

EXECUTIVE CHAMBER

CITY OF WARWICK



RHODE ISLAND

SCOTT AVEDISIAN
MAYOR

May 2, 2007

Mr. John Silva, Environmental Program Manager
Federal Aviation Administration
New England Region
12 New England Executive Park
Burlington, Massachusetts 01803

RE: ***CITY OF WARWICK COMMENTS***
"ENVIRONMENTAL CONSEQUENCES" Chapter - DEIS
T.F. GREEN AIRPORT – WARWICK, RHODE ISLAND

DEIS Prepared by Vanasse Hangen Brustlin, Inc. (VHB) for the Federal Aviation Administration and the Rhode Island Airport Corporation (RIAC).

Dear Mr. Silva:

I have reviewed the Draft Environmental Consequences chapters of the Environmental Impact Statement (EIS) prepared by Vanasse Hangen Brustlin, Inc., (VHB) for the Federal Aviation Administration (FAA).

Attached is a detailed 73-page response that contains recommended additions, deletions and objections. I strongly object to the "Environmental Consequences" inherent within the Improvement Program (IP) Build options, as they will cause substantial, unacceptable, irreversible, adverse health, social and environmental impacts on this Community.

The City of Warwick also disagrees with the discretion used in this study's assessment and argues instead that the proposed IP build options present an immediate, long term and cumulative adverse impact that degrades the environment and surrounding wetlands in a magnitude that would not exist if not for the runway extension proposal.

This chapter rationalizes adverse impacts instead of establishing limits that could be used to determine when actions are acceptable or excessive. In many cases, the narrative discounts future adverse community impacts, rationalizing that the existing condition is already degraded,

and, as such, any additional impacts would not be significant. This reasoning is less than objective and does not properly recognize the cumulative effects on the community within the baseline condition. In this case, narrow criteria and flawed reasoning to evaluate threshold impact has resulted in incomplete analysis that promotes mitigation instead of avoidance.

The City of Warwick strenuously disagrees with the assessments contained within this chapter as they do not account for the cumulative and comprehensive thresholds limits of adverse impact on this community beyond that which is narrowly defined by the FAA.

The Environmental Consequences chapter clearly acknowledges that the IP build options will increase the scope and magnitude of undesirable health, housing and social impediments. However, the chapter fails to entirely acknowledge the extent of existing impacts and if the additional burdens placed on this population would exceed threshold limits. This is due, in part, because the study has never appropriately studied all the ill effects present in the current condition. Our community already endures disproportionately high adverse impacts from airport use; however, this chapter concentrates on affects from incremental increases proposed by the IP build options, not aggregate, long-term health, social and environmental concerns of the community.

Our evaluation finds that the IP build options are not in the best interest of the City of Warwick. The end results place undue hardships on area residents. Hundreds of families would be displaced and some eight percent of the City's affordable detached housing stock eliminated. This directly affects a large concentration of low-to-moderate income families and poses a number of specific and disturbing environmental justice concerns. Fractured, isolated neighborhoods, a displaced minority and low-income population, and the eradication of youth recreational ballfields present further degradation of a neighborhood already impacted by air and noise pollution. This section also asserts, incorrectly, that families forced out of these homes would be able to find affordable housing elsewhere in Rhode Island. The reality is that there is an affordable housing crisis in Rhode Island, a fact that has been widely reported and is recognized by the general public.

This chapter's evaluation of wetland, noise and air quality impact deliberates favorable actions within a narrative of advocacy opposed to an independent review of the facts. Disproportionate air quality and noise impacts are either justified or explained away as outside the purview of study and analysis. The study of baseline and cumulative impacts from hazardous air pollutants includes a bare minimum of data collection with a brief discussion and disclaimer regarding their opinion as to the value of this data in this EIS process.

The study appears to be indifferent to the proposed large-scale destruction of acres of freshwater wetlands, increased pollutant discharges and alterations to critical streambeds that support exceptional and unique andronomous fish runs. The devastation of environmental resources is often minimized through the solitary suggestion of mitigation without review of alternative avoidance measures and a comprehensive impact study.

The chapter is entirely devoid of meaningful study of improving the baseline condition. The City strongly objects to the methodology used in this study as it relates to baseline conditions.

Air, noise and water quality and traffic conditions are already degraded in the area. However, the study does not take this into consideration, instead basing its threshold analysis from future actions against the existing degraded condition thereby minimizing the collective adverse impacts placed onto the community.

Further, the study justifies any adverse community and environmental impacts and additional destruction with the often-touted (but factually unconfirmed) economic benefits of runway expansion, ignoring the fact that ancillary development and forecasted passenger growth will continue with or without the runway extension. This method conveniently assumes a huge financial windfall for the City, without considering long-term losses that will require future State subsidy to the City of Warwick such as, Payments in Lieu of Taxes, construction of new affordable housing stock, uninsured health care costs and the repair/upgrade of state roadways that surround the airport.

The lack of analysis concerning net economic gain includes a similar weakness in the forecasted assumption of perceived additional non-stop service. The City is of the opinion that regional demand clearly demonstrates that this study's claims of revenue generated from additional non-stop service are inflated and uncorroborated. This chapter provides no concrete data to substantiate its claims that non-stop West coast service is necessary to make the airport competitive and profitable. In the City's opinion, these claims do not coincide with the market needs of the majority of the air carriers serving T.F. Green Airport. In fact no dominant air carrier has provided a written agreement to provide said service. As such, the economic development dollars cited in this study are unverifiable and should be considered mere conjecture.

Overall, I am disappointed with this study's lack of data gathering and the irregular neutrality of its assessment. I am of the opinion that the fundamental evaluation, methodology and technical analysis used in this study do not fully disclose or explain the myriad adverse conditions that affect our community. The City of Warwick demands, and deserves, a more comprehensive assessment of the existing and long-term health, social and environmental impacts on our community beyond a bare-minimum analysis. As such, the City of Warwick considers this Draft Environmental Consequences chapter incomplete and in need of improvement in data collection, independent narrative and comprehensive threshold assessment.

Should you have any questions or comments regarding this matter please contact Mark Carruolo, Planning Director, at (401) 738-2000, ext. 6289.

Sincerely,

A handwritten signature in black ink, appearing to read "Scott Avedisian". The signature is fluid and cursive, with a prominent initial "S" and "A".

Scott Avedisian
Mayor

City of Warwick Comments



April 23, 2007

Group I, II and III Environmental
Consequences Chapter Draft
Environmental Impact Statement (DEIS),
T.F. Green Airport Warwick, Rhode Island

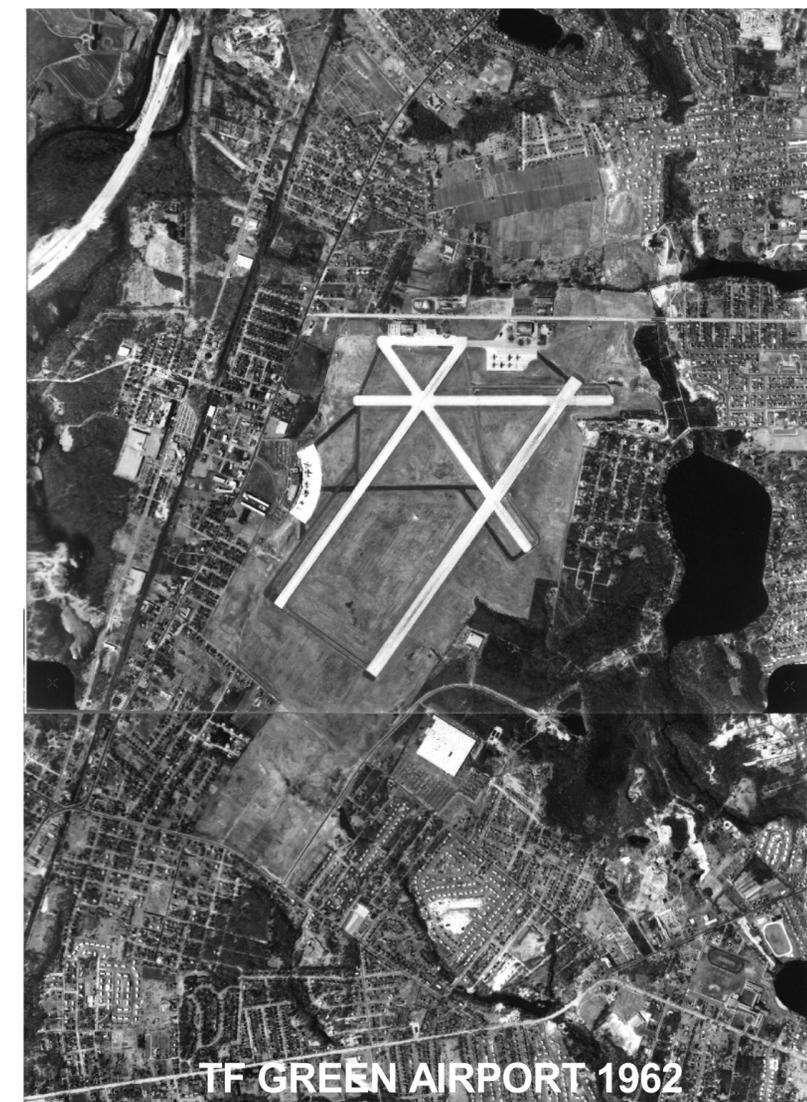
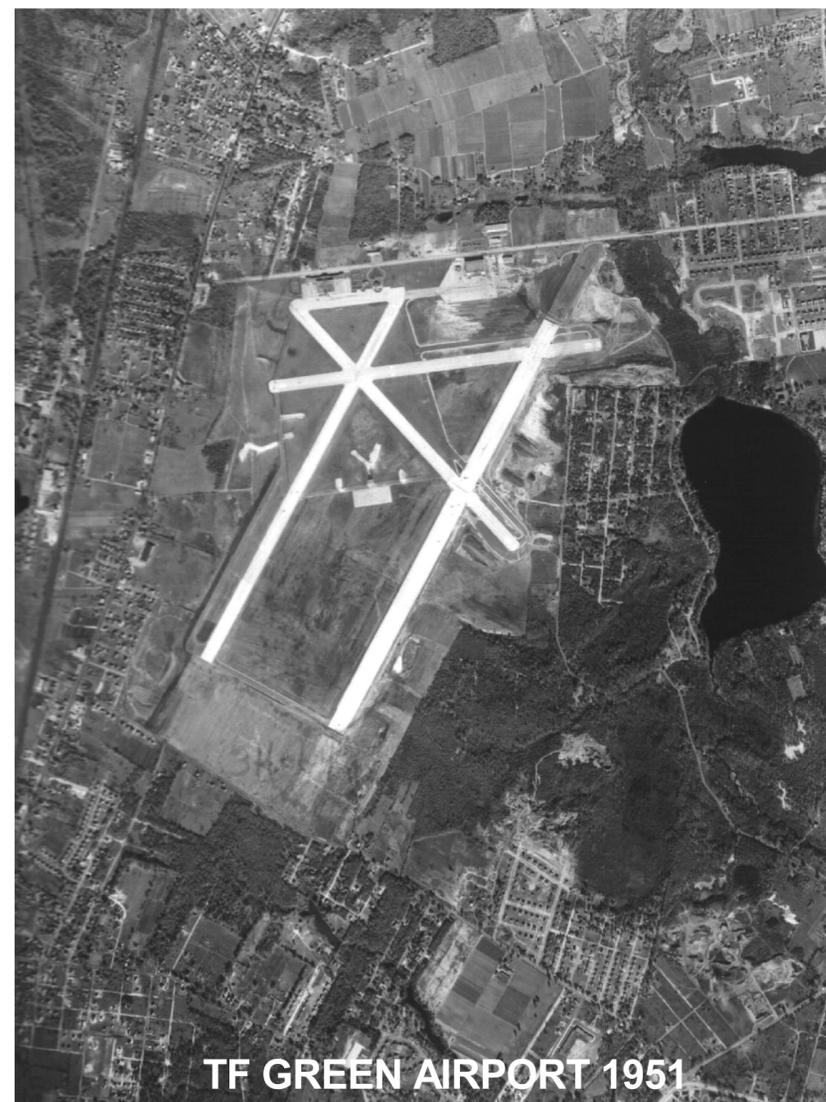
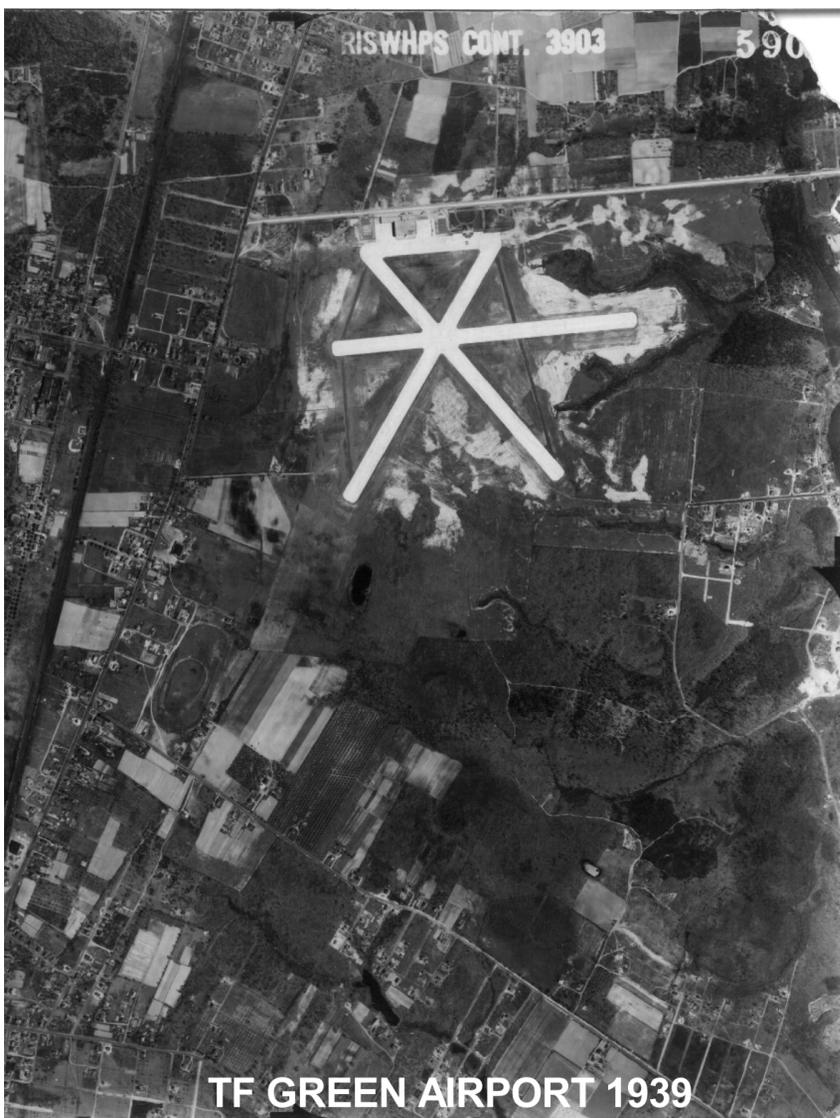
In response to: Environmental
Consequences Chapter Draft
Environmental Impact Statement (DEIS)
Prepared for the Federal Aviation
Administration (FAA) and Rhode Island
Airport Corporation (RIAC) by Vanasse
Hangen Brustlin, Inc., (VHB)

Comments submitted by:

Mayor Scott Avedisian, City of Warwick
Warwick Planning Department
William DePasquale Jr., AICP, Principal Planner



Summary 5.9 Recreation-4f
Summary 5.10 Wetlands
Summary 5.11 WaterQual.
Summary 5.12 Fish & Wildlife
Summary 5.13 T-E
Summary 5.15 Coastal
Summary 5.20 Noise
Summary 5.30 LandUse
Summary 5.40 Socio-Econ
Summary 5.50 Env. Justice
Summary 5.60 SurfaceTrans
Summary 5.70 EC Air Quality



Summary 5.9 Recreation-4f

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Author: Warwick Planning Department Subject: Highlight Date: 4/23/2007 1:05:20 PM

"5.9 Public Parks and Recreation Areas"

Must include mitigation/replacement of all recreational ballfields impacted by the IP build options including but not limited to the recreational fields leased to the City located south of Main Avenue. The FAA agreements that allowed the ballfield use constitutes "reliance" the City used to allocate significant financial resources and grants to establish and maintain the ballfields for public use. Removing the fields as prescribed in all the IP build options, would adversely impact youth activities in the City and result in a net loss in recreational fields.

This section of study must identify reuse options for the replacing the recreational ballfields within areas of residential areas to be taken by the noise mitigation program.

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Author: Warwick Planning Department Subject: Highlight Date: 4/23/2007 1:03:58 PM

"Table 5.9-1 Section 4(f) Public Parks and Recreation Areas Day Night Noise Levels 1 for IP Options A through E compared to the No-Action Alternative"

ADD Bend Street Complex
 Ballfields South of Main Avenue

Summary 5.10 Wetlands

Page: 1

Author: Warwick Planning Department Subject: Highlight Date: 2/15/2007 2:42:30 PM

"T.F. Green Airport Improvement Program (IP) Options A through E"

The City continues its long-standing written objection to the EIS "purpose and need" statement as well as improvement programs review of a single alternative runway extension which severely limits the opportunity to avoid or minimize wetland losses.

Author: Warwick Planning Department Subject: Highlight Date: 2/15/2007 2:42:29 PM

"City of Warwick also has authority to regulate wetlands."

Include additional language. The City of Warwick retains the authority through the City Council to deny formal wetland applications. Additionally the City's zoning ordinance includes a pass through zoning regulation for all statutory buffer and setback requirements.

The City's zoning ordinance requires a deviation be granted by the Zoning Board of review for all petitions seeking a setback or buffer closer than that required within the Freshwater Wetland Regulations. Even if permission is granted by the state DEM, the application must gain approval from the Zoning board as the regulation is considered a dimensional setback within the ordinance.

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Author: Warwick Planning Department Subject: Highlight Date: 2/15/2007 2:42:30 PM

"The Study Area"

When addressing ecosystem impact the study area cannot be described with such exact boundaries. Hydrologic and environmental functions extend far beyond the project area. As such, this paragraph must be amended to reflect this reality included expanding the study beyond that described in this section.

Author: Warwick Planning Department Date: 2/15/2007 2:42:30 PM

"5.10.2.1 Impacts"

On the issue of impacts, this study fails to adequately assess the cumulative impacts of the IP options on the entire Buckeye Brook ecosystem including but not limited to the open water habitat of Warwick Pond. This section must be redrafted to address the larger impact of isolating wetland areas and disturbing hydrological systems within the remaining wetlands in the City.

Author: Warwick Planning Department Subject: Highlight Date: 2/15/2007 2:42:30 PM

"Modifications to wetland hydrology can alter the extent of wetlands and/or performance of functions and values provided by wetlands."

True, therefore for each IP option shall include a statement regarding whether mitigating losses as proposed for the each option will affect the wetland functions and values, as they exist today.

Author: Warwick Planning Department Subject: Highlight Date: 2/15/2007 2:42:30 PM

"As discussed in the Section 5.11, Water Quality, stormwater runoff may also affect water quality in wetlands or may result in the deposition of sediments from roads, such as sand."

This Department suggests assessment of wetland issues include the study of groundwater as a source of induced pollutant loading to area waterway affecting groundwater flow and recharge rates which could in turn affect the nearby wetlands.

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Author: Warwick Planning Department Subject: Highlight Date: 2/15/2007 2:42:30 PM

"5.10.2.2 Cumulative Impacts"

The study shall be amended to address the qualitative differences between the existing wetland values and the proposed condition with mitigation for all IP options. Pre and post construction values must be compared and explained. The fact is that wetlands values are not identical and their importance within the larger community may be more significant than their individual role within the study area.

Author: Warwick Planning Department Subject: Highlight Date: 2/15/2007 2:42:30 PM

"Cumulative impacts include previous wetland impacts"

Include analysis regarding historic and proposed impacts upon wetlands via hydrological changes.

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Author: Warwick Planning Department Subject: Highlight Date: 2/15/2007 2:42:30 PM

"Airport Improvements are not anticipated to produce secondary impacts (induced developments) to wetlands because the area surrounding the airport is already intensely developed, and the economic analysis indicates non induced development as a result of the Improvement Program."

The statement is false and must be amended. The statement improperly relies on a static consideration that the airport is already intensely developed ignoring the historical land use patterns that have developed around the airport land use. Public and private infrastructure develops around the airport land use to support the growth of aircraft operations. In fact, this study's own goal is to increase service destinations and passenger enplanements so why shouldn't we expect induced growth to serve the increased passenger growth. The fact is that there is no evidentiary support for this finding. Land use opportunities exist around the land use on open agricultural land or a reuse of former industrial property the key being that the said locations are also in close proximity to area wetlands. It has been the Planning Department experience that redevelopment of properties adjacent to wetland areas often include a wetland alteration or variance component. Please expand review of this section using GIS mapping to identify potential areas overdevelopment and induced wetland impact from likely encroachments.

Author: Warwick Planning Department Subject: Highlight Date: 2/15/2007 2:42:30 PM

"5.10.6 Cumulative Impacts"

The function of a wetland resource is dependent upon many factors to sustain its performance. Our review indicates that this section does not go far enough in assessing the current and future performance of the area wetlands. This section must be extended to include data describing the condition of the wetlands and the manner in which these alterations have effected the functioning of the wetland ecosystem. Has the wetlands recovered from past alterations? How will the proposed alterations impact the functioning of the wetlands systems given the past alterations?

Has the wetland resource witnessed such a rapid degradation that it cannot recover? Describe the threshold of alteration occurring to date and planned for all wetland systems.

The analyst review of historical impacts only notes changes that have occurred but does not evaluate the manner in which past degradation has impacted the functioning of the natural ecosystem. This Department suggests responding to the aforementioned questions as well as including a destruction threshold for all area wetlands whereby historical wetland destruction and proposed alterations may be assessed. The threshold would allow individual evaluation of how further losses would affect the functioning of a particular wetland system. This analysis is important because the Department is of the opinion that large portions of certain wetland ecosystems in the study area have already been altered requiring the remaining wetlands to perform more functions.

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Author: Warwick Planning Department Subject: Highlight Date: 2/15/2007 2:42:30 PM

"5.10.7 Mitigation"

Paragraph must be expanded to address what constitutes a significant impact to wetlands and what mitigation measures are appropriate.

Author: Warwick Planning Department Subject: Highlight Date: 2/15/2007 2:42:30 PM

"were minimized to the extent practicable."

Include evidence that supports the conclusions that the mitigation principles employed to minimize impact are an effective alternative.

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Author: Warwick Planning Department Subject: Highlight Date: 2/15/2007 2:42:30 PM

"5.10.7.2 Minimization- The Airport Options were designed to avoid impacts to wetlands."

The minimization strategies reviewed in this study do not include enhancement opportunities that seek to reduce the overall cumulative degradation of the resource. Minimization can be effective when coupled with remedial measures designed to alleviate existing unwanted effects from an adverse environmental condition.

The section must explore mitigation of former wetland destruction and contamination as a strategy within the comprehensive review of minimization/mitigation techniques studied herewith.

A likely project for consideration should be the cleanup and wetland restoration of the landfill located at the end of industrial drive.

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Author: Warwick Planning Department Subject: Highlight Date: 2/15/2007 2:42:30 PM

"Table 5.10-18 IP Option A Summary of Impacted Wetland Functions and Values"

Because there is no assurance that the mitigation of wetlands are comparable in values and functions to those wetlands lost this table must include a post condition functions and value evaluation.

Author: Warwick Planning Department Subject: Highlight Date: 2/15/2007 2:42:30 PM

"Table 5.10-18 "Wetland Impact"

For each wetland system add column to indicate the approximate wetland altered from the baseline historical analysis 1939. The baseline approach can be used to understand the entire effect of the wetland alterations proposed.

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Author: Warwick Planning Department Subject: Highlight Date: 2/15/2007 2:42:30 PM

"Table 5.10-19 IP Option B Summary of Impacted Wetland Functions and Values"

Because there is no assurance that the mitigation of wetlands are comparable to those that are lost this table must include a post condition functions and value list.

"Table 5.10-19 "Wetland System"

For each wetland system add column to indicate the approximate wetland altered from the baseline historical analysis 1939.

The baseline approach can be used to understand the entire effect of the wetland alterations proposed.

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Author: Warwick Planning Department Subject: Highlight Date: 2/15/2007 2:42:30 PM

"Table 5.10-20 IP Option C Summary of Impacted Wetland Functions and Values"

Because there is no assurance that the mitigation of wetlands are comparable to those that are lost, this table must include a post condition functions and value list with a statement of the resultant adverse impacts.

Author: Warwick Planning Department Subject: Highlight Date: 2/15/2007 2:42:30 PM

"Table 5.10-20 "Wetland System"

For each wetland system add column to indicate the approximate wetland altered from the baseline historical analysis 1939. The baseline approach can be used to understand the entire effect of the wetland alterations proposed.

