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July 23, 2010

Secretary Ian Bowles
Executive Office of Energy and Environmental Affairs
MEPA Office
Attn: Holly Johnson, MEPA Analyst
EEA #13886
100 Cambridge Street, Suite 900
Boston, MA 02114

Dear Secretary Bowles,

Thank you for this opportunity to comment on the Final Environmental Impact Report (FEIR) for the Green Line Extension project.

I was pleased that you required the project proponent, the Massachusetts Department of Transportation (MassDOT), to perform further environmental analysis on the project in the form of an FEIR. Unfortunately, while progress has been made, MassDOT has not satisfactorily completed the work that was prescribed in your DEIR Certificate of January 15, 2010.

I will address five areas of the Scope in particular: College Avenue Station, Mitigation/Section 61 Findings, Public Involvement Plan, Maintenance Facility and Lechmere Station.

College Avenue Station

Citing the fact that in prior MEPA reviews and public meetings the environmental impacts associated with College Avenue were reviewed only within the context of it functioning as an intermediate station along the project route, the DEIR Certificate required that the FEIR “should revisit the DEIR models, revise as necessary to accurately assess the predicted function of the station, and describe differences in operations and mitigation measures between the DEIR and the FEIR, if any.”

There is scant evidence in the FEIR that MassDOT did any of this. Despite the Certificate’s statement to the contrary, MassDOT asserts that it fully evaluated the impacts of a College Avenue terminus station in the DEIR, and in Chapter 4 essentially restates information from the DEIR.

In a 13-page chapter, the only new information provided with regard to College Avenue functioning as a terminus station is that up to four Green Line cars would be staged north of College Avenue for approximately one hour before the start of morning service, which will occur at approximately 5 a.m., and that a double cross-over would be constructed about 300 feet north of the platform to allow trains to change tracks to reverse direction.

In fact, the FEIR unabashedly states, “No changes to the traffic model or analysis have occurred since the DEIR/EA was published,” and, “There have been no changes to the impacts analysis or mitigation commitments since the DEIR/EA.”

Compare that to MassDOT’s response in the FEIR to the Certificate’s instructions regarding Lechmere Station, which were to consider station design refinements; clarify modeling assumptions and layout and mitigation measures to ensure safe accommodations of pedestrians, cyclists and bus riders; explore ways to improve integration of the station into the neighborhood; and reduce the amount of proposed parking.

In the FEIR, MassDOT instituted numerous design modifications, revised the Future Build analysis, conducted a supplemental analysis of O’Brien Highway, performed a more detailed analysis of the current Lechmere Station parking demand and practices, and evaluated noise and vibration impacts on abutters. This was detailed in a 24-page chapter supplemented by a 134-page Lechmere Station Transportation Analysis.

While MassDOT responded appropriately to the DEIR Certificate’s requirements with regard to Lechmere Station, it clearly ignored the directive with regard to College Avenue Station, and should again be required to fully analyze College Avenue as a terminus station and propose mitigation commitments accordingly.

College Avenue Station/Medford Hillside requirement

Although not required to do so by the DEIR Certificate, MassDOT chose to include in the FEIR a response to DEIR public comments that maintained that the College Avenue Station does not fulfill the state’s legal requirement to extend Green Line service to Medford Hillside.

(MassDOT states in the FEIR that “a few stakeholders” raised this concern; in fact, according to the “Summary of DEIR/EA Comments” chart (Table 1-1) in the FEIR, 48 commenters raised the issue of “terminal impacts.” As stated in my DEIR comment letter, I concur that a College Avenue Station **does not** constitute Medford Hillside; only a station at Winthrop Street/Boston Avenue [which MassDOT evaluated but did not recommend] or at Mystic Valley Parkway would fulfill the legal requirement.)

MassDOT has attempted to demonstrate its belief that College Avenue Station equals Medford Hillside in two ways:

- Creating yet another new definition of and boundaries for the Medford Hillside neighborhood, some 33 months into the EIR segment of the project

- Enlisting the help of the Central Transportation Planning Staff (CTPS) to attest that the one-mile “walk market” surrounding College Avenue station comprises the Medford Hillside neighborhood

MassDOT’s new definition of Medford Hillside – while less far-fetched than the one it offered in the DEIR – is no more accurate.

