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Second Supplemental Final Environmental Impact Statement (SSFEIS)

Fab 8 Campus at LFTC
Proposed Fab 8.2

Towns of Malta & Stillwater
Saratoga County, New York

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SECOND SUPPLEMENTAL FINAL ENVIRONMENTAL IMPACT STATEMENT
Proposed Fab 8.2
Fab 8 Campus at LFTC
Towns of Malta & Stillwater, Saratoga County, New York

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1.0 EXECUTIVE SUMMARY

1.1 Summary

As required by the State Environmental Quality Review (SEQRA) regulations defined in 6 New York Codes, Rules and Regulations (NYCRR) Part 617, this Second Supplemental Final Environmental Impact Statement (SSFEIS) discusses the potentially significant adverse environmental impacts and benefits of the proposed action. It has been prepared in accordance with Article 8 of SEQRA and Part 617 of the implementing regulations. The original Town of Malta Planned Development District legislation which created the Luther Forest Technology Campus (LFTC) was classified as a SEQRA Type 1 Action and a Generic Environmental Impact Statement (GEIS) was prepared. The LFTC is located on approximately 1,350 acres situated one-half mile southeast of the intersection of Dunning Street and Route 9 in the Town of Malta and west of Cold Springs Road in the Town of Stillwater, Saratoga County. The SSFEIS addresses proposed revisions to that legislation which would affect a portion of Development Area 1 of the LFTC.

This SSFEIS includes the Second Supplemental Draft Environmental Impact Statement (SSDEIS) dated March 1, 2013 accepted by the SEQRA "lead agency" Malta Town Board on March 7, 2013 and the responses to public and involved/interested agency comments received during the public comment period on the SSDEIS, which responses are set forth, in Section 2.0 of this SSFEIS.

<u>The Proposed Action</u>

The proposed action by GLOBALFOUNDRIES is the amendment of the Malta and Stillwater Planned Development District (PDD) legislation for the Luther Forest Technology Campus (LFTC) to enable the potential further build out of the Fab 8 Campus to include Fab 8 Module 2 (Fab 8.2).

GLOBALFOUNDRIES is requesting that certain amendments be made to the PDD legislation in order to accommodate company- and design-specific requirements. Proposed changes to the PDD legislation for Fab 8.2 are limited to: (i) increasing the allowable height for rooftop appurtenances by 15 feet, (ii) increasing the main fabrication building foot print to 575,000 ft^2 and deleting the redundant constraint on cleanroom space, and (iii) modifying the off-site transportation mitigation measures.

Summary of Public Comments

A majority of the public comments on the SSDEIS were on transportation, visual impact analysis (VIA), air resources and noise. Each of these subject matters is summarized in the following paragraphs, along with a characterization of other comments.

A. Transportation: Transportation comments focused on the acceptability of the proposed off-site transportation improvements at six (6) intersections. Concern was expressed over the proposed elimination of the current PDD requirement for a new exit 11A on the Northway "prior to a certificate of occupancy being issued for the third Nanotechnology Manufacturing Facility within Development Area 1 or 1,800 trips in the AM peak hour or 1,875 trips in the PM peak hour."

Other public comments raised safety considerations of constructed and proposed intersection improvements as well as the shift changes, access routes used, and number of construction and fab workers.

The SSDEIS indicated that the projected full production ramp for Fab 8.2 can be accommodated without significant impact of service levels, if the following six (6) off-site transportation mitigation measures, or their equivalent, are implemented prior to the full production ramp for Fab 8.2:

1. Construction of an eastbound right-turn lane at the US Route 9/Malta Avenue/Malta Avenue Extension intersection.

2. Construction of northbound and southbound left-turn lanes on East Line Road at NY Route 67.

3. Modification to the US Route 9/NY Route 67/Dunning Street roundabout to allow east/west through movements to use the eastbound and westbound left-turn only lanes and provide northbound and westbound right-turn lanes. NYSDOT roundabout design standards may require physical geometric improvements to the eastbound and westbound approaches to accommodate the left-turn lane modification.

4. Modification to the US Route 9/NY Route 67/Round Lake Bypass roundabout to provide an eastbound left-turn lane.

5. Installation of a traffic signal at the Interstate 87 Exit 11 southbound ramp with Round Lake Road.

6. Traffic signal coordination between the new traffic signal at the southbound ramp with the existing traffic signal at the northbound ramp at Exit 11.