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Author: Warwick Planning Department Subject: Highlight Date: 2/15/2007 2:42:30 PM

"Table 5.10-21 IP Option D Summary of Impacted Wetland Functions and Values"

Because there is no assurance that the mitigation of wetlands are comparable to those that are lost this table must include a post condition functions and value list.

Author: Warwick Planning Department Subject: Highlight Date: 2/15/2007 2:42:30 PM

"Table 5.10-21 Wetland System"

For each wetland system add column to indicate the approximate wetland altered from the baseline historical analysis 1939. The baseline approach can be used to understand the entire effect of the wetland alterations proposed.

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Author: Warwick Planning Department Subject: Highlight Date: 2/15/2007 2:42:30 PM

"Table 5.10-22 IP Option E Summary of Impacted Wetland Functions and Values"

Because there is no assurance that the mitigation of wetlands are comparable to those that are lost this table must include a post condition functions and value list.

Author: Warwick Planning Department Subject: Highlight Date: 2/15/2007 2:42:30 PM

"Table 5.10-22 Wetland System"

For each wetland system add column to indicate the approximate wetland altered from the baseline historical analysis 1939. The baseline approach can be used to understand the entire effect of the wetland alterations proposed.

"5.10.8 Summary of Impacts"

Add a summary table of loss of wetlands from Past Actions, Present Actions and Proposed Actions. State the cumulative impact that existing in the current condition and by 2012 and 2020.

Author: Warwick Planning Department Subject: Highlight Date: 2/15/2007 2:42:30 PM

"This section summarizes impacts of Airport Options A through E and compares the five Options with respect to loss of federal and state-regulated wetlands."

This section requires major revision to include a statement of significance based on the scope and intensity of the wetland alterations proposed for each IP action. The significance of the proposed action must be analyzed in context with the existing condition and alternate IP options.

Significance of the proposed action as defined in the code of federal regulations is a measure of the intensity and severity of effect.

The cumulative size and geographic extent of past and proposed actions must be addressed in narrative accompanied with a table that depicts the magnitude of past wetland alterations with those that are proposed as well as the cumulative impact of these actions with a description of impact for each IP action relative to each alternative and against the existing condition.

Author: Warwick Planning Department

Subject: Highlight Date: 2/15/2007 2:42:30 PM

"Summary of Impacts IP Option C"

Add: a Summary table with the narrative comparing the impacts of the IP options in terms their magnitude of wetland impact including the cumulative effects of past actions. The table will allow easy reference for decision makers to compare intensity and significance of wetland impact from the proposed IP options. The narrative and quantitative analysis can be used with the raw number data for complete evaluation.

Author: Warwick Planning Department Subject: Highlight Date: 2/15/2007 2:42:30 PM

"IP Option A"

same as above

Add a Summary table with the narrative comparing the impacts of the IP options in terms their magnitude of wetland impact including the cumulative effects of past actions. The table will allow easy reference for decision makers to compare intensity and significance of wetland impact from the proposed IP options. The narrative and quantitative review can be used with the raw number data for complete evaluation to determine environmental consequence of each alternative as a function of the particular action and as part of the larger comprehensive review of total impact on the resource.

Author: Warwick Planning Department

Subject: Highlight Date: 2/15/2007 2:42:30 PM

"IP Option E"

Same as above

Add a Summary table with the narrative comparing the impacts of the IP options in terms their magnitude of wetland impact including the cumulative effects of past actions. The table will allow easy reference for decision makers to compare intensity and significance of wetland impact from the proposed IP options. The narrative and quantitative review should include raw data for complete evaluation to determine environmental consequence of each alternative as a function of the particular action and as part of the larger comprehensive review of total impact on the resource.

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Author: Warwick Planning Department Subject: Highlight Date: 2/15/2007 2:42:30 PM

"Table 5.10-23 Areas of Federal Wetland Impact by Option"

Specific criteria defining the significance of these figures must be included in this table.

I suggest using NEPA guidelines to form explicit definitions of terms used to describe said impact that reflects the magnitude of past and proposed alterations on the larger wetland ecosystem.

Author: Warwick Planning Department Subject: Highlight Date: 2/15/2007 2:42:30 PM

"Table 5.10-24 Areas of Wetland Cover Type Impact by Option"

Describe the cumulative effect of these actions on the different wetland systems.

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Author: Warwick Planning Department Subject: Highlight Date: 2/15/2007 2:42:30 PM

"there is no practicable alternative that achieves the project purpose while completely avoiding impact to wetlands"

This statement is false and must be removed. The City of Warwick is of the opinion that the EIS has not fully examined all relevant considerations to the lengthening of runway 5-23, in particular the assessment of alternative off-site proposals. The City of Warwick has consistently argued that the "need" segment of the EIS is actually based on desire, not actual need. This distinction is critical considering that the nucleus of the EIS study is based on a false premise that without the runway extension T.F Green Airport could not support future operations in a safe and efficient manner. This assertion is misplaced considering that T.F Green Airport currently operates as a successful and convenient Airport serving southern New England with one-stop service to the west coast and direct non-stop flights to Las Vegas. Maintaining the future success of the Airport would not be threatened if the 9,350 lf runway 5-23 were not built because the projected passenger growth would continue to be served by planned improvements to the terminal and gate area.

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Author: Warwick Planning Department Subject: Highlight Date: 2/15/2007 2:42:30 PM

"The FAA will coordinate with the USACE, EPA, USFWS, RIDEM Division of Water Resources Permitting Program (WRPP), and the City of Warwick"

Should add NRCS - Natural Resources Conservation Service and The Natural Resources Conservation Service ("NRCS") particularly the New England Fisheries Management Council with their study and management expertise in the study of herring a species within Buckeye Brook.

Summary 5.11 Water Quality

Page: 1

Author: Warwick Planning Department Subject: Highlight Date: 4/12/2007 2:46:04 PM

"5.11 Water Quality"

The water quality impacts cited are not entirely explained within this section. The short and long-term adverse impacts on environmental resources (water and fish populations) of the host community are adequately addressed. Instead of considering and quantifying the aggregate impact on the water resources from all current (baseline) and future pollutants (IP) this section chooses to address only that incremental increases in volume, pollutant concentration, deicing fluid etc., from the specific IP build options often emphasizing that the small increases are offset by the already constrained water quality and larger economic benefits derived from the construction of the IP option.

This limited assessment of the water quality impact is unacceptable to the City. The existing problems facing area water bodies are serious and must be fully acknowledged within this section. Instead of centering on the minimization of impact based on an incremental measurement, this study must include larger data sets and discussion of the existing and aggregate water quality condition including what role the airport land use plays in pollutant

contribution along with a measure of severity of impact on fish and wildlife in the existing condition.

Limiting the study of impact to accretive increases from the IP options without establishing a degradation threshold or baseline essentially ignores the existing water quality problems (such as lack of DO, growing pollutant loading, velocity and temperature increases) that have been increasing since the 1990's. To dismiss these critical conditions from study assures that the study will not properly account for the pollutants already introduced into the system from existing airport operations.

Page: 2

Author: Warwick Planning Department Subject: Highlight Date: 4/12/2007 2:50:52 PM

"Each of the IP Options would increase impervious surfaces in some drainage areas at the Airport and would require detention and/or infiltration structures to reduce peak discharges into the local surface waters. The impervious surfaces would not substantially increase pollutant loading as they would consist mostly of taxiways and runways but could increase the temperature of runoff."

The City disagrees with this statement. Even with the best type of stormwater devices (like *Vortech*) all TSS's (and wet detention is not allowed near the airport use) pollutants attach to the suspended solids and are not always captured 100 percent of the time. Increasing volume of runoff will only serve to increase the potential for pollutant loading including increasing the concentration of pollutants at the outfall. Therefore, it must be said that TSS's and pollutants will increase. The additional impervious surfaces will also collect oil, rubber, metals and other fluids normally and customarily attributed to the use of vehicles and aircraft on these new surfaces. Therefore, the previously mentioned statement is incorrect. Amend the above language to reflect this fact.

Author: Warwick Planning Department Subject: Highlight Date: 4/12/2007 2:51:41 PM

*"The IP Options would increase the number of flights compared to the No-Action Alternative, thereby increasing glycol use. However, there would still be no increase in the use of glycol over existing conditions. Ongoing improvements to glycol application and recovery procedures **may** offset any impacts from the increased application of glycol compared to the No-Action Alternative. Glycol application (and potential impacts) would occur only within the Mill Cove watershed because glycol application would only occur on the aprons."*

Remove the assumption "may offset". This is a technical document, as such should this document should limit the use of such subjective phrases. Address as; it will or will not or it is unknown. Include a basic statement that *the increased application of glycol compared to the No-Action Alternative will continue to adversely impact the Mill Cove watershed.*

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Author: Warwick Planning Department Subject: Highlight Date: 4/12/2007 2:53:18 PM

"Water can also flow faster off impervious surfaces, which can increase erosion in receiving streams and therefore potentially increase the amount of sediment in the water."

Include narrative explaining first flush pollutant contribution discharging into the neighboring waterways. Add: "...amount of sediment and *pollutants* in the receiving waters."

Author: Warwick Planning Department Subject: Highlight Date: 4/12/2007 2:54:37 PM

"Runways and taxiways receive little vehicular traffic compared to conventional roadways and do not accumulate substantial quantities of salt, sand, oil, and metals."

This statement understates impact. Amend the following paragraph:...However, these

surfaces may contain other contaminants such as pavement deicers and deicers that may be blown off aircraft on departure Add: *"As proposed the addition of active runway area will collect rubber deposits and metals which contribute ultimately to point source contamination through stormwater discharge points to receiving water bodies"*

Degradation of paint, braking material and other similar pollutants associated with the operation of hundreds of aircraft (between stormwater events) can collect on the large impervious runway only to be washed into the stormwater system. In soluble form, these pollutants enter the surrounding waterbodies.

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Author: Warwick Planning Department Subject: Highlight Date: 4/10/2007 1:04:40 PM

"5.11.2.3 Cumulative Impacts"

Please include assessment of groundwater and surface water impacts from the unlined landfill at the end of Industrial Drive.

Author: Warwick Planning Department Subject: Highlight Date: 4/12/2007 2:55:31 PM

"Data on impervious surfaces, Airport operations, and local and regional water quality are not available for the Airport's entire history."

Couldn't you use old aerial photography to assess impervious surfaces by year? I believe Statewide Planning maintains an extensive collection of old aerials.

Author: Warwick Planning Department Subject: Highlight Date: 4/9/2007 1:28:19 PM

"5.11.2.4 Mitigation"

The City is of the opinion that this section does not go far enough in addressing the degree of degradation already placed within the watershed from the airport land use. Understanding the full scope and breadth of negative impacts placed on water resource is required to fully understand the limitations of both mitigation and restoration measures. Even a slight increase in degradation from an IP alternative may be all that is necessary to cause a larger serious and irreversible negative impact on a water resource if that resource has already been subjected to years of incremental degradation. Water resources cannot sustain an unlimited amount of pollutant loading and as such this study must better address pollutant loading and performance of past mitigation measures employed against their original expectations (including but not effectiveness oil water separators, capture of TSS and glycol recapturing etc.)

Since 1996, several on-field infrastructure improvements have been constructed based on the individual project's impact on water quality. The previous actions should not be excluded from this study because they may have received a finding of no adverse impact. Instead, appropriate analysis must include full reassessment of past mitigation and impact together with those recommended within the Build options to create a single impact/mitigation statement reflecting a combined assessment of the mitigating strategies in place and proposed.

It is vitally important to first assess already poor water quality conditions before assigning mitigation for future impingements, as these measures may be less effective in buffering negative impact within a resource already overly constrained through years of aggregate water quality degradation. Present a greater detailed explanation in a tabular layout, of individual past impact/ mitigation actions (for all past improvement actions)

along with that which that is proposed within the IP Options. Evaluate threshold values (consequences) of water quality degradation as a single action that reflects impact from combined and present actions.

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Author: Warwick Planning Department Subject: Highlight Date: 4/12/2007 2:57:47 PM

"5.11.3 1 Impact Assessment"

This section must extend its analysis of the baseline condition to gain a greater understanding of the cumulative and long-term impact of pollutant loading on area water quality. Outline in detail the specific loading characteristics and concentrations of stormwater pollutants to the receiving water bodies in the existing condition together with the actual performance characteristics of stormwater devices as a percent of removal of soluble pollutants and TSS's. Quantify additive impact from additional volume and concentration of pollutants from the proposed actions on the watershed (especially from deicing fluids). Determine if these receiving water bodies are capable of assimilating the additional pollutant loading proposed within the IP build options without adversely impacting water quality. Indicate what avoidance actions are required to mitigate the adverse cumulative and secondary impacts of water quality. Clearly cite what actions are necessary to enhance water quality through the reduction of pollutant runoff as opposed to just controlling stormwater runoff. Address minimization and avoidance of impact in the existing baseline condition through improved techniques designed to eliminate or reduce the onsite sources of pollutants. Address what actions are required to achieve water quality improvement by 2012.

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Author: Warwick Planning Department Subject: Highlight Date: 4/12/2007 3:02:13 PM

"Glycol use for aircraft deicing would increase as the number of departing flights increased, along with potential glycol-related effects in surface water and groundwater. Glycol use at an airport varies from year to year depending on weather conditions, and is correlated with the number of departing flights and winter storm events. In the 2004-1005 deicing season, a total of 187,360 gallons of glycol were used at T.F. Green Airport. In the 2005-2006 deicing season, only 80,191 gallons were used. The average of these two years (133,775 gallons) is therefore used as the base condition. Under the No-Action Alternative, the Airport would implement a glycol blending facility that is predicted to reduce the amount of glycol applied by up to 30 percent from existing use. The T.F. Green Airport 2006-2007 Annual Deicing Management Plan describes the glycol management practices that are included in the No-Action Alternative. Key elements include constructing a new consolidated glycol blending facility that would blend deicing fluid concentrations to match ambient temperatures and reduce the amount of glycol used; new glycol recovery equipment; and constructing and operating a glycol recovery processing facility. These facilities would be in place by 2012."

Controlling pollutant loading emanating from the Airports stormwater system is ultimately the responsibility of RIAC. State this clearly. To increase the amount of deicing fluid expected to be collected within the IP build options will only serve to exacerbate the existing problem of deicing fluid reaching nearby waters unless this study prescribes specific improvements in the methods of glycol management and more stringent discharge limits as adopted by RIDEM. Include a narrative explaining this in detail. Also explain that current approach is less than entirely effective in treating high-volumes of de-icing fluid over a short period and that the deicing fluid does make its way into the stormwater system and discharges into nearby water resources. Recognize that the amount of de-icing fluid reaching the neighboring water resource will only increase within the IP build options unless

more sophisticated deicing facilities are constructed and that this will adversely affect water quality and fish habitat.

The use of deicing fluids to remove ice and snow from aircraft during the winter months is an operational necessity of the Airport land use and as such should receive no special exception in terms of designing the infrastructure necessary to eliminate pollutant discharge by 2012. Eliminating deicing fluid from entering stormwater runoff requires mitigation no matter the cost and should be listed as a viable avoidance measure to comply with local RIDEM discharge limits.

Author: Warwick Planning Department Subject: Highlight Date: 4/12/2007 3:02:06 PM

"Aircraft departures would increase from 60,714 in 2004 to 68,603 by 2012 and 76,138 in 2020. Assuming that glycol usage would increase consistently with operations, and taking into account a 30 percent reduction in usage, under the No-Action Alternative approximately 105,821 gallons of glycol would be used in 2012 and 117,444 gallons in 2020 (this would depend on the severity of storm events while planes are being deiced in those years).

"In the absence of mitigation, it is possible that any increase in glycol usage could decrease DO levels in the receiving waters and in groundwater. Reduced DO can impact organisms dependent on DO and can increase iron levels in groundwater."

Must be more definitive in terms of scaling and defining the actual long-term impact on the ecosystem. "can impact" does not appropriately respond to the issue of quantifying the magnitude of environmental consequence.

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Author: Warwick Planning Department Subject: Highlight Date: 4/12/2007 3:06:11 PM

"However, spill protection and control measures as required by RIDEM regulations and would be implemented. Therefore, the selection of a given Integrated Cargo Facility Site would not increase the potential for contamination to the receiving water(s) for that site. Truck traffic on the access roads could also introduce roadway contaminants such as salt and oil. Changes in roadway area associated with the Integrated Cargo Facility Sites are discussed below for each IP Option."

Are you assuming these management practices are 100 percent effective? If this is an assumption, please cite accordingly. If the practices are not 100 percent effective, quantify their performance and subsequent impacts. The City does not see any evidence that BMP/stormwater management is entirely effective at removing all pollutants in every circumstance as such this section must be revisited. Additionally the operational increases forecasted will statistical increase the probability of oil leaks and/or accidents and therefore result in the greater chance of water quality contamination. (released into the stormwater system). Amend accordingly to reflect this reality.

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Author: Warwick Planning Department Subject: Highlight Date: 4/11/2007 12:54:51 PM

"These new fueling locations would not pose a new threat to water quality, particularly since fuel farms and terminals already exist at the Airport."

Assess the current threat to water quality. If the current threat were unacceptable, the future additive impact would be even greater.

Author: Warwick Planning Department Subject: Highlight Date: 4/11/2007 1:03:53 PM

"The new runway and taxiway areas would have a negligible impact on water quality as these uses of pavement do not typically contribute measurable contaminants to runoff."

The City disagrees with this statement especially given the enormity of impervious surface involved. It is well accepted that impervious surfaces used by transportation vehicles collect a variety of pollutants including oils, salts, and metals. Given the acres of impervious surface in both the existing and proposed conditions, the pollutants flushed into nearby water can hardly be considered immeasurable.

Strike or amend.

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Author: Warwick Planning Department Subject: Highlight Date: 4/12/2007 3:39:23 PM

"The increase in impervious surface in the Mill Cove drainage area would be fairly small and would be controlled by BMPs."

State the effectiveness of the BMP's proposed to mitigate increased water temperature and removal of soluble pollutants. The City is of the opinion that the BMP's cannot perform at a level that removes all adverse impacts from temperature increases and soluble pollutants. Amend to reflect these limitations opposed to using the less than technical term "fairly small".

Author: Warwick Planning Department Subject: Highlight Date: 4/12/2007 3:07:46 PM

"IP Option A would not cause a substantial increase in glycol use over the No-Action Alternative and would not cause significant changes in DO or iron content."

It is unacceptable and inappropriate to state that no significant changes would occur without properly establishing the health of the existing condition (no-action alternative). Without proper assessment of existing impact from the airport land use it is impossible to determine that the proposed actions would have no comprehensive and long-term impact on area waterbodies. The City contends that the change in DO from periodic glycol discharge into area waterways is already unacceptable as it poses a significant and adverse impact on the entire ecosystem. Any addition in volume would exacerbate this condition.

Strike this paragraph, and include in its place a baseline assessment of impact from all current glycol contaminates.

"any effects of glycol on water quality should be local and would have a negligible effect on areas farther downstream due to the fairly rapid breakdown of glycol and the subsequent reoxygenation of the water. The U.S. Department of Health and Human Services reports that glycol in water generally breaks down within several days in surface water and soil and that glycol breakdown is fastest under oxygen-rich conditions, depending on temperature. The dilution of glycol as it enters receiving waters downstream such as Brushneck Cove and Mill Cove would both reduce the intensity of any environmental effects and speed up the breakdown process."

This apologist type of narrative is entirely unacceptable to the City. Many alternate studies suggest that even within this period the result of the DO could be devastating. This seemingly one-sided characterization is surprising and inconsistent with the federal regulations that guide the development of environmental impact statements.

No facts are included that suggest that the statement as referenced has direct applicability to this particular watershed.

Strike the entire paragraph.

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Author: Warwick Planning Department Subject: Highlight Date: 4/11/2007 1:44:28 PM

"These new fueling locations would not pose a new threat to water quality, particularly since fuel farms and terminals already exist at the Airport."

Same as the comment for IP option above.

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Author: Warwick Planning Department Subject: Highlight Date: 4/11/2007 1:45:54 PM

"The overall effects on impervious surfaces in the Mill Cove drainage area would be fairly small, and would be controlled by BMPs. This would not be expected to cause significant downstream hydrologic changes."

Same as the comment for IP option above.

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Author: Warwick Planning Department Subject: Highlight Date: 4/12/2007 3:12:25 PM

"The new outfall would add a discharge point, but the total quantity of flow to Callahan Brook would decrease slightly."

Include the quantity and concentration of pollutants added by this new outfall in context with the entire burden of the receiving waters.

Author: Warwick Planning Department Subject: Highlight Date: 4/11/2007 1:49:44 PM

"These new fueling locations would not pose a new threat to water quality, particularly since fuel farms and terminals already exist at the Airport."

Same as the comment for IP option above.

"Airport operations and glycol use would increase as discussed for IP Option A in Section

"5.11.3.3 and would have similar negligible impacts that would be minimized further by mitigation."

Current impacts are not appropriately quantified in this study and as such, "similar" has no rational reference point on which to assess impact. In addition to a need to properly establish adverse impacts within the baseline condition this study must also qualitatively consider significant pollutant reduction strategies to limit present and future impact from the IP build options. Describe how pollutant loads into the neighboring water bodies can be reduced or eliminated today and by 2012 and 2020.

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Author: Warwick Planning Department Subject: Highlight Date: 4/11/2007 2:08:46 PM

"These new fueling locations would not pose a new threat to water quality, particularly since fuel farms and terminals already exist at the Airport."

Same as the comment for IP option above.

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Author: Warwick Planning Department Subject: Highlight Date: 4/11/2007 2:09:29 PM

"The new runway and taxiway areas would have a negligible impact on water quality as these types of pavement do not typically contribute measurable contaminants to runoff."

Same as the comment for IP option above.

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Author: Warwick Planning Department Subject: Highlight Date: 4/11/2007 2:10:33 PM

"The increase in impervious surface in the Mill Cove drainage area would be fairly small and would be controlled by BMPs. This would not be expected to cause significant downstream hydrologic changes."

Same as the comment for IP option above.

Author: Warwick Planning Department Subject: Highlight Date: 4/11/2007 2:13:30 PM

"All aircraft deicing would still be conducted at deicing areas discharging to Buckeye Brook and would be managed in accordance with the DMPP. IP Option E considers Integrated Cargo Facility Sites 1, 2, and 3."

Will the deicing be managed in accordance with the latest RIDEM permit? If not please state why? Describe the impacts to water quality should the airport operator elect not to manage deicing fluid to the discharge limits permitted by RIDEM.

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Author: Warwick Planning Department Subject: Highlight Date: 4/11/2007 2:16:57 PM

"The new Airport outfall to Callahan Brook would have a negligible impact on Callahan Brook as the same area already discharges to the brook through the Warwick municipal stormwater system. The new outfall would add a discharge point, but the total quantity of flow to Callahan Brook would decrease slightly."

Address the additional point discharge's impact on pollutant loading. Please define the terms "slight" and "negligible". Define the baseline water quality condition Callahan Brook.

Author: Warwick Planning Department Subject: Highlight Date: 4/11/2007 2:18:19 PM

"These new fueling locations would not pose a new threat to water quality, particularly since fuel farms and terminals already exist at the Airport."

See comments included within the IP options listed above. Author: Warwick Planning Department Subject: Highlight Date: 4/11/2007 2:21:24 PM

"The new runway, taxiway, and EMAS areas would have a negligible impact on water quality as these types of pavement do not typically contribute measurable contaminants to runoff."

The City disagrees with this statement. Please amend to include pollutants collected within such a large impervious surface. See comments above.

Author: Warwick Planning Department Subject: Highlight Date: 4/11/2007 2:22:28 PM

"Airport operations and glycol use would increase as discussed for IP Option A in Section 5.11.3.3 and would have similar negligible impacts that would be minimized further by mitigation."

The City disagrees with this statement. See comments above. Strike language.

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Author: Warwick Planning Department Subject: Highlight Date: 4/11/2007 2:25:01 PM

"Standard roadway mitigation measures would be used to meet water quality standards."

To vague, specify the structure (s) proposed as well as their efficiency in removing TSS's and soluble pollutants.

Author: Warwick Planning Department Subject: Highlight Date: 4/12/2007 3:17:01 PM

"The increase in impervious surface in the Mill Cove drainage area would be fairly small, and would be controlled by BMPs. This would not be expected to cause significant downstream hydrologic changes. Impervious surfaces would increase in the Brushneck Cove drainage area, which would have no significant impacts downstream."

The City disagrees with this statement. *"would have no significant impacts downstream"* only if compared to the already impaired condition which is in large part a result of the unmitigated expansion of infrastructure improvements on airport property. See comments above regarding expanding this EIS to study and establish an existing condition that accurately reflects the overall health of impacted waterbodies as a function of maladies already placed on the ecosystem from the airport land use. Determine if the ecosystem is already at significant risk in it's current state and quantify how much more adverse impact (pollutants, temp, velocity etc.) the system is capable of handling before reaching the threshold of significant impact in the aggregate condition by 2012.

