

Excerpts from the General Turnpike Revenue Bond Resolution of the  
Maine Turnpike Authority

SECTION 101. Definitions.

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"Traffic Consultant" shall mean an independent traffic consultant of nationally recognized standing or a firm or corporation of independent traffic consultants of nationally recognized standing selected by the Authority and appointed pursuant to a resolution of the Authority and having a favorable reputation for skill and experience in traffic engineering or consulting matters relating to facilities comparable in scope and character to the Turnpike.

\* \* \* \* \*

**SECTION 501. The Pledges Effected by this Resolution.** (a) There are hereby pledged for the payment of the Bonds, in accordance with their terms and the provisions of this Resolution, subject only to the provisions of this Resolution permitting the application thereof for or to the purposes and on the terms and conditions herein and therein set forth including, without limitation, this Article V, Section 905 and Section 1005 hereof: (i) all Revenues; (ii) all moneys and securities in any of the Funds, Accounts and Subaccounts (except the Rebate Fund, the Subordinated Debt Service Fund and the Subordinated Debt Service Reserve Fund) together with the investment income therefrom except to the extent such income is required to be deposited in the Rebate Fund pursuant to a Supplemental Resolution; and (iii) all other moneys and securities to be received, held or set aside by the Authority or by any Fiduciary pursuant to this Resolution (except Subordinated Bond proceeds). It is the intention of the Authority that, to the fullest extent permitted by law, this pledge shall be valid and binding from the time when it is made, that the Revenues, moneys, securities and other funds so pledged and then or thereafter received by the Authority shall immediately be subject to the lien of such pledge and shall be valid and binding as against all parties having claims of any kind in tort, contract or otherwise against the Authority, irrespective of whether such parties have notice thereof. The Authority hereby confirms its pledge to the Surety Bond Provider of the Pledged Collateral, which pledge shall be subordinated to the pledge granted to the Bonds.

\* \* \* \* \*

**SECTION 706. No Impairment of Bondholders' Rights under Resolution.** The Authority covenants and agrees that none of the Revenues will be used for any purpose other than as provided in this Resolution and no contract or contracts will be entered into or any other action taken by which the rights of the Trustee or of the Bondholders might be impaired or diminished. The Authority further covenants that it will, from time to time, execute and deliver such further instruments and take such further action as may be required to carry out the purposes of this Resolution.

\* \* \* \* \*

**SECTION 802. Toll Schedules and Revisions.** (a) The Authority covenants that tolls will be classified in a reasonable way to cover all traffic, so that the tolls may be uniform in application to all traffic falling within any reasonable class regardless of the status or character of any Person included in the traffic, that no reduced rate of toll will be allowed within any such class except through the use of commuter passes or other privileges based upon frequency or volume, and that, except as provided in (b) below or as may be required from time to time on a temporary basis for the safe and efficient operation of the Turnpike, no free vehicular passage will be permitted over the Turnpike, or any portion thereof, except to members, officers and employees of the Authority and of the Department of Transportation and the state police of the State while in the discharge of their official duties and except to employees of independent contractors while in the performance of their duties for which the Authority has contracted and to emergency vehicles authorized by the Authority while performing emergency services on the Turnpike; provided, however, that the Turnpike may be used at any and all times by the armed forces of the United States, the State and any of their allies for defense purposes or

preparations therefor free of all tolls and charges, but any structural damage to the Turnpike created by such free use, ordinary deterioration or depreciation excepted, shall be compensated for at cost of repair or replacement.

