads, but City lacks the funds to reconstruct most roads. Also, almost the entire stretch of City Point Road and Starrett Drive are designated as high crash locations, where eight or more crashes have been reported within a three-year period.

2. Traffic speed:
See the Transportation Posted Speeds and Compact Area Map for the speed limits of state and city roads. Speeding is of concern on Routes 1, 3 and 141 especially. Ongoing enforcement is costly. Traffic calming strategies have been recommended through the Gateway 1 strategic planning process, and if implemented could reduce the amount of enforcement needed to reduce speeding. The City, in 2009 and 2013, constructed initial traffic calming improvements at the Rte 141/Rte 1 intersection, and plans to construct additional improvements to this intersection in 2013. Further, the City has received numerous requests from local residents to consider the reduction of traffic speeds on the road on which they live. Examples of such requests in the past ten years include but are not necessarily limited to: Doak Road, Stephenson Lane, Woods Road, Miller Street, High Street and Swan Lake Avenue. An additional concern is City interest in MDOT examining the desirability of establishing more consistent speed limits for Route 1.

3. Congestion and travel delay:

The Belfast Comprehensive Plan map titled Transportation Network shows the customer service level (CSL) level of service (LOS) of State and local roads in Belfast. LOSCLS is a measure of congestion and delays, safety, condition and service. The lowest CSL/LOS found in Belfast is ED—on an A-F scale, indicating that a roadway has reached its maximum capacity and that delays where the travel speed is lower than the posted speed are commonplace. LOS-CLS ED is found on the Route 52 extending southwest from Route 1 into Northport, a bridge over the Passagassawakeag River and extending north to the Rte 1/Rte 141 intersection, and on the stretch of Route 1 from the Goose River to the Searsport town line. Delays on Route 1 occur mostly during the summer tourist season. Much of the Route 1 bypass is LOS D, which is usually considered an indication of the maximum acceptable volume/capacity if current posted speeds and travel lanes are to be maintained. City roads are mostly LOS A and B, indicating no congestion on average. Portions of Route 3, from Edgecomb Road to the Belmont town line, are LOS C—Congestion at the following locations has been noted by residents and municipal officials: Route 1 and Route 52, Route 1 and Route 141, Route 1 and Route 3, and Route 1 and Congress Street.

4. Travel volume and type:

The Belfast Comprehensive Plan maps titled Transportation Network and Transportation Network Downtown show factored annual average daily traffic volumes at key points on state, state aid and municipal roadways in Belfast from 2010 and the percent...
change since 2000. Heavy truck volumes at select locations are also shown. The Route 1 bypass, serving the purpose for which it was built, has a higher volume of long-distance traffic, including heavy trucks, than do local downtown streets. Seasonal volumes (highest in July and August) are approximately 1.5 times greater than the annual averages for principal roadways. Nearly all consumer goods for sale in Belfast are trucked into the City.

5. Traffic problems caused by such things as road and driveway locations and design, road maintenance needs, traffic control devices, growth patterns, and lack of transportation options:

Road maintenance is an ongoing effort and municipal budgets are stretched as the cost of such maintenance increases much faster than the costs of other goods and services, due principally to the costs of petroleum and petroleum-based products like asphalt. The state and federal match for such work has always been important and has become even more crucial to maintain safe roadways. The City has worked with property owners to maintain the safety and mobility (traffic flow at the posted speed) of roadways by addressing access management within the urban compact boundary. New entrances and driveways are approved in accordance with access management goals while balancing private property rights to allow for the use of properties abutting roadways.

The City understands that encouraging growth within and near the in-town area will reduce transportation costs and auto-dependency. The City’s minimum lot size of 4 acre, 7,500 square feet for most of the area located within the Route 1 by-pass underscores its efforts to encourage dense growth in areas near services. This area also features an existing system of interconnected streets that create multiple ways for a person to travel to their destination. In addition, the City has encouraged most larger scale employers and retail development to occur in the area immediately adjacent to the Route 1 by-pass. At the same time, there is concern about the amount of congestion that might develop in these areas from new development.

Current state access management rules apply to all state roads located outside of the urban compact area, and to the Pitcher Road. The City has cooperatively worked with MDOT in the implementation of these rules, and recognizes that good quality access management rules are warranted to improve public safety and manage traffic. That said, the City is concerned that current MDOT rules and the implementation of such may conflict with the City’s intent to allow greater development in some areas, such as along Searsport Avenue. Further in the case of one permit requested in 2008 for a rural stretch of Route 3, the required Comment [SD5]: Traffic volumes update NEEDED
mitigation, prohibiting a left turn from a proposed visitor center, appeared to be more dangerous and difficult to enforce than simply either denying the permit or allowing left hand turns from the site.

The City’s current access management standards are less strict than the state standards. That said, the City believes it has often been effective in managing the number of curb cuts on state roads located within the urban compact area, including efforts to reduce the number of curb-cuts at existing businesses when they apply for new permits. The City also recognizes that it should review its current access management standards to ensure its standards well address public safety needs, while also allowing appropriate types of development.

Belfast and the surrounding communities lack effective alternative transportation options in comparison with more densely developed communities in other areas of the State. There is no daily City-wide bus service for all residents, and public transportation options are very limited. Thus, residents are largely dependent on their privately-owned vehicles for daily trips to work, stores and elsewhere. Reference section B.3. for a description of current public transportation services.

6. Lack of transportation links between neighborhoods, schools, recreation, shopping, and public gathering areas:

Much of the densely developed area located within or near the Route One by-pass has a well established system of neighborhood blocks connected by sidewalks and streets. The area features most of the City’s parks, two of its 4 schools, and the downtown retail and service area. Outside of the bypass, Belfast is accessible primarily by roadways. Much of the development in these areas occurs linearly along the adjacent road. There are few neighborhoods and even fewer connecting roads/streets and sidewalks. That said, the City has worked to use both City and MDOT monies to install pedestrian oriented improvements on Route 1 to foster greater connectivity and to provide safer routes to the City schools located outside of the bypass.

The City believes that parking is generally adequate for current and projected future use at most schools, recreation, shopping and public gathering areas. Some downtown parking lots require improvements, and there likely always will be a need for more parking near the harbor in the summer, but on the whole, the City does not feel that Belfast has a significant shortage of parking. Municipal parking lot locations and capacity are noted in C.3. (below), and this public parking augments the onsite parking provided at shopping and other locations. Current and
recommended pedestrian and bicycle routes are noted in both sections B.8. and C.2. Concern for improving the safety of these routes has helped shape the recommendations in this chapter. Residents in general, especially children and the elderly, should be able to get around portions of the City without depending exclusively on motor vehicles.

7. **Closed or posted bridges or roads:**

There are no closed bridges or roads. The City, however, routinely posts seasonal weight limits on many of its roads in the early spring when such roads are most susceptible to damage because of ‘break-up’ and a poor road base.

8. **Pedestrian and bicycling safety.**

Belfast has devoted increasing attention and resources to enhance pedestrian and bicycle safety in the past 15-20 years. Two of the premier projects are the reconstruction of the Armistice Bridge (Footbridge) across the Passagassawakeag River which the City completed in 2006 at a cost of $3.6 million ($2.6 million in City funds), and the upcoming Harbor Walk project which will create connectivity along the Belfast waterfront between the Armistice Bridge and the Boathouse at Steamboat Landing; a project which is estimated to cost about $1.8 million ($1 million in City funds) and which the City will construct in the spring of 2013, was completed in 2013 at a cost of $1.6 million ($800,000 in City funds).

In 2010, the City also purchased the former right-of-way owned by the Belfast and Moosehead Lake Railroad. In 2016, the City completed construction of the Rail Trail, a 2.2 mile, in 2012—2013, is using local funds and a grant through the State coastal program to examine the feasibility of constructing a multi-use path within the rail corridor, that a path that would be about 2.3 miles runs along the upper stretches of the Passagassawakeag River. In addition to the Harbor Walk and Rail Trail projects, the City has made improvements to key intersections, extended and reconstructed sidewalks and explored avenues to foster greater pedestrian and bicycle use to increase connectivity.