Please strike and amend accordingly.

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Author: Warwick Planning Department Subject: Highlight Date: 4/11/2007 2:41:41 PM

"5.11.5 Mitigation Measures Mitigation measures would be implemented for each IP Option to reduce pollutant loading and meet state water quality and stormwater design standards. In a typical design, mitigation measures would include avoidance, minimization, and mitigation. In this case, avoidance would only be possible for the No-Action Alternative, as all of the IP Options would require constructing new impervious surfaces. None of the IP Options allow complete avoidance of impacts. Each IP Option was designed to minimize impacts to specific wetlands, neighborhoods, and major roadways and would shift impacts from one drainage area to another. All of the IP Options would require mitigation for the impacts that were not avoided. Therefore, specific mitigation measures are discussed below rather than avoidance and minimization."

The City disagrees with this methodology and believes the outright rejection of avoidance and minimization options does not follow what is required within the development of an EIS.

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Author: Warwick Planning Department Subject: Highlight Date: 4/12/2007 3:38:40 PM

"5.11.7 Summary of Impacts"

Addressing this section including all the subsections below: This study's conclusions are based on an abbreviated and limited analysis of the additive impacts from the IP options only. Cumulative impact assessment of the resources is inadequately addressed. The methodology used in this section de-legitimizes the existing constraints placed on area waterbodies by the airport land use as additive impacts are not appropriately studied in the context of aggregate consequence on the water resource. This flaw, within the EIS is consistently apparent and has not been resolved. Also deficient is the less than substantial review of avoidance and minimization alternatives. This study also does not adequately address reasonable alternatives to improve water quality by or minimizing existing pollutant sources emanating from the airport land use.

The assumption is made that no greater impact of the water resource will occur from increased amount of pollutants and deicing fluid without defining the health of the water resource in the baseline condition and establishing a threshold of significant impact for the

entire water resource impacted.

As outlined in this study adverse impact is invariably assumed not to occur because of the degraded existing condition with no regard to the current RIDEM water quality objectives or history of water quality issues that surround the airport land use. Little is said about the current water quality permit restrictions and how the IP options would impact said discharge limits. The study must not issue a conclusion as a proponent of the project but instead must indicate how additional pollutants and their concentrations may affect an already overburdened water body. The specific water quality objectives of the State must be respected in the documents and responded to accordingly with an improvement of existing conditions management strategy contained within either the minimization or the avoidance sections.

The fact is that the proposed infrastructure and operational changes proposed will increase pollutant loading on a resource already adversely impacted. However, this section does not convey knowledge or obligation to remediate this situation in any way. The frailty of the surrounding water bodies as impacted by the airport land use must be acknowledged and discussed further within this section of the EIS. The draft EIS includes limited data and projections that largely omit relevant information concerning the current health of area water bodies as well as resource specific information regarding the limits of the receiving waters to ability to accept additional pollutant loading with respect to adverse impact on the entire ecosystem. Heavy emphasis is given to mitigation and compensation avoiding discussion of past and present destructive practices such as pollutant loading and deicing activities.

This study's weaknesses includes a general appearance of partiality, inadequate analysis of the aggregate and long term impacts of the water resources (cumulative and proposed condition), lack of a full range of alternatives designed to avoid or minimize impact and contains no reasonable considerations for attenuating on-site pollutants so as to improve water quality (through reduction of on-site pollutants on airport property).

The City is of the opinion that the requested additions are not unreasonable in analyzing the detriments associated with the proposed IP options. As submitted, the shortcomings of this section do not comply with CEQ's requirements especially for review of reasonable alternatives analysis and as such appear to be legally inadequate.

Summary 5.12 Fish & Wildlife

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Author: Warwick Planning Department Subject: Highlight Date: 2/20/2007 2:21:20 PM

*"Significance Threshold" "FAA Order 5050.4B directs the investigator to consider the project effects on population dynamics; sustainability; reproduction rates; natural and artificial mortality (aircraft strikes); and the minimum population size needed to maintain the affected population. While there is not a specific threshold for significant impacts to biodiversity provided in FAA Order 1050.1E, for the purposes of this evaluation a significant impact is one that could cause **one or more existing species to be eliminated from the Project and Study Areas.**"*

The "significance threshold" must be expanded.

The selected threshold of "elimination of species" is far too extreme for this urban ecosystem. The proposed alternations occur within an environmental system that has already endured years of

alterations. Rewrite the section to include study of the adverse conditions, as they exist within the baseline condition. The threshold study shall include all direct and indirect habitat modifications that have and are proposed to, effect existing species within riparian habitats and migratory fish populations. Additional language must be included that expands the definition of "significant" impact to one that conflicts with local policies and/or plans that seek protection and preservation of wildlife resources and migratory fish populations.

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Author: Warwick Planning Department Subject: Highlight Date: 2/20/2007 2:24:44 PM

"5.12.2 Methodology/Study Area"

Please expand the narrative to explain the habitat linkage that exists within the Buckeye Brook/ Mill Cove ecosystem and the importance of said linkage for wildlife, avian and aquatic species. The connected systems must be mapped to Mill Cove and Narragansett Bay with GIS and delineated with a narrative describing the larger area as the area of analysis for this section of the EIS study.

Author: Warwick Planning Department Subject: Highlight Date: 2/20/2007 2:18:24 PM

"a species of fish."

Add: affected spawning, rearing, and migration of anadromous species.

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Author: Warwick Planning Department Subject: Highlight Date: 2/20/2007 2:30:02 PM

"5.12.3 Impacts to Aquatic Habitats"

The section is silent concerning the IP option contribution of new pollutant loads into area waterbodies and how proposed increases /decreases would or would not impact area water quality and fish populations. Buckeye Brook, Warwick Pond, Mill Cove and the Narragansett Bay estuary are linked ecosystems that are of vital importance to anadromous species and wildlife. This document does not adequately acknowledge the full relationship of this scientific fact. Wildlife birds and fish do not stop at the border of the study area. The proposed IP options must be studied within the parameters of their entire habitat not within the lines established on a map as presented in this document. The analysis area as defined by federal guideline extends beyond that of the current study area. For each IP Option study must extend to the Mill Cove ecosystem.

This section must be revised accordingly. Expanded study of the entire length of Buckeye Brook into Mill Cove is the only means in which to properly access the impact of wildlife and fisheries within the linked habitats. To do otherwise will underestimate the effect of the IP options.

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Author: Warwick Planning Department Subject: Highlight Date: 2/20/2007 2:18:24 PM

"5.12.4 Impacts to Terrestrial Plant Associations and Wildlife"

Add: a subsection that includes an entomological survey and study. The section should address critical or endangered insect species as well as changes that may affect the food source for other dependent species.

Author: Warwick Planning Department Subject: Highlight Date: 2/20/2007 2:33:39 PM

"5.12.4 "Direct and indirect impacts on terrestrial biotic communities within the Project Area were evaluated for each IP Option"

This section must include a description of the existing condition as having sustained years of pollution and habitat destruction that has decreased the quality and availability of habitat for birds, mammals and fish population. As such, let the document reflect that current liabilities include those already imposed by the airport land use. Described in detail how food sources have been affected up to the baseline condition and assess the aggregate condition of food sources after implementation of IP options. Species are dependent on food sources that are dependent on biota to sustain the ecosystem. This well understood connection demands expanded study of the baseline condition as well as impact from each IP option. Without this information, the study cannot demonstrate that the IP options will not have an adverse environmental impact.

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Author: Warwick Planning Department Subject: Highlight Date: 2/20/2007 2:18:24 PM

"Table 5.12-6 Summary of Impacts to Terrestrial Biotic Communities Improvement Program Option A"

Add column with data of habitat loss to date. (since 70's)

Add column of aggregate impact (habitat loss up to the baseline and loss by IP Option after the baseline)

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Author: Warwick Planning Department Subject: Highlight Date: 2/20/2007 2:18:24 PM

"Table 5.12-7 Summary of Impacts to Terrestrial Biotic Communities Improvement Program Option B"

Add column with data of habitat loss to date. (since 70's)

Add column of aggregate impact (habitat loss up to the baseline and loss by IP Option after the baseline)

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Author: Warwick Planning Department Subject: Highlight Date: 2/20/2007 2:18:24 PM

"Table 5.12-8 Summary of Impacts to Terrestrial Biotic Communities Improvement Program Option C"

Add column with data of habitat loss to date. (since 70's)

Add column of aggregate impact (habitat loss up to the baseline and loss by IP Option after the baseline)

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Author: Warwick Planning Department Subject: Highlight Date: 2/20/2007 2:18:24 PM

"Table 5.12-9 Summary of Impacts to Terrestrial Biotic Communities Improvement Program Option D"

Add column with data of habitat loss to date. (since 70's)

Add column of aggregate impact (habitat loss up to the baseline and loss by IP Option after the baseline)

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Author: Warwick Planning Department Subject: Highlight Date: 2/20/2007 2:18:24 PM

"Table 5.12-10 Summary of Impacts to Biotic Communities Improvement Program Option E"

Add column with data of habitat loss to date. (since 70's)

Add column of aggregate impact (habitat loss up to the baseline and loss by IP Option after the baseline)

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Author: Warwick Planning Department Subject: Highlight Date: 2/20/2007 2:18:24 PM

"5.12.5 Cumulative Impacts"

There is no doubt that the airport land use is a source of pollutants that are degrading water quality and impacting aquatic species within Warwick Pond and Buckeye Brook. This fact must be acknowledged in greater detail within this section as a direct cumulative impact.

Author: Warwick Planning Department Subject: Highlight Date: 2/20/2007 2:34:29 PM

"5.12.5.1 The river herring spawning run through Buckeye Brook into Warwick Pond and the presence of American eel in streams and ponds in the Project Area are important components of aquatic biodiversity."

Please add some language. Buckeye Brook ecosystem is a natural resource of great value to the local community a resource that has become increasingly rare in this urban context. This natural resource cannot be replaced once it has been destroyed; a fact not recognized in this document but understood by the City's Comprehensive Plan a plan that is approved by the State of Rhode Island.

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Author: Warwick Planning Department Subject: Highlight Date: 2/20/2007 2:34:54 PM

"5.12.5 Cumulative Impacts Indirect impacts to aquatic resources have included urbanization of the Buckeye Brook watershed which has affected water quality. Road and street culverts discharge sand and sediment at each storm drain outlet along the stream."

A surface water impact assessment must be undertaken as part of this section for both Warwick Pond and Buckeye Brook to determine the manner of impact for which deicing operations have had on eutrophication on these water bodies including how non-point source surface water inflows emanating from the airport property impact aquatic and avian habitat.

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Author: Warwick Planning Department Subject: Highlight Date: 2/20/2007 2:35:39 PM

"Integrated Cargo Facility"

This section must address stormwater runoff from new impervious surfaces proposed within the IP options including proposed treatment including the quality and quantity of stormwater to be discharged in area waterbodies as well as a determination of impact of fish species pre and post project.

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Author: Warwick Planning Department Subject: Highlight Date: 2/20/2007 2:18:24 PM

"5.12.6.3 Mitigation"

The methods to minimize impact through mitigation do not address avoiding critical periods for spawning and migrating fish populations. Additionally, if habitat restoration, replacement or mitigation is chosen the narrative must be expanded to include detailed study of the and effectiveness of said compensatory measure. If the destroyed habitat is not restored or replaced the destruction of the natural habitat must be clearly indicated in a clear statement such as; will result in permanent loss of habitat even with the mitigation proposed. Additionally data shall be included detailing the

effectiveness of all mitigation measures proposed by IP option.

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Author: Warwick Planning Department Subject: Highlight Date: 2/20/2007 2:38:14 PM

"5.12.7 Summary of Impacts"

The criteria and determination of impacts within the document including within its summary is inconsistent with the guidelines for the drafting of an environment impact statement. Many items have not been comprehensively addressed within the document. Additional data gathering and analysis is required within the following areas: Provide the extent of habitat fragmentation and edge effects by IP option within the entire system East to Mill Cove and quantify the aggregate loss of animal and plant populations within critical habitat areas. Describe how the losses will impact food sources and assess the effect on mammals, reptiles' amphibians, fish, insects and birds. Indicate how each IP option will or will not create or exacerbate barriers to movement on mammals and fish species. Will temporary, short and long-term noise interfere with critical natural functions such as wintering, foraging, migration breeding and rearing.

Additional information must be provided describing aggregate loss of animal and plant populations historic by 2012 and 2020. Discuss the cumulative effects of degraded water quality (pre and post condition) as it relates to the health of fish species including a biological assessment of the IP actions on all state and federal programs designed to preserve and protect river herring.

Author: Warwick Planning Department Subject: Highlight Date: 2/20/2007 2:40:01 PM

"5.12.7 The five IP Options and the No-Action Alternative have been evaluated to assess impacts to local and regional biodiversity."

This section is inadequate, must be redrafted, as it is too isolated, and does not include appropriate assessment of comprehensive impact.

The study fails to describe the importance of the existing wildlife and aquatic habitats within the context of the City and larger ecosystem. The study offers no expressive baseline condition of the state of the existing habitat and its place within the urban community or its relationship and hydrologic function with Narragansett Bay. The focused summation of amount and scope of impact included in the document does not itself constitute fulfillment of the NEPA regulations. The environmental consequences section requires a complete assessment of the qualitative and quantitative impact within and outside the study area. The baseline condition of the wildlife and aquatic condition must be established using information of past water quality problems as well as impact from prior habitat encroachment. Understanding the entire cost to our wildlife and aquatic habitats can only be quantified if we know the state of system in its current condition. This is critical for the decision making process because destruction of habitat only occurs once.

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Author: Warwick Planning Department Subject: Highlight Date: 2/20/2007 2:40:51 PM

"Table 15.12-12 Summary of Impacts to Biotic Communities by Improvement Program Option"

The table and narrative to follow references the amount of wildlife and habitat destruction with no attempt to establish the ecological significance of said impact.

Revise the entire section to include a significance threshold impact for each IP option proposed. Another table must be generated that shows the percent of alternations that has occurred up to the baseline condition additive with those proposed impacts from each IP option.

This threshold review will determine aggregate ecosystem impacts from both past incremental degradation and proposed actions that are required as a macro tool for decision-making. (i.e. grassland habitat: 1939- 2006 loss of xx%, IP option A XX%, aggregate loss yy%)

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Author: Warwick Planning Department Subject: Highlight Date: 2/20/2007 3:27:10 PM

15-12.12

"IP Option A, IP Option B, and IP Option E"

The study must affirmatively state the aggregate adverse impact on the river herring in context with the pre-existing degradation in water quality. State whether the action will threaten the continued existence of river herring for each IP option. Additionally determine if critical habitats are adversely modified and to what degree and said impacts effect mammals, reptiles, insects and bird populations. Include both the process and rationale used in arriving at the conclusions. These determinations must be made for all elements of study addressed in narrative and contained within a table format.

Author: Warwick Planning Department Subject: Highlight Date: 2/20/2007 2:18:24 PM

"5.12.8 Regulatory Coordination and Required Permits"

The section should be amended to include an interagency review component in this case with the National Marine Fisheries Service that is a resource agency that may provide valuable expertise on the aquatic species element of this study.

Summary 5.13 T-E

Page: 1

Author: Warwick Planning Department Subject: Highlight Date: 4/19/2007 3:10:02 PM

"5.13 Threatened and Endangered Species"

Refer to the City's comments contained within the following sections: wetlands, water quality, fish, and wildlife. The City is particularly concerned that the IP build options will adversely impact already stressed ecosystems that support unique bird and fish populations especially threatened is the Buckeye Brook/Warwick Pond environs.

Summary 5.15 Coastal

Page: 1

Author: Warwick Planning Department Subject: Highlight Date: 2/27/2007 9:53:40 AM

"5.15 Coastal Resources"

Wholly inadequate.

The entire section requires significant revision to include greater data gathering, assessment and analysis. A greater emphasis must also be given to previous studies as well as the findings, goals and policies of the SAMP PLAN.

As written, this section is misleading and discounts the role of CRMC and SAMP Plan. Important public issues related to pollutant loading are sidestepped while university studies that link surface/groundwater pollution of Greenwich Bay are ignored. An accurate assessment cannot be made without applying the principles gained from these past studies addressing recent environmental issues that have plagued Greenwich Bay. These issues were of critical importance in the creation of the SAMP Plan and the

governor's executive order that requested study to solve the fish kills and beach closings. The long-term impact of this proposal on the environmental fabric of this City cannot be fully understood without study of all available data that acknowledges contemporary environmental issues. We suggest additional meetings with the Executive Director of CRMC and staff to discuss ongoing problems and links between the resource and activities on airport property that impact freshwater tributaries and groundwater movement to Greenwich Bay.

I have included an excerpt of a critical study that provides vital scientific information that needs to be contained within the EIS.

"Contaminant Sleuthing in the Coastal Environment Raymond M. Wright, Professor Department of Civil Engineering Ray Wright earned a BS in civil engineering from Tufts University. He has an MS and a PhD, both in civil engineering, from Pennsylvania State University. He joined the URI faculty in 1981 and specializes in hydrologic research in lakes, rivers, and estuaries. Daniel W. Urish, Professor Department of Civil Engineering Dan Urish received a BS in civil engineering from the University of Illinois and an MS in civil and environmental engineering from the University of Washington. In 1978, after 20 years with the U.S. Navy, he received his PhD from URI and joined the faculty. His research has focused on island and coastal hydrogeologic studies. The water that flows into Greenwich Bay comes from a 13,000-acre watershed Relatively clean precipitation moves along myriad pathways to the bay, accumulating anthropogenic contributions, many of which can be harmful to the bay. Greenwich Bay is a rich natural resource with shellfishing, sailing, and swimming. It has a beautiful coastline and is bordered by a 500-acre state park. During the past two decades, Greenwich Bay shellfishing areas have been closed due to high levels of fecal coliform which contaminated the shellfish. There have been beach closures as well. The loss of a major shellfishing resource was of great concern to City of Warwick officials.

Another contaminant of concern is nitrogen. When nitrogen is present even in low values in salt water, it can trigger eutrophication, a condition of overfertilization that results in oxygen depletion and attendant fish kills. Both fecal coliform and nitrogen are contained in human and animal waste.... A major comprehensive study was funded in 1994 by the City of Warwick and RI Sea Grant to determine the nature and origin of pollutants traveling through the watershed into the Bay. Two principal avenues transport water through the watershed to the bay---surface stream flow and much slower moving and unseen groundwater. In the Greenwich Bay watershed, approximately 72 percent of the water enters the Bay as stream flow and 28 percent as direct groundwater discharge along the coastline...Groundwater discharge is diverse and depends on the geology and geometry of the shoreline. The sampling process is a challenge. Thermal infrared aerial imagery was used to identify optimum locations for groundwater discharge sampling in August 1998. The thermal infrared image shows the cold groundwater discharge as dark plumes moving from the shoreline into the warmer water of the bay."

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Author: Warwick Planning Department Subject: Highlight Date: 2/27/2007 9:55:08 AM

"Applicable CRMP performance standards:"

This section is incomplete. Must address the following Sections of the CRMP.

ADD: Section 310 Alterations to Freshwater Flows to Tidal Waters Bodies and Coastal Ponds. ADD: Section 320 Inland Activities and Alterations that are subject to council permitting. (has the potential to damage the Coastal environment as specified with the adopted Special Management Plan.)

Summary 5.20 Noise

Page: 1

Author: Warwick Planning Department Subject: Highlight Date: 3/5/2007 11:53:44 AM -05'00'

"5.2 Noise"

GENERAL COMMENTS The study must expand discussion of noise as a function of forecast and fleet mix and background noise. Explain in either this section or within the main body of the report (within several different sections), how the use of large and small aircraft will affect capacity, operations and noise in the future. Discuss these variables in detail. Present concise data regarding current changes in airline operations as well as the trend of feeding airline hubs with fewer regional and smaller aircraft by legacy airlines and increasing load factors for direct flights by low cost carriers. Please update the document with additional study within the 2005-2007 periods describing the competitive changes in the T.F. Green marketplace including limitations such as the loss of carriers, fuel costs, less frequent service, reduction in seats offered for each airline, code sharing and effects of legacy carrier mergers/bankruptcies in relationship with a change in the previously anticipated fleet mix. Graph passenger traffic for the last five years depicting number of aircraft operations versus total number of passengers (i.e. load factor). Establish a ratio of average passengers per operation for the existing condition, no build and all IP options (average number of passengers per operation). Address if the airlines have or will accept additional increases in landing fees and gate leases required to financially support the construction of the runway extension as proposed within the IP Build options.

Describe the changes that have occurred in the last two years and identify future new trends that may affect future noise exposure. Use the data to project noise contours on a single map depicting the difference in contours (noise exposure) from the 2000 part 150 study, existing condition, no build and IP options. Correlate recent market conditions and trends over the last three years to determine if larger airports are now experiencing a resurgence of service in somewhat of a trend reversal. Explain how this changes the parameters of this study and the fleet mix used to calculate the INM model. Offer changes to the INM modeling to account for the changes. Provide data of like airports in the New England region that provide non-stop west coast service. Determine if those markets have experienced increases in non-stop west coast operations in the last two years. Quantify and substantiate these findings. Include a detailed study of load factors over the past five years for all airlines serving T.F. Green Airport, Manchester and Bradley. Quantify the increasing/decrease in load factors. Has the decreased number of seats available changed the fleet mix used to determine noise exposure? Include the noise signature of all aircraft by specific model. Include all aircraft especially the B767 variants including the 400 series.

Understandable figures depicting aircraft type with their noise signature from lowest to highest serving T.F. Green Airport will assist in the public's understanding of noise footprint. Explain additional variable such as a fully loaded aircraft on a hot humid day will project a greater noise footprint than a half loaded aircraft on that same day. Include additional data of single event noise from actual noise monitoring in the summer months (windows open) and use the flight track data to correct the default INM model inputs. Embrace the single event noise metric and improve the study of ambient background noise as a factor of measuring disturbance in the community for very early, late and overnight operations. Address noise as a factor of real estate value and incorporate the noise hotline data and flight tracking non-compliance into the noise exposure model to reflect the community's "real everyday" experience.

Author: Warwick Planning Department Subject: Highlight Date: 3/5/2007 11:53:44 AM -05'00'

"three types of noise analysis are presented in this chapter: noise associated with aircraft flight operations, ground noise associated with cargo operations, and ground noise associated with roadway traffic."

Please expand your study to actual single event noise generated by reverse thrust and run-up's. Include the data into the INM model.

Author: Warwick Planning Department Subject: Highlight Date: 3/5/2007 11:53:44 AM -05'00'

"Preparation of Day-Night Average Sound Level (DNL) noise exposure contours, and estimates of the population within each contour interval"

Please include additional mapping: layer residential densities (low-medium-high) of all areas within and adjacent to the 60 dnl contour on all contour mapping also include the 55DNLcontour.

Map the 2000, 2003, 2006, 2012 and 2020 contours for the purpose of comparison. Depict in half-tone all residential structures already purchased by RIAC since 1996. Include a map depicting the 2000 Part150 study contour and existing condition contour. Create a chronological map depicting all takings and noise attenuation that has occurred since 1996 to present and that proposed from present to 2012 and 2020. Include an updated noise compatibility/exposure map that includes all the following; residential density, sensitive noise receptors (schools churches), dwellings purchased by RIAC since 1996, homes already noise attenuated, homes proposed for takings/attenuation to year 2020. The mapping is fundamentally important for the planning and public process.

Author: Warwick Planning Department Subject: Highlight Date: 3/5/2007 11:53:44 AM -05'00'

"INM Inputs provides additional detailed information on data inputs for existing and future conditions."

As drafted the INM model does not include contemporary and unexpected changes in airline fleet mix that have occurred in the last several years. The fleet mix and forecast used in the creation of the noise exposure affects the INM modeling. Of particular concern would be the greater use of regional jets, retrofitted aircraft for cargo operations and reduced availability of seats. Expand your study and present data addressing the use of older nosier aircraft by some cargo carriers. How do these operation impact noise footprints in a manner different from OEM aircraft. Please indicate what changes you have made in the fleet mix characteristics since the original fleet mix was drafted.

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Author: Warwick Planning Department Subject: Highlight Date: 3/5/2007 11:53:44 AM -05'00'

"There would be no significant noise impact from ground noise associated with cargo operations from this Option."

Please address noise as a function of the time of day (pre/post condition). Will the new cargo facility extend noise impact to different time periods for area residents? Please do not limit the study of noise to aircraft only. Ground vehicles may also contribute to noise and impact on the community especially during the early morning and late night. While the draft does address this issue in general, the data is not site specific to single event field data.