In the FEIR, MassDOT states, “Medford Hillside is defined in this analysis as an area of the City of Medford bounded by the Mystic River to the north, Medford Square to the east, College Avenue to the south, and North Somerville to the west. This area was defined based on an examination of local maps and businesses that identified themselves with the Medford Hillside neighborhood.”

In the DEIR, MassDOT had described Medford Hillside as “broadly defined as Boston Avenue from the Mystic Valley Parkway to Warner Street” – the latter being in the middle of South Medford and closer to the proposed Ball Square Station! (Also worth noting is that the DEIR definition of Medford Hillside differed from the one MassDOT [then EOT] used in the 2005 Beyond Lechmere Northwest Corridor study. And this is for a neighborhood that has existed for centuries.)

Ignoring voluminous evidence and dozens of maps showing what is generally regarded to be the Medford Hillside neighborhood, first submitted to MassDOT in August 2008 and then again to MassDOT (and MEPA) in DEIR comments, MassDOT and CTPS made a feeble Internet search to try to demonstrate that the Medford Hillside neighborhood is in fact something else, and that it extends as far south as College Avenue.

In explaining its “research” in a July 6, 2010 memo provided by Green Line Extension Project Manager Kate Fichter, CTPS said it found “several” Medford Hillside businesses located between Winthrop Street and College Avenue; an accompanying CTPS list actually named four properties, three of which were dubious – one address was actually a building on Dearborn Street in Somerville, not Dearborn Road in Medford; another was for a nonexistent address (440 Boston Avenue); and one was for an AMRAD radio tower obsolete since 1925.

MassDOT could have saved itself some work by simply consulting the City of Medford’s Five-Year Consolidated HUD Community Development Plan for 2010-2015 and its definition of Medford Hillside:

Hillside – Tract 3394

Hillside is an older, concentrated residential area with 65% of the housing stock built pre-1939. The tract contains two areas of low and moderate income population concentrations. The first area, Block Group #1, is defined by Mystic Valley Parkway to the north and west, Winthrop Street to the east, and Marshall Street to the south. This area has a 55.2% low and moderate income population. The second area, at 52% low and moderate income, is bounded by Marshall Street to the north, Winthrop Street to the east, and Boston Ave. to the south and west. . . . The area is

home to a large transient population because of its proximity of Tufts University, which has a major impact on this modest densely populated neighborhood. Over 58% of the housing units are renter occupied. Plans to extend the Massachusetts Bay Transportation Authority (MBTA) Green Line light rail public transit service to this area are currently in the design phase and will have a major impact on the physical and economic environment when implemented.

(Source: http://www.medford.org/Pages/MedfordMA_ComDev/StrategicPlan.pdf?FCItemID=S02AF9B4E)

This definition is consistent with virtually every map in existence, which identify Medford Hillside as northwest of Winthrop Street.

MassDOT also cites CTPS research on the College Avenue “walk market” as supporting its assertion that College Avenue Station fulfills its legal agreement to extend the Green Line to Medford Hillside, even though in the aforementioned memo, CTPS distanced itself from such a conclusion, stating, “This memo was not intended to support or argue against any particular terminus location, but simply to explain the modeling assumptions used by CTPS as they pertain to the projected coverage of the walk market around the College Ave. station, and including the relationship between the project walk market area and the Medford Hillside neighborhood.”

Regardless of intent, reliance on a one-mile “walk market” to support its position with regard to the College Avenue terminus station appears to be a last-minute MassDOT invention inconsistently applied for its own purposes. If a station need only be within the one-mile “walk market,” MassDOT could claim it was meeting its legal requirement to extend the Green Line to Union Square by having placed a station at Brickbottom, a mere .45 mile away. In fact, one of every two proposed stations on the Green Line Extension could be eliminated based on such criteria.