As a result of public comment and direction from the Town of Malta and New York State Department of Transportation (NYSDOT), the proposed mitigation measures from the SSDEIS for two (2) of the intersections were modified:

1. For the US Route 9/NY Route 67/Dunning Street roundabout, improvements shifted to a focus on adding intersection capacity by constructing connector roads around the intersection (i.e., northwest-Kelch and northeast-Hemphill quadrants) instead of adding new slip lanes to the existing roundabout as set forth in third mitigation measure above. In addition, modifications will be made to the Route 9/Route 67/Dunning Street roundabout to allow east/west through movements to use the existing eastbound and westbound left-turn only lanes. Eastbound and westbound approaches to the roundabout will also be modified to improve deflection angles and decrease approach and entering speeds.

2. For the US Route 9/NY Route 67/Round Lake Bypass roundabout, improvements were modified to include a change in the vehicle deflection on the eastbound approach, in addition to the addition of a left-turn lane on the eastbound intersection approach.

The remaining four (4) off-site transportation mitigation measures are unchanged.

Specific funding sources for the proposed off-site transportation mitigation measures include potential pools of State, local and private funds. GLOBALFOUNDRIES acknowledges that these funding sources be determined and the mitigation implemented before the relevant traffic thresholds are hit.

A phasing plan has been developed for the planned implementation of the off-site transportation mitigation measures associated with Fab 8.2 (refer to Appendix N). This phasing plan is linked to the issuance of a building permit for Fab 8.2 by the Town of Malta and requires the pre-planning of the proposed off-site transportation mitigation measures. The phasing plan is based on the anticipated peak hour trip generation associated with full time employment equivalencies at the Fab 8 Campus with specific

off-site transportation improvements tied to the following full time equivalent GLOBALFOUNDRIES' employees: 2,645 (50% of new employees), 3,700 (70% of new employees); and 4,760 (90% of new employees).

Regarding Exit 11A, it has been demonstrated that the proposed action with the above transportation mitigation can be accommodated and provide adequate levels of service without a new exit on the Northway. However, it is also recognized that advanced planning activities in consultation with NYSDOT and Federal Highway Administration (FHWA) need to be proactively taken in order to realize a new exit on the Northway at some point in the future. Towards this end, GLOBALFOUNDRIES has stated its favor for the development of Exit 11A and will continue to collaborate and support efforts to move it forward. Mitigation for Exit 11A includes the formation of a task force by the Town of Malta whose mission is to work with the appropriate agencies to assist with the planning and implementation of a new Northway Exit 11A.

B. Visual Impact Analysis: The potential increased visual impact associated with raising height limitation for rooftop stacks and other appurtenances by 15 feet raised questions by eight (8) commentors. In addition to completing a visual impact assessment report which included photographic renderings of the Fab 8.2 structure and its stacks as part of the SSDEIS, the Applicant subsequently prepared two (2) visual animations along Saratoga Lake, and agreed to launch balloons at the proposed height of 125 feet (110 + 15 feet height increase) to facilitate a public viewing. These combined visual impact tasks served to demonstrate that the proposed height increase of 15 feet will not result in a significant detrimental effect on views, or public enjoyment or appreciation of nearby resources. In addition, GLOBALFOUNDRIES has agreed to assess whether those portions of the facility that are viewable from Saratoga Lake can be constructed of materials that are colored to blend into the tree line with less contrast than shown in the renderings and animations. Visual mitigation includes screening, fabrication, or painting those portions of Fab 8.2 with potential visibility, such as the upper portion of the buildings and the stacks, with muted colors such as gray. No reflective material will be used on visible portions of the buildings or stacks. In addition, rooftop lighting, if required, will be minimized, and lighting fixtures will be downward facing and shielded.

C. Air Resources: The potential impact of an increased stack height of 15 feet was the subject of six (6) public comments. GLOBALFOUNDRIES has indicated that Fab 8.2

with an increased stack height of 15 feet will be in compliance with NYSDEC short term and long term guidance values, which is consistent with the Prior SEQRA Record. GLOBALFOUNDRIES will need to apply for and receive a Title V permit from NYSDEC for Fab 8.2.

D. Noise: The Applicant did not make any request to change the PDD legislation regarding its current noise requirements. The prior PDD legislation established strict noise standards which include 55 dBA daytime/45 dBA nighttime noise levels at the PDD property line, and provided provisions for periodic noise monitoring and reporting consistent with the construction noise monitoring plan which specifies octave band measurement criteria. Public comments on the SSDEIS were made regarding noise complaints associated with the operation of Fab 8.1, specifically associated with the Fab 8.1 electric service building (ESB 1). In response to these noise comments, the Applicant has agreed to implement additional noise mitigation measures for Fab 8.2 which includes integrating the accumulated mitigation efforts by GLOBALFOUNDRIES associated with ESB 1. These additional noise mitigation measures include using acoustical enclosures equivalent to those used for the Technology Development Center (TDC).

E. Recreation: GLOBALFOUNDRIES is currently obligated to pay an Open Space/Recreation Fee for development of Fab 8.2 in accordance with Town of Malta Local Law 6-2004 Section W.5.(b).(3) and Town of Stillwater Local Law 3-2008 Section X.6.b.(3).