(b) The Authority covenants that it will continue in effect the present schedule of tolls for traffic over the Turnpike until such schedule shall be revised as hereinafter provided and that, except as hereinafter provided in this Section, it will not authorize or permit a reduction or reclassification in toll rates or any modification (except for the conversion of the north end of the Turnpike to a closed barrier system) to the toll collection system in effect as of the effective date of this Resolution unless the Authorized Official furnishes the Trustee with a Certificate, based upon a Consultant's Report, stating that it is reasonably expected that the Net Revenue Requirement will be satisfied in the current Fiscal Year and in each of the five Fiscal Years following the rate reduction or reclassification or modification of the toll collection system. Subject to the foregoing provisions of this Section, from time to time and as often as it shall appear necessary the Authority will request the Consulting Engineers and the Traffic Consultants to furnish a Consultant's Report for the purpose of making recommendations as to a revised schedule of tolls and will inform the Trustee of such request. The Authority covenants that it will revise such schedule and such tolls as may be necessary or proper, in order that the Revenues will at all times be sufficient:

- (i) to provide funds for the payment of Operating Expenses; and
- (ii) to provide Net Revenues that are equal to or greater than the Net Revenue Requirement in any Fiscal Year;

provided, however, that nothing herein shall be deemed to limit the Authority's right in its discretion to revise such schedule and such tolls in a reasonable manner in order to provide additional Revenues for making deposits to the General Reserve Fund.

The deposit to the credit of the Debt Service Fund in any Fiscal Year of an amount in excess of the amounts provided for above for such Fiscal Year shall not be taken into account in adjusting the schedule of tolls for any subsequent Fiscal Year or Fiscal Years. Any deficiency in the Required Debt Service Deposit or the Required Reserve Maintenance Deposit, or the amount of any Required Debt Service Reserve Deposit, in any Fiscal Year shall, as promptly as may be practicable, be added to the amounts provided for above for the remaining Fiscal Years in adjusting such schedule of tolls, provided that the amount so to be added to meet the requirements of clauses (i) and (ii) above in each of such subsequent Fiscal Years may be based upon recommendations of the Consulting Engineers and the Traffic Consultant.

\* \* \* \* \*

**SECTION 805. Consulting Engineers and Traffic Consultant.**

(a) The Authority covenants that it will, for the purpose of performing and carrying out the duties imposed on the Consulting Engineers by this Resolution, employ an independent engineer or engineering firm or corporation having a nationwide and favorable reputation for skill and experience in such work. Any Consulting Engineer employed by the Authority may be replaced by the Authority upon giving notice to the Trustee of thirty days, provided that the new engineer or firm or corporation shall be approved by a resolution adopted by the Authority and certified in writing by two Authorized Officials, including either the Chairman or Vice Chairman, to the Trustee that such engineer or firm or corporation qualifies under the criteria set forth under this Section 805.

(b) The Authority shall employ a Traffic Consultant, or cause the Consulting Engineers to employ a Traffic Consultant approved by the Authority, to perform any of the duties of the Consulting Engineers under this Resolution which would ordinarily be performed by a Traffic Consultant.



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January 12, 2017

Mr. Peter Mills  
Executive Director  
Maine Turnpike Authority  
2360 Congress Street  
Portland, ME 04102

**Subject: AET Versus ORT Conversion Variables Considered at the York Mainline**

Dear Peter:

You contacted our firm (CDM Smith) to conduct an objective evaluation of the gross and net revenue impacts of converting the York mainline plaza to either All Electronic Tolling (AET) or Open Road Tolling (ORT). CDM Smith has conducted studies for numerous clients throughout the United States (in Florida, North Carolina, Pennsylvania, Colorado, and Texas, among others) where those studies have led to the successful implementation of AET. In fact, most studies in recent years have resulted in conversion to AET and not ORT.

Quite frankly, at the outset of this study, I assumed that AET would also provide a viable toll collection solution to the problems that currently exist at the York mainline plaza. It is also not surprising that others would have come to the same conclusion. MassPike recently converted to AET, New York City's MTA bridges and tunnels are converting to AET, the Pennsylvania Turnpike is studying conversion to AET. It would only seem logical that AET would also be a viable alternative at the York mainline.

However, after having conducted our analysis at the York plaza, using the same approach we've used on other conversion studies, we estimated that a \$3.00 passenger car video surcharge would be required to offset projected net revenue losses at this location. The \$3.00 surcharge amounts to a doubling of the current passenger car cash toll rate. Based upon the impacts of these measures, previous professional tolling recommendations, and an MTA staff recommendation, the MTA Board of Directors selected ORT over AET at the York mainline.