Further, the Boston Metropolitan Planning Organization’s Coordinated Human-Services Transportation Plan, which draws largely on the work of CTPS, declares that one-half mile is the distance most people will walk to access light rail transit. The document, which provides guidance for applying for funding from FTA human-services transportation programs, was released in June 2008 and updated in June 2010. The half-mile standard was not changed in the recent update.

(Source: http://www.ctps.org/bostonmpo/3_programs/8_chst/CHST_plan_070110.pdf)

Regardless of what is considered an acceptable or likely walking distance, the State Implementation Plan (SIP) requires that the Green Line be extended **to** Medford Hillside, not **to within walking distance of** Medford Hillside. By virtually everyone’s definition except MassDOT, the College Avenue station **does not** extend the Green Line **to** Medford Hillside.

This fact also seems to be lost on the Massachusetts Department of Environment Protection, which also at the 11th hour rendered an opinion that College Avenue Station

fulfills the SIP requirement because it achieves the required air quality benefits. A July 9, 2010 letter from Commissioner Laurie Burt to Transportation Secretary Jeffrey Mullan concluded by stating that while “outside of MassDEP’s expertise, MassDEP believes that terminating the project at College Avenue will serve the greater Medford Hillside neighborhood.”

I would hope that given your qualified expertise and your authority as the highest-ranking person in the state’s environmental agency, you will do whatever necessary to ensure that the Commonwealth fulfills its legal obligation to extend the Green Line **to** Medford Hillside, and avoid the unnecessary prospect of protracted and expensive litigation over this matter.

Mitigation/Section 61 Findings

The FEIR was required to “contain a clear commitment to mitigation, a schedule for implementation, an estimate of the individual costs of the proposed mitigation and the identification of the parties responsible for implementing the mitigation.”

The FEIR meets this requirement except for one area; it lacks the “clear commitment” to mitigation. Time and again, the report says that MassDOT will provide mitigation “to the extent feasible” or “to the extent practicable.” This provides an easy “out” for MassDOT to subjectively determine that mitigation is not feasible or practicable for any reason.

MassDOT should be required to commit to fully mitigate the environmental and human impacts of this project, both in written agreements with each of the affected communities that define the mitigation obligations, deadlines for fulfillment, and penalties for noncompliance (as was done on the Greenbush commuter rail project), and in line items in all project budget documents, including those submitted to FTA for New Starts funding.

While the FEIR well describes many techniques for mitigating noise, vibration and visual impacts, there is no firm commitment to most of them ever being implemented on this project, and certainly no commitment to corridor-wide noise mitigation – something that is essential given the relocation of the commuter rail tracks closer to abutting residential properties. Moreover, as the FEIR notes, “The FTA also states that there is a stronger need for mitigation if a project is proposed in an area currently experiencing high noise levels (Ldn above 65 dBA) from surface transportation sources. This is clearly the case at sensitive receptors adjacent to the College Avenue Station where existing Ldn levels range between 70 to 79 dBA.”

Further, despite the directive to re-evaluate the College Avenue Station as the terminus, the FEIR states, “There have been no changes to the visual impact mitigation since the DEIR/EA.”