The purpose of the GEIS Recreation/Open Space Fee is to assist the Towns in furthering their efforts toward acquisition, improvement and/or enhancement of public recreational opportunities for residents of the Towns. Public access to Saratoga Lake for recreational purposes has long been identified as a significant goal of the Towns and surrounding communities. In furtherance of these goals, GLOBALFOUNDRIES has offered and the Malta Town Board has agreed that, in lieu of the GEIS Open Space/Recreation Fee that would otherwise be due to the Town of Malta, Operator will instead contribute the sum of $3.0 Million Dollars for acquisition of the Brown's Beach property and existing improvements.

Brown's Beach is located within the Town of Stillwater and the property will likely be acquired by the Town of Stillwater alone. However, the Town of Stillwater has agreed that the Brown's Beach property and any present or future associated recreational

amenities will all be made available to residents of the Town of Malta upon the same terms and conditions as for the residents of Stillwater. The Malta Town Board determines this acquisition and access to a substantial recreational opportunity for the residents of Malta and agrees to accept such contribution in lieu of the Open Space/Recreation Fee which would otherwise be required under the GEIS.

These obligations are further set forth in a Development Agreement between the Town of Malta, the Town of Stillwater and GLOBALFOUNDRIES which will be executed contemporaneously with the Town Board's legislative adoption.

F. Construction: All construction workers will continue to be scheduled to arrive and depart the Fab 8.2 site in such manner as to prevent their coinciding with shift changes for the non-construction personnel. Compliance with this provision requires that shift changes must be separated by at least 30 minutes in order to reduce commuting congestion. Ride-sharing will be continue to be encouraged and noise, dust, lighting and vibration construction mitigation measure outlined in the Prior SEQRA Record will continue to be implemented.

GLOBALFOUDRIES will use its best efforts to ensure that construction of Fab 8.2 be commenced and concluded within an eighteen month period. In order to facilitate accomplishment of this goal, construction is permitted at all times on all days of the week subject to Section 4.22 of the SDEIS Findings Statement adopted on August 25, 2008 by the Malta Town Board. This period of time during which such extended construction hours may be employed may be extended by the Malta Town Board by resolution for good cause shown.

G. Other Comments: Miscellaneous comments were made regarding plans for utility services (i.e., water, sewer, electric power, and natural gas), quality of life, emergency services, storm water, economic impact, alternatives, health and safety, permits and approvals, proposed action, and PDD. No incremental adverse impacts were identified associated with these other comments.

<u>Changes to SSDEIS</u>

This SSFEIS makes the following changes to the SSDEIS:

1. Figure 5 has been revised.
2. The proposed off-site transportation mitigation has been modified, as presented above, at two (2) of the intersections.

3. Mitigation for Exit 11A includes the formation of a task force by the Town of Malta with participation by GLOBALFOUNDRIES.
4. Visual mitigation measures have been added, as presented above, for the portions of Fab 8.2 with potential visibility.
5. Noise mitigation measures have been added, as presented above.
6. Additional information regarding utility use has been presented, along with estimating the amount of additional development that could occur in LFTC utilizing the remaining utility capacities.
7. Additional documentation regarding a no hazard determination from the Federal Aviation Agency (FAA) has been added.
8. Additional documentation regarding archeological compliance has been added.
9. Additional air modeling data has been provided, including isopleths maps.
10. Additional noise monitoring data has been provided.
11. Additional traffic analysis data has been provided.
12. Additional visual impact analyses have been completed and summarized, including the results of a public viewing, video animations, and supplemental renderings.
13. Letter of service from utility providers have been obtained.
14. Documentation regarding PDD easements has been provided.
15. A redline version of the Industry Requirements Report (IRR) has been provided.
16. An off-site transportation phasing plan has been provided.
17. Addition design details have been provided regarding the electrical connection to the LFTC Substation.

1.2 Project History

1.2.1 LFTC Creation

On June 3, 2002, a uniform PDD Application for LFTC was filed with the Malta and Stillwater Town Boards. Pursuant to a coordinated review,[1] the Malta Town Board ("the Board") subsequently assumed SEQRA "Lead Agency" status for the environmental review of the proposed LFTC action by consent through a cooperative agreement with the Town of Stillwater. Scoping was conducted, and a Draft GEIS was accepted as complete by the Board on January 16, 2003. Following a 60-day public review and comment period, including two (2) public hearings, the Board prepared a Final GEIS for LFTC dated October 16, 2003 and adopted Findings on May 18, 2004. The Stillwater Town Board also adopted similar Findings on June 14, 2004, for the portion of the LFTC project site located in the Town of Stillwater. Subsequent to completion of the SEQRA review, both Towns adopted PDD legislation, which established semiconductor manufacturing as an allowable use in Development Area 1 of LFTC.

