

I – INTRODUCTION

This chapter discusses near term and long term railroad operational considerations and how they may influence what level of improvements are necessary, summarizes the cost estimates for the necessary improvements and suggests additional infrastructure improvements in the future if rail traffic to and from Washington County were to grow such that trains longer than about 1,200 feet are operated.

II- RAIL OPERATOR CONSIDERATIONS

The MEDOT will need to negotiate an operating agreement to provide rail service to the proposed trans-load facility on its corridor. The current rail operations to and from Washington County are unique in that the current operator, Pan Am Railway, operates the 11 miles of active track in Washington County as an isolated operation from the rest of their railroad. To reach the balance of their system, the New Brunswick Southern/Eastern Maine Railroad moves the rail cars over 99.75 miles of their railroad from St. Stephen, New Brunswick north to McAdam and then west to Mattawamkeag, Maine. This is a less than ideal situation for a number of reasons as it requires three trains, three operating crews and two physical interchanges. This results in higher transportation costs by adding another rail carrier to the move and adds considerable transit time in and out of Washington County. This time issue is further exacerbated by the unwieldy track arrangement between Calais and St. Stephen.

These issues will need to be considered along with the numerous rail operator scenarios that could be utilized to service the port of Eastport trans-load facility.

III. – OPERATIONAL CONSIDERATIONS IN DETERMINING LEVEL OF UPGRADES.

There are two primary considerations in determining the appropriate level track upgrading.

- Whether cars of a maximum gross weight of 263,000 lbs or 286,000 lbs are to be operated.
- Operating time and crew cost determination of Class 1 track (10 MPH) versus Class 2 track (25 MPH).

The first consideration is to consider upgrading the rail line to 286,000 lb cars. It is important to understand the capacity of the adjacent connecting rail lines as part of this decision process. Based on recent media announcements, C\$36M will be invested in the next several years on the New Brunswick Southern rail lines including the lines from St. Stephen to McAdam to the Maine state line in Vanceboro. HNTB has made several attempts to contact New Brunswick Southern to confirm the rail line capacities and clearances but has been unsuccessful in making contact.

There is no question that operation of 286,000 lb cars on the existing 85 lb rail is not possible. A rail section of least 100 lbs would be necessary. Since the cost of No. 1 relay 100 lb rail delivered to Maine currently is approximately \$950 per ton (\$32 per track foot) versus new 115 lb rail at \$1,250 per ton (\$48 per track foot), it is strongly recommended that new 80 foot, 115 lb rail be considered if the 286K cars are to be operated. That option would also result in less rail joints than the 39 foot pieces of older 100 lb rail.

The other consideration is the time it would take for a single rail operating crew to switch the Woodland Mill, run to St. Croix Junction and Cambells sidings, then down to Perry, switch the transload, back to Calais, make the interchange with the New Brunswick Southern and back to Woodland to tie up. At Class 1 freight operating speeds of 10 MPH for freight, this would not be possible with a single crew within the current, federally mandated maximum of 12 hours on duty. It would be possible with Class 2 conditions allowing for 25 MPH operation. It is especially critical to achieve 25 MPH on the 18 miles or so between St. Croix Junction and the trans-load facility at Perry, and somewhat less so for the 8 miles between St. Croix Junction to Woodland due to the shorter distance.

Another possibility is if 286K is initiated to Perry but not to Woodland, the 85 lb rail removed on the MEDOT track between Ayers Junction and St. Croix Junction could be given to Pan Am Railway to replace the 4.1 track miles of 75 lb rail in the Canadian segment of the line to Woodland.

Adding still more variability is the need to segregate work in Canada from work in the United States since it is presumed that Federal stimulus funds cannot be used in Canada.

IV. DEVELOPMENT OF COSTS FOR VARIOUS OPTIONS

Based on the forgoing discussion and the cost estimates from Chapter 7, a number of potential options are summarized on the following page. For all options we have assumed that the smaller, Phase 1 transload in Perry as defined in Chapter 3 would be constructed and on the site identified as Site 4, the wooded upland west of Route 1. That site also has a significant cost savings over the other three sites due to the fact that less railroad, grade crossings and bridge costs are realized as the rail distance to Ayer Junction is less to Site 4 than the other sites (up to \$4,500,000 less versus Site 1). Site 4 also appears to have less permitting issues and potential for project delays.

Although not recommended, we are summarizing the cost to upgrade to only Class 1 condition with 263K cars only as the first option following.