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Author: Warwick Planning Department Subject: Highlight Date: 3/5/2007 11:53:44 AM -05'00'

"There would be no significant noise impact from ground noise associated with cargo operations under this IP Option."

How can it be concluded that relocating the cargo facility closer to a residential district will not increase background noise. The conclusion is inaccurate because the data used is not specific to time-based

actual single event field measurements taken throughout the summer months (windows open) within the adjacent residential districts. Please address noise as a function of the time of day pre/post condition. Because the infrastructure proposed within the AIP is planned to grow toward the surrounding residential community, how will the new cargo facility extend noise impact throughout different time periods of the early morning, nighttime hours and late night affect different residential areas of the City? Document the noise exposure of the no build option compared with IP cargo option specific to the noise contour associated with ground operations impact on the adjacent residential districts. Establish a before and after ambient background condition within the adjacent residential districts using single event noise analysis and DNL before and after the cargo build-out option. By definition a cargo operations includes the use of ground vehicles that contribute noise onto adjacent landuses.

Author: Warwick Planning Department Subject: Highlight Date: 3/5/2007 11:53:44 AM -05'00'

"There would be no significant noise impact from ground noise associated with cargo operations from this Option"

GENERAL COMMENT

Please address all ground noise from cargo operations as a function of the time of day especially during the very early morning and overnight hours. Study and include additional data from ambient background noise during early morning, nighttime and overnight hours. Show the ambient background levels over a 24-hour period on a graph depicting the background noise level for the baseline and IP options. Link this graph with field noise data of single event noise levels for the 24-hour time period. Compile a net level of disturbance for each period based on the difference between the background level and single event noise against a time period axis (early morning, evening and over-night). Using this data determine the level of disturbance within the adjacent residential neighborhoods. Additionally the study must expand the study of ground noise related to taxing aircraft to and from the cargo facility.

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Author: Warwick Planning Department Subject: Highlight Date: 3/5/2007 11:53:44 AM -05'00'

"would be no significant noise impact from ground noise associated with cargo operations from this Option."

Please address ground noise as a function of the ambient background noise present in the overnight and very early morning hours. Area residents complaining about late night or early morning runups and reverse thrust have logged many complaints. The single incidents are not properly address in this section. Please review all the complaints logged into the noise hotline during the last five years and include the data in this report. Amend the study and INM modeling accordingly to account for the complaints filed with a noise penalty of 5 dB for all past events (mean or median with a statistical increase). Include impacts from additional trailer truck traffic serving the new facility.

Author: Warwick Planning Department Subject: Highlight Date: 3/5/2007 11:53:44 AM -05'00'

"There would be no significant noise impact from ground noise associated with cargo operations from this Option."

Please extend the noise study to ground vehicles accessing the cargo facility from area roadways that can contribute significant noise and impact on the adjacent residential communities especially during the early morning and overnight hours. Describe how trucks accessing the cargo facility in the early morning and overnight hours will impact the ambient background noise level. Depict current conditions versus the 2012 and 2020 condition along all roadways accessing the cargo facility.

Author: Warwick Planning Department Subject: Highlight Date: 3/5/2007 11:53:44 AM -05'00'

"This noise assessment evaluated three sources of noise to understand complete noise exposure of the Project, including: noise associated with aircraft flight operations (takeoffs and landings); aircraft ground operations (e.g. taxiing, idling and run-ups of passenger and cargo aircraft); and traffic noise from vehicles, including trucks and cars, on the improved off-airport roadways."

ADD A new section with specific data and additional mapping. Special study must be given to nighttime runups, reverse thrust and other single incident noise events that because of their a high decibel levels and time of occurrence present an inordinate level of disturbance within the community especially during summer months when windows are open. Currently said events are averaged within the LDN study over a 24-hour period. A new analysis must extend to this study mapping of single incident noise events as a function of level of disturbance imparted onto the community. As mentioned above this community has long complained that single event noise disturbances (from touch and go, reverse thrust, runups, maintenance and other sideline noise) are disruptive especially when they occur during early morning and evening hours with low ambient background levels. The magnitude of their disruption to the population is dissimilar to the impact as portrayed by the use of the average day/night noise measurement (DNL). The long-standing complaint using just the DNL measurement is routinely dismissed or given but token review, as is the case with this study. Please do not mask the SEL noise occurrences by including them within the average noise data.

Include specific noise events with an hour based ambient background noise measurement including time of day. Source measurements should be taken during the summer months within the structures of sensitive noise receptors. Compliment the existing data with a new data set this spring and summer. This measurement is the only way to accurately determine the real experience a person has to noise exposure. Depict the actual field noise data in relationship with the ambient background noise and linked with during the following hours: 5:00 AM to 7:00 AM, 10:00 PM to 1:00 AM and 1:00 AM to 5:00 AM.

Map the location of the 55DNL contour and present a grid depicting SEL noise events. Specifically address IP options impact on ambient background noise as a function of the time of day in a graph format. Depict the change in SEL grid data measured against the existing background level. The resultant noise event must be correlated with the time of day to determine the level of disturbance from SEL events which then can be used in an averaged study and linked to specific information on the health effects and impact on human activity.

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Author: Warwick Planning Department Subject: Highlight Date: 3/5/2007 11:53:44 AM -05'00'

"Aircraft Noise Exposure (Flight Operations)."

The data produced by RIAC indicates a decrease in passengers' traffic in the last year which is similar to decreases in passenger service occurring at other regional airports. The actual flight operations do not appear to be consistent with the forecasts produced for this study. The forecast and fleet mix that drive this study must be revisited because they do not accurately reflect current trends near future changes in the market and airline industry. The aircraft noise exposure is based on old data and a former marketplace condition creating a noise exposure that is inaccurate and unreliable for predicting future noise in the community. It is premature to continue with this noise exposure study until the forecast data is updated. It is equally premature to approach the future fleet mix in such as static manner.

Author: Warwick Planning Department Subject: Highlight Date: 3/5/2007 11:53:44 AM -05'00'

"Integrated Noise Model (INM) Inputs"

Please include actual field measurements of reverse thrust noise events by SEL. Add a grid point map depicting these SEL events of sideline noise. Include the actual measurements to INM modeling.

Author: Warwick Planning Department Subject: Highlight Date: 3/5/2007 11:53:44 AM -05'00'

"Operational inputs for the INM used to model aircraft noise exposure for the No-Action Alternative and the IP Options for 2012 and 2020 include existing radar data, flight tracks, flight profiles, fleet mix, runway use, operations, day-night split, and average weather conditions."

The INM model must include how future congestion from runway capacity and delays in the 2012 and 2020 period will influence ground noise from queued and idling aircraft.

"Operational inputs for the INM used to model aircraft noise exposure for the No-Action Alternative and the IP Options for 2012 and 2020 include existing radar data, flight tracks, flight profiles, fleet mix, runway use, operations, day-night split, and average weather conditions."

The INM model must include how future congestion from runway capacity and delays in the 2012 and 2020 period will impact ground noise from queued and idling aircraft. Author: Warwick Planning Department

Subject: Highlight

Date: 3/5/2007 11:53:44 AM -05'00' "5.2.2.1 INM Inputs "Additional details are provided in Section 4.2.4.2"

ADD a preamble describing both the methodology and INM model. Also, include an explanation of specific variables used beyond those default parameters within the INM model such as field noise measurements (SEL) and changes to descent/climb profiles relative to area geography (Covesett). ADD a section devoted to the baseline condition and map said INM contour and compare against projected contours contained within the part 150 study. This will establish the existing baseline condition within the host community.

Author: Warwick Planning Department Subject: Highlight Date: 3/5/2007 11:53:44 AM -05'00'

"Radar Data"

The radar data has shown that not all flights comply with the exact departure and arrival paths authorized within the Part 150 study. The EIS must respect the people and land uses that surround the airport and not treat the area land use as a nuisance to the airport. As such, how has and how will, the deviations from take-off and departures outside the part 150 paths impact residential areas of the City within the existing and future INM model? This section must be expanded to include specifics of the 80,000 radar flight tracks and disclose the percent of noncompliance. Include the non-compliant flight track data within the new INM model.

This will correct the INM variable to allow the model to better reflect actual noise events. Also, include a new graphic depicting the projected noise contour contained within the 2000 Part 150 study with the baseline condition and the 2012 contour altered to reflect the noncompliant flight tracks. Using the percentage of noncompliance since year 2000, please depict future alterations to the approved flight paths as they overfly residential areas. Shade those residential areas that have been mostly affected by non-compliance with the Part 150 flight corridors for both the base line and 2012 condition (assuming the rate of future non-compliance will continue and increase by relative statistical standards).

Consideration must also be given to all densely populated areas of the City adjacent to the part 150 flight paths including but not limited to the northern portion of the City. This area frequently experiences a premature deviation of westbound traffic with a heading that leads traffic over very densely populated

residential areas of the City particularly west of Elmwood Avenue. A detailed section interpolating the invaluable flight track data is required to maintain the integrity of this study especially considering the generous and important amount of data gathered by this system.

Author: Warwick Planning Department Subject: Highlight Date: 3/5/2007 11:53:44 AM -05'00'

"Fleet Mix"

The fleet mix used within this section is erroneous because the approach taken assumes only modest change in the airline industry without fully understanding that competitive dynamics that are actually driven by the airline industry not by RIAC, a consultant's forecast or the FAA. Changes in fleet mix will occur with mergers, bankruptcies and alliances. Composition of the airlines fleet mix changes allowing traffic to be handled by different aircraft type and size to meet market demand. Deploying different aircraft types to serve markets is discounted in this study and lumps all aircraft models together including but not limited to the B767 design aircraft which this document fails to acknowledge may not be limited to the B767-300. The use of the B767-400 and higher models require less runway length an equipment change that has actually occurred at T.F. Green (non-stop flight to San Diego) and is likely to occur again in the future should a non-stop west coast market show profitability. Please include in this study a detailed aircraft equipment list of all models registered with an airworthiness certificate for each airline servicing T.F Green Airport.

As mentioned in earlier City comments, the B767 aircraft has many engine configurations that have far superior lift and range capability than the B767-300 design aircraft. Conveniently, the proceeding is used as the sole basis for argument for the longer runway. In reality the type of equipment used by the airlines to serve, particular markets are not limited to those listed in the fleet mix contained in this draft (B767-300 only) and as such, the noise exposures generated by this draft document is flawed and must be amended. We know as fact that a B767-400 was redirected to T.F.Green Airport to fly a non-stop charter to San Diego even though the fleet mix predicted this aircraft type would not be used. As the number of carriers serving market changes and as the industry is presented with increasing costs so will the will need for airlines to redistribute equipment to provide service to markets with very high load factors. These contemporary changes are not appropriately addressed in this draft document. The marketplace changes have already begun with the advent of code sharing, alliances, increased use of regional jets and reduced seating availability. Impending changes include mergers and bankruptcies all issues that are inadequately addressed within this document. Airlines and profitability of market are the ultimate determinant of size, type of aircraft used a condition that cannot be completely understood by the consultant, and as such, the feet mix used should be flexible enough to consider future equipment changes. Author: Warwick Planning Department Subject: Highlight Date: 3/5/2007 11:53:44 AM -05'00'

"The aircraft fleet mix is one of the main influences on the noise environment. The No-Action Alternative aircraft fleet mix is based on the aircraft operations forecast that was developed in support of the purpose and need analysis (see Chapter 2)."

The City will continue its objection to the operational forecast and fleet mix developed within the purpose and need that in turn impacts the noise exposure maps generated within this section of the study. The existence of west coast markets does not itself assure corresponding non-stop service from T.F. Green Airport. In fact the City has long since argued that trends suggest that airlines are seeking higher passenger loads and if not available will choose to serve the market with smaller aircraft, with less frequency or in the case of Spirit Airlines cease operations completely. It is clear that the trends over the past two to three

years have been for airlines to distribute their aircraft in a manner that effectively and economically services the market. Past fleet mix, tendencies used universally within this study no longer apply without question. The competitiveness in this industry has never been greater. Planned service to new markets will be kept secret until the last possible moment. So will the assurance that economics will demand flexibility of an airline to redistribute their fleet to meet the performance and load requirements of that market being served. Presented with this reality the City requests the fleet mix and design aircraft for this airport be revisited to reflect both recent and future trends in the airline industry.

Author: Warwick Planning Department Subject: Highlight Date: 3/5/2007 11:53:44 AM -05'00'

"The future fleet mix assumes that several of the loudest aircraft in the 2004 fleet mix would be retired and replaced, including: DC9 aircraft would be replaced with A319 aircraft; some of the MD-80 fleet would be replaced with A320 aircraft; and some of the cargo fleet B727 aircraft would be replaced with A300 aircraft."

This section needs to be bolstered with additional data and research that includes but is not limited to a detailed list of aircraft orders by all airlines serving T.F. Green Airport. The aforementioned narrative is brief and does not sufficiently address this issue. The section must be amended to include a narrative and table detailing aircraft orders and phase out plans for each airline servicing T.F. Green Airport.

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Author: Warwick Planning Department Subject: Highlight Date: 3/5/2007 11:53:44 AM -05'00'

"Table 5.2-1 "Small Wide-body (B767)"

Breakdown this data set by specific model and engine configuration.

Author: Warwick Planning Department Subject: Highlight Date: 3/5/2007 11:53:44 AM -05'00'

"Table 5.2-1 "Regional Jet"

The use of regional jets is wholly underestimated within this document.

Analyze the percent of increase in this category since the 2000 part 150. Project these increases into 2012 and 2020. The use of regional jets operations by legacy airlines provide commuter and short haul service to market hubs effectively extending their overall reach in a more economical manner. This industry trend is not properly recognized within this document. The important role and change to regional jets at T.F. Green Airport by some large legacy carriers will have on an impact on the entire aviation system a fact underestimated in this document. As mergers of legacy airlines and bankruptcies progress so, will the increase in the use of regional jets by the legacies to feed their hubs when load factors are light changing the dynamics of the forecast fleet mix and noise exposure. The section must be rewritten to include this data and reflect the manner in which this trend will affect the 2012 fleet mix, traffic, overall operations and noise exposure.

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Author: Warwick Planning Department Subject: Highlight Date: 3/5/2007 11:53:44 AM -05'00'

"Table 5.2-2 Small Wide-body (B767)"

Breakdown this data set by specific model and engine configuration.

Author: Warwick Planning Department Subject: Highlight Date: 3/5/2007 11:53:44 AM -05'00'

"Table 5.2-2 Regional Jet"

Update this data as of February 2007. Analyze percent increase in this category and project said increase into 2012 and 2020.

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Author: Warwick Planning Department Subject: Highlight Date: 3/5/2007 11:53:44 AM -05'00'

"5.2.3.1 Aircraft Noise Exposure (Flight Operations)"

In the opinion of the City of Warwick this section of the document is incomplete and in some cases inaccurate. The reference thresholds used are also incomplete. Study of aircraft noise exposure must extend beyond the obligatory and account for the degree of noise exposure already exacted on the community in the baseline condition from years of airport growth. Other relevant areas of study that have not been thoroughly addressed in this document as a factor in noise exposure are threshold noise levels, single event noise frequency, early morning and evening hours and single event disturbance as a factor of time of year (open windows) and ambient background noise. The City suggests a more representative approach that would assess all these issues in more detailed and interrelated manner.

The City also requests modification of the penalties assessed within the INM model to include a 3 dB penalty for all operations that exceed 90 dB SEL during the hours of 6 AM to 8 AM and from 6 PM to 10 PM beyond that penalty already assessed within the INM model for overnight flights. The study also lacks proper measurement or quantification of increased noise exposure from both the airports use and the ambient background noise condition and altitude of the aircraft noise in the very early morning and after 10 PM.

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Author: Warwick Planning Department Subject: Highlight Date: 3/5/2007 11:53:44 AM -05'00'

"Thus, the DNL 65 dB contour is an important yardstick for population impact assessments. The DNL 65 dB contour also forms the basis for FAA eligibility for sound insulation funding."

ADD: Text addressing the DNL 65 dB noise contour as based on averaging as well as the fact that the City of Warwick and other professionals are on record objecting to this measurement as the sole determinant of noise exposure on humans and animals. Add text addressing the long-standing noise issues that have plagued area residents. Speak to the issue of the community's concern that the measurement underestimates the level at which many people are annoyed or adversely impacted.

Expand your discussion and use of the single event or SEL noise metric as well as ambient background noise by time of day, as a means to assessing "real everyday" impact on the people that are neighbors of the airport landuse.

Author: Warwick Planning Department Subject: Highlight Date: 3/5/2007 11:53:44 AM -05'00'

"As described herein, T.F. Green Airport has in place a Noise Compatibility Program established through a FAR Part 150 Study"

The study is outdated and the radar flight tracks show a history of non-compliance. Poor reference. Must include greater detail on issues on non-compliance from this program and provide technical expertise on how deviation to the 2000 program may be corrected within a new part 150 study. Include text describing how this study will account for the non-compliance with the 200 part150 and the manner in which radar tracking data and noise complaints will be incorporated into the study to reflect the real noise exposure experienced in this community.

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Author: Warwick Planning Department Subject: Highlight Date: 3/5/2007 11:53:44 AM -05'00'

"Table 5.2-9 Noise-Exposed Population for the No-Action Alternative, 2012 and 2020"

ADD Text as well as a new section addressing both short and long-term impacts of high noise exposure on humans and how this environmental condition affects health of residents and the real estate values of dwellings within the higher noise exposure contours. Include within the study a corresponding table, a

qualified appraiser's analysis of mean, median and average real estate sales transactions within the 65 to 70DNL before and after Build options compared with properties outside the 60 DNL periods for a period of two years. Add text from a qualified appraiser speaking to the issue of desirability of real estate relative to extreme noise events.

Author: Warwick Planning Department Subject: Highlight Date: 3/5/2007 11:53:44 AM -05'00'

"Table 5.2-9 and Table 5.2-10 "60 to 65dB"

ADD A new column of data that includes 55 dB DNL.

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Author: Warwick Planning Department Subject: Highlight Date: 3/5/2007 11:53:44 AM -05'00'

"Table 5.2-11 Summary of Traffic Noise Impacts: No-Action Alternative (2012)"

ADD Single event noise data to this table (SEL) as well as a time based measurement of noise events during specific early morning hours (5am-7am) and evening hours (7pm-10pm), sensitive times of day and night used for communication and relaxation.

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Author: Warwick Planning Department Subject: Highlight Date: 3/5/2007 11:53:44 AM -05'00'

"In sections of Lincoln Park and Norwood, and in areas north of the airport along Post Road, traffic noise levels would range from 49 to 64 dBA Leq(h). These levels are expected to be less than 1 dB greater than the existing noise levels due to the projected increase in traffic volumes from 2004 to 2012, and would not approach or exceed the FHWA NAC at any residences in these neighborhoods."

As mentioned within several previous City comments the FAA approved Part 150 departure paths are not being complied with all the time. For instance, the north-west 5R departures are directed over the narrow Elmwood Avenue commercial corridor. However, tracking radar proves that in actuality aircraft stray miles on either side of Elmwood Avenue broadening the noise impact on the dense residential neighborhood that abuts this roadway district that is a residential area that was supposed to be avoided under the part 150 study.

Flight tracking radar proves that this flight path is frequently not followed as aircraft prematurely head west overflying densely populated areas of the City in area of the village of Norwood. Contrary with this fact this study presupposes all aircraft will follow the departure path exactly which results in a lower predicted noise exposure. Amend this section to include additional text and revise the conclusions of noise exposure.

ENTIRE REVISION OF THIS SECTION IS REQUIRED.

This study must use the valuable flight tracking radar data. Review all actual departure and arrival tracks over the last two or three years and assess the actual flight tracks versus that those assumed to occur within the 2000 Part 150 study. The actual flight tracks and non-compliance data must be used to amend the INM model accordingly. Determine the actual noise exposures within residential areas that are adjacent to the part 150 flight tracks. Map these areas in particular. Please use the accumulated radar tracking data to produce an INM noise contour specific to of non-compliant flights over residential areas of the City. Overlay this map with the computer generated INM model used in this study. Address the changes in noise exposure.

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Author: Warwick Planning Department Subject: Highlight Date: 3/5/2007 11:53:44 AM -05'00'

"Table 5.2.12 Composite Noise Level"

ADD: Please include maximum noise event data in a map with the following layers: aircraft flight operations, composite noise level, density and residential districts/structures. For all tables map the

increase and intensity of Composite noise level increases (for NB, and all IP options). Follow this with a single map depicting increases by IP option differentiated by color in a grid type format for effective comparison of impact.

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Author: Warwick Planning Department Subject: Highlight Date: 3/5/2007 11:53:44 AM -05'00'

"Total Population and Housing Exposed to DNL 65 dB and Above"

Add a note for all tables with similar information. Indicate if the data including new developments that could be built in the future according to current zoning and planning regulations. Include subdivision of new lots and redevelopments for multifamily.

Author: Warwick Planning Department Subject: Highlight Date: 3/5/2007 11:53:44 AM -05'00'

"An increase of DNL 3.0 dB within the 60 to 65 dB DNL contours is considered slight to moderate impact. FAA's definition of significant noise impact is discussed fully in Section 5.2-3. Table 5.2-14 presents the significant impacts to the population and housing units for IP Option A"

The City finds this statement as well as the measure within the 60 to 65 db DNL to be subjective and inexact when referencing human impact. The methodology used to measure noise impact by FAA differs from that of more scientific based references and noise effects handbooks. The average DNL measurement does not accurately reflect the concerns posed to persons who are experiencing high decibel single event noise that has the potential to aggravate health problems and cause emotional illness. Many studies indicate the onset of adverse health effects from noise events of 80 dB and higher. Additionally, noise causing sentence intelligibility rises significantly between 60 - 65 db SEL. Please amend the text to include accepted health impacts from these various noise levels. Accordingly amend the impact from the 3db change from slight to moderate-to-moderate to severe or just moderate.

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Author: Warwick Planning Department Subject: Highlight Date: 3/5/2007 11:53:44 AM -05'00'

"5.2.5 Supplemental Noise Metrics"

ADD NEW STUDY DATA

Maximum noise impact must be included within the supplemental noise section. Cull out maximum noise event measurements from the data set and profile peak noise levels from 5 AM to 1 PM. The daily maximum single event noise must then be couple with the time above data for the maximum noise events and depicted on a map of maximum noise levels during peak hours.

This analysis and mapping is more representative (than DNL) of maximum exposure on a typical day.

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Author: Warwick Planning Department Subject: Note Date: 3/5/2007 11:53:44 AM -05'00'

"5.2.6 Mitigation"

The TA data is solid relevant data but a gap still exists between the noise data and analysis. Address mitigation considering single event noise within sensitive noise receptors not just as a function of day night-average. Also, include mapping depicting the chronology takings and sound attention program relative to the following table from 1996 to present and from the present to 2012 and 2020.

Summary 5.30 Land Use

Page: 1

Author: Warwick Planning Department Subject: Highlight Date: 3/23/2007 9:07:02 AM

"It also discusses, to the extent relevant, compatibility of the IP Options with the City of Warwick Zoning Ordinance, and land use plans and policies of public agencies for development of the area in which the Airport is located (as discussed in Section 4.3, Land Use)."

Include "as well as the City of Warwick Comprehensive Plan". The referenced land use plan is one functional element of the Comprehensive Plan which is the document recognized and required by state law.

Author: Warwick Planning Department Subject: Highlight Date: 3/23/2007 2:45:54 PM

"For the purposes of the Draft Environmental Impact Statement (DEIS), land use compatibility is defined by the Federal Aviation Administration (FAA) in 14 CFR 150, Airport Noise Compatibility Planning, as the "use of land that is identified as normally compatible with the outdoor noise environment."1 A detailed baseline existing conditions noise analysis and land use compatibility was undertaken as part of this DEIS in order to identify areas of existing non-compatible land uses based on criteria established by the FAA (i.e., land uses exposed to noise at or above day-night noise level [DNL] 65 dB). The baseline noise and land use compatibility analyses are documented in Sections 4.2, Noise and 4.3, Land Use. Additional information related to noise is provided in Section 5.2, Noise."

This paragraph is very deceptive to the ordinary reader as to what is, or is not, a compatible land use. This section must be expanded to include an explanation of what is considered a compatible land use according to FAA guidelines in contrast with the City's zoning regulations.

The compatibility argument in this report is only used in the context with FAA guidelines and does not equitably portray land use compatibility in the community. Local zoning regulations adopted well before the many expansion programs undertaken by the airport land has established legally permissible uses around the airport land use that date back to the 1940's. These legally established local zoning regulations comply with all state enabling legislation at their inception and today. The growth of the airport land use must be documented in this report is a unauthorized use within the neighboring residential district and as such the expansion as proposed is inconsistent with local zoning regulations and the City of Warwick Comprehensive plan.

Please reflect this statement within the opening paragraph.