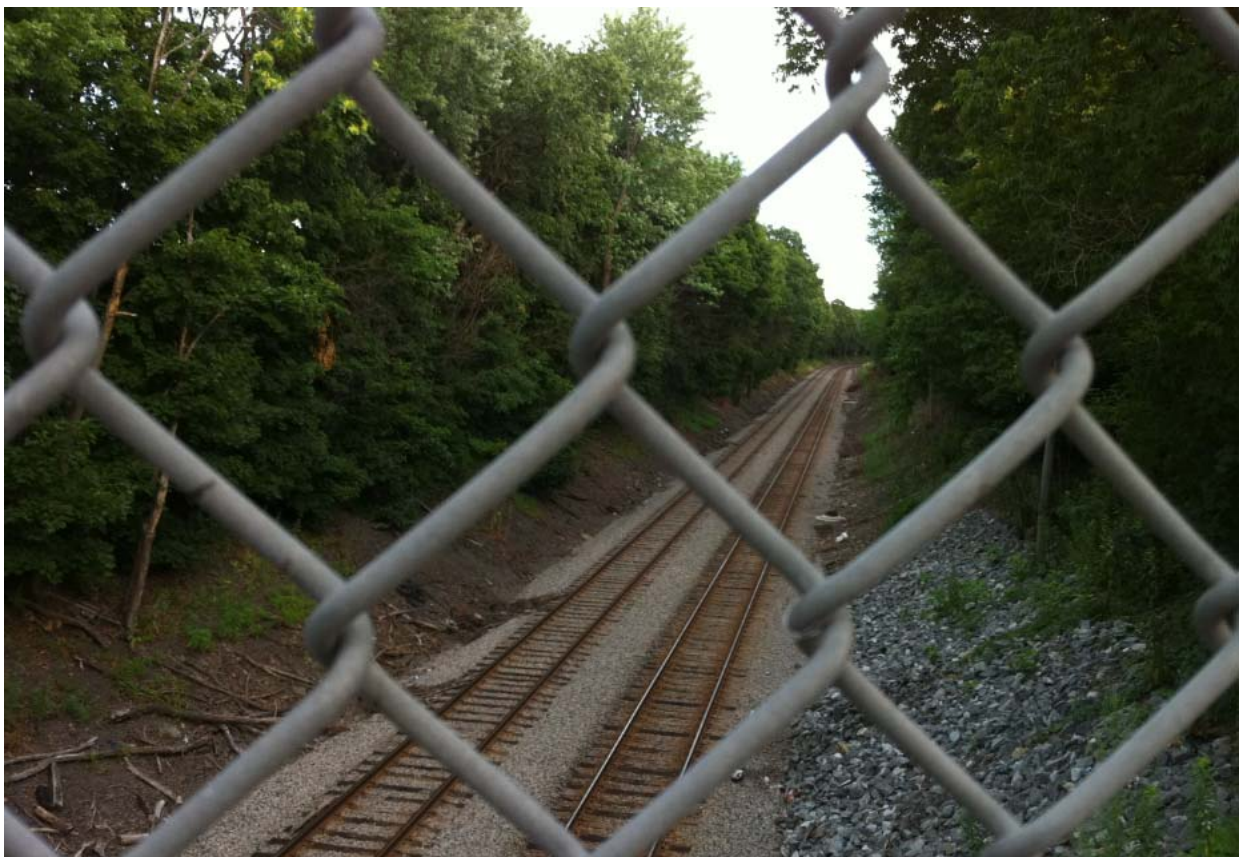
This is disconcerting, following the inclusion of statements like these in the DEIR:

- “Due to the urbanized character of the portions of Cambridge, Somerville, and Medford, and involved, there are no other significant visual resources associated

with the Project [besides the forested area in the Mystic River Reservation near the proposed Route 16 station].”

- “Because the changes would occur in urbanized areas within and adjacent to the existing right-of-way, they would have little overall visual impact on the public.”
- “Fences, trees, and steep slopes on each side of the right-of-way minimize the rail corridor’s visibility. The right-of-way is only visible to the public from certain locations, such as from bridges or through fences.”

As the below photo attests, the entire stretch of the project corridor between College Avenue and Winthrop Street – more than half of which would be affected by Phase I of the project, and all of which will be affected by Phase II – has a substantial visual buffer of trees, nearly all of which will be removed. There obviously is a need for a “clear commitment to mitigation” for visual impacts here.



This photo shows the existing, tree-lined commuter rail corridor in Medford between College Avenue and Winthrop Street.

Mitigation cost commitments are either missing from the FEIR or suspect. For example, the FEIR describes an “estimated cost for installed ballast mats of \$3.5 million.” However, the project cost estimate data MassDOT has submitted to the FTA shows zero dollars committed for “Track: Vibration and noise dampening” (see next page).

Note: Cost Estimate data is currently under review by the FTA. Final cost data has not yet been approved.