In 2008 the Belfast Bay Watershed Coalition and Belfast Trails prepared a report entitled The Vision for Pedestrian, Biking, and Hiking Mobility in Belfast, which identified pedestrian and bicycling safety concerns and which was produced at the request of the Belfast Vibrancy Committee. Key concerns included: Route 1
crossings at Route 52, Belmont Ave/Route 3, and Route 141; all of which are heavily used pedestrian and bicycle routes that connect downtown Belfast with key destinations outside the bypass. As noted in the report, “We view them as critical because they are the most lacking in infrastructure and planning in terms of safety relative to their high rate of pedestrian use (or potential use) and because they involve routes and intersections with heavy auto traffic.” This report helped spur actions on several of the most critical projects, and prompted the City Council to appoint and designate a Pedestrian, Biking and Hiking Committee to regularly advise the Council.

Key concerns identified in the above Vision report and how the City has addressed the request are identified below:

a. Route 52: (Destinations: Bank of America, Walsh Ball Field, Little River Community Trail, YMCA, Troy Howard Middle School).

   Status: In 2010 community members, the City, and MDOT implemented a Safe Routes to School project which enhanced pedestrian access across Route 1 at the Route 52 intersection. It featured adding a no turn on red signal for vehicles, a pedestrian activated signalized crosswalk on Route 1 and a duratherm crosswalk.

b. Main St./Belmont Ave./Route 3/: (Destinations: Reny’s Plaza, Route 3 commercial district, UMaine Hutchinson Center)

   Status: The Pedestrian, Biking and Hiking Committee has explored potential approaches to enhance pedestrian and bicycle use between the downtown and the Hutchinson Center, a 1.7 mile stretch. The Committee intends to submit a Concept Plan to the Council in early 2013 that identifies desired improvements to this area. While a major 2004 MDOT reconstruction project on Rte 3 near Reny's Plaza that included new sidewalks, and 2009 City improvements to the sidewalks near the Route 1/Route 3 overpass have helped, much of this heavily used pedestrian route remains difficult to walk or to ride a bike. The existing sidewalks are discontinuous and narrow, they do not extend to the Hutchinson Center, and there are few amenities to support bicycle use.

c. Route 1 and 141 area: (Destinations: East Side School, East Side businesses on Route 1, Patterson Hill/Robbins Rd. residential community)
Status: In 2010 the City used a MDOT Traffic Calming grant to make initial improvements to the Rte 1 and Rte 141 intersection to enhance pedestrian safety. Improvements included relocating the cross walk to the north side of the intersection, installing a duratherm crosswalk, installing pedestrian activated warning signals, and similar improvements. In 2013, the City, with the assistance of a subsequent Traffic Calming grant, intends to make additional improvements to benefit pedestrians, with much of the focus on the initial section of Route 141, including extending the sidewalk on Rt 141 and relocating the crosswalk on that road. The improvements the City is pursuing are consistent with a 2012 MDOT Safety Audit for this intersection.

Sidewalks and Crosswalks

The City has seen increased support for improving sidewalks and crosswalks in recent years. The City Council has more than doubled funding for sidewalk improvements and construction in recent budgets. The City used a five-year sidewalk plan to guide the improvement and construction of new sidewalks beginning in 1998. The City’s current plan (2012) is to reconstruct a minimum of 1,500 feet of sidewalk each year. Many of the City’s existing sidewalks are in poor condition and require reconstruction rather than only resurfacing.

General recommendations regarding sidewalks:

- Mark all crosswalks prominently with high visibility cones for a longer portion of the year (i.e. not just in summer).
- Inventory condition of all sidewalks (and identify problems for wheelchair access)
- Recent sidewalk and crosswalk projects have included:
  - In compiling information for this report, some specific areas stood out as needing attention:
    - Church St. (between Market and Anderson): Clearly mark pedestrian right of way past Duval’s
    - High St. (MacLeod’s to Waterfall Arts): Minimize length of and mark pedestrian crossings. Clarify pedestrian route and wheelchair route.
    - Walkway from Post Office to Family Dollar
Starrett Drive: Clearly mark pedestrian right of way from Hannaford and Ocean State Job Lot to Route 3, mark and minimize street crossings.

East Side: Improve sidewalk from footbridge to Perry’s Nut House

Bike lanes

We recommend using Miller Street as a well-designed model for bicycle travel; it has no painted centerline and has well-marked bike lanes on each side.

9. Light pollution

Lighting standards are included in the Belfast Code of Ordinances. The City now controls all streetlights and is in the process of installing LED lights throughout. The intention is to have energy efficient lighting that provides adequate, high quality lighting without too much light pollution. However, these standards may not adequately address issues of light pollution from new large-scale development or piecemeal development, especially along major roadways and shore frontage. Concern has been expressed regarding the amount of lighting associated with some existing uses, such as Quirk Motors, which is on the edge of a commercial area that abuts a residential area, and for types of development which could occur, such as the large scale retail development the City is attempting to attract to the Route 3 area. Accordingly, ordinance standards that seek to further reduce light pollution should be considered for adoption.

In addition to potential issues associated with light pollution, Belfast also has significant problems associated with inadequate lighting. There are some locations along Route 1, particularly near the interchange with Rt 137, in which there is inadequate lighting to address public safety needs, and the City has an ongoing problem regarding how to provide more lighting along Starrett Drive, which is a major commercial area in Belfast. Further, the City is concerned that its existing street lighting may not be the most appropriate or energy efficient lighting for an area.

b. What conflicts are caused by multiple road uses, such as a major state or U.S. route that passes through the community or its downtown and serves as a local service road as well?

Routes 1 and 3 are major state routes that serve a large volume of through traffic. See the Transportation Map for these figures. These roads also serve for local commerce in Belfast. These different uses can create conflicts, especially in regards to speed. The installation of traffic signals at key intersections on Route 3 (Belmont Ave & Main

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Street) has helped regulate traffic. Enforcement of posted speeds is crucial. The limited use of traffic calming measures in some areas of Route 1, particularly along Searsport Avenue, have been or are being implemented, and Maine DOT and the City are investigating these techniques further. A sizable portion of Belfast’s business activity is located downtown, not on Routes 1 or 3.

Conflicts in Belfast also occur between how the City and State may view use of a road. The main area of conflict appears to be Searsport Avenue (Route 1). Belfast extended public sewer service to this area in the mid-1990’s and views Searsport Avenue as an area which can support significant development. In contrast, it appears that MDOT would prefer the City limit the amount of development along much of Searsport Avenue. At present, few use conflicts occur westerly of Crocker Road on Route 3, and the main concerns on state roads, such as Routes 52, 137, and 141, appear to be the speed of traffic in areas which often support residential development.

c. **Upon review of state and regional transportation plans, State transportation plans that should be reviewed include Maine DOT’s 20 Year Long Range Plan, its 6 Year Plan and its most recent Biennial Capital Work Plan. What are their impacts on your current and future community plans? What actions can the community take to address identified impacts?**

MDOT’s Long Range Transportation Improvement Plan provides general goals for the maintenance and improvement of the state transportation system to meet the need of residents and businesses. These goals are in agreement generally with the Belfast Comprehensive Plan. There are no Belfast specific projects or impacts included in this plan; however, a lack of adequate funding to preserve and enhance the state transportation network will impact Belfast along with many other Maine communities over the next twenty years. The community will need to lobby Maine DOT directly for adequate transportation investments in Belfast and the region.

The 2012-2013 Biennial Capital Maine DOT Work Plan includes these projects in Belfast:

- **Belfast Municipal Airport, Extend Hangar Area/Taxi lanes,** $283,250.
- **Belfast Harbor Walk project, .75 mile multi-use path along working waterfront,** $250,000 in MDOT funds. Also, $1,000,000 in City funds, $400,000 in Community for Maine Future funds and $250,000 in CDBG funds.
- **Traffic Calming Project, $100,000, Rte 1 and Rte 141.** Also, $7,500 in City funds.
- **WALDO CAP, 3 projects totaling about $225,000 to support**
operation of transportation services and purchase of equipment for said operations.