The GEIS evaluated four (4) phases of fab development within Development Area 1, with ancillary development taking place in other development areas of LFTC. The substantive basis for assessing the potential environmental impacts of the semiconductor manufacturing in Development Area 1 was derived from the estimates set forth in the AGI Industry Requirements Report (IRR). This report made various assumptions regarding the size and other specific metrics of the planned four (4) phases of semiconductor manufacturing.

On May 24, 2004 the Malta Town Board filed with the New York State Department of State (NYSDOS) Local Law No. 6 of the Year 2004, which established the LFTC PDD and made semiconductor manufacturing an allowable land use. The Malta PDD legislation for LFTC amended §167A-52 of the Code of the Town of Malta, and was subsequently modified by the Malta Town Board at the request of the LFTCEDC on

[1] Interested and involved agencies included, among others, the Stillwater Town and Planning Boards, the Malta Planning Board, the Saratoga County and Mechanicville-Stillwater Industrial Development Agencies (IDA), the Saratoga County Planning Board, the Army Corps of Engineers (Corps), NYSDOT, NYSDEC, NYSDOH, New York State Department of Public Service (NYSDPS), New York State Historic Preservation Office (NYSHPO), Empire State Development Corporation (ESDC), and the Village of Round Lake Board of Trustees.

October 10, 2007 by Local Law No. 18 of the Year 2007 and on February 28, 2007 by Local Law No. 2 of the Year 2007.

On July 8, 2004 the Stillwater Town Board filed with the NYSDOS Local Law No. 4 of the Year 2004, which established the LFTC PDD and made semiconductor manufacturing an allowable land use. The Stillwater PDD legislation was subsequently modified by the Town Board on December 31, 2004 by Local Law No. 8 of the Year 2004.

1.2.1 AMD-GLOBALFOUNDRIES Action

On February 25, 2008 AMD filed its initial application to the Town of Malta for a PDD Amendment. AMD's specific plans for development presented in 2008 for the semiconductor manufacturing facilities proposed three (3) phases of fab development in Development Area 1, with each individual phase of fab development being larger than previously presented in the 2003 GEIS. Accordingly, a Draft Supplemental Environmental Impact Statement (SDEIS) was prepared for the proposed Fab 4X Project (aka, Fab 8 Module 1), including an AMD Industry Requirements Report (AMD IRR). This report provided more specific information for AMD's proposed actions in Development Area 1 of LFTC and served to replace the 2002 AGI Report.

On March 31, 2008 the Malta Town Board acting in its capacity as the SEQRA lead agency accepted a SDEIS as complete and commenced a public comment period on the document. Following the close of the public comment period, on August 1, 2008, a Supplemental Final Environmental Impact Statement (SFEIS) accepted by the Malta Town Board. Findings Statements and revised PDD legislation were subsequently adopted which enabled GLOBALFOUNDRIES to apply for and obtain site plan approvals for Fab 8 Module 1 and the second administrative building.

Collectively, the GEIS, SEIS and Findings for LFTC and the Fab 8 Campus, in addition to the PDD legislation in Malta and Stillwater, set forth, among other things, "specific conditions or criteria under which future actions will be undertaken or approved, including requirements for any subsequent SEQRA compliance."[2]

[2] See 6 NYCRR § 617.10(c).

In most respects, the GLOBALFOUNDRIES modified master plan as proposed would fully comply with the existing 2004 Findings Statements for LFTC and the 2008 Findings Statement for the proposed AMD/GLOBALFOUNDRIES Development described above. For example, Fab 8.2 would be located in Development Area 1, designated by the Towns for nanotechnology manufacturing. The water, electricity, natural gas, and wastewater capacity to be used at the Fab 8.2 facilities would continue to be provided by the sources envisioned by the original GEIS and the Findings. All of the baseline environmental impacts, such as impacts to ecological habitats, wetlands and cultural resources have already been addressed as required by the GEIS and the Findings. All issues regarding the past use of the site as the Malta Rocket Fuel Area (MRFA) have been addressed in the GEIS and Findings, and GLOBALFOUNDRIES will be designing the project to either avoid impacting contaminated groundwater or by addressing such impacts as set forth in the Findings.

Most importantly, the GLOBALFOUNDRIES project would continue to fulfill the LFTC community vision by providing additional economic benefits desired when the LFTC was originally created and the Findings were adopted. These benefits include additional well-paying technical jobs during operation, as well as a plethora of construction jobs. The proposed action will also promote the cumulative economic growth in the region, consistent with the evaluation in the GEIS and Findings Statement for LFTC. Based on the similarity of the proposed semiconductor manufacturing operational conditions and cumulative building footprint areas in comparison with the prior SEQRA analysis assumptions, there is no reasonable basis to challenge the continued relevance of the growth analysis provided in the GEIS. The underlying economic data from the GEIS remain valid.