MAIN WORKSHEET - BUILD ALTERNATIVE								
MASSACHUSETTS BAY TRANSPORTATION AUTHORITY						Today's Date 3/19/10		
Green Line Extension Project						Yr of Base Year \$ 2009		
Medford Hillside Branch and Union Square Branch - PMOC Comments, Adj wall cost, Option L MF						Yr of Revenue Ops 2014		
	Quantity	Base Year Dollars w/o Contingency (X000)	Base Year Dollars Allocated Contingency (X000)	Base Year Dollars TOTAL (X000)	Base Year Dollars Unit Cost (X000)	Base Year Dollars Percentage of Construction Cost	Base Year Dollars Percentage of Total Project Cost	YOE Dollars Total (X000)
10 GUIDEWAY & TRACK ELEMENTS (route miles)	4.31	105,459	23,828	129,288	\$ 29,997	26%	15%	148,405
10.01 Guideway: At-grade exclusive right-of-way	4.00	22,017	5,504	27,521	\$ 6,880			31,591
10.02 Guideway: At-grade semi-exclusive (allows cross-traffic)				0				0
10.03 Guideway: At-grade in mixed traffic				0				0
10.04 Guideway: Aerial structure	0.31	58,088	14,522	72,610	\$ 234,226			83,346
10.05 Guideway: Built-up fill				0				0
10.06 Guideway: Underground cut & cover				0				0
10.07 Guideway: Underground tunnel				0				0
10.08 Guideway: Retained cut or fill				0				0
10.09 Track: Direct fixation				0				0
10.10 Track: Embedded				0				0
10.11 Track: Ballasted		18,922	2,838	21,760				24,978
10.12 Track: Special (switches, turnouts)		6,432	965	7,397				8,491
10.13 Track: Vibration and noise dampening				0				0
20 STATIONS, STOPS, TERMINALS, INTERMODAL (number)	7	81,076	16,125	107,201	\$ 15,314	22%	13%	123,905

The FEIR bases the projected costs for ballast mats (and resilient fasteners) on a total of 19,700 track-feet of vibration mitigation. However, since there is approximately 8 miles (42,240 feet) of commuter rail track within the project area – 3 miles on the Medford Branch, and 1 mile on the Union Square branch, in both directions – this would mean MassDOT intends to only include vibration mitigation on less than half (46.6%) of the project.

Finally, while the FEIR says that MassDOT will follow the MBTA’s existing policies on mitigation, it does demonstrate this. MBTA policy is to commit at least 2% of project cost to noise mitigation. With an overall cost estimate of about \$1 billion, the Green Line noise mitigation commitment should approach \$20 million; the FEIR estimates only \$2.7 million to be spent on noise barriers (down from the \$3.7 million estimate in the DEIR), and provides no cost estimate for sound insulation (the DEIR contained an estimate of \$12.1 million).

Public Involvement Plan

As a member of the Project Advisory Group for the DEIR, I was asked by MassDOT to submit feedback on the experience. Among my recommendations were to make better use of the advisory group’s knowledge, talents, interest in and commitment to the project through more meaningful engagement; confine the group’s (and MassDOT’s) work to the scope of the project; increase site visits; include active participation from high-ranking MBTA representatives; respond to advisory group issues in a timely fashion; improve station workshop locations, many of which were too small to accommodate the attendees; and to post videos of all advisory group meetings on the project website.

I am pleased that several of these recommendations were included in the description in the Public Involvement Plan (PIP) of how the Station Design Working Group (DWG) will function. I would also hope that the DWG meets no less than quarterly, as is the projected schedule, and that it be given substantive work to do in between meetings; the DEIR Project Advisory Group, which early on met monthly, later went as long as

more than three months without a meeting, with no work to perform in between. (Station design subgroups, described at the first Project Advisory Group meeting as forthcoming, never materialized, to the detriment of the process.)

I do feel MassDOT has not fully complied with the Certificate's recommendation for constituency representation on the Design Working Group, as to my knowledge it has not included any appointee(s) from the business communities of Medford, Somerville or Cambridge. This is an oversight that should be corrected before the DWG first meets.