COST OPTION 1 - CLASS 1, NO 286K CARS

Pan Am Track - USA only	\$3,536,723
MEDOT Track to Ayers Junction	\$4,147,088
Ayers Jct. to Site 4 in Perry w/100lb Rail	\$10,799,951
Sub-Total Track and Bridges	\$18,483,762
Phase 1 Perry Transload	\$9,882,000
Sub-Total Construction Cost	\$28,365,762
Contingency - 10%	\$2,836,576
Engineering - Design & Permitting	\$3,744,281
Construction Management	\$1,872,140
Property Acquisition	\$420,000
Reach Stacker for Transload Facility	\$560,000
TOTAL ESTIMATED COST	\$37,798,758
An Additional Amount for Track in Canada	\$3,517,693

COST OPTION 2 - CLASS 2, NO 286K CARS

Pan Am Track - USA only	\$4,010,821
MEDOT Track to Ayers Junction	\$4,918,948
Ayers Jct. to Site 4 in Perry w/100lb Rail	\$10,799,951
Sub-Total Track and Bridges	\$19,729,720
Phase 1 Perry Transload	\$9,882,000
Sub-Total Construction Cost	\$29,611,720
Contingency - 10%	\$2,961,172
Engineering - Design & Permitting	\$3,908,747
Construction Management	\$1,954,374
Property Acquisition	\$420,000
Reach Stacker for Transload Facility	\$560,000
TOTAL ESTIMATED COST	\$39,416,013
An Additional Amount for Track in Canada	\$3,731,119

COST OPTION 3 - CLASS 2, WITH 286K CARS ALL TRACK

Pan Am Track - USA only	\$8,049,952
MEDOT Track to Ayers Junction	\$14,108,375
Ayers Jct. to Site 4 in Perry w/115lb Rail	\$11,668,110
Sub-Total Track and Bridges	\$33,826,437
Phase 1 Perry Transload	\$9,882,000
Sub-Total Construction Cost	\$43,708,437
Contingency - 10%	\$4,370,844
Engineering - Design & Permitting	\$5,769,514
Construction Management	\$2,884,757
Property Acquisition	\$420,000
Reach Stacker for Transload Facility	\$560,000
TOTAL ESTIMATED COST	\$57,713,551
An Additional Amount for Track in Canada	\$6,478,700

**COST OPTION 4 - CLASS 2, WITH 286K CARS TO PERRY,
DONATE RAIL TO PAN AM - NO 286K TO WOODLAND**

Pan Am Track - St. Croix Jct. to Milltown Jct. only	\$4,383,200
MEDOT Track to Ayers Junction	\$14,108,375
Ayers Jct. to Site 4 in Perry w/115lb Rail	\$11,668,110
Sub-Total Track and Bridges	\$30,159,685
Phase 1 Perry Transload	\$9,882,000
Sub-Total Construction Cost	\$40,041,685
Contingency - 10%	\$4,004,168
Engineering - Design & Permitting	\$5,285,502
Construction Management	\$2,642,751
Property Acquisition	\$420,000
Reach Stacker for Transload Facility	\$560,000
TOTAL ESTIMATED COST	\$52,954,107
An Additional Amount for Track in Canada	\$6,478,700

Note that the cost of upgrades to the 5.12 miles of the segment between St. Croix Junction in Baring to Woodland that lies within in Canada is carried below the Total Estimated Cost.

Class 1 allows operation of freight trains at no more than 10 MPH.

Class 2 allows operation of freight trains at no more than 25 MPH

Due to the relatively small cost differential between Class 1 and Class 2 with 263K cars and the significant operating cost penalty due to the 10 MPH speed versus 25 MPH, Option 1 should not be considered. The increased cost to allow 286K cars as depicted in Options 3 and 4 is significant. Essentially an all new track structure is required. Some savings may be realized if the existing Pan Am line between St. Croix Junction to Woodland is not upgraded to 286K (Option 4).

III – FUTURE INFRASTRUCTURE IMPROVEMENTS

The track layout of the present connection between Pan Am Railway at Calais and the New Brunswick Southern at Milltown – St. Stephen does not allow a head-on or progressive train movement from Washington County to McAdam. The physical restriction is that the 4.7 mile long Milltown Spur of the New Brunswick Southern connects in the wrong direction at both of its ends. At Milltown the spur connects in the direction towards the end of the Pan Am Line in Calais and at the opposite end in St. Stephen, it connects in a direction towards a dead end in St. Stephen rather than towards McAdam. The result of this unfortunate track arrangement is that the inward New Brunswick Southern train from McAdam pulls clear to the switch to the spur and then must back up to the 4.7 miles to the Pan Am railway. That also limits the length of train that can be moved at one time to the limited length of tail track exists at both ends in St. Stephen and Calais. If rail traffic increases or if a more efficient, timely and cost effective rail service to and from Washington County is to be realized, this major operational issue must be rectified.

A back-up move is also required exiting Calais so that the train is facing the in proper direction to move north to McAdam.