1.2.3 Proposed Action

On January 31, 2013, GLOBALFOUNDRIES filed its initial application to the Town of Malta for a PDD Amendment to enable the potential development of Fab 8.2. This initial application included an applicant-prepared SSDEIS, as well as other miscellaneous documents in support of the application. Shortly thereafter, the Town posted the entire contents of this initial application on their website: http://www.malta-town.org.

On February 12, 2013, the Malta Town Board, after receiving consents from all involved agencies, voted to re-establish its role as the SEQRA Lead Agent. It also acknowledged

receipt and the continuing review of the applicant-prepared SSDEIS as a supplement to the GEIS and the first supplemental EIS.

The Towns of Stillwater and Malta commented on the completeness of the applicant-prepared SSDEIS, which was subsequently revised and resubmitted to the Town by GLOBALFOUNDRIES.

On March 7, 2013, the Malta Town Board, as lead agent, voted to issue a positive declaration of significance and accepted the applicant's revised SSDEIS as complete for commencing public comment. By resolution, it also resolved to hold a public hearing on the SSDEIS on March 25, 2013. The Town subsequently distributed copies of the SSDEIS to Involved Agencies and other interested parties, the NYSDEC Commissioner, NYS Region 5, and the Chief Executive Officer of the political subdivisions in which the action will be principally located; and electronically placed the SSDEIS onto the Town of Malta website at http://www.malta-town.org/?nid=312. Copies of the SSDEIS were provided to persons requesting a copy form the Town of Malta.

On March 20, 2013, the positive declaration was published in the Environmental Notice Bulletin (ENB).

Due to the untimely publication of the notice for the public hearing in a newspaper of general circulation, the Malta Town Board voted on March 25, 2013 to hold the public hearing on the SSDEIS on April 15, 2013. However, any member of the public who appeared at the March 25, 2013 Town Board meeting was given an opportunity to comment on the SSDEIS and those comments have been included as part of this SSFEIS.

On March 26, 2013, the Town subsequently distributed copies of a Notice of Completion of SSDEIS and Revised Notice of Hearing to Involved Agencies and other interested parties, the NYSDEC Commissioner, NYS Region 5, and the Chief Executive Officer of the political subdivisions in which the action will be principally located.

On March 28, 2013 the Town published a combined Notice of Completion of SSDEIS and Revised Notice of Hearing in the legal notices section of the Daily Gazette. This combined notice was issued pursuant to Part 617 of the implementing regulations pertaining to Article 8 (SEQRA) of the Environmental Conservation Law. The notice established a 30-day public review and comment period until the close of business on

April 26, 2013, and established for a public hearing at 7:00 PM on April 15, 2013 at the Malta Town Hall.

On March 28, 2013, a Notice of Acceptance of SSDEIS and Public Hearing were published in the Environmental Notice Bulletin (ENB). The notice established a 30-day public review and comment period until the close of business on April 26, 2013, and established for a public hearing at 7:00 PM on April 15, 2013 at the Malta Town Hall.

On April 15, 2013 at 7:00 pm, the Malta Town Board conducted its duly noticed SEQRA public hearing at the Malta Town Hall which comments have also been included as part of this SSFEIS.

The written public comment period was held open until May 7, 2013 in order to accommodate last minute comment letters.

SEQRA Documentation pertaining to the required SSDEIS notices is provided in Appendix A.

1.4 Summary of the SSDEIS

The SSDEIS, dated March 1, 2013, evaluated the potential environmental impacts of the proposed action. This section provides only a brief summary of the SSDEIS and has been included for the convenience of the reader of this SSFEIS. The complete SSDEIS dated has been incorporated by reference to this document in accordance with 6 NYCRR Section 617.9.

The proposed action by GLOBALFOUNDRIES is the amendment of the Malta and Stillwater Planned Development District (PDD) legislation for the Luther Forest Technology Campus (LFTC) to enable the potential further build out of the Fab 8 Campus to include Fab 8 Module 2 (Fab 8.2).

GLOBALFOUNDRIES is requesting that certain amendments be made to the PDD legislation in order to accommodate company- and design-specific requirements. Proposed changes to the PDD legislation for Fab 8.2 are limited to: (i) increasing the allowable height for rooftop appurtenances by 15 feet, (ii) increasing the main fabrication building foot print to 575,000 ft^2 and deleting the redundant constraint on cleanroom space, and (iii) modifying the off-site transportation mitigation measures for the Fab 8 Campus.