- Belfast, pedestrian facility improvements along Route 1, Route 52, Chestnut Street, Bayview Street, and Mechanic Street, $614,143.
- Belfast Municipal Airport, safety and infrastructure improvements that may include obstruction removal – Phase 2, runway 33, $221,450.
- Belfast, Poor Mills Road, Sheldon Bridge replacement over Goose River, located 0.89 of a mile east of Shepard Road, $715,000.
- Belfast, Goose River Bridge replacement over Goose River, located 0.15 of a mile east of Mitchell Street, $2,355,000.
- Belfast, Waldo Avenue, painting bearings and beam ends on the Waldo Avenue Bridge over Route 1, Located 0.05 of a mile northwest of Field Street.

Prior 2010-2011 Biennial Capital Work Plan included considerably more projects, including the following:

- Construction, Apron, $1,620,000 includes 5% local match.
- Belfast Municipal Airport, Engineering, Apron Design, $100,000 includes 5% local match.
- Belmont Ave, Engineering and Construction, Crack Sealing (1.58 miles), $7,652.
- Bus Purchase, Federal Transit Administration Section 5310, for the Elderly and Disabled, Waldo Community Action Partners, $75,240 includes 10% local funds, total for two years.
- Lighting, Safe Routes to School Bicycle/Pedestrian Improvements: Near Troy Howard School and Captain Albert W. Stevens elementary school, Duratherm Crosswalk, in pavement lighting and countdown signals ($28,000 local funds - $35,000 MDOT Safe Rte to School funds). Note – Project completed in 2009.
- Public Transportation, Operating Assistance, Waldo Community Action Partners, $28,508 total for two years from state funds.
- Public Transportation, Operating Assistance, Waldo Community Action Partners, $279,222 total for two years, includes a 45% local match, 55% federal.
- Public Transportation, Technical Assistance, Waldo Community Action Partners, $79,145 total for two years, includes 20% local match, 80% state.
- Route 1, Engineering and Construction, Highway Resurfacing (4.11 miles), $1,847,259 total of two phases.
- Route 52, Construction, Maintenance Paving Surface Treatment (4 miles), $139,500.
Route 52, Engineering and Construction: Highway Rehabilitation (1 mile); $104,000.

d. How do the community’s land use regulations mesh with the Maine DOT, regional, and local objectives for transportation system facilities in the community? If growth areas are located on arterial highways, arterials are highways that are intended to provide long-distance connections between towns and regional centers. Volumes of traffic typically range from 5,000 to 30,000 vehicles per day. Arterials are divided between “principal” and “minor” arterials. How will growth in these areas affect the ability of the arterial to safely and efficiently move traffic?

The proposed major land uses (see the Land Use Chapter of this plan) including the mixed use/growth along US 1 in East Belfast and along portions of the US 1 bypass, and the area labeled ‘encourage new residential’ along the bypass, will incorporate access management controls along state roadways, shared entrances/ driveways, and new internal street networks that avoid dead-end subdivision roads wherever possible. In following these strategies, the City seeks to maintain the mobility, capacity and posted speeds of US Route 1 and Route 3. That said, potential conflicts may arise, particularly with respect for Searsport Avenue (Rte 1) because the City believes this area is well-suited for additional development. See also, the Midcoast Route 3 Corridor Management Plan (2009) for additional information and recommendations relating to Route 3 through Belfast. That plan can be accessed: http://www.midcoastplanning.org/PDFs/MCR3CMP.pdf. Overall, the City seeks to encourage patterns of development that do not degrade the capacity of the overall road network. For example, the City hopes to concentrate future larger retail development into the area near the Routes 1 and 3 intersection that is presently used for intense retail and office development, but in doing such, the City also recognizes that road improvements will be needed.

e. What is the community’s schedule for regular investments in road maintenance and improvement? How are Maine DOT Urban-Rural Initiative Program (URIP) funds used to offset municipal road improvement costs.

The City Department of Public Works performs a wide variety of tasks associated with maintaining, and in some cases, upgrading its extensive network of City roads. For example, the City regularly resurfaces City roads on a 10 – 12 year schedule, and typically replaces culverts every other scheduled road resurfacing, about every 20 – 25 years. Also, the City has reconstructed several of its existing streets within the past 10 years as an element of a public sewer extension or replacement project.
Miller Street and Northport Avenue are examples of streets which have been reconstructed. Further, the City regularly maintains open drainage swales adjacent to the road, repairs and extends sidewalks, installs warning signage, sweeps many of the streets, and grades several remaining roads which have a gravel surface.

f. What concerns does your community have regarding its policies and standards for design, construction, and maintenance of public and private local roads and bridges?

The City is concerned that all roadways and bridges that are constructed be well engineered and built to last so that potential damage from flooding and adverse weather and use can be minimized. Substandard design or construction will result in higher costs to taxpayers and/or subdivision associations for repair and remediation. Road damage from flooding, adverse weather conditions and from use, especially heavy trucking activity, requires that roads be built to appropriate standards, including sufficient sub-bases, drainage systems and grading. While this may cost more in development costs upfront, it will reduce costs for the taxpayers, residents, and business owners, all of whom depend on the road network, in the long term. To that end, the City has adopted and enforced good quality road construction standards through implementation of its subdivision and site plan regulations, and the City Council will only accept a road for public ownership if it is engineered and construction of the road is inspected by City engineer to determine compliance with City requirements.

(2). Parking

a. What are the parking issues in the community?

Parking is generally sufficient in most parts of the City. The City owns and maintains 3–2 large public parking areas (60 – 100 vehicles each), an additional 45 smaller public parking lots, and a significant amount of designated on-street public parking in its downtown and waterfront areas. In 2012, the City counted the amount of public and private parking in the downtown (reference map at end of this chapter) and determined that there was a total of 1328 spaces; 761 public spaces consisting of 395 on-street public spaces, 313 public spaces in parking lots, and 53 public spaces at public buildings, and an additional 567 privately owned spaces. While this is a significant amount of parking, there are concerns that the increased amount of growth which has occurred in the downtown in the past several years, and an increase in the number of major events may lead to temporary shortages in the amount of parking. At present, there is no cost (no meters) to use any City parking space or facility.

Most issues associated with the use of existing public parking areas fall into
the category of a nuisance rather than a crisis. Examples of these conflicts are as follows:

- Employees of downtown businesses and offices park in on-street parking spaces rather than the off-street parking lots which limits the amount of parking readily available to customers. In 2012 the City revised its parking ordinance, increased enforcement and worked cooperatively with Our Town Belfast (local Main Street organization) and local business owners to address this concern and it appears that these efforts have helped to lessen problems.
- There often is a conflict between short-term and longer-term users at the limited amount of parking near the City harbor.
- There is more public parking along lower Main Street than upper Main Street.
- Periodic events which involve a significant amount of customers can overburden the amount of public parking available in a select area, including events such as the call for jury duty at the Superior Court House.
- Similar to many communities, there is not enough parking to support a major event, which results in the need to use off-site satellite parking lots and the transport of people to the event.

b. Do local parking standards promote development in desired areas or do they drive it to outlying areas?

Belfast believes it has adopted progressive parking standards which support attracting small scale development to its downtown and working waterfront area. For example, Belfast does not require any on-site parking in much of the downtown area, and the Planning Board has the authority to grant reductions in the amount of on-site parking required in other areas in the downtown and along the working waterfront. Also, through the contract zoning provisions the City has adopted for some uses, larger-scale proposals could have some flexibility regarding the amount of parking provided to complement existing, traditional downtown development patterns.

Clearly, there also is market demand to locate retail, office and job creation activities outside of the downtown area. Certain retail facilities want to locate directly on Routes 1 or 3 to take advantage of the large volume of through-traffic, some of which make brief stops at these facilities on their way to destinations beyond Belfast. Belfast believes the amount of parking it requires is consistent with industry norms. Further, the City restricts the maximum amount of parking which can be provided on a site and its standards encourage the use of shared parking. The City updated its parking standards in 20092010, and these standards can be found in its Code of Ordinances, Chapter 98, Technical Standards Article VIII. Parking and Loading Facilities).
c. How do local ordinances consider safety related to parking lot layout and circulation for vehicles, pedestrians and all other users?