Author: Warwick Planning Department Subject: Highlight Date: 3/26/2007 9:37:33 AM

"Significance Thresholds- According to FAA Order 1050.1E (Change 1), the following thresholds for land use are used in determining incompatible land uses for each IP Option: •• Acquisition of any real property; •• Land uses exposed to future noise levels at or above DNL 65 dB (Table 4.3-1); or •• If the proposed action would cause residential land uses to experience an increase in noise of 23 DNL 1.5 dB or more, at or above noise levels of DNL 65 dB, when compared to the No-Action Alternative 24 for the same time-frame."

As mentioned several times throughout the comment period, the City objects to the strict significance thresholds used in this study (determined by the specific FAA order) as they do not entirely reflect land use "incompatibility" from the City's perspective. The extension of the airport into existing residential communities is an action discouraged within the City of Warwick Comprehensive Plan as an "incompatible" intrusion.

Include a narrative stating the differences in the land use principals between the FAA and local zoning and planning regulations. Add significance thresholds that reflect local zoning and planning regulations.

Upon construction of airport improvement projects the remaining residential dwellings become the frontline for incompatibility located within a fractured and isolated neighborhood. The remaining homes once located within dense residential neighborhoods would be altered under the Build IP options. In some cases existing homes within the heart of a typical residential neighborhood would under the IP build options, be changed to a home overlooking a chain link fence and runway safety area or cargo facility. This situation would present homeowners within the host community a variety of new nuisances and adverse health issues including monetary impacts such as diminution in real estate value.

Increased noise, air pollution and blight from the adjacent airport land use. These serious adverse conditions presented by the IP build options are important considerations in the determination of land use compatibility at the local level. Tangible aspects such as providing cost effective public services become challenging as the City is forced to extend services to the remaining isolated residential neighborhoods. If this proposal were, a private interest requesting expansion of the airport land use would be required to comply with all zoning regulations and Comprehensive Planning policies regarding land use consistency. This petition does not comply with any of these provisions, a point that requires acknowledgment within the report.

To this end, the threshold study must be expanded to include analysis of adverse impact for the remaining residential dwellings outlining the expanded airport perimeter. Consistency statements must be made for all improvements to be located outside the current fence in context with the uses consistency with local zoning and planning documents. Should the proposed actions not be consistent with the local the Comprehensive Plan or Zoning ordinance the actions shall be considered a significant adverse impact as it pertains to land use.

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Author: Warwick Planning Department Subject: Highlight Date: 3/22/2007 9:39:26 AM

"would result in some level of impact to land use due to increases in noise levels."

Please extend the study of land use compatibility to ground and sideline noise from aircraft operations, taxing, run-up's, and maintenance activities, reverse thrust, nighttime cargo operations and ground transportation. Much of the information provided to date is based on interpolation of the INM contour without satisfactorily assessing single incident noise, duration and time of incident. Analyze the impact on the remaining residential communities adjacent to the fence line for all IP options to determine land use compatibility from the FAA and City perspective. Map the underlying zoning designation for both the airport property (LI) and surrounding areas. Shade the changes proposed by IP option. Issue a compatibility statement for all proposed changes as determined by local zoning and planning regulations. Include acre breakdown of changes in actual land use beyond noise exposure. Percent of airport land use located in residentially zoned districts for all IP options.

Author: Warwick Planning Department Subject: Highlight Date: 3/22/2007 10:05:07 AM

"In 2012 and 2020, under all IP Options several areas would experience a significant increase in noise levels (an increase of DNL 1.5 dB from DNL 65 dB and above) compared to the No-Action Alternative."

Please expand the statement to address single even exposure from ground or sideline noise onto the adjacent residential zoning districts during sensitive hours. According to the local noise ordinance, residential districts are protected from noise events between the hours of 8 AM-10 PM with a maximum DBA of 60 and from 10 PM to 8 AM with a maximum 50 DBA (code of ordinance section 40-13). Are the uses proposed within the IP options compatible with the local noise ordinance for surrounding residential districts? It appears that the proposed airport improvements extend incompatibility into the established community further than the limited noise threshold cited herewith.

Include mapping that shades residential areas within the community that exceed the 50 DBA thresholds from the hours of 10 PM to 8 AM for each IP option. Use this mapping in conjunction to determine the scope of incompatibility within the residential district using the locally noise criteria.

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Author: Warwick Planning Department Subject: Highlight Date: 3/22/2007 10:05:50 AM

"The FAA recognizes the authority of municipalities and states in relation to land use controls, noting: "A determination does not relieve the proponent of responsibility for compliance with any local law, ordinance or regulation, or state or other federal regulation." In addition, the FAA does not have the jurisdiction to adopt, amend, or repeal local zoning ordinances, issue or deny building permits, and has no police powers concerning local land use. The objective of the review of these plans is to determine if the action proposed in this DEIS is consistent with local, regional, and state plans for development and growth as part of FAA's decision-making process."

Refer to the second comment listed above. It is imperative that this report clearly state the following:

The City of Warwick zoning ordinance in place since 1945 has considered the airport land use incompatible within a residential zoning district and that encroachment of the airport land use into a residential district is NOT consistent with the adopted and approved Comprehensive Plan of the City.

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Author: Warwick Planning Department Subject: Highlight Date: 3/21/2007 4:32:24 PM

"Parameters evaluated for each IP Option includes:"

Address impact on individual neighborhood structure and continuity.

Author: Warwick Planning Department Subject: Highlight Date: 3/22/2007 10:10:13 AM

"For the purpose of the EIS, it is assumed that all homes eligible for land acquisition under the current Part 150 Program would participate in the program and would be acquired."

Unacceptable assumption. Use the actual percentage of program acceptance within the voluntary program to date. This figure will be more accurate than the assumption of 100% acceptance

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Author: Warwick Planning Department Subject: Highlight Date: 3/23/2007 11:20:05 AM

"5.3.4 Impact Assessment"

This section does not go far enough in it's assessment of the IP options impact on the expansion of prohibited uses onto the neighboring residential community. The remaining dwelling left behind at the border of the new fence-line (after the scheduled takings) is not studied as to their compatibility with both, neighboring airport land use, and local zoning. Furthermore, the impact assessment does not clearly explain that the incompatibility cited throughout this section of study is derived from expansion of the airport land use into the preexisting conforming residential district. Alert readers that the airport land use is not allowed within a residential district according to local zoning regulation.

Address how the FAA determination of incompatibility (noise exposure) adversely affects the legally permissible residential uses established within the surrounding community.

Include discussion of case law as determined by the Rhode Island Superior Court regarding the rights associated with legally permissible and established landuses. Describe the paradox of preexisting legally permissible residential landuses that become incompatibility by FAA definition because of growing noise exposure from a prohibited airport land use. Acknowledge that the State of Rhode Island zoning enabling legislation allows local municipalities to adopt zoning and planning regulations.

State that without just compensation, the preexisting incompatible residential land uses will remain regardless of the FAA determination of incompatibility. Describe and detail this dynamic. State in unequivocal terms that the certain residential landuses that surround the airport are adversely influenced by the build IP options because they are now deemed "incompatible" by the FAA guideline.

Establish that the airport land use and their impacts into the surrounding residential neighborhoods do not comply with local zoning and planning regulations and that such expansion would extend nuisance considerations such as noise, air pollution and blight onto a new group of property owners.

Address adverse impact onto the City's own Comprehensive Plan requiring costly revisions to reflect the RIAC sponsored FAA sanctioned build-out that is not in the best interest of the City of Warwick.

Explain the disconnect between implementing planning goals of an airport operator with that of the host community especially considering ever-changing DNL contours and inconsistent definitions of compatibility between the FAA and City of Warwick. Determine if the IP options are consistent with City's zoning and planning regulations.

Describe how the DNL contour as a determinate of incompatibility by FAA guidelines, changes through time and acts as floating overlay district in the City without any connection to local zoning bylaws. Lend some readability to the document by including an unbiased depiction of regulatory and statutory zoning regulations and FAA guidelines. Include platting of the surrounding neighborhoods, local zoning along side significant changes in FAA landuse regulations, past airport expansion projects from the 1930's to present. This depiction will balance the otherwise misunderstood conception that the residents of the City moved to the nuisance and that their uses are incompatible by choice. Follow with a description how the incompatibility has occurred through periodic growth of aircraft operations, runway extensions and terminal expansion at T.F. Green Airport.

Author: Warwick Planning Department

Subject: Highlight Date: 3/26/2007 9:37:52 AM

"There is no indication that the Improvement Program would induce a significant amount of development therefore, no secondary, or induced, impacts on land use are anticipated under any of the IP Options."

Does not mesh with the goals contained your own purpose and need statement whose goal is to service to new markets especially with non-stop flights. The new service destinations as forecasted by your own projections will increase enplaned and deplaned passengers greater than that of the no-build option. The influx of passengers has traditionally resulted in induced developments around the airport dedicated to serving both passenger and cargo traffic. Carefully review all under-utilized surrounding properties including off-site satellite locations as possible sites for development or redevelopment induced by the airport improvement projects especially commercially zoned properties that abut residential districts or pocket neighborhoods that may be reasonably predicted to be subject to rezoning through a private buyout. Employ highest and best use analysis for all surrounding properties per IP option.

In many cases, its induced re-development that requires the most amount of analysis in the land use planning. Pocket residential development and reuse of old industrial buildings in some cases provide a more reasonable financial opportunity than market rate commercial property. The City has seen a great deal of speculation in this area especially within the Jefferson Boulevard corridor. Please re-review all industrial properties located within the Jefferson Boulevard corridor as potential redevelopment opportunities for office and hotels uses. Special concern also be given to the neighborhoods east and south of the old Leesona building (Strawberry Field Road East), the remaining neighborhoods adjacent to Field View Drive, the three pocket residential neighborhoods west of Post Road and east of the railroad tracks and north the small residential area south of Rt. 37 and north of Airport Road.

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Author: Warwick Planning Department Subject: Highlight Date: 3/22/2007 12:28:21 PM

"Table 5.3-1 Part 150 Voluntary Acquisition Program Summary"

Add a new column that indicates how many of these noise insulated homes will be purchased by IP option. Also include the phase in which the original noise insulation was completed.

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Author: Warwick Planning Department Subject: Highlight Date: 3/22/2007 12:43:41 PM

"Table 5.3-8 Land Uses Exposed to the Noise Levels of DNL 65 dB and above for Improvement Program Option A Compared to the No-Action Alternative - Residential"

Incredibly misleading.

Most people reading the chart will believe that the option actually results in a decrease in noise exposure. Without reading the narrative that explains that, the reduction is actually attributed to the reduction of residential dwellings that are to be taken by land acquisition derived from the proposed improvements.

CHANGE ALL OF THE CHARTS per IP Option to include actual total of raw land area (noise exposure) without assignment of land use compatibility as considered by FAA regulation. If you want to include an additional data column depicting totals of FAA compatible landuse, than this caveat must be clearly stated **(in bold) within the heading of the column.**

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Author: Warwick Planning Department Subject: Highlight Date: 3/22/2007 12:44:58 PM

"Table 5.3-12 Land Uses Exposed to the Noise Levels of DNL 65 dB and above for Improvement Program Option B Compared to the No-Action Alternative"

Incredibly misleading.

Most people reading the chart will believe that the option actually results in a decrease in noise exposure. Without reading the narrative that explains that, the reduction is actually attributed to the reduction of residential dwellings that are to be taken by land acquisition derived from the proposed improvements.

CHANGE ALL OF THE CHARTS per IP Option to include actual total of raw land area (noise exposure) without assignment of land use compatibility as considered by FAA regulation. If you want to include an additional data column depicting totals of FAA compatible landuse, than this caveat must be clearly stated **(in bold) within the heading of the column.**

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Author: Warwick Planning Department Subject: Highlight Date: 3/22/2007 12:45:59 PM

"Table 5.3-17 Land Uses Exposed to the Noise Levels DNL 65 dB and above for Improvement Program Option C Compared to the No-Action Alternative"

Incredibly misleading.

Most people reading the chart will believe that the option actually results in a decrease in noise exposure. Without reading the narrative that explains that, the reduction is actually attributed to the reduction of residential dwellings that are to be taken by land acquisition derived from the proposed improvements.

CHANGE ALL OF THE CHARTS per IP Option to include actual total of raw land area (noise exposure) without assignment of land use compatibility as considered by FAA regulation. If you want to include an

additional data column depicting totals of FAA compatible landuse, than this caveat must be clearly stated **(in bold) within the heading of the column.**

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Author: Warwick Planning Department Subject: Highlight Date: 3/22/2007 12:47:00 PM

"Table 5.3-22 Land Uses Exposed to the Noise Levels of DNL 65 dB and above for Improvement Program Option D Compared to the No-Action Alternative"

Incredibly misleading.

Most people reading the chart will believe that the option actually results in a decrease in noise exposure. Without reading the narrative that explains that, the reduction is actually attributed to the reduction of residential dwellings that are to be taken by land acquisition derived from the proposed improvements.

CHANGE ALL OF THE CHARTS per IP Option to include actual total of raw land area (noise exposure) without assignment of land use compatibility as considered by FAA regulation. If you want to include an additional data column depicting totals of FAA compatible landuse, than this caveat must be clearly stated **(in bold) within the heading of the column.**

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Author: Warwick Planning Department Subject: Highlight Date: 3/22/2007 12:48:18 PM

"Table 5.3-27 Land Uses Exposed to the Noise Levels of DNL 65 dB and above for Improvement Program Option E Compared to the No-Action Alternative"

Incredibly misleading.

Most people reading the chart will believe that the option actually results in a decrease in noise exposure. Without reading the narrative that explains that, the reduction is actually attributed to the reduction of residential dwellings that are to be taken by land acquisition derived from the proposed improvements.

CHANGE ALL OF THE CHARTS per IP Option to include actual total of raw land area (noise exposure) without assignment of land use compatibility as considered by FAA regulation. If you want to include an additional data column depicting totals of FAA compatible landuse, than this caveat must be clearly stated **(in bold) within the heading of the column.**

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Author: Warwick Planning Department Subject: Highlight Date: 3/23/2007 11:20:15 AM

"5.3.5 Compatibility with Planning and Zoning This section assesses each IP Option's compatibility with the City of Warwick zoning and local, regional, and state land use plans and policies summarized in Section 4.3, Land Use."

This section should include an additional narrative that more accurately describes the term "incompatibility" and the differences between that use of this term by the FAA and the City within the local zoning regulations and Comprehensive Plan.

Add a clear and concise statement that the airport use is not a compatible landuse within a residential zoning district according to local zoning regulations that were adopted under the State of Rhode Island zoning enabling legislation. Include a detailed narrative explaining the Zoning and planning legislation passed by the state legislature in 1992 and the impact that the legislation has on local zoning and planning regulations. Compare the differences in the criteria used by FAA guideline (noise exposure etc.) with the tenets of local zoning regulations and Comprehensive planning. For context, use a historic time-line referencing the travel of the airport land use and its growth into the surrounding residential land community. Detail in narrative and provide statistics with aerial photography from the 1940's through time

and up to the base-line condition depicting the growth of the airport land use into the legally established community. Show these changes through time on a single map that includes surrounding land use and zoning overlay.

Include a narrative that describes the established state and local land use regulations from the first local zoning in the 1930's through the 1945, 1957 and 1988 zone changes. Additional mapping must be included that depict "incompatible" land use as interpreted by the local zoning and comprehensive plan for the baseline 2012 and 2020 condition. Describe the scope of impact the IP option impose on the host community given the level of incompatibly proposed.

Include within the narrative that the residential communities that surround T.F. Green Airport were approved as legally permissible land uses in the 1940's when the airport was more an airfield that impose little nuisance. At that time, the uses may have been considered compatible. Explain how contemporary improvements in aircraft technology and airfield improvements expanded the airport as a land use into the surrounding residential community. Describe the growing difference in assessing compatibility as applied by FAA guideline and local zoning and planning regulations.

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Author: Warwick Planning Department Subject: Highlight Date: 3/23/2007 10:40:53 AM

"The No-Action Alternative is consistent with the State of Rhode Island Land Use 2025: Rhode Island's State Land Use Policies and Plan, which recommends that any development in the immediate vicinity of airports should be in a manner that would be compatible with airport operations. Off-Airport projects that would be in place in 2012 include the inter-model station, which is compatible with the WSRD and improvements to Airport Road as well as the proposed retail development for the former Fain Farm (which would be subject to City zoning requirements)."

Must add narrative in this section speaking to the issue of compliance with the City of Warwick Comprehensive Plan and the premise of the consistency doctrine requires the Comprehensive Plan be consistent with the City of Warwick Zoning Ordinance.

In the reciprocal of the aforementioned parameter of study, address how *"airport operations would be compatible with the surrounding zoning district"* in a detailed assessment that addresses the ramifications of applying the FAA guidelines only in the determination of land use compatibility while ignored local zoning regulations that prohibit expansion of the airport land use in residentially zoned areas of the City.

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Author: Warwick Planning Department Subject: Highlight Date: 3/23/2007 9:38:44 AM

"5.3.9 Summary of Land Use Impacts The following provides a summary of the changes in land use (size and location), impacted sensitive land uses, and land acquisitions for each IP Option."

This list is not a complete summary of impacts. The impacts that are included account for only a portion of those land use impacts that will be borne by the City and its residents. The previous growth of the incompatible airport land use into the surrounding residential community has imposed adverse impacts on the community that are improperly assessed within this study's review of the baseline condition.

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Author: Warwick Planning Department Subject: Highlight Date: 3/23/2007 9:32:05 AM

"5.3.10 Regulatory Coordination and Required Permits The land use compatibility analyses were conducted in accordance with FAA Orders 1501.E and 5050.4B. The Orders note that compatibility of existing and planned land uses in the vicinity of an airport is usually associated with the extent of the airport's noise impacts and that if the noise analysis concludes that there is no significant impact, a similar conclusion usually may be drawn with respect to compatible land use. The Orders make a similar declaration with regard to other impacts exceeding thresholds of significance and that if those impacts may have land use ramifications, then the effects on land use should be analyzed in the context of the land use compatibility analysis."

Unacceptable to draw such a conclusion in this case: *"FAA Orders 1501.E and 5050.4B. The Orders note that compatibility of existing and planned land uses in the vicinity of an airport is usually associated with the extent of the airport's noise impacts and that if the noise analysis concludes that there is no significant impact, a similar conclusion usually may be drawn with respect to compatible land use"*

Amend all assumption-based conclusions within this land use section. Land use planning principals discourage the universal use of this type of decision making when existing comprehensive planning and zoning is available. This land use section is entirely deficient a thought review and analysis of the IP options affects the City of Warwick Comprehensive Plan and zoning ordinance.

This section of the DEIS is wholly deficient the particular review that is required to determine comprehensive plan consistency which should be studied by particular roadway and neighborhood addressing all the elements of the comprehensive plan.

Without such a review this section is consider incomplete.

Summary 5.40 Socio-Economic

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Author: Warwick Planning Department Subject: Highlight Date: 4/3/2007 9:38:19 AM

"5.4 Socioeconomic Impacts According to FAA Order 1050.1E (Change 1), the principal social impacts to be considered are those associated with relocation of a residence or business or other community disruptions, including any appreciable change in employment. This section also assesses impacts to the local and regional economies due to the displacement of businesses, losses in tax revenues, employment changes, and changes in Airport-related businesses."

Regardless of the FAA order, the impact on area real estate value and affordable housing must be studied in further detail. According to the Planning Department review, the affordable spectrum of the detached single-family housing market will be disproportionately and adversely impacted by all the build IP options. Many of the homes to be taken as part of the IP Build options are below assessed below \$200,000 and sold under \$300,000 a price range that is critical to the low moderate-income family. The IP Build options would translate into a 4%, 5% or 8% loss in this value range housing stock within the City. Since the City is second only to Providence in total number of dwelling structures the impact on the larger housing market may have both short and long term impacts on that segment of the housing that low to moderate income families rely on. Within this analysis, adjust comparable sales downward for home sales that were included within the federal relocation program because of the higher sales prices established are not truly representative of the true market condition of limited and discriminating buyers.

The result is that the IP build proposals will eliminate housing choice in the all-important \$185,000 to \$275,000 detached single-family housing range that also happens to be a segment that is difficult to replace because of high land, regulatory and materials cost. New construction in this price range is generally limited to multifamily dwelling because increased density assists in recovering land cost. The study must indicate the frailty of this housing segment along with the fact that once this housing stock is destroyed it will not be reconstructed in it's entirety at the same rate as the growth of the income segment that relies on it. This study fails to detail the short and long-term social and financial impacts of this loss in housing stock.

This section of study must fully engage these issues in detail. The ramifications of removing this large number also reduces housing choice in the host community and within the State at large, please address this as a significant adverse impact. The assimilation assumed to occur within this document is entirely speculative and unrealistic. North Kingstown? The report is light on detailed factual study on particular demographic and housing characteristics including the lack of study of available and potential build out of detached single family housing under \$300,000 by city and town. Assuming assimilation into this community without this detailed study does not properly account for these issues. Please expand the research on the impacts

associated with induced market value during the relocation period and how the federal relocation assistance program may temporarily and artificially inflate the real estate comparable values within this range making it even more difficult for families not affected by this airport issue to enter this market. The findings in this report also do not address how the IP Build options impact on specific housing plans policies and findings of the City's fair housing plan and the State affordable housing policies as well as findings and recommendations of non-profit groups such as "*Housingworks RI*". The City of Warwick is of the opinion that this section is entirely unacceptable and must be readdressed with more defined data that reflects more closely the affordable housing crisis in Rhode Island.

Author: Warwick Planning Department Subject: Highlight Date: 4/3/2007 9:39:09 AM

"5.4 Significance Thresholds"

Add the following threshold reviews:

- Short term impact on the detached single-family housing market under \$300,000
- Impact on housing choice under \$300,000 (single family versus multifamily condominium)
- Impact on small neighborhood business; loss of business, employment and bankruptcy.
- Reduced real estate value for dwellings that remain near the fence-line abutting airport property. -Impact on the State of Rhode Islands affordable housing planning and policies with special concern given to the consideration that 38 of 39 cities and towns median price for a home is unaffordable to two thirds of Rhode Island households that earn less than \$60,000.
- IP build options consistency with the 2004 low to moderate income housing act and policies of the Governor's office of housing and community development.
- Impact to the fractured neighborhood's to remain including financial impact on local faith based, social organizations, churches and schools who rely heavily on their membership for support of their programs.
- Impact on affordable housing under \$250,000 for the elderly and families of persons with special needs.-Impact on the additional 10% threshold established by the State's low to moderate Income housing act of 2004 after the IP build option's takings.
- Quantify the annual loss in dollars of real estate values for all properties exposed to great noise exposure as part of the IP build options
- Numbers of low to moderate-income families by census block impacted by the IP option.-Total number of detached single-family dwelling units on the market within the \$150,000to \$270,000 price range within the State and amongst all Cities and towns.
- List the number of units within the \$150,000 to \$270,000 price by housing type (detached and multifamily units) within the State and amongst all Cities and towns.

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Author: Warwick Planning Department Subject: Highlight Date: 4/3/2007 9:55:09 AM

"While there is no significance threshold specified for affordable housing impact analysis in FAA Order 1050.11 E (Change 1), the proposed T.F. Green Airport Improvement Program is evaluated in terms of its potential impact to affordable housing as requested by the City of Warwick. For the purposes of the DEIS assessment, a significant impact would occur if the IP Options would result in substantial reductions of the subsidized housing stock with no replacement options or would significantly impact housing affordable by removing a substantial number of units from the City of Warwick's housing stock."

The DEIS understates and under-reports how housing affects minority and low-mod income groups. The housing impacts imposed by the IP build options may present one of the most significant adverse impacts on this community as well as on the State at large. This study must include a more detailed independent

review of the facts and indirect impacts associated with the removal of this housing segment. Address how this loss will adversely affect the City's affordable housing mandate considering loss of the City's exemption, limited buildout available and difficult to achieve price point for new construction. The adverse impacts imposed on this community especially within the Low-mod and minority communities appear to be greater than the mere statements offered with in this study. Address the implications of exacerbating the shortage of affordable housing units and limiting housing choices. How will reducing affordable units impact on the already small minority community in the City? No creditable statements have been made regarding equity of burden on income class or social group. The beneficial outcomes cited appear to be overstated with the use of economic modeling with the distribution of adverse impact not clearly addressed by block-based neighborhood facts. Given that the City maintains a low minority population provide statistics by local block group opposed to citywide analysis that has a tendency to dilute perceived impact. Using statistics that are more refined will better represent impact on the minority population as distributed throughout the City.

Author: Warwick Planning Department Subject: Highlight Date: 4/3/2007 10:31:58 AM

"5.4.1 Key Findings"

These key findings fall short of an accurate assessment of the facts. The IP build options will remove approximately 8% of the entire City's single-family detached homes with mortgages assessed by the City between \$150,000- \$200,000 value range. This figure is even greater if the recent takings within the Part 150 study are included. As stated earlier once removed, this detached housing stock WILL NOT be replaced in it's entirety within the City. The statements included in the study calling for ease of assimilation of displaced families into neighboring communities is inaccurate as it does not properly address the entire cohort impacted by the action.