Also, one area that should be added to the possible Topics the DWG will focus on is the importance of designing the stations in a way that does not preclude, but rather anticipates, further expansion and modernization – in particular the extension of the Green Line from Union Square to Porter Square, and the electrification of the Lowell and Fitchburg commuter rail trains (and Amtrak trains on the Medford Branch).

I also commend MassDOT's intention to put in place a Project Ombudsman. However, I feel this position should be created and filled immediately, not when project construction begins, which will be too late to address many of the issues that have already been identified or will arise during the next phase of Preliminary Engineering/Final Design. Also, this position should be appointed by, paid for and overseen by MassDOT/MBTA, not a construction contractor. Further, I would suggest that each city – Medford, Somerville and Cambridge – be required to appoint or enter into a contract with a Green Line Ombudsman representing its own community, to be the point of contact with its residents, and to facilitate communication and problem solving with the MassDOT/MBTA Green Line Project Ombudsman.

Maintenance Facility

I support MassDOT's decision to abandon Yard 8 as the site of the maintenance and storage facility in favor of Option L. However, I would strongly urge that MassDOT be required to evaluate the Option L modifications offered by independent engineer Steven Kaiser and Alan Moore of the Somerville Bicycle Committee. The recommendations of Messrs. Kaiser and Moore contain some crucial improvements to the maintenance facility that would better use the existing MBTA property; substantially reduce the need for property acquisition and the associated costs and uprooting of a unique and prominent Somerville business employing more than 300 people; and reduce the overall maintenance facility cost by about \$30 million.

One aspect of the maintenance facility that MassDOT (and the city of Somerville) has been silent on are the prospects of potential air rights developments, in particular the possible construction of a 20,000-seat multipurpose stadium that would host New England Revolution soccer games and other sporting events, concerts, etc. Such potential development must be considered in the design of the maintenance facility, as well as the adjacent Green Line stations, as such a venue at or near the maintenance complex substantially changes the human and automobile movement patterns in the vicinity. Moreover, a project of this magnitude undoubtedly will require its own Environmental Impact Report study – a lengthy process as we know – so better to begin to address this potential scenario early into the Preliminary Engineering phase of the

Green Line Extension project, lest it arise later and complicate and even delay completion of the GLX.

Lechmere Station

I applaud MassDOT for being receptive to the ideas proposed by East Cambridge residents and incorporating many of them into an improved design for Lechmere Station. I encourage the Secretary to advise MassDOT to be similarly receptive to Medford and Somerville residents' recommendations regarding the Route 16 station proposed for Phase II and which will be the subject of intense study and analysis under the guidance of the Metropolitan Area Planning Council beginning this fall.

However, with regard to Lechmere Station, much more work needs to be done to improve access and safety. I would recommend the further reduction (or elimination) of all parking at Lechmere Station, as parking is not offered at any other stations along the extension. I also urge abandonment of the plan to add lanes to McGrath-O'Brien Highway, which will increase auto traffic volume and congestion (and air pollution) and make walking and bicycling in the area even more hazardous.

East Cambridge residents also have generated many thoughtful and exciting ideas for redevelopment of the current Lechmere Station area. MassDOT should similarly give these ideas every consideration.

Other matters

Community Path: I was pleased to see the Somerville Community Path mentioned often with regard to analysis in the FEIR. However, it is penny wise and pound foolish for MassDOT to only commit to the planning, design and engineering of the Path, and not its construction. Providing excellent non-motorized access to stations is perhaps the most important factor related to ensuring the success of the Green Line Extension, and this element must not only be planned and designed as part of the project, it also must be constructed. The Community Path is a crucial part of the project infrastructure – much like mitigation measures – and should not be treated as an amenity. Further, the cost of construction of this vital link to the GLX stations – which will also encourage people to forgo car use for many other daily trips, even if they don't include a Green Line ride – is a minuscule fraction of the overall project cost, and well worth the modest capital investment.

Cost estimates: As noted earlier, MassDOT continues to be vague and inconsistent with regard to the actual projected costs of the Green Line Extension. For example:

According to the FEIR, the Option L maintenance facility as currently proposed would cost \$50 million more than the Yard 8 location (\$129 million vs. \$79 million, including \$46 million more in property acquisition costs alone). However, the overall cost of the project as expressed in the FEIR, \$953 million in YOE dollars, has only gone up by \$21 million from the \$932 million figure in the DEIR.