Safety of vehicles and pedestrians is one of the stated purposes of the parking and loading facilities section of the Belfast Code; reference Chapter 98, Technical Standards, Article VIII, Parking and Loading Facilities. To that end, specific standards to ensure clearly defined entrances and adequate parking and space for circulation patterns are included in this ordinance provision.

d. What community investments are needed to expand or improve parking?

The City, in 2010, commissioned the development of a master plan for its downtown and waterfront area which examined realistic approaches the City could implement to increase the amount of on-street and off-street parking in this area. A recommendation of this study which has now been completed was the construction of improvements to the Cross Street/Miller Street/Spring Street area which created an additional 35 on-street parking spaces. This project was funded by a $500,000 CDBG Grant, which was matched by City funds. is now being implemented through the City’s receipt of a 2012 CDBG Downtown Revitalization Grant is to construct improvements in the Cross Street/Miller Street/Spring Street area which should result in creating an additional 40 on-street parking spaces. Also, in 2003, the City commissioned a feasibility study to examine the cost and practicality of constructing a parking deck or garage for its Beaver Street parking lot. The cost of this proposed development, however, was much too great for the amount of new parking spaces provided. The City, within the last 10 years, has increased the number of off-street parking lots in the downtown area by constructing parking facilities at Steamboat Landing, Belfast Commons and Thompson’s Wharf, about 140 parking spaces in total.

(3) Other Modes of Transportation:

a. What transit services are available to meet the current and future needs of community residents? If transit services are not adequate, how will the community address the needs?

WaldoCAP (Community Action Partners) – Waldo County Transportation provides the Downtown Area Shuttle (DASH), a limited scheduled shuttle-style bus route service around Belfast. The DASH operates Monday through Friday from 8AM to 12PM and 1PM-5PM. Fares range from $2.00 one-way to $50.00 for a monthly pass.

WaldoCAP also operates a bus route service between Belfast and shopping venues in other towns. Twice monthly trips are made from Belfast to Waterville with stops in Waldo, Brooks, Knox, Thorndike,
Unity and Burnham. Twice monthly trips are made from Belfast to Augusta with stops in Belmont, Morrill, Searsmont, Montville, Liberty and Palermo. Twice monthly trips are made from Belfast to Rockland with stops in Northport and Lincolnville. Weekly trips are made from Belfast to Bangor, with stops in Searsport, Stockton Springs, Prospect, Frankfort, and Winterport. Weekday trips are made between Belfast and Searsport. Once a week trips are made from Belfast to these communities Troy, Unity, Thorndike, Freedom, Knox, Jackson, Belmont, Brooks, Waldo, Swanville, Liberty, Morrill, Monroe, Montville, Winterport, Frankfort, Palermo, Prospect, Stockton Springs, and Searsport. Trips three times a week are made from Belfast to Lincolnville Center, Lincolnville Beach and Northport. Fares for all these trips are $3.50 or less. Within Belfast, Waldo CAP bus service operates three times a week for $1.00 fares.

Waldo CAP also offers door-to-door transportation to Belfast from all towns in Waldo County and is available for grocery shopping, personal business and medical appointments for low-income families. This service requires an application process. Waldo CAP provides transportation by bus, van or automobile for MaineCare members to medical appointments for clients that cannot arrange their own medical transportation. Medical transportation is provided by agency and or volunteer drivers.

Concord Coach (Trailways) offers daily service on their Maine Coastal Route between Orono and Logan Airport. In addition to Belfast, other key stops include Bangor, Rockland, Portland and Boston.

The frequency of scheduled bus service is not sufficient for most individuals to be able to partake on a regular basis, as would be required for commuting to work daily. The community’s relatively small total population and its dispersed location of residents and of workplaces inhibits public transportation to some extent. However, with an aging population and rising fuel costs, public transportation may become a more feasible future option. Service between the in-town area and local stores, such as Hannaford and Reny’s, may prove feasible. Strategies to address this need are presented at the end of this chapter.

b. If the community hosts a major transportation terminal, such as an airport, rail, or ferry terminal, how does it connect to other transportation systems?

The Belfast Municipal Airport (KBST) is located at the edge of the Airport access road off of Lower Congress Street near the Route 1 intersection (see the Transportation Network map). The Airport offers a range of services to charter services and private aircraft, however, there are no scheduled carriers that offer flights between Belfast and other locales. As such, the Airport is a significant facility, but it is not a critical
part of the transportation system for most residents. Information regarding the Airport is provided below.

The Airport, which is adjacent to the Belfast Airport Business Park has a paved runway 4,002 feet long and 100 feet wide, Runway 15-33. It is lighted and open 24 hours a day. Aviation fuel services are available. Tie downs are available. There are about twenty t-hangars currently at or under construction. The Fixed Base Operator (FBO) is Maine Scenic Airways. According to the FAA, in 2019 there were about 15 aircraft based on the field, and an average of 27 aircraft operations daily, of which 60% were general aviation, 20% transient general aviation, and 20% air taxi. An Airport Layout Plan Update was published in 2008 and the City is working to implement the plan and is constructing a new runway 15 partial parallel taxiway and a runway 33 bypass taxiway. was drafted in 2006 with forecasts for future usage and proposed improvements and cost estimates. The City is working to update the above plan. The 2006 plan can be accessed: http://www.cityofbelfast.org/Airport%20Layout%20Plan.shtm.

The City has made a significant number of improvements to the airport in the past 5 years, and in 2012 is starting the process to examine if the length of the runway can be increased to accommodate private jet traffic. Athenahealth, one of the City’s major employers, is particularly interested in the use of private jets, as is the Front Street Shipyards (major boatbuilder) which opened for business in 2011. Strategies from the plan recommended for implementation are presented at the end of this chapter.

c. If the community hosts any public airports, what coordination has been undertaken to ensure that required airspace is protected now and in the future? How does the community coordinate with the owner(s) of private airports?

Belfast has zoned the Belfast Municipal Airport (a municipal airport) and land around the airport as either Business Park-Airport District or Airport Growth District. Within both of these districts, aviation uses are permitted, there are structure height limitations, and residential uses are prohibited. Also, the Future Land Use Plan that has been adopted as part of this Comprehensive Plan recommends that the current Airport Growth zoning district be replaced by an Airport Overlay District which can be used to better manage uses and activities which could conflict with the airport. The land use regulations the City has established for the areas surrounding its Airport are consistent with FAA guidelines. There are no private airports in Belfast.

(4) Coastal Communities only:

a. What land-side and water-side transportation facilities are needed?
The City of Belfast has an authentic working waterfront. The waterfront supports two boat building operations (Front Street Shipyard established in 2011 and French & Webb established in the 1990’s), a tugboat operation (serves Mack Point), three private marinas, two public marinas, a cadre of small restaurant and retail operations, and three public parks (Steamboat Landing, Heritage Park, and land near the Armistice Bridge). The establishment of the Front Street Shipyard, which purchased and redeveloped the former Stinson Seafoods property in 2011, has had a transformative impact on the waterfront, including use of the Inner Harbor area. The Shipyard has the largest marine travel-lifts (165 and 400 tons) located north of Newport, Rhode Island, and by the summer of 2012 had grown to 85 employees.

Unfortunately, the amount of area which can be used for the working waterfront is very limited. There is only about 2,500 lineal feet of shore land which has the water depth to support significant marine development, and the deeper waters only occur on the westerly side of the River. This area is framed by the Armistice Bridge to the north, and the Steamboat Landing area to the south. The lack of additional land underscores the need for the City to obtain maximum beneficial use of on-shore public and private lands in this area, and to wisely use its inner harbor to support commercial fishing and working waterfront uses.