Therefore, the conclusions regarding this matter are not valid. This Department's review of housing characteristics finds the communities cited as areas of assimilation are deficient the current minimums regarding affordable housing. Given this fact how can assimilation be made to occur without adverse impact if the immediate and near future shows no substantial increase in detached single-family units under \$270,000. Infill developments will occur at a slower pace with much higher land and infrastructure costs, the resultant stock is priced higher than the real estate stock being removed. Longer term, the reduction of total housing stock available will drive the \$200,000 to \$275,000 price range higher as demand driven by income and workforce will outstrip supply furthering the crisis. The removal of the housing stock will only add to an already document deficit in affordable housing. Additionally your study should remove unaffected affluent areas from the study of social characteristics, as the number appears to skew the intensity of perceived impact.

This study must also include a full build out analysis for this City as well as for all communities assumed to assimilate the displaced families. The study must also concentrate more on specific block data; housing price range, income and social characteristics. Include low-mod by block in all areas within the study area and within assumed communities expected to assimilate the families. Include detailed MLS data of existing single-family detached units available in the State priced between \$200,000 to \$275,000 price range by City and Town. Use the last three years of building permit data from each community and project construction of new single-family dwelling units within this price range.

Include additional census data in block detail concerning income demographics and housing characteristics. Project short and long-term impacts on low to moderate-income families seeking housing in the \$200,000 to \$275,000 price range. State clearly changes in housing choice i.e.. Forcing purchase of multifamily dwellings instead of a detached single-family dwelling unit as the only option within this price range. The findings must be incorporated into the social justice section of study for a finding.

Use the data gathered for available housing stock in the 200,000 to \$275,000 price range, market availability, and time based assimilation affects on the real estate market to assess short and long-term impact on low to moderate income and minority populations within the City.

Author: Warwick Planning Department Subject: Highlight Date: 4/3/2007 10:20:55 AM

"In general, from an economic standpoint, the proposed IP Options would result in losses to the City's tax base from residential and business land acquisition, and impacts to jobs and spending, but would also result in income, employment and tax benefits from the additional business generated by incremental increase in the daily flights associated with the extended runway. By 2020 overall employment impacts from four of the five IP Options are expected to be positive."

Strike this very misleading and undocumented statement.

"would also result in income, employment and tax benefits from the additional business generated by incremental increase in the daily flights associated with the extended runway. By 2020 overall employment impacts from four of the five IP Options are expected to be positive."

The economic development cited herewith both in direct and indirect terms are projections not guarantees of income unlike the loss of 2 million dollars plus annually in tax revenue to the City which is guaranteed to occur as part of the IP build opinions. Secondly the so-called economic gain is not fixed or directed to the host community. In fact, many of the anticipated economic benefits maybe funneled directly to RIAC (parking revenue etc.) and non-localized revenue benefiting the State treasury and dispersed amongst 39 communities guaranteeing no recoup of the annualized tax revenue and local spending generated by the former neighborhood of 300 families. Limit the review of the dollar impact only the proposed twelve additional flights a day. As assumed even within the high side condition will NOT likely to result in the wholesale construction of new business directly because of these additional flights, a point not clearly made within this study. Instead, this section focuses on aggregate income generation from uses already located and established around the airport. This is erroneous since the established uses generating these dollars will not disappear in the event that the IP options are not constructed.

The funding generation assumed in this study is not commensurate with the potential, predicted increases assumed to occur if the runway were to be extended. Re-address this methodology used in the economic modeling. Offer a scale of economic development dollars generated by the twelve additional operations and diversion of funds (gains) to RIAC, the State of Rhode Island and Direct dollars and the City. Define the variables found within the assumed study. Define dollar generation by 2012 for less than the predicted increase in daily flights at a 50% less than expected condition and 75% less than expected condition. This additional information would reflect the changes in "benefit" while also reflecting the variability associated with predicting non-stop west coast service accepting miscalculations in the past (forecasted non-stop service at Manchester and Bradley International Airports). Amend this section to more independently review the likely costs and perceived benefits weighed against the sure losses proposed per IP build option.

Author: Warwick Planning Department Subject: Highlight Date: 4/3/2007 10:43:11 AM

"The T.F. Green Airport Improvement Program is expected to lead to non-stop long distance domestic service at T.F Green by 2012 and international service by 2020"

Comments from page 2 continued on next page

Rigid biased and unproven assumption that includes no variability for adjustment in the event that the

prediction falls short of the assumed condition. We know all too well that forecasts are best guesses within an industry that is dynamic and very competitive. What type of truly independent professional review would use such a ridge statement without explaining and incorporating data adjustments in case this ridge assumption fails or is less than predicted? Please include detailed study of similar regional incentives for non-stop service and compare their current schedule to that which was predicted prior to approval of the corresponding improvement option. Given the embarrassing missed assumptions of the past such as Southwest Airlines service in 1996, Las Vegas nonstop, Manchester International Airport limited nonstop operations to the west coast and the loss of carriers to destinations that were not projected or foreseen to occur by three different consultant groups, provide companion data and findings based on a low end projection in nonstop West Coast service by 2012 to reflect the missteps made in past forecasting. In general section 5.4.1 reads not an independent review of the facts but instead as a report design to justify the "purpose and need" for this project contrary with CEQ regulations regarding the methods of creating an environmental impact statements. This entire section is unacceptable and needs to be rewritten.

Author: Warwick Planning Department Subject: Highlight Date: 4/3/2007 11:07:51 AM

"All of the IP Options would require acquiring approximately one percent or less of Warwick's overall housing stock. However, based on a review of the current real estate market, there is sufficient available housing in Warwick and surrounding communities such as West Warwick, Coventry and North Kingstown to meet the relocation housing needs of all displaced residential households."

"there is sufficient available housing in Warwick and surrounding communities such as West Warwick, Coventry and North Kingstown"

Remove this statement.

This statement is simply absurd primarily based on the most elementary of statistics (total universe of units). These statements found throughout the document underestimates the adverse impact on low to moderate-income families through the elimination of much need entry-level housing stock. North Kingstown as a town capable of assimilating the \$200,000 to \$270,000 single-family housing stock? This data needs to be produced in this document before the statements are made.

"sufficient available housing"

Is not a term that you hear readily throughout the State of Rhode Island. Government, business and advocacy groups agree that "affordable" housing in the State are in short supply. 38 out of 39 communities do not provide affordable housing opportunities for families earning \$60,000 a year. Considering the employment demographic, growing populations and low-income workforce this trend is expected to continue. The well-publicized housing crisis does not correlate with the statement and demonstrates either a lack of understanding by the consultant or a blatant attempt to skew the study's finding in favor of the build options. I suggest removing such an embarrassing statement.

"approximately one percent or less of Warwick's overall housing stock."

OVERALL, HOUSING STOCK? A very elementary statistic for a DEIS. As stated in the pervious comments the overall percentage is a useless statistic because it does not represent proportionality of impact on social groups. The housing and income characteristics of the impacted neighborhoods are below the mean tax assessors' valuation of the overall housing stock for the City so why would the entire data point of all housing units be used. It appears that this statistic was used to minimize the IP build options impact on affordable housing. A representative statistic is more like 8% of the housing stock in the affordable price

range are impacted. Rewrite this entire section to include additional data and statistical analysis by neighborhood consisting of block group data along with housing price ranges as well as low-mod income and minority populations. The impact review must be based of these refine and representative populations and housing characteristics. Without amendment, this section is considered unacceptable to the City.

Author: Warwick Planning Department Subject: Highlight Date: 4/3/2007 11:10:35 AM

"All IP Options would require acquiring some affordable housing units, representing less than one percent of Kent County's affordable housing units."

This figure is incorrect. The average assessed value of a single family detached home in the three plat neighborhood affected by the IP build options according to Warwick tax assessors' records is \$165,518. The median selling price single family home in Warwick in 2005 was \$244,700.00. The median selling price single family home in the State in 2005 was \$282,900.00. Therefore this analysis entirely misses the target group affected choosing to include selected data in an effort to reduced the perceived impact. It is disingenuous to include housing characteristics that do not truly represent the impacted citizenry.

Use a more detailed and accurate study of housing units priced below \$275,000 by community removing irrelevant data points that dilute the impact of the proposed takings. Of the 19,891 housing units in Warwick w/mortgages, the tax collector below the \$200,000 assesses about 27%. This study must address specific impact on the 40% of low to moderate-income families that live in the affected areas of study. Amend this study to specifically focus on the detached single family home selling for under \$275,000. Add more thorough assessment of the existing housing crisis in the State. Explain how the IP Build options will negatively impact this City's fair housing plan and thresholds established by the State of Rhode Island's low to moderate income housing act of 2004. What is the exact cost in dollars to the City to replace the affordable housing segment lost as part of the IP build options? What would the cost to the City be should the City lose their exception (rental units) within the affordable housing act? Detail the percentage of detached single-family units in the \$225,000 - \$275,000 and \$175,000 - \$224,999 price ranges within the City and in all other Cities and Towns.

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Author: Warwick Planning Department Subject: Highlight Date: 4/3/2007 11:24:39 AM

"All of the IP Options would require acquiring residential and commercial properties resulting in the loss of City taxes, businesses and jobs; however, all IP Options would result in a gain in State taxes and income as a result of the additional flights serving long distance destinations."

The statement " however, all IP Options would result in a gain in State taxes and income as a result of the additional flights serving long distance destinations." is disingenuous because it minimizes local adverse impact and avoids the proportionality of cost issue. The documented and tangible costs are borne by the City and are greater that the documented benefits received by the City with a majority of tangible benefits directed to RIAC and State of Rhode Island. Perceived increases in economic development benefiting the host community are not guaranteed and are merely assumed to occur. Does the impact analysis change if this economic gain is not realized? Who will compensate the City for the known and documented losses? These questions must be clearly answered within this study as a range of impact associated with a variety of forecast outcomes. Equity related to distribution of costs and benefits are inadequately studied within this document. Our interpretation of the data suggests that socioeconomic impacts are disproportionately placed on specific areas of the City and income groups. The impact involves a high percentage of affordable housing units that serve low to moderate-income families.

The specific and disproportionate impact on this community has social justice implications and must be studied in greater detail. Explain the concept of proportion of cost relative to benefit on low-mod income families. Do not buffer local impact with subjective statements of perceived or expected economic benefit. Allow this technical document to detail exact gains and losses within and outside the City. Describe in greater detail the socioeconomic costs to area families. Describe economic activity related to specific benefits or costs to Warwick residents, economy, income group and cultural diversity. If no benefits are attributed within the IP build options then clearly state this fact. Create a new table and cite specific monetary and jobs growth benefits applied to City residents as well as those directed outside the City attributed only to the revenue derived from non-stop west coast service (12 flights by 2012). Create a list of jobs and economic benefits derived by proposed IP options as well as the amount of dollars directed to RIAC (parking etc.), the State of Rhode Island (increased tax revenue) and City of Warwick using exact figures broken down cents on one dollar. Detail short and long-term job growth for residents within City of Warwick as gained through additional non-stop west coast service. Add to this table net benefit of monetary and social costs to the host community compared with the net benefit derived from RIAC and the State of Rhode Island.

Author: Warwick Planning Department Subject: Highlight Date: 4/3/2007 1:47:30 PM

"Statewide aviation-related impacts of the T.F. Green Airport Improvement Program in the State of Rhode Island would introduce almost 1,900 new jobs totaling approximately \$54 million in wages (2005 dollar)"

First detail "jobs" as short-term construction jobs or long term new jobs associated only with the addition of 12 flights a day by 2012. Statewide aviation related impacts have little value as proportionate benefit derived from the addition of non-stop west coast service. Because the airport land use is in place, the existing economics derived from this aviation use will remain relatively constant and therefore is irrelevant in the assessment of adverse impact from the construction of additional runway length. This section must be removed and replaced with focused study on the cost/benefit of extending the main runway and monies and jobs derived from the forecasted gains attributed only to servicing non-stop west coast destinations. The entire aviation systems' economic benefits are irrelevant and as such all reference must be stricken as the numbers are misleading an intended to promote the project in a less than professional review of the immediate benefits of the construction improvements contained within the IP build options. The data used in developing this statement is misapplied to provide a context of economic benefit in a more dramatic fashion than the assessment than that attributed to the addition of 12-flights a day.

By federal guideline, this DEIS must be a technical document. Unfortunately, this is documents reads like a position paper for proponents of the "purpose and need" rather than an independent analysis of the facts. Should universal statements of economics benefit be required in this report then clearly state the short-term benefits of construction jobs and the undocumented future monies that are hoped to occur based on predicted service. Also state clearly the anticipated benefits cannot be assured but will have a disproportionate impact on the low-mod income group and affordable housing sector. The wild tertiary multipliers used in the indirect modeling should be removed. Hyperbole should be separated from fact and stated as such. The data of economic activity are grandiose in their claim and do not assign the origin of the dollars produced or destination of benefit. Do not measure economic benefit as if the airport were not located in the City.

The "purpose and need" does not include an alternative that abandon the use of T.F. Green Airport so why should the economic model consider this null set when defining economic benefit. Accordingly,

this study must limited to benefit related statement derived specifically from known economic additions that may result for the construction of the improvement program and addition of 2,130 lf, of runway not as a measured benefit of the entire aviation industries impact on the State of Rhode Island. That already exists.

Author: Warwick Planning Department Subject: Highlight Date: 4/3/2007 11:49:26 AM

"In 2012, all of the IP Options would result in a loss in annual residential and commercial property tax revenue to the City of Warwick averaging around one percent or less of forecasted annual property tax base for the City."

This cost is extremely underestimated. The DEIS must also include loss in tax revenue from depressed real estate values for the dwellings that remain after removal of some 300 homes. The once dense residential neighborhood, as outlined within the IP build options, will become fractured and segregated from the approach to the runway extension creating a new set of dwellings that abut the fence line impacted by noise and visual blight. Dwellings that abut the airport fence will most likely retain lower real estate market value than in their previous condition that will directly result in a further lost in tax revenue. Reassess and assign a monetary loss associated with the reduced real estate value.

Also, include lost tax revenue from reduced housing values associated with increased noise exposure and secondary spending in local markets and shops catering to the City's villages. Of tremendous importance and wholly unaccounted for within this study is the loss in the City's "tax levy" power by the reduction of taxable units in the City from recent and proposed takings. The loss in levy may result in a higher percentage tax increase for the remaining real estate properties in the City and effect future bonding capacity and interest rates assigned to said bonds. Study and assess the dollar impact to the City.

Include loss in real estate tax revenue attributed to reduced real estate value from homes exposed to higher noise levels as indicated within the IP build options (greater than 1.5 DNL). Calculate the total number of homes affected and assign loss in real estate value and subsequent annualized tax loss to the City. Small businesses serving the local community contribute local jobs and dollars to the City. A loss of spending at community markets and shops have many secondary impacts included lost jobs and bankruptcies while increasing vacancies of small storefront business depressing commercial real estate. Quantify loss in dollars to subscription-based services such as local newspapers as well as impact on social and community programs dependent on community involvement. Assign a cost for the City to purchase land and construct new recreational facilities to replace the fields lost as part of the IP build options.

Understanding real estate's primary rule is location; assign an annualized dollar figure to reflect lost tax revenue attributed to reduced real estate value in the IP build options caused by degraded quality of life due to increased noise and air pollution, traffic congestion, fractured neighborhoods, visual blight and a general degradation of the natural environment. Quantify these impacts in terms of dollars. Re-review this entire section to include dollar values for all the aforementioned.

Author: Warwick Planning Department Subject: Highlight Date: 4/3/2007 11:55:07 AM

"•• Under all IP Options, the State would gain non-property taxes ranging from approximately \$944,000 in 2012 to \$2,365,000 in 2020 due to increases in aviation activities."

The economic impact must be detailed as to that which is derived from "non-recurring" impacts such as construction jobs. What percent are construction jobs and economic activity associated with the short-

term benefits induced through capital expenditures that act essentially as a public works program? List these within a table. Offset these perceived gains by losses in additional State subsidies to the City to compensate for the real estate tax losses.

Offset these perceived gains with additional State subsidies to address larger social issues that require public funding. Determine the "net" impact in a gain versus loss analysis.

Include as costs not calculated in this study:

- Higher costs of subsidized housing
- Business slippage due to a lack of affordable housing
- Increases in medical cost related to degraded air quality around the airport (uninsured medical claims) --
- Reduced productivity due to sleep interference and deprivation
- Health impacts from toxins associated with the airport land use (cancers, social cost to assist in these matters)
- State funding required for upgrading transportation infrastructure for state roads serving the airport land use
- Environmental cleanup off airport property by RIDEM and others.

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Author: Warwick Planning Department Subject: Highlight Date: 4/3/2007 11:56:44 AM

"5.4.3.1 Impact Assessment Methodologies The following assumptions were used throughout the socioeconomic impact analysis: •• Demographic impact estimates for each IP Option have been provided based on Study Area 2004 baseline conditions."

Unique and dramatic changes within the real estate market since 2004 demand that this study include updated MLS and comparables along with housing characteristics and demographics from the 2005 and 2006 data sets.

Author: Warwick Planning Department Subject: Highlight Date: 3/30/2007 11:56:45 AM

"Analysis is based on the City of Warwick property assessment data"

I do not believe this is the most up to date data collected by CLT.

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Author: Warwick Planning Department Subject: Highlight Date: 4/3/2007 12:03:24 PM

"Social impacts due to land acquisition include a qualitative analysis of community disruption including the impact to residential areas and neighborhoods from changes in land use. The impact assessment also provides details on the effects of displaced businesses on employment and direct impacts (losses) to City property tax revenue due to land acquisitions. Secondary impacts to regional employment, and State sales and income tax revenue are also assessed for each IP Option using methods described further below."

The proposed infrastructure associated with the IP Build options appears to impose serious adverse impact on specific neighborhood communities that have large populations of low to moderate-income families (40%). The overall impact assessment underestimates the localized and disproportionate impact of the IP build options. This section must be refined to include a larger field of study including how reduced tax base and reduced housing opportunities disproportionately impact the minority and low income community along with educational and social service programs in the

City. The impact to the low to moderate income group must be more comprehensively studied with the assistance of the Department of Housing and Urban Development (HUD) to ascertain the scope of direct and indirect social impact.

To properly quantify the social impacts block study of the under \$275,000 detached housing units must be adjoined with existing information and data collected by federal, state and non-profit agencies dedicated to affordable housing in the State of Rhode Island. The supposed assimilation included within this DEIS is unsubstantiated and is contrary to many locally accepted housing studies. The reduction in the affordable housing stock proposed within the IP build options present a serious social concern for the City and State as it poses and inequity entirely placed on the less affluent families in our community a social injustice that appears to be purposefully glossed over in this study.

Author: Warwick Planning Department Subject: Highlight Date: 4/3/2007 11:59:27 AM

"The estimated City of Warwick housing stock of 38,892 units (according to Demographics) serves as a baseline to evaluate T.F. Green Airport Improvement Program-related impacts."

Breakdown this figure to reflect the housing stock (price range) impacted by the IP build options. Use detached single-family units along with a subset of the housing characteristics, minority populations and the income demographic for all affected plats using assessment and census data by Block group.

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Author: Warwick Planning Department Subject: Highlight Date: 4/3/2007 12:03:53 PM

"Housing Affordability Assessment Methodology"

This section does not far enough to address the entire short and long-term impact on the low to moderate-income family at the affordable range. See all previous comments regarding this issue.

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Author: Warwick Planning Department Subject: Highlight Date: 4/3/2007 12:21:24 PM

"Units affordable as of 2006 would continue to be affordable in 2012,"

STRIKE THIS ASSUMPTION

This assumption is clearly invalid given the limited quantity of the existing housing stock available and the lack of new replacement housing be constructed under \$275,000 (due to cost of property and construction). The assumption dilutes the data set and reduces this reports statements regarding adverse impact. The fact not assessed properly in this study is that after completion of the IP build options the availability of this housing stock will only continue to decrease. Will new units be constructed to compensate for the aggregate loss in this housing stock? If not state this and explain what is planned to mitigate this loss. The low-mod income levels are not projected to rise significantly and in concert with land and construction costs so how do we remove affordable housing stock, assimilate displaced families, and not adversely impact an already demonstrated need for affordable housing? This study does not properly address the magnitude of these important social consequences.

The growing low-mod demographic will demand growth in housing under \$275,000. This study fails to address how the proposed IP build options will impact this imbalance in the City and on a statewide basis. Increasing construction and land costs will assure that the percentage of these units will be harder to construct in the future and that the remaining supply will be less than the growing demand within this

income demographic. Therefore, amend the assumptions used in this study to consider a change within the top 5% of the affordable price-range from affordable units to unaffordable by 2012.

Author: Warwick Planning Department Subject: Highlight Date: 4/3/2007 1:47:51 PM

"The estimated Kent County housing of 71,511 units (according to the U.S. Census data, July 1, 2004) is used to assess secondary impacts on housing affordability, since the affects of changes in the housing stock in Warwick are likely to be felt throughout the county."

As mentioned several times in our comments the DEIS must include specific community housing and demographic data (for communities supposed to assimilate displaced families) by housing price range and income group. Refine geographic study areas and address impact on housing type, price range, low mod, minority populations, elderly, children with disabilities, school age children. Localized impact relative to neighborhood and income group will allow for a more proper and defined assessment in gauging larger community impact and social justice issues. (i.e. changing schools, loss of recreational opportunity impact on children, impact of low income and minority populations, private, public church; school enrollment, organized social and volunteer staffing and funding of elderly community services)

Author: Warwick Planning Department Subject: Highlight Date: 3/30/2007 12:57:33 PM

"Direct Impacts on Affordable Housing"

Inadequate data and analysis.

See comments above.

Author: Warwick Planning Department Subject: Highlight Date: 3/30/2007 12:58:07 PM

"Secondary Impacts on Affordable Housing"

Inadequate data and analysis.

See comments above.

Author: Warwick Planning Department Subject: Highlight Date: 3/30/2007 12:58:57 PM

"Economic Impact Assessment Methodology"

Inadequate data and analysis.

See comments above.

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Author: Warwick Planning Department Subject: Highlight Date: 4/3/2007 12:52:38 PM

"Secondary (Indirect and Induced) Economic Impacts"

This is drastically overstated. The secondary and induced impact is simply used as another means to pad an already high guesstimate of positive economic gain to erase or "mitigate" IP build alternatives. The modeling cannot adjust to account subtle differences within the established universe around the airport land use. The so-called secondary and induced impacts are guesses that in reality are a result of many circumstances. Landuses located around the airport can be said to be located as much for their proximity to interstate Route 95 than the airport land use and therefore direct correlation or reasoned based economic befit cannot be definitely established.

This dynamic is well understood by planners. Urban sprawl, contemporary populations centers are issues synonymous make it difficult to discern single factors of secondary impacts. Accordingly, it is difficult to understand how the statements in this section can be so definitive and grandiose. Amend to embrace

other substantial market factors such as cost of real estate, proximity to market and transportation infrastructure. It is very difficult to understand all the factors that are involved with inducing new businesses around the airport because of its geographic proximity within the State, location in the urban core and prime commercial landuses adjacent to the interstate. Therefore, the secondary benefits cited cannot be fairly attributed only to the airport use. Office buildings, hotels and restaurants may or may not have been established solely because on the presence of the airport but with this modeling they are assumed to be. This is false and must be changed accordingly.

The long established airport use could induce secondary impacts without the IP build options a fact not clearly identified within this section. This study must not imply or overstate economic gain by using as an inferred baseline of no airport operations at T.F. Green Airport as there are no plans on moving all airport operations to Quonset Airport. Please include narrative that explains that without construction of the IP build options the airport will continue to induce economic development including serving passengers and creating secondary economic impacts for the State. Explain in clear and concise terms the limits and history of inaccuracy of the economic modeling considering the reliance on assumed and highly variable market conditions within one of the most dynamic industries in the world. Revisit this section and re-weigh the information accordingly as a guess for purposes of guidance emphasizing the limited utility of figures produced compared to hard and known data included as Comments from page 9 continued on next page a requirements of implementing the build options. Limit study in this area to only quantifiable secondary/induced economic impacts derived from the forecasted 12 flights a day by 2012. .

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Author: Warwick Planning Department Subject: Highlight Date: 4/3/2007 12:54:30 PM

"These impacts would lead to additional business conducted on the Airport to service airlines and passengers, and spending would increase in Warwick"

Where will spending actually occur in Warwick? In the terminal, at gas station outside the terminal, parking garage or in area coffee shops? How much of the perceived monetary gains will be directed back to the City? Provide an exact breakdown of cents on a dollar that will be spent outside the fence directed at increasing the City's tax revenue. If this is not known do not make the statement.

Author: Warwick Planning Department Subject: Highlight Date: 3/30/2007 1:06:42 PM

"This change in the destinations that could be reached directly from T.F. Green could offer opportunities for spillover business activities near the Airport to take advantage of the new service and customers."