Various groups and individuals have questioned the Board's decision given the many benefits of AET (no stopping by any motorist, lower capital costs, etc.) and in light of the fact that AET is being implemented on numerous facilities throughout the United States. Upon analysis, it turns out that the York mainline operating characteristics are rather unique and set it apart from other toll facilities that have been converted to AET. In fact, these same unique factors have led the New Hampshire Department of Transportation to convert its Hampton mainline toll plaza (a 15-minute drive south of the York mainline) to ORT and not AET. In May of 2013, New





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Hampshire opened its second ORT plaza at Hooksett. Each facility must be evaluated in the context of its particular mix of patrons, operating characteristics, and the larger transportation system it operates in.

The following factors were taken into account as part of the CDM Smith analysis and all contribute to the ultimate decision for conversion to ORT and not AET at the York toll plaza:

1. **High current cash market share.** Almost 30 percent of current transactions at York do not pay via E-ZPass. Under AET, all non-E-ZPass transactions will become video transactions. Nearly 100 percent of toll revenue leakage with AET comes from the video component. For this reason, the majority of toll facilities that have converted only do so when they have reduced cash toll transactions to 20 percent, or less, of total transactions. Video transactions on the recently converted MassPike, for example, account for only 15 percent of total toll transactions. Minimizing cash transactions at the time of conversion reduces the financial risk of revenue loss.
2. **High proportion of out-of-state cash motorists.** Compounding the negative impact of a high cash market share at the York mainline is the fact that the majority of them are out-of-state motorists. Only about 37 percent of cash paying motorists at York are Maine residents. In fact, about 5 percent of York cash customers are from out-of-country (i.e., from Canada). Out-of-state motorists' license plate images are less likely to be correctly identified, they have a lower invoice payment rate, and they are much more difficult to successfully collect on through second party collection efforts. I am not aware of any other toll facility that has converted to AET where only 37 percent of cash customers are in-state.
3. **High proportion of low frequency users.** Just over 61 percent of passenger car cash motorists use the York mainline only a few times a year. Very low frequency (and most likely, out-of-state) users are more difficult to collect from. Even Maine's existing reciprocity agreements recognize that interstate enforcement may not be invoked until a violator has accumulated a threshold number of violations sufficient to make enforcement worthwhile. Between New Hampshire and Maine the threshold is ten violations. Between Massachusetts and Maine, the threshold is a minimum of \$25 in unpaid tolls.
4. **Accessible parallel alternative route.** Route 1 provides a parallel alternative route to the Turnpike. Those wishing to avoid a doubling of the toll rate could divert to it for



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many of their trips. Relatively low diversion would be expected during the peak summer tourist months. But, significant additional capacity exists for diversion during off-peak time periods and at all times during the off-peak winter months. Many, if not most, AET facilities have been implemented on tunnels or bridges (where alternative routes are also tolled) or are in more congested urban settings with less attractive alternative diversion routes.

5. **Partial AET conversion.** In the event the York mainline were converted to AET, it would be the only AET facility on the Maine Turnpike System. All other locations on the Maine Turnpike would require motorists without E-ZPass to stop and pay a cash toll. Given the very high percent of out-of-state (and low frequency) cash users, this would undoubtedly cause much confusion at subsequent tolling locations north of the York plaza. Violations would likely increase as cash motorists incorrectly assume they use the E-ZPass lanes at all toll plazas. I am not aware of any other similar situation where a single tolling point has been converted to AET, with the remainder of the system continuing to operate as a traditional (or ORT) toll facility.
6. **Obsolete Maine Department of Motor Vehicle (DMV) Records.** Actual experience by Maine Turnpike Authority staff to identify current toll violators shows that just over 17 percent of requests to the DMV do not produce valid/current mailing addresses. This is extremely high compared to other states. In our experience, most states are unable to match a license plate to an address in only 5 to 10 percent of the time.