Belfast, like many smaller coastal harbors, needs float and docking facilities that can support larger private and commercial vessel operations. For example, while Belfast is now among the top 5-10 ports in Maine regarding the number of cruise ship passengers per year, the size of a cruise ship that may call on Belfast is limited by our current docking facilities. Further, more dock space is needed for transient vessels, and the Harbor Committee would like to install better quality fuel facilities. The 2013 construction of an expanded commercial fisherman’s wharf should help address the needs of a small but active commercial fishing fleet (mostly lobsters), however, more area is needed land-side to support operations of the public harbor.

The City, in 2010—2011, prepared an Inner Harbor management plan as part of its Downtown Waterfront Master Plan. This project resulted in the preparation and Council adoption of a management plan for the inner harbor area in 2012. The Shipyard has had a major impact on the use of the inner harbor because the former Stinson Seafoods site is now experiencing much larger boat traffic. The City began work to implement the new inner harbor plan in the summer of 2012, and intends to continue work in 2013—2014.

b. How does the community protect access to facilities for island travelers, currently and in the future?
There are no regularly scheduled ferry services provided from or to Belfast.

c. How do the community’s land use regulations mesh with Maine DOT, regional, and local objectives for marine transportation facilities?

The City enforces its state-approved shoreland zoning and floodplain management ordinance provisions. In 2004 the City worked with the Maine Dept Environmental Protection to overhaul its shoreland and zoning regulations for its working waterfront. The City’s regulations allow intense use of the working waterfront area; for example, 100 percent lot coverage, no setback from the high water mark and flexibility on structure height. The City regularly advises applicants to insure compliance with applicable state and federal regulations relating to development of marine transportation facilities. Further, the City has routinely worked with the Maine DOT, Maine Dept of Conservation, and Army Corps of Engineers regarding the construction of marine facilities, and to have the ACOE conduct a maintenance dredge of the Belfast Harbor channel.

(5) Environmental and Cultural Considerations:

a. What, if any, environmental degradation caused by state or local transportation facilities or operations (e.g. wildlife mortality, habitat fragmentation, erosion, groundwater contamination, non-point source pollution) is occurring?

The City is unaware of any significant environmental degradation from state or local transportation facilities or operations. If such degradation is occurring the City would work with the state and facility operators to reduce or eliminate such pollution consistent with applicable laws.

b. What are the community’s objectives for preserving or protecting important identified or designated scenic, historic, or cultural resources adjacent to transportation facilities?

Transportation projects in historically sensitive areas should be designed in a context sensitive manner that preserves the historic qualities of the areas whenever possible. Most of the City’s downtown is designated as a Historic District and a portion is designated as a Commercial Historic District. These districts are on the National Register of Historic Places. Further, the City, through its In-town Design Review Ordinance, has established a permitting process that applies to new construction, renovation of the exterior of an existing structure, or the demolition of an existing structure to ensure such development is compatible with the existing character of buildings in the surrounding area. Continuing, the Belfast Planning Board, through its Subdivision and Site Plan Ordinances, has the authority to consider “aesthetic, cultural and natural values” in its review of an application.
c. How does the community address any transportation-related noise concerns?

State law sets noise level limits for motor vehicle operation, motor vehicle engines and exhaust, and vehicle sound systems. Enforcement is the responsibility of the police. Violations are traffic infractions. Two nuisance issues which warrant additional attention are noise generated by motorcycles with no mufflers or illegal mufflers, and jake brakes associated with truck traffic.

d. What steps can the community take to encourage development to occur in a manner that minimizes transportation-related environmental impacts such as habitat fragmentation and/or vehicular CO2 emissions?

The City can and has encouraged housing development in areas close to existing public and private services, so that residents can choose to walk rather than drive, and so that public transportation with fixed-routes becomes more practical at sufficient development densities to provide adequate ridership levels. In rural portions of the City, the use of conservation subdivisions/cluster can help to preserve habitats by setting aside ecologically sensitive but developable land into permanent conservation. See the Land Use Chapter of this plan.

(5). Land Use:

a. How do existing and proposed major transportation facilities complement the community’s vision?

Aside from the WaldoCAP bus service, there are no proposed major transportation facilities in Belfast, nor are any proposed, like intermodal facilities, train stations, and such in Belfast. Improvements to bike and pedestrian pathways have been a priority of the City in recent years, as well as improvements to key Route 1 and 3 intersections. While the Gateway One project is no longer an active effort, the 2009 Plan prepared by the Gateway One Committee identifies a potential location for a park and ride lot. Existing facilities would be enhanced with development as proposed in the Land Use Chapter of this plan.

b. How do local land use plans and decisions affect safety, congestion, mobility, efficiency, and interconnectivity of the transportation system?

The City’s adopted future land use plan recommends encouraging denser residential development and more intense non-residential development in the following areas: areas located within the Route 1 by-pass, such as the downtown area; in areas immediately adjacent to the Route 1 by-pass, such as the Belfast Business Park and the area that supports Bank of America, athenahealth and most of the City’s larger retail establishments; and adjacent to Searsport Avenue (Rte 1 on eastside). These areas have existing services and are more likely to attract development.
The Belfast Planning Board, through its existing land use ordinances, particularly its site plan, subdivision plan and technical standards ordinances, must consider factors such as safety, congestion and mobility in its review and approval of a development permit. The City’s ordinance includes access management standards and the Board often uses the services of the professional traffic consultant to analyze traffic impacts.

c. **How do existing land uses and development trends support or inhibit cost effective passenger transportation systems and the efficient use of freight rail systems?**

Densities within many areas located inside the Route 1 by-pass are quite high, often 10,000 square feet for single family and two family residential units, and there are no density limits in the downtown commercial zoning district. These are sufficient densities to foster public transportation and, through the allowance of mixed uses within downtown, promote walking from home to stores and such. Unfortunately, Belfast’s relatively small population, about 6,714 persons, impedes development of a good quality public transportation system. Also, there are no freight rail lines in Belfast, and there does not appear to be any demand for rail freight. See the Land Use Chapter of this plan.

d. **Does the community have in place, or does it need to put into place, access management or traffic permitting measures? How do these measures correlate with Maine DOT’s access management program and regulations for traffic permitting of large development?**

Belfast has adopted access management standards; reference Chapter 98, Technical Standards, City Ordinances. The Belfast Planning Board applies these standards in its review of applications for a subdivision, site plan, and use permit. At present, City standards are not as strict as MDOT access management standards, however most streets to which these standards apply support different volumes and speeds of traffic than are typical of most state roads. That said, Belfast intends to review and refine its current access management standards when it pursues implementation of its future land use plan.

e. **How do the community's local road design standards support the type of village, suburban, or rural land use patterns the town wants?**

Belfast has five street design categories based upon the use and volume of a proposed roadway (Urban Lane, Rural Lane, Residential Street, Collector Street, Industrial/Commercial Street) (See Article III, Street Design Standards, Chapter 98, Technical Standards. This approach supports appropriate road design based upon the proposed use and the existing conditions of the site and the neighborhood in which the proposed street will be located. Also, the City Planning Board routinely allows minor streets, 16 feet of travel width with 2 feet paved shoulders, for lots which serve less than 7 housing units.
f. Do planned or recently built subdivision roads (residential or commercial) simply dead-end or do they allow for expansion to adjacent land and encourage the creation of a network of local streets? Where dead-ends are unavoidable, are mechanisms in place to encourage shorter dead-ends resulting in compact and efficient subdivision designs?

Belfast has experienced little to no a modest amount of subdivision development in the last 10 years. Of the few subdivisions, most approved or constructed subdivisions used a dead-end road and few provided opportunities for connection to adjacent land or encouraged the creation of a network of local streets. That said, in most such subdivisions, there was no realistic opportunity or value associated with requiring greater connectivity. In the one case in which a specific subdivision development, the 26 unit Tara Mews Subdivision on Cedar Street, which would foster the creation of a network of local streets, the Planning Board did require the construction of a through street between Cedar Street/Penobscot Terrace and Wight Street, and a sidewalk adjacent to the street. In addition, in the largest subdivision ever approved in Belfast, the proposed 147 lot Apple Tree Acres Subdivision located off of Route 3 (that ultimately was never constructed), the Planning Board required an internal road layout in which all main streets connected (loop roads), and consistent with MDOT requirements, featured only one curb cut with good quality sight distances onto Route 3, which is rated by MDOT as a mobility corridor. Further, the Board has approved rural subdivisions that used a dead-end, a cul-de-sac, in which the main road was quite short in length and a series of individual or mutually owned driveways that were connected to the cul-de-sac were used to serve the house lots.