Section 2.0 of the SSDEIS summarizes the prior New York State Environmental Quality Review Act (SEQRA) reviews that were conducted during the period of 2002-2004 for the LFTC Campus and in 2008 for the proposed AMD Development of LFTC. Collectively these two environmental reviews are termed the Prior SEQRA Record. The first SEQRA review is the original GEIS for LFTC. This environmental review generically evaluated four (4) phases of fab development in Development Area 1 and was precedent to establishing semiconductor manufacturing as an allowable land use in both the Towns of Malta and Stillwater. The second SEQRA review is the AMD/GLOBALFOUNDRIES Development. This environmental review served as a supplement to the GEIS for LFTC and evaluated three (3) phases of proposed fab development in Development Area 1.

Section 3.0 of the SSDEIS provides an overview of the proposed action, including a specific listing of PDD amendments being requested as well as the permits and approvals required for Fab 8.2. The Fab 8.2 design includes the following major buildings: (1) fabrication (fab) building; (2) a combined Electric Service Building (ESB) and Central Utility Building (CUB); and (3) miscellaneous manufacturing support buildings as well as service yards, a high voltage (HV) electric switchyard, and small support buildings. Approximately 1,273 new parking spaces are proposed by making Lot E permanent parking, and expanding existing Lots C and D. All building heights would conform to the existing 110 foot height restriction, and stacks and other roof-top appurtenances would be allowed to extend to a maximum height of 125 feet. The GLOBALFOUNDRIES Industry Requirements Report (GF IRR) describes the specific plans for Fab 8.2 development and summarizes specific area and utility metrics.

Section 4.0 of the SSDEIS describes the changed conditions that are the primary subject of this Second Supplemental Draft Environmental Impact Statement (SSDEIS). These changed conditions include: a larger footprint area for the manufacturing building and its associated clean room space; a height increase of 15 feet for stacks and other rooftop appurtenance; an update of the traffic study; increased levels of use for water, natural gas, electric power and wastewater; and a larger construction work force.

Section 5.0 of the SSDEIS addresses the potential environmental impacts and mitigation measures associated with the changed conditions defined in the prior section. The larger footprint for the manufacturing building is not anticipated to have any new adverse environmental impact, since the overall amount of buildings and clean room

space for the three (3) phases of development is less than contemplated in the Prior SEQRA Record. The modest height increase is not anticipated to have a significant detrimental adverse visual impact to off-site resources, including Saratoga Lake. The Traffic Impact Study indicates that the increased levels of traffic can be accommodated by improving six (6) intersections without the need for a new Exit 11A. Technical demonstrations are provided to document available utility capacities. A construction logistics plan, which extends onto adjacent property owned by the Luther Forest Technology Campus Economic Development Corporation (LFTCEDC), is proposed to mitigate the impacts associated with construction activities and a larger construction work force.

Section 6.0 of the SSDEIS summarizes alternatives to GLOBALFOUNDRIES' proposed action, including the No Action Alternative and Alternative Fab Designs. These alternatives evaluate the potential scope and range of GLOBALFOUNDRIES' development within LFTC for comparative analysis and consideration.

Section 7.0 of the SSDEIS summarizes unavoidable adverse impacts and concludes that there are not expected to be any unavoidable adverse impacts associated with the proposed actions. The construction and operation of Fab 8.2 will however have some minor inconveniences to the local community, consistent with the Prior SEQRA Record.

Section 8.0 of the SSDEIS addresses irreversible and irretrievable commitment of resources which include loss of natural habitat and the use of building materials and other man-made resources.

Section 9.0 of the SSDEIS addresses effects on use and conservation of energy, including a summary of energy consumption, energy conservation measures and energy efficiency building standards.

Section 10.0 of the SSDEIS contains a list of references, and Section 11.0 contains a list of acronyms and abbreviations.

2.0 RESPONSES TO PUBLIC COMMENTS

The following represents the responses to comments that were received on the SSDEIS for the proposed Fab 8.2 Project. A public meeting was held on March 25, 2013 to solicit comments on the SSDEIS and the SEQRA public hearing was held on April 15, 2013[3]. The public comment period extended until April 26, 2013 and was held open until May 7, 2013 to accommodate late comments.

Copies of all written correspondence received on the project during the public comment period are provided in their entirety in Appendix B. Appendix C provides complete transcripts of the public meeting held on March 25, 2013 and the SEQRA public hearing held on April 15, 2013.

Substantive comments are first summarized below and then provided in greater detail noting the person and/or agency making the comment. Responses are provided for each substantive comment. It is important to note that comments as summarized in the text of this SSFEIS may not be provided verbatim, although every attempt has been made to accurately reflect the substantive comment.