Our role in this analysis was to assess the likely impact these variables would have on net revenue collections at York assuming both AET and ORT conversion. None of the above factors negatively effects toll revenue collection under ORT (at least not compared to current toll collection at York). Cash customers under ORT would continue to be treated as they currently are at York. Under AET, however, the combined effect of each of the above factors leads to revenue losses that require the substantial video toll surcharges recommended in our report.

If you have any questions or comments, please do not hesitate to contact me at your convenience.

Very truly yours,

A handwritten signature in black ink, appearing to read "Gary T. Quinlin".

Gary T. Quinlin  
Project Manager  
CDM Smith, Inc.



# Town of York

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York, Maine 03909-1314

Town Manager/  
Selectmen  
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Town Clerk/  
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(207)363-1003

Finance/  
Treasurer  
(207)363-1004

Code Enforcement  
(207)363-1002

Planning  
(207)363-1007

Assessor  
(207)363-1005

Police Department  
(207)363-1031

Dispatch  
(207)363-2557

York Beach Fire  
Department  
(207)363-1014

York Village Fire  
Department  
(207)363-1015

Public Works  
(207)363-1011

Harbor Master  
(207)363-1000

Senior Center/  
General Assistance  
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Recreation  
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Maine Turnpike Authority  
Board of Directors:  
2360 Congress Street  
Portland, ME 04120

May 20, 2014

Dear Board of Directors:

The citizens of York, organized under the aegis of Think Again, are once again preparing to engage the MTA on the siting of new toll facilities.

The York Board of Selectmen thereby reaffirms their policy position on the toll collection system at the York Toll Plaza as follows:

1) The York BOS recognizes that all electronic tolling (AET) is and should be the ultimate policy goal for an integrated interstate toll collection system. However, we recognize that certain technical and political impediments make adoption of this AET system unfeasible at present.

2) The York BOS recognizes that 34% of MTA toll revenues consist of cash payments, indicating that Open Road Tolling is the next most desirable collection format.

3) The York BOS remains steadfast in its belief that the current toll booth location is suitable for the location of an ORT system.

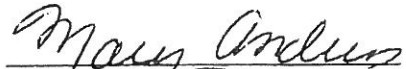
A) The current toll booth location is dimensionally capable of accommodating an ORT system.


B) The issue of land subsidence at the current toll booth location is susceptible to technical analysis and remediation and should not be considered an impediment to a retrofit. In fact, a technical resolution of this subsidence issue will be mandatory for the continuing viability of the roadway itself regardless of the toll booth siting.

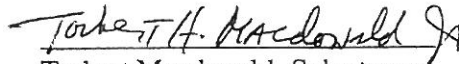
C) The benefits of constructing an ORT system at the current toll booth location are myriad: the avoided cost of new land acquisition; the avoidance of new environmental impacts in the invaluable Mt. Agamenticus region of Town; and the avoided impact of quality of life diminishment and the impact of land taking in a community unified in opposition to such action.

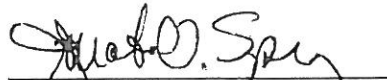
Therefore, the York BOS encourages the MTA Board of Directors to pursue the engineering studies necessary to prove the viability of an ORT plaza at the current location of the York Toll Plaza. All other options will be strenuously opposed by the Town of York.

Respectfully,  
Town of York, Board of Selectmen

  
Mary Andrews, Chair

  
Robert E. Palmer Jr., Vice Chair

  
Torbert Macdonald, Selectmen

  
Jonathan O. Speers, Selectmen

  
Ronald Nowell, Selectmen

Cc: Robert G. Yandow, Town of York Town Manager  
Peter Mills, MTA Executive Director  
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Bruce Van Note  
Mary E. Costigan, Town of York – Town Attorney