C. Conditions and Trends (Minimum data required to address state goals)

(1) The community’s Comprehensive Planning Transportation Data Set prepared and provided to the community by the Department of Transportation, and the Office, or their designees.

This data set has been incorporated and updated in the Belfast Comprehensive Plan maps titled: Transportation Network, Transportation Network (Downtown), and Transportation Posted Speeds and Compact Urban Area.

(2) Highways, Bridges, Sidewalks, and Bicycle Routes:

a. Location and overall condition of roads, bridges, sidewalks, and bicycle facilities, including any identified deficiencies or concerns.

The Transportation network map shows the locations roads and bridges. Similar to roads owned by the State of Maine, nearly all City streets are paved, however, the sub-base for many of these roads is inadequate which leads to frequent and long-term maintenance problems. In short, such roads are usually in reasonable condition during the warmer
months, but suffer frost heaves and similar problems in the winter. The City has reconstructed several of its major streets located within the Route 1 by-pass, such as Front Street from Main Street to Pierce Street, Miller Street and Northport Avenue; however the total number of streets and rural roads which warrant reconstruction dwarf the available funds. As such, the City commits to regular maintenance of its streets.

The City also has committed significant local monies to maintaining its bridges. In 2006, the City completed reconstruction of the Belfast Footbridge, which was the original MDOT Rte 1 bridge, at a cost of nearly $3.6 million. In 2009, the City reconstructed the culvert bridge on Oak Hill Road, and it also regularly replaces culverts.

Lastly, see B. 8, above, for recommended pedestrian improvements to address safety concerns. Sidewalks are located along many of the roads within the downtown and area within the Rte 1 by-pass.

b. Identify potential off-road connections that would provide bicycle and pedestrian connections to neighborhoods, schools, waterfronts and other activity centers.

The City has undertaken several in the last 5+ years to examine how to achieve better connectivity through-out the City. In 2006, the City completed reconstruction of the Belfast Footbridge across the Passagassawakeag River. In 2012–2013 the City will solicit bids for construction of the Belfast Harbor Walk project along .75 mile of its working waterfront with a total cost of about $1.8 million. In 2009–2010, the City used MDOT monies to construct pedestrian crossing improvements at the Rte 1/Rte 52 and Rte 1/Rte 141 intersections, and plans to make additional improvements at Rte 1/Rte 141 in 2013. In 2016 the City completed construction of the Rail Trail, a 2.2 mile multi-use path within the rail corridor, that runs along the upper stretches of the Passagassawakeag River.

Continuing, the City Council, in 2009, established a Pedestrian, Biking and Hiking Committee, and their recommendations are included in this Chapter. The Council also charged the City Parks and Recreation Committee with identifying options for preservation and development of the City’s range-ways, most of which provide public access to the coast. The City has begun implementing a range-way management plan which has included public art installations and pedestrian-way identifiers to preserve the use of these coastal access points.

Further, the City has focused on connectivity both in-town and regionally, connecting pedestrians to recreation, cultural, and scenic routes within the City in addition to connecting the local trails to neighboring trail systems and communities. Museum in the Streets is an example of a local program developed and implemented by the Belfast
Historical Preservation Society that connects recreation with cultural and educational programs. A few examples of regional connectivity of trails include:

Further, the Vision for Pedestrian, Biking, and Hiking Mobility in Belfast (2008), produced by the Belfast Bay Watershed Coalition and Belfast Trails Committee, identified bicycle-pedestrian connection and recommendations to improve connections. These include:

In-Town Trails

These are “trails” that offer recreational, cultural, and scenic walking routes within the City, connect significant destinations, or allow public access to the shore. Some examples are listed here; others may be identified. These trails contribute to Belfast’s vibrancy, and should be promoted in tourism guides.

1. Rangeways (Public rights of way to the shore).
   Recommendation: Review the status of all City Rangeways and ensure that public access to the shore via the existing rights of way is maintained. It is noted that this was done by the Parks & Recreation Committee.

2. Harbor Walk—scheduled for construction in 2013—

3. The Muck / Kirby Lake Nature Trail (Grove Cemetery to the Muck and beyond)
   Recommendation: develop concept with input from the City, design interpretive signs, landowner negotiations. No work on this trail to date.

4. Museum in the Streets. This is an existing program in the downtown area which was developed and implemented by the Belfast Historical Preservation Society.

Connecting trails

This section describes trails (either existing or envisioned) that connect the City of Belfast with other trail systems, other communities, or other destinations outside the immediate City. We envision initiative, funding and maintenance for these trails to come from other organizations, such as the BBWC, Coastal Mountains Land Trust. Support from the City would be in the form of cooperation in planning, letters of support for funding, and acknowledgment of the value trails bring to the community.

1. Rail Trail to City Point Bridge
   Recommendation: City purchased the railroad right of way in 2010 and in 2012–2013 is preparing a feasibility for this trail.
2. Little River Community Trail and Outer Greenway Trail (Belfast River Water District to Stover Preserve via Little River Community Trail, Troy Howard, and the Hutchinson Center)

   Recommendation: This trail would form a ring around Belfast, from the Little River Water District to the Stover Preserve on the Passy River at Doak Rd. Endorse BBWC efforts to develop this trail, support access to trail heads and development of safe parking options.

3. East Coast Greenway, an interurban pedestrian and bicycle route connecting the entire East Coast, from Florida to Maine and the Maritimes

   Recommendation: Continue collaboration and cooperation with this initiative.

4. Maine Birding Trail: Belfast is part of the Maine Birding Trail (see mainebirdingtrail.com)

   Recommendation: Continue collaboration and cooperation with this initiative.

5. Inter-town trail connectors for hiking and skiing
   a) Moose Point State Park and Searsport
   b) Frye Mountain
   c) Durham State Forest & Northport
   d) Hurds Pond

6. Passagassawaukeag Canoe Trail and Goose River Canoe Trail

c. Identify major traffic (including pedestrian) generators, such as schools, large businesses, public gathering areas/activities, etc. and related hours of their operations.

<table>
<thead>
<tr>
<th>Major Traffic Generators</th>
<th>Hours of Operation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waldo County General Hospital</td>
<td>24 hours per day</td>
</tr>
<tr>
<td>Bank of America/Athena Health Care</td>
<td>7 AM – 6 PM</td>
</tr>
<tr>
<td>High School</td>
<td>7 AM – 2 PM</td>
</tr>
<tr>
<td>Middle School</td>
<td>7 AM – 3 PM</td>
</tr>
<tr>
<td>Elementary Schools</td>
<td>7 AM – 3 PM</td>
</tr>
</tbody>
</table>

In addition to traffic associated with the above schools and employers, there are a number of public events that occur mostly in the summer that result in additional congestion. Further, overall summer traffic is much heavier than winter traffic.
d. *Identify policies and standards for the design, construction and maintenance of public and private roads. Identify the location of private roads and assess their potential to become public roads.*

The City has an adopted standard which it uses to determine if a newly constructed street can become a City owned road. This standard is consistent with good quality road construction standards and includes standards such as but not limited to: 18 inches of road base, 4 inches of asphalt, 20 feet of travel width with 3 feet gravel shoulders and such. In the last 15 years, the City has accepted only 1 newly constructed road as a City street, however, 4 additional roads are under construction which the City Council has agreed to accept provided all construction complies with City requirements. Unfortunately, most current City roads were constructed prior to the adoption of the above standards and most do not satisfy current requirements. The City regularly maintains all City streets, including any accompanying stormwater and sidewalk improvements.