2.2 Summary of Comments

The following written comments were received:

1. Letter dated March 18, 2013 from the Chazen Companies.[4]
2. Letter dated February 14, 2013 from Air Resources Group, LLC to the Chazen Companies.[5]
3. Community Response Board (CRB) Meeting Minutes dated March 13, 2013.
4. Undated letter from Lynda Bablin of Malta.
5. Carol Marotta, Stillwater Planning Board, fax dated April 6, 2013.[6]

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[3] See Section 1.2.3 above concerning a detailed explanation of the SEQRA procedural history.

[4] This Chazen correspondence serves to replace the preliminary technical comments provided in their memorandum dated February 26, 2013. Completeness comments, #1-20, contained in the February 26, 2013 memorandum were addressed in the revised SSDEIS dated March 1, 2013.

[5] This correspondence is included as Comment 28 in the Chazen correspondence dated March 18, 2013.

6. Letter dated April 1, 2013 from the Chazen Companies.
7. Comments from Robert Barshied, Chairman Stillwater Planning Board (undated).
8. Saratoga County Planning Board Referral Review dated March 26, 2013. [7]
9. Letter dated April 16, 2013 from NYSDEC Region 5.
10. Saratoga County Planning Board Preliminary Review dated March 6, 2013.
11. Letter dated April 23, 2013 from NYSDOT Region 1.
12. Letter dated April 23, 2013 from Terri Korb, Town of Saratoga Resident.
13. Email from Mike Hartman, Chazen, dated April 14, 2013.
14. Email from Carol Marotta dated April 7, 2013.
15. Letter dated April 25, 2013 from Capital District Transportation Corporation.
16. Email from Tony Tozzi, Director, Malta Building and Planning Department, dated May 7, 2012.
17. Email dated May 5, 2013 from Lynda Bablin.

During the March 25, 2013 public meeting, the following persons made comments on the SSDEIS:

1. Carol Henry, Chair of Community Response Board (CRB).
2. Carol Marotta, Stillwater Resident.

During the April 15, 2013 SEQRA Public Hearing, the following persons made comments on the SSDEIS:

3. Mike Smith, Burnt Hills Resident.
4. Cathy Lawrenz, Manning Cove Resident.
5. Steve Gottmann, Malta Resident.
6. Bob Barshied, Chair of the Stillwater Planning Board.

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[6] This written correspondence was specifically referenced in Carol Henry's verbal comments during the first SEQRA public hearing.

[7] The same Saratoga County Planning Board referral letter was sent to both the Town of Malta and Stillwater. These two (2) letters are herein treated as one written comment.

2.2 Written Comments and Responses

1. Letter dated March 18, 2013 from the Chazen Companies

Comment 1-1: The application references easements and other restrictions on this property as being attached in Appendix A. Based upon a review of Appendix A there are several easements noted as existing and one easement, subject to definition. A copy of each recorded easement is requested and as well as a copy of the proposed access easement. If a map is available that further describes the location of the easements, a copy is requested. (PDD)

Response: Refer to Appendix J, Planned Development District (PDD) Easements and Map. The "Existing Conditions Plan" shows the locations of the referenced easements. The proposed easement for access – 5.05 ac, is for where the entrance road is now located and is also shown on the Plan. The description of this easement is found on page 5 of INST-NO 2009010320 which is the deed into the Fab 8 Campus. This easement is no longer "proposed" and was in fact executed when the transfer of the property to GLOBALFOUNDRIES occurred and memorialized when the deed was recorded in the Clerk's Office.

Comment 1-2: A review of Section 3.2.2 includes a representation of proposed principal buildings as well as ancillary building that would be included with Fab 8.2. It is noted that ancillary buildings included a Sulfuric Building, Compressor Building, Pyrophoric Bunker Building and Silane building. Later in Section 3.4 there is reference made to a Fire Pump House with Storage. Please clarify if this is intended to represent an additional ancillary structure which should be added to the list in Section 3.2.2 or if it is intended to be situated within an existing building or structure. (Proposed Action)

Response: The Fire Pump House with Storage is a proposed new ancillary structure associated with Fab 8.2 having a nominal footprint area as depicted on Figure 2 in the SSDEIS. It should be added to the list in Section 3.2.2 of the SSDEIS.

Comment 1-3: Regarding Building Metrics, the SSDEIS should discuss how a larger cleanroom associated with FAB 8.2 will affect other impacts, such as increased chemical deliveries, use of gasses and the potential need for increased emergency response. (Proposed Action)

Response: Section 6.0 of Appendix D, Industry Requirements Report, of the SSDEIS presents the chemical use and storage requirements for Fab 8.2, and Section 9.0 of

Appendix D presents the emergency response program. Refer to Response to Comment 1-4 regarding the larger cleanroom size.