Strike

Another assumption not quantified.

Author: Warwick Planning Department Subject: Highlight Date: 4/3/2007 12:59:37 PM

"Economic Models and Inputs"

The City does not agree with the assumptions and multiplier used in the analysis. The wild guesstimate does little to address the known quantitative and sure loss in tax revenue to the City. The model does not assure or guarantee a penny will be received by the City. The section overshadows known and quantifiable environmental and social impacts with statements of assumed fiscal prosperity. The "potential economic development" as referred to in the paragraph is given as the reason to legitimize the known fiscal, environmental and social costs to the City of Warwick. The City rejects this section of the DEIS (5.4 Socioeconomic) as it is written as a document of support for the build options opposed to an independent

review of the data. Throughout this section of the DEIS the narrative appears to continually underreport adverse environmental, health/safety and social issues in favor of biased presentation of the "upside" supporting the build options. The section is unacceptable and must be completely rewritten to conform to federal guidelines regarding fundamentals in data gathering and evaluation methods required in the compilation of an EIS.

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Author: Warwick Planning Department Subject: Highlight Date: 4/3/2007 1:01:08 PM

"Impacts on Taxes an analysis of direct and indirect impacts on City and State taxes for each IP Option is included as part of the impact assessment. City of Warwick Property Taxes"

Inadequately addressed see comments above.

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Author: Warwick Planning Department Subject: Highlight Date: 4/3/2007 1:02:11 PM

"5.4.3.2 Cumulative Impacts Methodology 25 The socioeconomic cumulative impacts assessment is broken down into two key topics: social and economic cumulative impacts Social Cumulative Impacts"

Inadequate as stated in the comments above.

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Author: Warwick Planning Department Subject: Highlight Date: 4/3/2007 1:04:36 PM

"Cumulative Social Impacts"

Inadequate see comments above

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Author: Warwick Planning Department Subject: Highlight Date: 4/3/2007 1:20:13 PM

"5.4.7.2 Social and Housing Impacts"

THIS SECTION REQUIRES A REWRITE

Address how the IP build options impact affordable housing, low-moderate income groups and minority populations by neighborhood as compared to the population demographics and housing characteristic of the larger host community excluding more affluent areas with high income groups and housing costs. Complete an assessment of burden by proportioning proposed adverse impact by social and income characteristics inside and outside the City.

Does the income group adversely impacted receive a benefit from this project? How will adverse impacts be distributed within different income and housing groups within the City? Clearly depict takings relative to home values and household incomes of a map. Describe if the IP build options will distribute the adverse impact evenly within income class and within real estate value range. Depict increases inequity on income group or housing characteristic in a more specific manner than the mapping already presented.

Social impacts can occur because of depressed property values. For those properties that are adjacent to the airport fence line or subject to higher noise exposure depressed property values can result in lack of stewardship, structures in disrepair and a soft market value. These conditions may cause a property owner to rent the property because it cannot be sold shifting area land use to renters as opposed to owner occupied units. The change in land use can impact the demographics including changes in demands on

city services and schools as rental conversion due to price breakdown generally reflect a lower income high demand for city services demographic. Address this issue and assign a cost to the City in reduced property values and increased city services.

The DEIS must address in greater specificity cumulative impact from the loss in affordable housing and its impact on low to moderate income families. This DEIS uses large County and census tract analysis along with wide ranging totals that include a variety of housing groups, incomes and housing characteristics. This is unacceptable. The diluted results do not reflect the inequity of the adverse impacts imposed at the neighborhood level. Compare specific block group data of income groups, minority populations within the neighborhood, average real estate value, income and other pertinent demographic information. The DEIS must included a real estate study conducted by a real estate expert inside and outside the airport influence area that compares real estate sales of homes located within and outside the airports influence are to determine market differences in real estate value. This study is required in order to fully assess all social and housing impacts.

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Author: Warwick Planning Department Subject: Highlight Date: 4/3/2007 1:27:12 PM

"Affordable Housing – Direct Impacts"

INADEQUELY ADDRESSED - SEE PRECEEDING COMMENTS

Include this statement.

The IP build options will adversely and disproportionately affect the low-mod income groups and the lack of affordable housing in the City and State of Rhode Island will be further degraded by the improvement program build options by adding to an unrecoverable loss in entry-level detached single-family housing stock.

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Author: Warwick Planning Department Subject: Highlight Date: 4/3/2007 1:33:15 PM

"Table 5.4-53 Summary of Direct and Secondary Impacts to Employment in Warwick"

Add to this table

- short term direct/indirect, long term direct/indirect and assumed job opportunities
- jobs to residents within the City of Warwick
- jobs within the "fence". RIAC, airlines, cargo garages etc.)
- jobs to others outside the City

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Author: Warwick Planning Department Subject: Highlight Date: 4/3/2007 1:33:37 PM

"Table 5.4-54 Summary of Direct Tax Impacts (Losses) to City of Warwick"

Refer to the aforesaid comments regarding this issue including but not limited to:

- Annualized loss in taxes from real estate depreciation (noise, home location) -Financial and bonding impact due to diminishing tax levy
- Tax burden shift onto the smaller residential tax base
- Increase in already high real estate tax burdens on residents and small businesses

- Affordable and available housing stock
- Degraded quality of life
- Aggregate impact from yearly erosion in tax base due to the part 150 takings
- Redistribution of economic benefit from the host community to RIAC and larger statewide interests
- Cost of additional state resources to support the local school system.
- Local cost to mitigate increased storm water run off and pollution outside the fence.
- Impact that reduced taxes will have on the quality education and its impact on overall real estate value in the City. (Education is fundamental component of a desirable community; the loss in educational quality may result in a reduced overall real estate value within the school district.)
- Further degradation of the constrained and congested transportation infrastructure may detract new and existing business to move to areas outside the City further eroding the City's tax base.

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Author: Warwick Planning Department Subject: Highlight Date: 4/3/2007 1:34:22 PM

" 5.4.8 Extensive relocation of residents is required, but sufficient replacement housing is unavailable."

Please add: Up to 40 percent of the dwellings within the relocation areas impacted by the IP build options contain low-moderate income families.

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Author: Warwick Planning Department Subject: Highlight Date: 4/2/2007 12:11:44 PM

"Table 5.4-56 Evaluation of Significant Impacts to City of Warwick"

Additional context is required to fully understand the full scope present within the existing baseline condition. Please add data to this table:

- Include the number of dwelling units taken within the last Part 150 to the current baseline condition.
- Include number of businesses displaced from the last Part 150 to the current baseline condition.
- Loss business revenue from the last part 150 to the current baseline condition.
- Actual loss of tax revenue from the last part 150 to the current baseline condition.
- Loss in local tax and business revenue due to the loss of household spending at local businesses. (Include restaurant tax and multiplier dollar impacts on the stores and businesses that serve the community.)

Author: Warwick Planning Department Subject: Highlight Date: 4/3/2007 1:36:50 PM

Table 5.4-56 "Substantial Decrease in LOS No: No: No: No: No"

The City vehemently objects to the "no impact" classification included within this table. The fact is a majority of the major intersections that surround the state airport performed well below acceptable levels of service partially as a result of the airports growth since 1996. The growth in passengers brought on by the terminal improvements did not include the commensurate infrastructure upgrades of the surrounding transportation network. The resultant condition is unacceptable level of service that will not improve in aggregate, within the build options proposed. It is disingenuous to suggest that because the existing condition is below an acceptable level of service the build proposals would pose no greater adverse impact in a "cannot get any worse argument".

The EIS should be proposing mitigation for the surrounding roadway network not only for the proposed condition but also for the existing baseline transportation system. The airport land use has had a significant direct and non-direct impact on the supporting roadway network that has been distressed beyond its original design capacity from unplanned and under designed airport growth. Off- airport property and roadway improvements have never been properly addressed within this DEIS. Past and present planning by RIAC and FAA gave little regard to off-site transportation improvements with the result being the terminal capacity increases have outpaced roadway improvements.

In all build conditions the LOS for at least three major intersections do not improve from their unacceptable performance in the baseline condition. This study fails to accommodate the growing capacity requirements of the airport with elementary design improvements to the area transportation network. The DEIS fails to properly address the causes of the existing condition or present mitigating strategies such as capacity improvements gained through lane widening along Airport Road and Main Avenue which exists as the City's primary east-west arterial roadways. For all the previously mentioned reasons the City requests the DEIS findings regarding the City's major intersections and roadways be amended to a finding of "significant adverse impact".

Author: Warwick Planning Department Subject: Highlight Date: 4/3/2007 1:38:30 PM

"Substantial Loss in Tax Revenue Annual Loss in Tax Base \$1.2M \$2.2M \$1.8M \$1.9M \$1.5M"

ADD DATA

Including the loss in annualized real estate taxes from the implementation of the most recent Part150 study. Include loss in local revenue from displaced families that are currently supporting small village convenience stores, shops, markets, etc. Apply a negative economic multiplier to extend financial impact should said business(s) fail as a result of reduced spending due to their displacement. Include annualized loss in tax revenue due to reduced real estate valuation of properties that are near the airport fence and areas of higher noise exposure. Explain the financial impact on the City tax base from depreciated and reduced real estate assets available for taxation or "levy" on the tax base including the impact on the tax rate of remaining property owners as well as impact on the school system considering the cap limits established by State law. What insurance in dollars is given to the City that the former tax base will be restored or PILOT FUNDS will be increased to offset the loss? Do not use the terms perspective, perceived or anticipated economic development, as these assumptions are not worthwhile considerations within this technically based study.

Author: Warwick Planning Department

Subject: Highlight Date: 4/2/2007 11:54:11 AM

"Significant Impact Exceeds one or more threshold Yes Yes Yes Yes option E :No"

Amend to "yes". Exceeds the transportation threshold impact as stated in the previously mentioned comments.

Author: Warwick Planning Department Subject: Highlight Date: 4/3/2007 1:46:49 PM

"Conclusion There is a significant difference between jobs that will be displaced and jobs that will likely be lost to Warwick and to Rhode Island among those that are displaced. In discussions of land acquisitions for each IP Option, the businesses and jobs that will be dislocated due to acquisition for each IP Option are reported. This approach represents a conservative worst-case scenario."

The City believes the adverse impacts are even greater than stated above. This study does not approach the magnitude of impact because it does not address many negative impacts that are less quantifiable. It does not fully enumerate the loss in dollars and quality of life elements that make up the true worst-case scenario. This DEIS does not properly calculate the entirety of the local adverse impact beyond that of annualized loss in tax revenue, physical loss of businesses and jobs. Expand this section to include a more detailed refined approach to cost-benefit as a function of quality of life and cost of regional gain versus localized pain. Include net impact of only quantifiable losses/benefits to the host community against those gains in areas outside the City or within RIAC. Do not include hypothetical or anticipated gains from potential future developments. Outline the "proportion" of negative impact by income group versus those gains received from that group. Identify costs associated with "loss of market" impacting small neighborhood eateries, bars, markets and hardware stores or circulation of a small local newspaper. Explain the disproportionate costs and benefits to the host city for each alternative. Explain in clear terms the number of job opportunities that will be created for Warwick residents both short term construction and long term permanent jobs.

Summary 5.50 Environmental Justice

Page: 1

Author: Warwick Planning Department Subject: Highlight Date: 4/18/2007 3:57:11 PM

"5.5 Environmental Justice and Children's Health and Safety Risk"

The summary statement of "no adverse impact" within the aforesaid areas of study are not based on all relevant and cumulative factors that in our opinion are disproportionately placed onto a specific socioeconomic segment of our community. The social, environmental and health impact from the IP build options are not adequately disclosed herein and as such the determination of no adverse impact is a clear error in judgment and contrary with CEQ and NEPA guidelines that require detailed data gathering and objective assessment.

The findings appear to prejudice those minority and low-income groups that already are impacted by the airport environ. While this study acknowledges that, the IP build options will increase noise and pollution the proportionality, distributive and cumulative impact on the minority, low income and dependent community (children) is given only a perfunctory review. The cumulative exposure to environmental hazards on children is particularly troublesome as is the displacement of an already small minority population. Both critical areas of study that are given just a cursory review.

Additional adverse health effects and ancillary hardships placed on low-income families such as depreciation of material assets (lowered residential property value) and families not covered by health insurance will only serve to exacerbate health and social impacts. The health and social consequences are not properly assessed because the study does not use a small enough geographic scale of study and detailed demographics of household impact relative to higher income and housing groups. Regional, State and County demographic data is heavily used in this study but has limited use in understanding the true distribution and proportionality of impact on low income, minority, dependent (children) and affordable home groups within the airport influence area and within the City at large. The use of the larger geographic data sets simply dilutes the perceived impact and does not appropriately depict the spatial

distribution of impact compared to higher income groups and neighborhood minority populations. The study must include smaller study area and detailed analysis of the demographic characteristics and income group to determine proportionality of impact. Limit the use of the larger data-sets for comparison and general reference not as a sole determinate in evaluating significance of impact.

Page: 2

Author: Warwick Planning Department Subject: Highlight Date: 4/18/2007 4:02:58 PM

"5.5.1 Key Findings •• Significant noise and land acquisition impacts would occur under all IP Options. There are no significant air or water quality impacts (see Sections 5.7 and 5.11). •• None of the IP Options considered in this DEIS would result in a disproportionate and high adverse noise or land acquisition effect on minority, Hispanic, or low-income populations. •• None of the IP Options considered in this DEIS would result in health or safety impacts to children."

The City does not agree with these conclusions. The IP build options will increase noise and air pollution while reducing affordable housing and fragmenting established social structures. The disruption to the minority and low-income populations including availability of affordable housing will create an environment that will have long-standing adverse human health and social impact on one segment of the community. The unfair distribution of adverse environmental AND social costs extend to children who are presented with an new environment that contains greater air and noise pollution within a fragmented social and ethnic populations isolated from their established social organizations and community groups. The above statement indicates that there will be no adverse impact on the health of children within the study area.

The City disagrees with this statement and we request removal of the statement and further study. Understood within the health care community is the premise that exposing children to high concentrations of air pollutants and other hazardous air pollutants for long periods may result in respiratory disease conditions and possibly cancer while increased noise exposure can cause auditory and learning problems. Realizing that the IP build proposals will increase already adverse air and noise pollutants onto the population, how can it be said with such clarity, that additional hazardous substances from aircraft operations forecasted (IP Build Options) would have no impact on children. This statement contradicts statistical probability of health impact associated with increasing exposure to harmful pollutants on a dependent population of children in an environment already experiencing compromised air quality.

Strike this conclusion and re-review the data and analysis to determine if the proposed IP options place a disproportionate cumulative adverse impact on low-income populations compared to that suffered by higher income populations.

Author: Warwick Planning Department Subject: Highlight Date: 4/18/2007 4:02:50 PM

"5.5.2.2 Identify Environmental Justice Populations"

The current study does not fairly depict proportionality and distribution of negative impact, as the universe used for comparison is too large and does not accurately portray immediate social impacts within the smaller community in which the effected population lives. Include additional GIS mapping depicting distributive impact on low income and minority populations based on a smaller geographic boundary defined by City neighborhoods. In particular, group the census block information by individual neighborhood or village for the entire City.

Use this base and indicate proportionality of impact compared to the same groups located outside the

airport influence area. This more practical data analysis will provide an understandable assessment of localized and cumulative impact on the low-income and minority populations compared with higher income areas of the City.

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Author: Warwick Planning Department Subject: Highlight Date: 4/18/2007 4:05:30 PM

"5.5.2.3 Determine if Significant Impacts Disproportionately Affect Environmental Justice Populations"

The City is of the opinion that the IP options disproportionately impact certain segments of our community including low-income groups and working families who require affordable housing. Our review indicates that the impact on low income and minority population is greater when viewed within a smaller geographic area opposed to the larger comparison used in this analysis. The City also believes that the impact on the minority community must be studied in greater detail. A more refined approach (percent impact within a neighborhood) and not a simple aggregate analysis of the whole would allow the EJ component to assess what income segment of the population will be given the burden and what benefit they will receive, if any. The appropriate unit of study for all demographic comparison shall be neighborhood boundaries opposed to a percentage of the general population, larger census tract or block group data not associated with a neighborhood.

Please amend accordingly and study the airport influence area for higher than average concentrations of impacts on low-income groups and dependent populations (numbers of children) compared to the areas outside the impacted area. Quantify numbers of schools aged children, low-income families and minorities that are subjected to additional impact by the proposed IP options beyond that already experience in the existing condition on a neighborhood basis. Assess the cumulative adverse impacts from the proposed IP options and present condition from increased noise exposure and air pollution on children. Include more specific language detailing ancillary impacts on the remaining neighborhood population include social cultural and health impacts. Improve mapping to improve the visualization of impact on a neighborhood/village basis, which is a more representative depiction of the distributive impact that that included in this study. Present clear and concise narrative on impact placed on low-income families compared with higher income classes.

Page: 4

Author: Warwick Planning Department Subject: Highlight Date: 4/18/2007 4:07:52 PM

"5.5.2.4 Children's Health and Safety Risk"

In general, the study does not go far enough to study the immediate and cumulative impacts on children from noise exposure and air pollutants. The City considers "*Children's Health and Safety Risk*" imposed to be an injustice and requests that the findings of this study conclude the same.

Address the impacts of air pollutants and noise levels as risk factors for children under 17 including the susceptibility of this group to additional environmental hazards compared to that of children not exposed to high concentrations of air pollutants and elevated levels of noise exposure. Explain the vulnerability of children, as their rapid developing organ systems are particularly vulnerable to these adverse environmental conditions on both a short term and cumulative basis. Describe the impact that excessive noise has on a children's ability to comprehend, read and complete homework assignments during periods of interference. Larger noise exposure will increase number of children exposed to disturbance and increase air pollutants and thus subject these children to additional deleterious impacts not otherwise

imposed if not for the IP build options. State this within this chapter and explain how children are considered to be impacted as a dependent group within the environmental justice component of study.

The City is of the opinion that the increased noise and air pollution presents a clear and unmitigated adverse impact on a particular population of children especially within low to moderate-income families who may also have inadequate health care. The result is the build options proposed would be a greater impact the most vulnerable group in our population; children whose families can least afford health care. Address the resultant social and moral cost.

Author: Warwick Planning Department Subject: Highlight Date: 4/18/2007 4:09:07 PM

"5.5.3 Impact Assessment"

As stated above the proposed IP options clearly affect a population which is nearly 40% low to Moderate income along with a minority population that itself is very small. This chapter does not appear to understand proportionality of impact often using larger community wide and regional data to determine impact as a percent of a much larger population with little comparable significance. Also not sufficiently addressed is the significance in changes in this case loss that will occur within minority populations given the small (under 5%) minority population within the entire City. Issues regarding proportionality and equity on the community i.e.; low cost housing, low-income households with children and loss in the minority population are not given the appropriate analysis including but not limited to discussion of secondary social and cultural impacts on the neighborhoods (minority populations) that will remain and within the City as a whole.

Page: 5

Author: Warwick Planning Department Subject: Highlight Date: 4/18/2007 4:09:21 PM

"Impacts to environmental justice populations were considered in two areas of significant impact: •• Land acquisition for construction, runway protection zone, and noise mitigation purposes. •• Areas significantly impacted by noise."

ADD: Address impact on minority owned businesses taken or impacted by the IP options.

Page: 22

Author: Warwick Planning Department Subject: Highlight Date: 4/18/2007 4:13:46 PM

"5.5.7.1 Summary of Land Acquisition Impacts None of the IP Options considered in this DEIS would have disproportionate and high adverse land acquisition effects on minority, Hispanic, or low-income populations. As shown in Table 5.5-12, IP Option B would have the greatest land acquisition impacts to minority populations, but these impacts would not be disproportionate (i.e., 5.1 percent of the people affected would be minority, which is lower than the minority threshold of 15.0 percent)"

As stated in previous comments the City disagrees with this assessment.

The small minority population within the City of less than 5% is not equally distributed and any loss in minority population will have a disproportionate impact on that specific neighborhood or village with a minority population. Additionally the City is of the opinion that the scale of adverse impact will be much larger than that expressed within the larger threshold criteria used herein. Amend this section accordingly and include percentage of impact as a percent of the smaller village or neighborhood boundary.

Unlike that concluded within this chapter, the smaller geographic areas such as a village or neighborhood would sustain proportionately high, specific and direct impact from a loss of minority population adversely impacting the village/neighborhood community businesses, cultural resources and churches serving that area. This study must be amended to address these issues and revise the threshold study based on a percentage of minority population residing in that smaller village/neighborhood. Include additional GIS mapping depicting specific impacts and details neighborhood (several block groups) demographics including but not limited to housing and household characteristics.

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Author: Warwick Planning Department Subject: Highlight Date: 4/18/2007 4:17:11 PM

"5.5.7.2 Summary of Significant Noise Impacts- None of the IP Options considered in this DEIS would have disproportionate and high adverse noise effects on minority, Hispanic, or low-income populations even though they are affected by significant noise increases. As shown in Table 5.5-13,"

Indicate the percentage of children within the impacted areas that do not have health coverage and are within low to moderate-income families. Also, study the proportionality of noise impact on children, in general, and amend this statement to conclude that increasing noise exposure will affect children within minority and low income families.

Summary 5.60 Surface Transportation

Page: 1

Author: Warwick Planning Department Subject: Highlight Date: 2/12/2007 10:25:18 AM -05'00'

This study must evaluate transportation impacts within a comparative framework that extends beyond that of the 2004 baseline condition. The current format does not properly account for transportation infrastructure improvements that may occur within the 2020 design year that may improve conditions such as level of service.

Page: 2

Author: Warwick Planning Department Subject: Highlight Date: 2/12/2007 10:32:09 AM -05'00'

How much? This document must be as technical as possible. Subjective statements are ineffective in presenting independent analysis. Include the actual percent.

Again another uncorroborated statement that requires justification. As projected within the adopted forecast, the projected passenger increases will not be limited to any one catchment area. Statistical probability assures that the increased passenger growth would extend to urban core communities such as Cranston and Warwick and parts of East Greenwich. Passenger growth within these areas use major arterial roadways closer to their residence to access the airport such as Post Road and Warwick Avenue

Not true. Option B,C,D, E includes a delivery drive to Post Road not present in option A and the no build. As experienced at the existing Airport Road delivery entrance, any access point on a major arterial has an affect that requires study. This study cannot make a statement that the conditions are identical.

"substantially reduce"

Is a term that is entirely subjective and does not have a place within this study? In fact, review of all IP options finds varying degree of changes to LOS, a fact that must be reflected within this paragraph. This statement is incorrect. The purpose and need of the airport improvements proposed is intended to induce new passenger traffic by initiate new stop service to the west coast. Increased passenger traffic would in some amount require the use of area roadways that are not going to be improved within Option A.

Creating additional passenger growth through new service destinations will result in additional vehicle trips without improving area roadways, a condition that will result in exacerbating and already documented deficiency in level of service on on Airport Road, Post Road, Main Avenue and all corresponding intersections.

This section must be changed to reflect that IP option A would result in increasing traffic volume on the existing public transportation system that is already deficient.

Page: 4

Author: Warwick Planning Department Subject: Highlight Date: 2/12/2007 12:33:25 PM -05'00'

These so-called "speculative developments" must be qualified as to their status of administrative review as well as a description of remedy required to realize the development. Many speculative developments included within this study have no justification because that have not even started within the legislative and regulatory process not within the process that may include zone changes and comprehensive Plan changes which are very difficult to attain. To assert that land use and zoning can be expected to be changes to accommodate the highest of intensity uses in is unprincipled and should not be included within this study.

Page: 5

Author: Warwick Planning Department Subject: Highlight Date: 2/12/2007 1:22:13 PM -05'00'

In a reciprocal argument, this document understudies future reuse/rezoning opportunities and therefore underestimates trip generation onto local roadways. A changing base in the City away from industrial has and will continue to result in reallocation of zoning districts and subsequent land uses causing a much higher trip generation.

Comprehensive Planning revisions and zone changes will reflect future needs of the community and will invariably result in reallocation from residential zones to GB for compatibly reasons, office to general business to meet future offsite demands and the most dramatic near future change large scale rezoning of industrial property to GB or multiuse overlay in the Jefferson Boulevard area. The results of the IP build options are large-scale changes to trip generation and traffic patterns. Underutilized industrial property will likely change to dense hotel and office uses. The specifics of this apparent land use condition are not given the appropriate study.

The City's transformation from industrial to service base will continue and therefore the resultant intensity of trip generation must assess as a function of total impact. Readdress the future trip generations expected through the construction of Warwick station must be fully accounted for. This paragraph and related method must be changed to reflect this within both this narrative and study for which it is referencing.

Page: 6

Author: Warwick Planning Department Subject: Highlight Date: 2/12/2007 1:50:33 PM -05'00'

Ridership and demographic information (before and after ip option) should be included as part of the mapping data or as new condition expressed within the quality of life component of affected residents within a study area. (i.e. improvement in the east-west circulation in the community or the intrinsic degradation of real estate due to worsening traffic condition.)