There are about 150 privately owned roads in Belfast. Many of the roads are unpaved, less than 500 feet in length and serve only 3 – 6 houses. Other private roads, however, are paved and serve a significant number of residences. For example the streets in the Crosby Manor Estates project will ultimately serve about 60 units, the Tara Mews Subdivision about 26 units, and the Oceans East Housing Project about 38 units. Some of these roads are associated with major condominium or affordable housing projects, while others, such as Bowling Green Lane and Birch Street serve single family residential subdivisions. In most larger and recent developments, the City required establishment of a homeowners association to maintain the private road. For a sizable number of the private roads that serve smaller projects, which often were initially developed through the exempt division of property provision, there is no homeowners association, which can lead to poor road maintenance and problems for emergency vehicles to reach all residences.

In the case of most private roads, there is little likelihood that the adjacent homeowners could successfully request that the City accept the road unless they made significant and costly improvements at their expense to satisfy City road acceptance standards. In recent years, several neighborhood associations have proposed that the City accept their street in its current condition, however, the Council refused to do such because the road was substandard.

It is noted that the City Assessor’s office maintains a current list of all public and private roads in Belfast.
(3). Parking:
   a. List and locate municipal parking areas including size, condition, and usage.

<table>
<thead>
<tr>
<th>Municipal Parking Lots Name/Location</th>
<th>Spaces</th>
<th>Condition</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Washington St @ 95 paved</td>
<td></td>
<td>Fair</td>
<td>Heavy</td>
</tr>
<tr>
<td>Front St (Railroad) lot Thompsons Wharf @ 96 Paved</td>
<td>Excellent</td>
<td>Minimal/Seasonal</td>
<td></td>
</tr>
<tr>
<td>Cross St @ 28 Paved</td>
<td></td>
<td>Fair</td>
<td>Moderate</td>
</tr>
<tr>
<td>Beaver St @ 60 Paved</td>
<td></td>
<td>Good</td>
<td>Heavy</td>
</tr>
<tr>
<td>Steamboat Landing (2 areas) @ 45 Paved</td>
<td>Good</td>
<td>Moderate</td>
<td></td>
</tr>
<tr>
<td>Belfast Commons @ 16 Paved</td>
<td></td>
<td>Excellent</td>
<td>Moderate</td>
</tr>
<tr>
<td>Belfast Harbor @ 40 Paved</td>
<td></td>
<td>Good</td>
<td>Heavy/Seasonal</td>
</tr>
<tr>
<td>Thompsons Wharf @ 15 Gravel</td>
<td></td>
<td>Fair</td>
<td>Heavy/Seasonal</td>
</tr>
</tbody>
</table>

(4). Other Modes of Transportation:
   a. List and locate all airports within or adjacent to the community and describe applicable airport zoning and airspace protection ordinances in place.

   See B.3.b. above.

   b. Identify inter-local, fixed route, commuter, and demand response bus or van services, including private or public operator information and local government involvement.

   See B.3.a. above.

(5). Coastal Communities:
   a. Location of current and potential seaport terminals. Identify whether seaport terminal is of local, regional, or state significance, its ownership/management and use (type and quantity/frequency of goods shipped in or out). List land-side and water-side facilities associated with port.

   There are no current or potential seaport terminals in Belfast.

   b. Identify public ferry service and private boat transportation support facilities including related water-side (docks/piers/wharves) and land-side (parking) facilities.
There are no current or potential public ferry services in Belfast. Two small cruise ship lines, however, now call on Belfast during the summer months, and there is some interest from larger cruise ship lines. In addition, there are boat charter rentals in Belfast, including sailing and motorized tour boats that regularly provide excursion tours during the summer months.

(6). Environmental and Cultural Considerations:

a. Location of evacuation routes identified in an emergency response plan, if applicable.

Route 3 is identified as an evacuation routes in the FEMA-approved Waldo County Hazard Mitigation Plan. Route 3 would serve as the principal evacuation route inland, while Route 1 would serve as the south or northeast evacuation route.

b. Identify areas with transportation related noise concerns.

Some residents have approached the City Council within the last 5+ years to express concern regarding the amount of noise generated by Jake brake operations with truck traffic on Searsport Avenue. Further, concern has been raised about tractor trailer truck operations associated with the Penobscot McCrum processing operations along Front Street near the downtown. Much of this latter concern involves ‗reefer‘ operations. An additional concern is noise associated with motorcycles that operate without any muffler or an illegal muffler.

c. Identify areas where inappropriate lighting affects transportation safety.

An area identified in the Route 1 Safety Audit that MDOT conducted with City representatives in 2006 was the Route 1/Route 137 exchange. The concern was inadequate lighting. Concern also has been raised regarding inadequate lighting for both pedestrians and motorists on Starrett Drive, and in 2010, the lack of lighting on part of Front Street has been raised as a concern. Lack of lighting on Front Street was addressed during the reconstruction of Front Street. Belfast has a policy of not installing street lights on most rural roads, except at intersections where streets connect. Belfast has gained control of street lighting throughout the City. Led lights have been installed to increase energy efficiency and cost savings. May need to conduct an inventory of existing lighting to better identify areas in which additional street lighting may be needed, and areas in which a different type of lighting, particularly more energy efficient lighting may be warranted.

2. Identify and describe scenic, historic, or cultural resources within or adjacent to transportation facilities that the community wants to protect,
such as street trees, covered bridges, etc.

Belfast’s downtown has significant historic resources, as reflected in the designation on the National Register of Historic Places; see the map titled Belfast Historic District/Belfast Commercial Historic District. Accordingly, transportation infrastructure improvements in this area including sidewalk treatments and street lighting, among other investments, should be in keeping with the historic character of the downtown.

3. Known locations with opportunities to restore habitat connections disrupted by a transportation facility owned and maintained by the community.

The City is unaware of any City road which has had a major impact on disrupting a significant wildlife habitat area as identified on the IF&W habitat maps. Most identified habitat areas in Belfast are located in areas in which there are no publicly owned roads. One potential area is near the intersection of Smart Road and Achorn Road which is identified as waterfowl habitat, however this is a minor road crossing. The City’s main approach will be to ensure that new road construction, both public and private, considers habitat related concerns.

(7). Land Use:

a. Identify current local land use management strategies (such as access management, zoning, density, and minimum lot size standards) that enhance or detract from the safety and efficiency of the transportation system (including highway, air, bus, bike, pedestrian, marine, and rail services.)

The City has addressed this concern in its response to other issues in this plan. Overall the City would note the following:

The City Future Land Use Plan encourages denser residential development and more intense non-residential development in areas in which public services are located. The Future Land Use Plan also encourages mixed used development in many of these areas.

The Future Land Use Plan, particularly in areas located within the Route 1 by-pass, typically allows minimum lot size requirements of 10,000 square feet with 60 feet of street frontage for single family and two family houses. In addition, in areas in which multi-family housing it to be allowed, density can approach 15 or so units per acre, and the City does not apply density standards to elderly housing and congregate care facilities.

The City has adopted Subdivision, Site Plan, Zoning, Shoreland, Floodplain, Technical Standard and Building Regulation Ordinances to assist in managing impacts associated with new development or the
redevelopment of existing sites. The City also employs professional staff to assist the Planning Board in the administration of these Ordinances. Belfast notes that it adopted its first Zoning Ordinance in 1934, and that it is accustomed to performing reviews of minor and major development projects. The City’s standards clearly address transportation and traffic concerns, as well as requiring sidewalks and bicycle facilities when appropriate.

The City Future Land Use Plan lays out how the City intends to address future development in Belfast.

D. Policies

(1). To prioritize community and regional needs associated with safe, efficient, and optimal use of transportation systems.

(2). To safely and efficiently preserve or improve the transportation system.

(3). To promote public health, protect natural and cultural resources, and enhance livability by managing land use in ways that maximize the efficiency of the transportation system and minimize increases in vehicle miles traveled.

(4). To meet the diverse transportation needs of residents (including children, the elderly and disabled) and through travelers by providing a safe, efficient, and adequate transportation network for all types of users (motor vehicles, pedestrians, bicyclists).