**YORK TOLL PLAZA REPLACEMENT PROJECT  
EVALUATION MATRIX  
SUBJECT TO DESIGN REFINEMENTS**  
October 13, 2015

Approximate Location \ Evaluation Parameter	ENGINEERING / SAFETY								ENVIRONMENTAL										
	Horizontal Alignment <sup>(1)</sup>		Vertical Alignment <sup>(1)</sup>		Sight Distance <sup>(2)</sup>	Separation from Interchange (>1 mile) <sup>(1)</sup>	Historic Crash Data <sup>(3)</sup>	Geotechnical <sup>(4)</sup>	Wetland Impacts (Total) <sup>(5)</sup>	Impacts to Maine DEP Wetlands of Special Significance <sup>(5)</sup>	Wetlands Relative Function and Value <sup>(6)</sup>	Stream Impacts <sup>(7)</sup>	Vernal Pool Impact (Total) <sup>(8)</sup>		Impacts to Maine DEP Vernal Pool of Special Significance		FEMA Floodplain <sup>(9)</sup>	Cultural / Historical Resources <sup>(10)</sup>	Potential Threatened / Endangered Species Habitat (State Listed) <sup>(11)</sup>
	Cash Plaza on Crest	Cash Plaza - Approach Grades between +1% and +2%	ORT Lanes on Existing or New	(Acres)									(Acres)	(LF)	No.	(SF)			
Mile 7.3	On Curve	Average	Poor	New	Average	No	43	Clay	5.5	1.9	High	360	1	1,750	0	0	3.0	No Impact	1
<i>Other Sites Analyzed</i>																			
Mile 8.1	Curve on approach	Average	Poor	Existing	Average	Marginal	23	Ledge	1.0	0.1	Average	50	0	0	0	0	0.5	No Impact	3
Mile 8.8*	On straight	Good	Average	Existing	Good	Yes	13	Ledge	1.0	0.8	Average	80	2	7,230	1	950	0.3	No Impact	3
Mile 10.0	Curve on approach	Average	Average	Existing	Average	Yes	21	Ledge	1.0	1.0	High	160	4	32,480	4	32,480	0.0	No Impact	2
Mile 13.2	On straight	Good	Poor	Existing	Good	Yes	18	Ledge	0.7	0.2	Low	140	2	7,430	0	0	0.0	No Impact	1
Low-Range of Impacts	On straight	Good	Good	Existing	Good	Yes	Low-range	Good	< 0.34	No Impact	Low	No Impact	No Impact	No Impact	No Impact	No Impact	No Impact	No Impact	No Impact
Mid-Range of Impacts	Curve on approach	Average	Average	New	Average	Marginal	Mid-range	Marginal	≥ 0.34 – 3.0	Resource Impacted	Average	Resource Impacted	Resource Impacted	Resource Impacted	Resource Impacted	Resource Impacted	Resource Impacted	Resource Impacted	Resource Impacted
High-Range of Impacts	On Curve	Poor	Poor		Poor	No	High-range	Poor	> 3.0		High								

Approximate Location \ Evaluation Parameter	ABUTTER IMPACTS			LOGISTICS DURING CONSTRUCTION			COSTS / FINANCIALS		
	Potential Right-of-Way Impacts <sup>(12)</sup>	House Displacement within 75 feet of direct impact line <sup>(13)</sup>	Houses within 1000 feet of direct impact line <sup>(14)</sup>	Constructability <sup>(15)</sup>	Safety of Toll Collectors <sup>(16)</sup>	Traveler Impacts <sup>(17)</sup>	Initial Capital Costs <sup>(18)</sup>	Revenue Loss during Construction <sup>(19)</sup>	Life-Cycle / Operations Costs <sup>(20)</sup>
	Acres						\$Millions		
Mile 7.3	0.1	0	47	Difficult	Extra Precaution	Intermediate	\$60.4	Significant	Not Typical
<i>Other Sites Analyzed</i>									
Mile 8.1	2.0	0	6	Conventional	No Impacts	Intermediate	\$39.7	Minimal	Typical
Mile 8.8*	0.3	0	4	Conventional	No Impacts	Minor	\$40.8	Minimal	Typical
Mile 10.0	3.5	0	46	Conventional	No Impacts	Minor	\$42.6	Minimal	Typical
Mile 13.2	2.5	1	41	Conventional	No Impacts	Minor	\$46.6	Minimal	Typical
Low-Range of Impacts	0 – 0.9	0	0 – 10	Conventional	No Impacts	Minor		Minimal	Typical
Mid-Range of Impacts	1.0 – 3.0	NA	11 – 30	Difficult	Extra Precaution	Intermediate		Significant	Not Typical
High-Range of Impacts	>3.01	>0	>31			Major			