That begs the question: Has MassDOT shaved \$29 million from the project cost

between the DEIR and the FEIR? If so, where? As previously noted, the estimated costs of noise barriers has been reduced by \$1 million, and the estimated cost of sound insulation has gone from \$12.1 million in the DEIR to N/A in the FEIR.

It is an extremely troubling development if MassDOT is already gutting the budget for mitigation, even before determining whether or not is it “feasible.”

MassDOT must be required to be publicly forthcoming with detailed budget information for the remainder of the project.

The other curious but heretofore unmentioned aspect of the Green Line Extension cost projections is that while MassDOT cites a lack of a funding source for delaying construction of the Full Build Alternative (Route 16 terminus) into a second phase, it has no compunction about choosing a new site for the maintenance facility that will unnecessarily increase the cost by \$50 million. Similarly, MassDOT has agreed to bear the cost of the McGrath-O’Brien reconstruction near the relocated Lechmere Station (the station itself was another \$100 million addition to the project midway through the DEIR). Are these elements of the project more worthy of capital outlay than is completing the project in a way that not only would ensure SIP compliance, but also provide the maximum benefits in regard to ridership, reduction of vehicle miles traveled, air quality improvements, and service to environmental justice communities?

Project Completion Delay/Mitigation

An extremely important development related to the project occurred midway through this FEIR comment period. On July 10, 2010, MassDOT announced that it has determined that it will be unable to meet its legal deadline of December 31, 2014, for instituting Green Line revenue service to Medford Hillside and Union Square, as required by the SIP.

While not unexpected, given that MassDOT filed the DEIR 10 months behind schedule, and yet disappointing, the announced delay nevertheless provides an opportunity for MassDOT to reapproach the project in a holistic fashion that would assuredly fulfill its legal commitment to extend to the Green Line ~~to~~ Medford Hillside, and address perhaps the two most important outstanding issues related to the project: the uncertainty surrounding the fate of construction of a permanent terminus station at Route 16, and of the Somerville Community Path.

Given that MassDOT now projects a Phase I completion date of October 2015, it makes more sense than ever to incorporate the planning, design, engineering and construction of the Route 16 terminus station in one phase. With the Boston MPO having programmed state funding for Phase II beginning in 2016, the time window between the proposed Phases I and II essentially has been closed.

Perhaps more important, due to the announced delay, MassDOT is now required to propose mitigation measures that will provide air quality benefits within the project corridor equal to that that would have been realized if the Green Line Extension were

completed on time. MassDOT said it plans to announce its mitigation plan in January 2011.

Given that the Green Line Extension is projected to provide up to 80 percent of the total air quality benefits described in the SIP, and that by 2015, mitigation measures such as diesel locomotive upgrades and retrofits, and low-emission bus upgrades will have already been instituted in the corridor, the obvious, easiest and most cost-effective way for MassDOT to mitigate for the delay is to revise the SIP agreement to include construction of the Route 16 terminus station and the Somerville Community Path in one construction phase by October 31, 2015.

It is simply a waste of scarce and precious MassDOT resources to spend the next five months vainly searching for equitable mitigation measures that simply are not to be found. As far back as the Beyond Lechmere study, the Green Line extension was hands-down the best option for reducing air pollution and ozone levels in the project corridor. That has not changed; in fact, subsequent analysis of the Route 16 terminus station, which is within a half-mile walk of 10,000 people living in Medford, Somerville and Arlington, as well as advancement of the Somerville Community Path design and the DCR paths in the Alewife and Mystic River Reservations, makes the Green Line Extension an even stronger project, and that much more attractive for federal New Starts funding.

I call upon you in your position as chief environmental agent in the Commonwealth to do everything in your power to ensure that this project be completed in its entirety, in as timely a manner as possible, and so that once and for all, Eastern Massachusetts is brought into compliance with the Federal Clean Air Act.

Thank you for your consideration.

Kenneth J. Krause

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