The solution requires two new short segments of railroad as follows (See Figure 2-1):

- Abandon the present rail bridge over the St. Croix River at Milltown and construct a new bridge upstream, oriented so that a direct move can be made from Pan Am to the New Brunswick Southern Milltown Spur. Physically this is totally feasible and eliminates over 1 mile of the Pan Am line in Calais including very sharp curves that exist north of the new bridge, including the sharp curve at Bridge Street and the grade crossing at that location.
- In New Brunswick, construct about 1,500 feet of new track where the Milltown Spur connects to the line north to McAdam. That track would replace the present connection in the wrong direction back towards St. Stephen.

An order of magnitude estimate of the construction cost of these improvements would be in the range of \$6 – 8 million and may require up to 2 years to permit, especially the new river crossing of the international boundary.

These improvements are necessary for significant increased rail traffic and will result in lower operating costs and transit times.

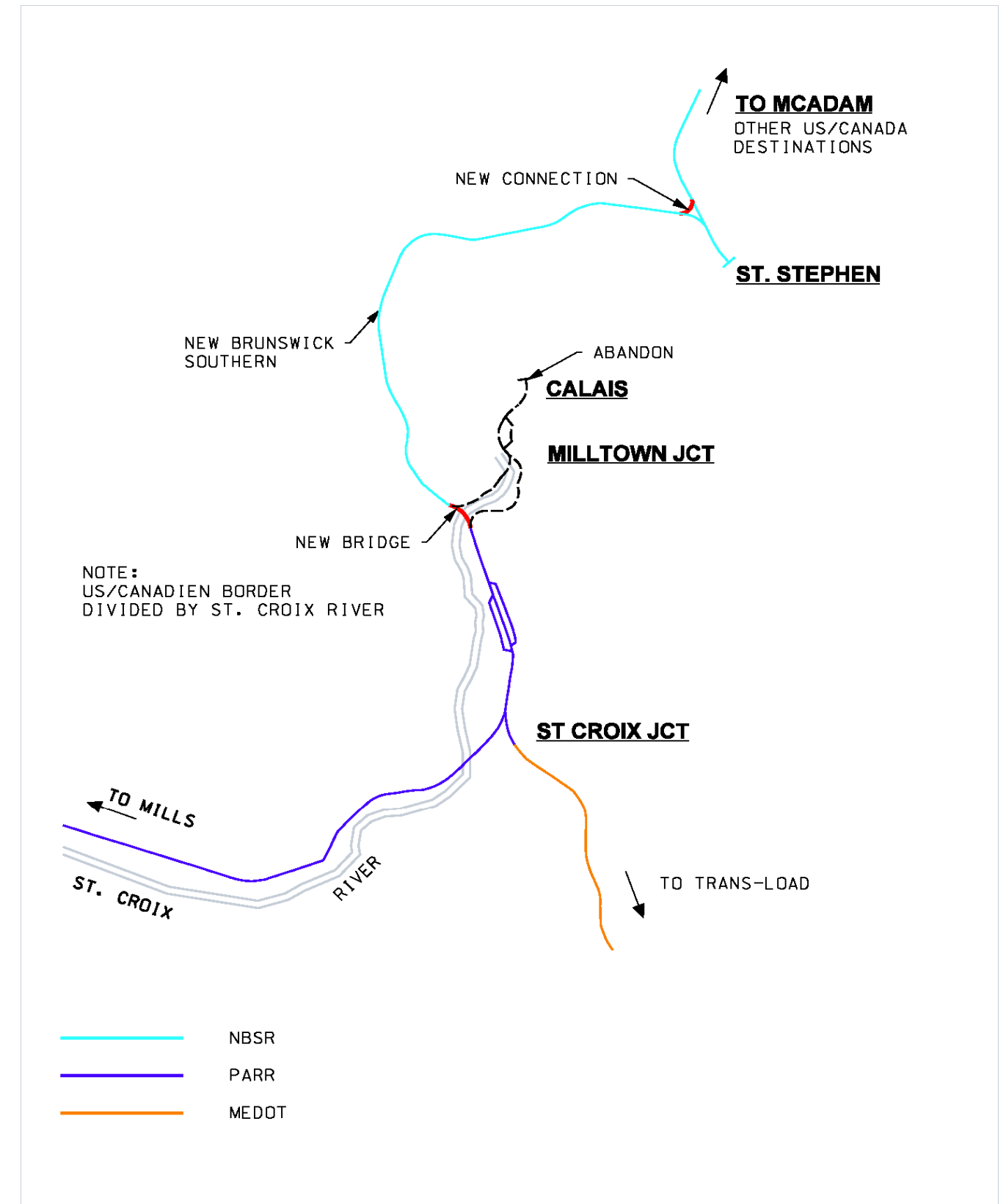


Figure 2-1

THIS PAGE INTENTIONALLY LEFT BLANK