\* Recommended for 10% design and further analysis.

**Footnotes:**

- Horizontal Alignment, Vertical Alignment and Separation from Interchange (>1 mile) values are based on criteria and design policies from the guidelines in the Federal Highway Administration report "State of the Practice and Recommendation on Traffic Control Strategies at Toll Plaza" 2006 and American Association of State Highway and Transportation Officials (AASHTO) "A Policy on Geometric Design of Highways and Streets", 2011.
- Sight Distance value is based on the criteria and design policies from the guidelines in the American Association of State Highway and Transportation Officials (AASHTO) "A Policy on Geometric Design of Highways and Streets", 2011.
- Information is based on MaineDOT's historical crash data and MaineDOT Office of Safety guidelines. Sites with 30 or more crashes were identified as high-range. Sites with 20-30 crashes were identified as mid-range. Sites with less than 20 crashes are low-range.
- Geotechnical. Green represents mostly stable granular soils, no apparent groundwater impact, and no apparent bedrock excavation (ledge). Yellow represents ledge excavation, possible unstable soils, and minor groundwater impacts. Red represents soft and compressible soils, impacts due to high groundwater elevation.
- Wetland Impacts are based on anticipated direct impacts on field delineated wetlands. Severity of impact based on level of USACE permitting required. Category 1 is non-reporting to the Corps. Category 2 requires notification to Corps but meets General Permit requirements. If not Category 1 or 2, a USACE Individual Permit must be obtained.
- Wetland Relative Function and Value is based on a preliminary comparative assessment of each proposed location in accordance with U.S. Army Corps of Engineers methodology.
- Stream Impacts are based on anticipated direct impacts to potentially jurisdictional waterways, which could be modified based upon regulatory agency determinations.
- Vernal Pool Impacts are based on anticipated direct impacts within Significant and Non-Significant Pools.
- Floodplains are based on anticipated direct impacts.
- Cultural / Historic Resources are based on anticipated direct impacts.
- Potential Threatened / Endangered Species Habitat (State Listed) are based on anticipated direct impacts within a State or Federally designated habitat area.
- Potential Right-of-Way Impacts is land that would need to be acquired and used as a right-of-way for the new toll facility. Right-of-way impacts may include construction of a new administration building, parking lot, highway widening or retaining wall. Right-of-impacts do not include new access road to the new administration building.
- House Displacement is quantified for houses within 75 feet of direct impact line. The direct impact line is the cut or fill limit shown on the conceptual plans.
- Houses within 1000 feet from direct impact line.
- Constructability is measured by construction constraints that may include poor soils conditions, environmental impacts, tolling equipment / installation, traffic management, and/or construction phasing.
- Safety of Toll Collectors. Identifying the safety of the toll collectors and maintenance staff who may have to walk through a construction zone.
- Traveler Impacts may include traffic delays or construction of the new plaza being within proximity of the existing toll plaza.
- Initial Capital Costs. Costs to construct the new toll facility, access road, utilities, utilities removed from existing toll facility, demo of the existing toll facility and reconfigure to a highway, wetland mitigation, toll equipment and systems, ROW acquisition, design/construction engineering and 10% contingency.
- Revenue Loss during Construction. It is anticipated there will be revenue lost if traffic is diverted during construction.
- Life-Cycle / Operations Costs. The life-cycle costs are associated maintenance issues. Example, paving operations may be on a 6-year cycle rather than a 10-year cycle.