(5). To promote fiscal prudence by maximizing the efficiency of the state or state-aid highway network.

E. Strategies

(1). Capital Improvements Plan. Develop or continue to update a prioritized five year improvement, maintenance, and repair plan for local/regional transportation system facilities that reflects community, regional, and state objectives.

Prepare and update a multi-year road improvement program to include maintenance, upgrading and rebuilding priorities by year, as well as costs for these projects, for all roads.

(2). Gateway One. The City was an active participant in the Gateway One Planning project. MDOT, however, defunded this project in 2010 which adversely affected the implementation of its recommendations, particularly on a region wide scale. The City, however, will examine recommendations identified in the Gateway 1

Comment [SD13]: Review with Noel
Corridor Action Plan (2009) and determine if implementing such recommendations may benefit Belfast.

(3). Belfast Safety Audit. The City should examine recommendations in the Belfast Safety Audit conducted jointly with MDOT and FHA (Federal Highway Administration) staff in 2006 and identify recommendations that it wants to pursue implementing. The City also will examine recommendations in the 2012 Safety Audit for the Route 1 and Route 141 intersection and seek to implement desired improvements.

(4). Ordinance Amendments. Enact or amend local ordinances as appropriate to address or avoid conflicts with:
   a. Policy objectives of the Sensible Transportation Policy Act (23 MRSA §73).
   b. State access management regulations pursuant to 23 MRSA §704. The intent is to maintain and improve traffic flows, and improve safety. In most cases, future land use ordinance provisions should be in harmony with access management performance standards set in current state regulations for state and state aid roadways.
   c. State traffic permitting regulations for large developments pursuant to 23 MRSA §704-A.

(5). Ordinance Amendments. Enact or amend ordinance standards for subdivisions and site plans and for public and private roads, as appropriate, to foster transportation-efficient growth patterns and provide for future street and transit connections. Further, the Belfast Planning Board, in its review of development applications, shall consider how such projects affect future street and transit connections.

(6). Traffic Speeds. The City should work cooperatively with MDOT to address citizen concerns regarding the speed of traffic in the community. Concerns include but are not limited to:
   • Examining the desirability of establishing greater consistency in the traffic speed limits posted for Route 1, particularly from the jug handle to Rte 141.
   • Examining the desirability of reducing current posted speed limits for rural roads, recognizing the condition and lay-out of the road, the amount of development on the road and its use.

(7). Agency Interaction. Work with the Maine DOT, as appropriate, to address deficiencies in the system or conflicts between local, regional, and state priorities for the local transportation system.

(8). Elderly and Disabled Transit Options: Work with Waldo Community Action Partners – Waldo County Transportation Office and other providers to better meet the needs of elderly and disabled residents,
who lack their own transportation, by providing carpools, van/jitney, to stores and services in Belfast and other communities.

(9). Pedestrians and Bicycles: The City will welcome opportunities to promote pedestrian and bicycle safe options by creating walking and bicycling paths. Through public participation the City will prioritize potential projects, and then seek CDBG infrastructure funds, Maine DOT Enhancement funds, and other sources in combination with City funds to connect and extend existing paths and create new paths where best suited, and in agreement with landowners. Public support for these project proposals will be obtained before the City commits resources. Also, include sidewalk repairs and maintenance in the proposed Five Year Capital Improvements Program.

(10). Pedestrians and Bicycles: Maintain a Pedestrian, Biking and Hiking Committee as recommended in the Vision for Pedestrian, Biking, and Hiking Mobility in Belfast (2008) report, This group will continue to:

- Further refine this vision and clarify priority projects
- Identify specific information needs (e.g. research sidewalk conditions, intersection use, bicycle route use, disability access needs, etc.)
- Coordinate a way for students (through Service Learning) or other volunteers (BBWC members, Senior College, or interested individuals) to research that information.
- Publicize the work of the committee and recruit interested individuals to help with specific mobility projects.
- Work with the City to implement simple, immediate low-cost improvements, such as setting out crossing cones for a longer season.
- The Mobility Committee would be the primary “engine” for implementing a mobility vision for the City. It would work with the City Council to ensure that the vision is implemented in a coordinated way, that decisions are based on good information, and that the vision evolves as needed.
- Identify factors that enhance or detract from the pedestrian’s or bicyclist’s experience, such as excessive noise, and identify approaches the City could implement to address these concerns.

(11). Airport: Continue to work with the Maine Department of Transportation Air Transportation Division to ensure that Federal and State funds continue to be made available to the City for the maintenance and improvement of the airport, in accordance with the State’s Airport Systems Plan and the City’s Airport Master Plan. Further, examine the desirability of extending the length of the
current runway to support jet traffic that will benefit area employers.

12. Parking: Investigate the desirability of establishing a Capital Reserve Account for purchasing and developing additional parking facilities and if warranted, providing for yearly contributions to the fund in the Capital Improvements Program. A priority area is additional parking at or near the waterfront.

13. Parking. City should examine opportunities to create joint use parking arrangements with the owners of private parking lots for the purpose of benefiting the public by making additional parking available. Although there were limited opportunities for such arrangements in the past decade, the need for such may increase as growth occurs in the downtown and waterfront area.

14. Impact Fee: Investigate, and if warranted, implement an impact fee system that applies to all new development that affects traffic use of the City’s major road corridors to assist in providing funds to upgrade these roads. That said, current levels of development likely would result in limited funds being generated by a City-wide or area-wide traffic impact fee system. This is likely a longer-term approach to consider.

15. Noise Abatement. It is recognized that excessive vehicle noise is a violation of the law and that this form of pollution is both a public safety and quality of life issue. Vehicular noise from motorcycles and vehicles with illegally modified exhaust systems can cause exaggerated startle responses and reactions that can lead to accidents, hypertension, ear damage, anxiety and similar disorders; and always irritation, disturbances and fright in both people and pets. Such noise can also damage tourism. It is recommended that the Belfast Police Department change from passive enforcement (police enforce following receipt of a specific complaint) to proactive enforcement (police initiate enforcement upon witnessing excessive noise emission).

16. Capital Project. MDOT, in cooperation with the City, should examine the feasibility of installing a ‘diverging diamond’ interchange as a potential option to address current and future traffic volumes and safety at the Route 1 and Route 3 intersection. (Note – a ‘diverging diamond’ is a specific type of intersection configuration that has been used in Europe and is now being constructed in several states, including but not limited to Springfield, Missouri, Alcoa, Tennessee, and Utah County, Utah, and is being considered by transportation officials in 20 additional states.)
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LEGEND

CSL_Overall_Service_Public_3

A
B
C
D
F
LOS A representing the best operating conditions and LOS F the worst. LOS E includes speed, travel times, freedom to travel and is the worst measure of these factors. There are six levels of service, generalization guidelines from A to F, with A representing the best operating conditions and F the worst. Level of Service (LOS) is a qualitative measure that characterizes operational conditions within a facility and includes factors such as travel time, blocked intersections and waiting times. However, in cases of C or D, usually seen in the maximum acceptable levels.

Transportation Network

Map prepared by Eastern Maine Development Corporation

Sources: MDOT and MEGUS

Map revised: January, 2010

LEGEND

Private/Undeveloped roads
Railroad
Perennial streams
Bridge

TRAFFIC VOLUMES - LEVEL OF SERVICE (LOS)

LOS A  LOS B  LOS C  LOS D  LOS E  LOS F

Factored Annual Average Daily Traffic in 2007
Percent change since 2001

SAFETY - HIGH CRASH LOCATIONS

HCL Pairs (Nodes from 2003 - 2007)

HCLA have 8 or more accidents within 3 years.
Level of Service (LOS) is a qualitative measure that characterizes operational conditions within a traffic stream and includes speed, travel times, freedom to maneuver, traffic interruptions, and the perceptions of motorists and passengers. There are six levels of service, given letter designations from A to F, with LOS A representing the best operating conditions and LOS F the worst. LOS E is defined as the maximum flow or capacity of a system. For most purposes, however, a level of C or D is usually used as the maximum acceptable volume.