The cumulative study must extend to a period prior to the 2004 baseline. The as built affect on area transportation and community from 1996 - 2003 (new terminal facility) must be factored into the argument to ascertain the true cumulative impact of IP options of the environs. Without such an analysis, any IP proposal cannot be said to have achieved minimization.

This paragraph must specify that unlike all other IP alternatives the no action alternative proposes no runway extension that would induce additional passenger traffic (enplane/deplanements) from new non-stop west coast service. Net impact is less passengers than forecasted with the runway extension to 5/23. (As gained through new service destinations; non-stop west coast). Consequently, less vehicle trips on area roadways. Must include Transportation improvements to roadways required by the City as a condition of zoning/redevelopment. I.e. Airport Road and Jefferson Boulevard.

Page: 7

Author: Warwick Planning Department Subject: Highlight Date: 2/12/2007 2:18:38 PM -05'00'

As mentioned earlier, consider reuse rezone Leviton and Cardi properties on Jefferson Boulevard "forecasted changes in Airport activity (enplanements, deplanements, and employment.. and forecasted changes in employment"...) This paragraph must be altered to read the data used in the no action alternative does not include projected increases in passenger growth from new non-stop service to the west coast.

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Author: Warwick Planning Department Subject: Highlight Date: 2/12/2007 2:26:11 PM -05'00'

Roadway improvements are a likely condition of approval for this potential development and should be addressed herein.

Page: 12

Author: Warwick Planning Department Subject: Highlight Date: 2/12/2007 2:30:54 PM -05'00'

Check data on Route 37. Capacity/Delay issues exist at its terminus. Merger north and south onto Post Road subject to considerable congestion and stack.

Page: 24

Author: Warwick Planning Department Subject: Highlight Date: 2/13/2007 10:46:47 AM -05'00'

"onto Post Road"

Are you referring to Southbound?

Page: 33

Author: Warwick Planning Department Subject: Highlight Date: 2/13/2007 11:40:46 AM -05'00'

"to Post Road"

Southbound?

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Author: Warwick Planning Department Subject: Highlight Date: 2/13/2007 11:45:13 AM -05'00'

"improvements may also benefit safety at this intersection."

Elaborate a little on this point, as it is difficult to understand the specific reason why safety would improve and to what degree it may influence the crash data.

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Author: Warwick Planning Department Subject: Highlight Date: 2/13/2007 11:57:20 AM -05'00'

"This improvement may also benefit safety at this intersection"

The accident data for this area would suggest that the northbound movement from Post Road onto the connector ramp might be a factor. Explain how this movement will change and how increasing trips from the new Gateway to the North would help the problem. Will the signalized movement from northbound post road onto the connector remain, and if so how will the accident data improve with greater trips entering the connector from the free right hand movement of southbound traffic.

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Author: Warwick Planning Department Subject: Highlight Date: 2/13/2007 12:12:16 PM -05'00'

"The improvement would result primarily from a shift in westbound traffic volume exiting the Airport to the newly created intersection of Post Road at the New Post Road Gateway to the south."

Explain how this change would reduce the volume of traffic over the Coronado overpass. Westbound traffic seeking travel to offices and hotels within the Jefferson boulevard corridor and metro center will require continued use of the overpass as their primary and fastest route. How does this change in this scenario. How can LOS be improved so dramatically? Are you assuming a new movement to the connector in favor of Coronado? If so we disagree.

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Author: Warwick Planning Department Subject: Highlight Date: 2/13/2007 12:17:21 PM -05'00'

"The analyses do not include roadway improvements, only potential traffic demands associated with this speculative retail development."

As mentioned within an earlier comment, this speculative development requires a zone change and comprehensive plan amendment and would most likely require roadway improvements.

Page: 49

Author: Warwick Planning Department Subject: Highlight Date: 2/13/2007 12:23:57 PM -05'00'

"None of these four unsignalized locations (Airport Road/Senator Street, Airport Road/Evergreen Avenue west, Airport Road/Evergreen Avenue east, and Post Road/Donald Avenue) meet the peak hour warrant for traffic signal"

While this maybe the case this study discounts the use of the area intersections by commercial truck traffic presenting an issue when signal, gaps are used in the justification and warrant analysis.

Additionally the roadways are adjacent to property that has a high probability of landuse and zoning change should this IP option be constructed.

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Author: Warwick Planning Department Subject: Highlight Date: 2/13/2007 3:49:03 PM -05'00'

"IP Option E would degrade east-west traffic flows by creating another intersection on Warwick Avenue across from Squantum Drive"

Stating that degradation will incur by the creation of another intersection requires further study. Consider alternate roadway geometry, installation of roundabouts and signal timing as measures designed to abate the singular concern (adding an intersection) prior to rendering such a conclusive statement.

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Author: Warwick Planning Department Subject: Highlight Date: 2/13/2007 4:13:11 PM -05'00'

"IP Option. Issues such as traffic detours, road closures, temporary roads, temporary sidewalks, interim traffic signals, variable message signs, shifted travel lanes, construction zones, and safety measures will be addressed"

Must extend beyond perfunctory assessment. The poor east west circulation within the City and dense residential neighborhoods demand that all specifics be addressed within this section. Storage areas, residential access and egress, time of operation, utility disruption, induced cut thru traffic etc. require particular study. As witnessed in the Greenwood Bridge reconstruction project, a similar perfunctory review failed to address myriad of issues that plagued neighboring residential areas and businesses for years.

"temporary roadway to the south of the proposed Main Avenue tunnel would need to be constructed to maintain traffic flow on Main Avenue"

The temporary roadway must be constructed with a design that accommodates the existing volume of traffic. If this is not the case, the report must indicate how the temporary roadway would impact traffic congestion and delay.

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Author: Warwick Planning Department Subject: Highlight Date: 2/13/2007 4:23:54 PM -05'00'

"5.6.4.5 Improvement Program Option D"

Address delay and congestion resulting from the temporary roadways

"5.6.4.6 Improvement Program Option"

Address delay and congestion resulting from the temporary roadways

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Author: Warwick Planning Department Subject: Highlight Date: 2/13/2007 4:27:03 PM -05'00'

"AADT1 Summary — No-Action Alternative vs. Improvement Program Options 1 A through E (2012)"

Include a bar chart that includes the baseline no action alternative.

"Option A would result in the least changes to the transportation infrastructure"

The statement is general and ineffective. Break out conclusions within a more defined set of conclusions i.e... IP effectiveness; induced trips, LOS and capacity improvements, degradation and assessment of aggregate impact.

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Author: Warwick Planning Department Subject: Highlight Date: 2/13/2007 4:34:41 PM -05'00'

"VMT/VHT Summary — No-Action Alternative vs. Improvement Program Options 1 A through E (2012)"

Add comparative chart

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Author: Warwick Planning Department Subject: Highlight Date: 2/13/2007 4:48:12 PM -05'00'

"Compared to the No-Action Alternative"

With or without considering passenger increases from non-stop west coast service? Comparisons must be based of fixed passenger forecasts for the No action alternative against the IP options.

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Author: Warwick Planning Department Subject: Highlight Date: 2/13/2007 4:50:31 PM -05'00'

"5.6.6 Mitigation"

Add avoidance

Summary 5.70 Air Quality

Page: 1

Author: Warwick Planning Department Subject: Highlight Date: 3/15/2007 10:36:55 AM

"5.7 Air Quality This section describes future-year air quality conditions at T.F. Green Airport in 2012 and 2020"

Air Quality sampling included in the report is insufficient to determine impact
Please expand air quality testing of the following hazardous air pollutants associated with the operation of aircraft: Acetaldehyde, Acrolein, Benzene,1,3-Butadiene, Ethylbenzene, Formaldehyde, Xylene Naphthalene, n-Hexane, Propionaldehyde, Styrene, Toluene within overflowed and downwind residential

areas of the City during hot humid days. Include additional data collection of particulate matter during the upcoming summer months for ultra fines. Higher concentrations of this finer particulate matter maybe dispersed more disproportionately within the community's residential districts than that assumed in this study.

Author: Warwick Planning Department Subject: Highlight Date: 3/15/2007 10:37:32 AM

"5.7.1 The overall approach for conducting the air quality assessment, including the objectives, methodologies and intended outcomes were outlined in an Air Quality Assessment Protocol (contained in the Air Quality Appendix) and reviewed by the Rhode Island Department of Environmental Management (RIDEM) prior to undertaking the analyses."

The "overall approach" fails to establish air monitoring outside the diluted data set used in Assessing adverse impact of air pollutants even though Rhode Island State law recognizes the need to establish long term monitoring of air quality around T.F. Green Airport.

This flaw within the DEIS must be corrected prior to moving onto the next phase of study, the selection of the preferred alternative.

Page: 3

Author: Warwick Planning Department Subject: Highlight Date: 3/15/2007 10:53:11 AM

"5.7.1.1 Emissions Inventory"

The study must be expanded to include additional data collection with specific segregation of peak data for all criteria and HAP's emissions by operation (taxing, idling takeoff and landing) at points under the end of the runways within various distances into all residential neighborhoods that surround the departure and arrival flight paths at T.F. Green Airport.

Include additional sampling at control sites in a residential neighborhood in Warwick outside the influence are of aircraft operations and at a remote residential site for the purpose of comparison (Exeter or West Greenwich). Detail the concentration, peak levels, and duration of both criteria and HAP's pollutants present in said residential neighborhoods and at the end of the runway. Correlate the data with the type of aircraft flown, climb and wind directions during peak operations at the airport. Include a comparative chart and map with the control data for these single events. The additional study will assist in the understanding the existing condition as well as providing baseline single event measurements and assessment of air quality impact in 2012 and 2020.

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Author: Warwick Planning Department Subject: Highlight Date: 3/15/2007 11:05:07 AM

"5.7.1.4 Hazardous Air Pollutants Emissions Inventory HAPs are a classification of air pollutants for which there are no NAAQS but that are considered by the EPA and RIDEM to be potentially harmful to human health when they occur in concentrations and over time periods that are sufficiently high and long enough to cause injury. Presently, research is underway by the FAA, National Aeronautics and Space Administration and others."

The overly careful use of minimum thresholds and response to only specific pollutants in this chapter is in part an exercise, or a goal to minimize the air quality impact of the IP options by providing an incomplete picture of the air pollutant exposure on the residential population. In order to achieve a finding of no adverse impact this study and its findings are limited to analysis of a few regulated pollutants diluted within

a larger study area which does not provide the factual data necessary for true unbiased assessment of impact. This deficiency extends to the lack of real data collection for Volatile Organic Compounds (VOCs) generated from aircraft operations.

This chapter must be amended to study the airport land use more like a stationary pollutant generator than an unregulated mobile source. Hundreds of families that surround the airport deserve a broader study that includes additional sampling and analysis of HAP'S.

Author: Warwick Planning Department Subject: Highlight Date: 3/15/2007 11:04:25 AM

"5.7.1.5 "Because the Airport and the City of Warwick are located in a non-attainment area for the air pollutant O3, an applicability analysis is conducted to determine if the requirements of this rule apply to the IP Options."

This chapter concludes that all IP options are well within the National Ambient Air Quality Standards and as such, no significant air quality impacts would occur because of the proposed improvement program. This chapter along with FAA statements on this matter does not clearly address VOC's and how ozone (O3) emissions from the IP options *do not* adversely impact air quality when Warwick and the State of Rhode Island are already federal non-attainment areas for ozone. Was ozone used within the air quality model?

How can a conclusion of "no significant impact" be rendered when the IP options all result in further the non-attainment for ozone?

Page: 5

Author: Warwick Planning Department Subject: Highlight Date: 3/15/2007 11:06:42 AM

"5.7.2 Significance Thresholds"

The significance thresholds must be extended towards the study of cumulative impacts from all criteria and toxic emissions on the community from operations at T.F. Green Airport. Emissions produced by aircraft cannot be simply viewed in context with mobile sources because this limits threshold impact by not accounting for VOC's and diluting criteria pollutant levels within the much larger urban complex. These results do not accurately reflect the disproportionate real world impact that aircraft emissions have within different geographic areas of the City. Peak levels of all pollutants including HAP's along with duration of exposure; weather conditions and wind speed are crucial elements of study and data collection not included in this study. This study must refine concentration and distribution of pollutants in a smaller geographic area than that presented in this study.

Page: 6

Author: Warwick Planning Department Subject: Highlight Date: 3/15/2007 11:07:46 AM

"Table 5.7-2 Summary of Applicable Air Quality Significance Thresholds - HAP's Emissions Inventory"

Toxic air pollutants while not regulated are accepted as potentially affecting human health; therefore, the effects of these pollutants must be thoroughly researched before additional pollutants are added within the 2012 and 2020 period. The threshold summary should include a discussion related to HAP's threshold and risk recognized outside the limited FAA parameters of study.

"HAPs Emissions Inventory Not applicable for aircraft, ground support equipment, and motor vehicles. NESHAPS for stationary sources and fuel facilities."

While this may be a convenient citation to dodge addressing adverse impacts associated with HAP's, the City is of the opinion that without further definition and data collection regarding this matter, the mobile sources chapter cannot be said to be complete or comply what we know to be outstanding concerns of local impact related to toxic pollutant emissions from aircraft.

"5.7.3 Key Findings Based upon the technical analyses discussed in the following sections, several key findings result"

The key findings are considered flawed because they are based on insufficient study and data collection. Include additional sampling of both criteria and HAP concentrations within the heart of residential districts overflowed and downwind of the runways during individual aircraft operations. Sample pollutants at the fence line during single events such as taxiing, idling, takeoff and landing. HAP concentrations for compounds (formaldehyde, benzene, 1,3-butadiene, etc.) related to mobile sources shall be quantified by event for both aircraft and vehicular sources at several distances from the airport. This sampling should coincide with specific aircraft operations with the use of existing flight tracking technology to map criteria and VOC concentrations by individual aircraft from taxi to takeoff at various locations throughout and downwind of the flight path. Determine changes in peak emissions within the previously mentioned residential neighborhoods by specific aircraft event.

Additional roadway monitoring sites must be established near the fence line under the runway to ascertain the background concentration prior to aircraft takeoff. All sampling shall be adjusted to account for prevailing winds in a wind dispersion model. Analyze concentrations during peak aircraft operations and compare these measurements against the ambient background condition adjacent to arterial roadways directly UNDER the flight path. Monitoring sites shall be established in the residential community and along major arterial roadways that surround the airport to serve as baseline collection sites. Sampling shall continue through the summer months to coincide with peak aircraft operations and increased emissions required for aircraft lift during hot humid days. Map and graph concentrations accordingly within every residential neighborhood within the departure and arrival flight paths. Project these emissions to 2012 and 2020.

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"HAPs Emissions Inventory –HAPs are predicted to be similar in the future among the IP Options A, B, C, D and E or the No-Action Alternative. Small differences would be due to the correspondingly small increases in aircraft operations and VMT on the off-site roadways with the IP Options. Total HAPs emissions between 2004, 2012 and 2020 are predicted to increase somewhat due to the forecasted increase in operational levels at T.F. Green Airport."

This subjective analysis is wholly inadequate considering the degree and scope of air pollutants discharged into these communities' environs by a single user, T.F. Green Airport.

The chapter cites a variety of reasons why data is excluded from the DEIS. The less than comprehensive approach taken to address only criteria pollutants diluted within the urban complex creates an easy threshold of comparison in the determination of no adverse impact. HAP's and their potential health impacts are largely dismissed in this document. VOC's are merely listed by name without an in-depth

analysis of their specific concentration in effected residential neighborhoods. While the City is well aware of MINIMUM federal review requirements and the lack of solid thresholds for the study for VOC's, the residents deserve to know more information about toxic air pollutants in their individual neighborhood especially during peak operations.

The study must allow for more comparative data sets of pollutant exposure between residential neighborhoods including areas outside the downwind areas of the flight paths. The incremental and fast-paced growth of this airport since 1996 has occurred without much real independent assessment of health risks for HAPS. It is time to address HAPS/VOC's as a reasonable request by the City of Warwick within this DEIS.

Please add text to this chapter explaining the potential hazards of VOC's as conveyed through accepted guidelines within the health-care community. Gather additional air quality data especially for HAP's and PM beyond that which is included in this study and required by existing federal standards. The information is useful in establishing a baseline condition of VOC's in the community from the airport as a mobile but in reality stationary source of pollutants. More importantly, the additional information would provide a valuable data set should future changes occur in threshold assessment. As witnessed in the evolution of water quality standards, indifference can transform into change as risk tolerance as values are reassessed. Without pertinent and specific air pollutant data this study will fail to meet the requirements of a true and independent environmental assessment of the facts. To date the finding in the study appears almost capricious because it ignores relevant public health issues raised by the community.

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"Air Quality Assessment Data and Information"

The study needs to include additional sampling associated with increased emissions from on-field idling and taxiing of aircraft. The study must account for additional emissions from future delay's (planes awaiting takeoff or delayed at gate) within the larger air transportation system are predicted to continue to increase to 2012 and 2020.

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"Table 5.7-4 Air Quality Assessment Data and Information Summary- Emissions Source"

Include addition data sampling under the runway ends (at the fence line) of toxic pollutants/VOC associated with aircraft emissions (formaldehyde, benzene etc.) during take off and landing. List the concentrations of said pollutants with baseline samples taken during periods of non-use.

"5.7-4 Aircraft"

Include additional sampling of pollutant concentration at "fence line" locations within adjacent residential neighborhoods that immediately surround the airport land use. Ground operations of aircraft during warm-up, idle and taxiing are known to contribute significant pollutant emissions for a longer duration. Combined with a wind condition: from the northwest or northeast abutting residential neighborhoods will experience a high concentration of these pollutants at certain times of the day and night. This study does not go far enough in specific data collection and study of these operations including new emissions derived from the use of newly constructed infrastructure such as the cargo and maintenance facility. Emissions from ground operations from idling, taxiing and delay will only increase as predicted within the New England Regional

Air Transportation Plan with more congested airports and increased passengers are predicted within the baseline 2012 and 2020 time frame.

"Construction equipment and activities to be provided when construction phasing and equipment analysis is available."

This information needs to be collected in a timely fashion as this segment of the emissions category can inflict adverse localized impact depending on the length and scope of improvements. Our concern includes the construction of the Main Avenue tunnel and roadway system which is likely to require diesel powered heavy construction equipment, generators etc. for a long period. The scope and length of construction in close proximity to residential neighborhoods, both to remain and scheduled to be taken, may pose a disproportionate short-term adverse impact on said residences. Please readdress this section and include relevant data and analysis outside that which is typical of FAA significant thresholds that compare emissions to a larger geographic study area. Consider the PM impacts to those residents in close proximity to the construction compared to the existing condition.

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"Dispersion on Modeling Data"

Please eliminate the current study's reliance on "dilution" of pollution strategy and consider a more concentrated analysis that reflects real world exposure of criteria and toxic pollutants on the community. Refer to comments to follow.

"Hazardous Air Pollutants Emissions Inventory"

This section is under reported. Provide specific data as to the concentration of these toxins within the baseline condition. Estimate the emissions contribution of the individual toxic pollutants derived by motor vehicle emissions traveling on Airport Road, Post Road, Main Avenue and portions of Jefferson Boulevard and the east end of the airport connector compared with emissions taken from samples taken during take off at the fence line under the active runway. Compare the quantity of pollutants present in the background roadway condition with that of a sample taken during takeoff at these locations. Project tons per year contribution by location in 2012 and 2020. Assess, explain and map toxic pollutant dispersion as a function of prevailing winds from the fence line through and downwind of the flight path. The toxic pollutant monitoring shall include sampling during peak operations on a hot humid day (greater contribution of emissions: lift). Address the cumulative effect of all mobile emissions not in such a large regional context but in a more realistic impact area analysis that reflects the smaller geographic area within the approach and departure paths as they lie within the boundaries of the City of Warwick.

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"Table 5.7-5 Emissions Inventory Hazardous Air Pollutants"

As mentioned augment, the table with additional sampling of HAP's at the fence line and within the downwind and overflow residential districts throughout the departure flight path and at incremental distances within the climb. Graph and map hourly peak data for all HAP's including particulate matter at these locations noting all relevant information such as wind direction, wind speed and temperature.

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"As shown, formaldehyde is predicted to occur in the greatest amounts followed by benzene, toluene and xylene. This trend is consistent with other findings by the EPA on a nationwide basis. These compounds are emitted in the exhaust of aircraft, GSE/APUs and motor vehicle engines and to a lesser extend from boilers, fuel facilities and other stationary sources on the Airport. We must remember that chemical pollution threatens all forms".

This paragraph provides little context as to the significance of this increase. The increase in formaldehyde referred to within this section presents a serious concern for this community. This document is an Environmental Impact Statement but the study fails to establish an appropriate baseline for understanding the real world effect that daily exposure of air toxins has on the community. So why is it reasonable to state, "Increases are expected" without asserting an impact statement? The City will not accept DEIS statements that fall short of proper data collection, analysis and impact assessment.

Additional study into the compounded effects of air toxins within underlying and downwind residential communities must be completed. This study must extend its research to determine the percentage of contaminants released by aircraft sources versus those emissions contributed by area motor vehicles. Emissions from the airport land use must be specifically targeted within a much smaller study area than that which is included in this report. It is unacceptable to merely site that elevated vehicular mobile emissions within the urban core as the reason for legitimizing continued increases in toxic pollutants. Without the benefit of study and risk, assessment this DEIS cannot proceed forward. At what threshold are toxic pollutants unacceptable? This study concludes that we will not know through the year 2020. The lack of appropriate study centered on this issue seriously compromises this DEIS.

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"5.7.7.1 Operational Emissions Inventory As shown in Table 5.7-41, total emissions of CO are predominant among all the IP Options and the No-Action Alternative followed by emissions of NOx, VOCs, SOx, PM10 and PM2.5. In all cases and for all pollutants, total emissions from 2012 to 2020 are predicted to increase somewhat. This is due to the forecasted increase in operations at T.F. Green Airport over this period. There is also a very small increase in total emissions between each IP Option and the No-Action Alternative. This is attributable to the correspondingly small increase in operations at the Airport and the change in VMT. There are little or no differences in total emissions among the IP Options"

It is our opinion that aircraft operations are the largest single source of air pollutants in this community. How is it possible to require detailed data collection and study of hazardous air pollutants from sources such as a power generating plant and factories but not from idling and taxing aircraft?

A finding of "little to no difference" is immaterial since the entire scope of air pollutants emanating from airport operations is under-reported (VOCs) in both the existing and future condition. The findings for the 2012 and 2020 conditions are equally as poor in their assessment of toxic pollutants.

The study must first establish a real world baseline condition for this City not for the entire urban core. Amend to include a comprehensive study of all pollutants including air toxins within the context of source, the aircraft, and relationship of impact, to the residential community that is overflowed. This study does not go beyond that which is mandated by FAA regulation. The immediate concerns of this community demand that existing airborne toxins and other pollutants emanating from aircraft be more specifically studied to determine proportionality of pollutant distribution on residential neighborhoods from aircraft operations.

Measure the difference in the ambient background conditions with that of the pollutant concentrations present during take off and landing. Use location based time measurements and wind conditions to determine proportionately of air emissions occurring over certain residential areas of the City. Include specifics on type of aircraft flown, time of day, weather and wind conditions in a more detailed localized study than the dispersion model included in this study. The total environs based analysis included in this study does not properly quantify the fluctuations and proportionality of pollutant emissions on individual neighborhoods during the actual overflight. Diluting specific data with more ambiguous vehicular emissions within a much larger transportation system does not accurately reflect impact on the closest and most frequently overflown residential receptor.

"Table 5.7-41 Air Emissions Inventory Summary – Operational (tons/year)"

Avoid limiting this data set to tons per year within such a large study area. Expand this data by including additional air quality testing using peak and hourly data throughout the summer months with varying wind conditions. Expanding the parameters of study allows a more sophisticated analysis and assessment of impact.

"5.7.7.2 Atmospheric Dispersion Analysis"

This DEIS must not avoid a more detailed study of air toxins from aircraft in the dispersion model. Without using the pretext that eliminates the use of toxic air pollutants in this model, study dispersion of toxic pollutants as a function of the City's prevailing winds including residential properties downwind and underlying the flight paths.

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"5.7.7.4 Hazardous Air Pollutants Emissions"

As mentioned within the previously mentioned comments this section of study must be augmented with HAP field measurements taken during takeoff/landing at the fence line, within overflown residential and downwind locations. Sideline concentrations shall also be measured within the adjacent residential communities during taxiing and idling operations.

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"Operational Emissions"

Within this paragraph, include study of emissions from planes idling or taxiing as stationary sources because much of the emissions from touch down to takeoff occur when planes are idling or taxiing. The data used in this study is too generic and does not reflect changes in the AIP and future delays in aircraft operations.