Comment 1-4: Regarding Building Metrics, the SSDEIS should discuss what potential impacts are associated with the elimination of the cleanroom threshold size within the PDD. For example, with no limits on cleanroom size, there may be no limits on the use of chemicals, gasses and other materials needed for cleanroom operations. (Proposed Action)

Response: In general, the larger cleanroom size for Fab 8.2 will use more raw products than a smaller sized cleanroom. However, in the context of the overall three phases of development associated with the Fab 8 Campus, the total amount of cleanroom space is less than what was previously contemplated 900,000 ft^2 versus the 875,000 ft^2. Accordingly, there is no net increase in chemical usage or emergency response associated with the increased size of the cleanroom associated with Fab 8.2 for the Fab 8 Campus.

Utilization of chemicals and gases is strictly regulated by environmental regulation (chemical bulk storage regulations and environmental emissions limits and permits). The representative raw materials use values in the Prior SEQRA Record are not limits but representative values. Removing the cleanroom size constraint does not affect those regulations and limitations.

Comment 1-5: In Section 3.2.4 miscellaneous details include descriptions of construction related workforce. Provide a summary of the accumulated construction work force related to concurrent construction operations anticipated and related construction schedules. (Construction Impacts)

Response: Refer to Response to Comment 1-13 regarding the subject of concurrent construction operations and associated temporary construction work forces for TDC and Fab 8.2.

Comment 1-6: General design criteria for Fab 8.2, as described in Section 3.4 suggest limited or no changes from the general design criteria established with prior SEQRA Findings Statements and PDD Legislation for LFTC. Of those elements noted in this section, noise mitigation is of most interest and related abatement measures beyond those employed for construction related impacts should be fully characterized. Certain additional design measures have been implemented and included with the TDC and were represented to be included in related structures for Fab 8.2. However, the Town of Malta has not received the proposed design, nor

has it accepted or approved it for the TDC. Describe, in detail, the proposed noise mitigation measures to be employed for Fab 8.2. (Noise)

Response: GLOBALFOUNDRIES has consistently stated that lessons learned from Fab 8.1 ESB 1 mitigation will be integrated into Fab 8.2 design. The TDC ESB 2 building has already been designed accordingly, as presented to the Planning Board in 2012. That information has been provided to town technical consultants and is included in these materials. In addition, the detailed design information submitted in the TDC building permit package has been separately provided to the town's technical consultants to support their review.

To better place the issue in perspective, provided herein is a summary of noise mitigation efforts that have culminated in the lessons learned that will be employed in Fab 8.2. Based upon this, GLOBALFOUNDRIES is confident that there will be no repeat or exacerbation of the bandwidth issue originally associated with ESB 1.

The first indication of noise complaints arose in June 2011 following the installation of the continuous power source (CPS) units within the Electrical Service Building 1 (ESB 1) located immediately to the north of Fab 8.1. Following receipt of noise complaints from residents along and near Featherfoil Way in Malta and from nearby residents in Stillwater, GLOBALFOUNDRIES initiated noise monitoring pursuant to the requirements of the approved Construction Noise Monitoring Plan. Noise monitoring was conducted by Novus Engineering during intervals designed to assess remedial work by GLOBALFOUNDRIES to reduce the noise impact of the CPS units within ESB 1. The Novus reports covered the following periods[8]:

- June 23, 2011 through July 17, 2011
- January 31, 2012 through February 20, 2012
- September 5, 2012 through September 14, 2012
- December 3, 2012 through December 17, 2012

Simultaneous with the initiation of noise monitoring in June 2011, GLOBALFOUNDRIES identified the source of the noise as most likely related to the

[8] Novus issued a Supplemental Response dated March 8, 2013 addressing specific inquiries of the Town of Malta "Noise Committee."

inertia fly wheel assemblies of the CPS units located within ESB 1. The CPS units are important components of the facility's electrical operating system, ensuring consistent and uninterrupted electrical power to critical systems including operations of sophisticated semiconductor manufacturing tools.

GLOBALFOUNDRIES' immediate response was to shut down the CPS units and construct a temporary noise barrier using Connex boxes and hay bales. Following evaluation by its experts, the GLOBALFOUNDRIES next began work on a project to replace the existing louvers in ESB 1 with a new series of insulated baffles. The louvers provide adequate air flow into the building. The work on this first project was completed in December 2011 at which point the company directed a second noise monitoring evaluation by Novus.

The Town of Malta undertook a limited noise level study in the rear yard of a Featherfoil Way property in September 2011 (Chazen Companies, 2011). The results of this noise study indicated that noise levels from Fab 8.1 were noticeable during nighttime hours and in some instances slightly exceeded the property line noise standards, and it was recommended that the Town seek to reduce noise from the CPS units.

In January 2012, GLOBALFOUNDRIES directed a second project that consisted of the installation of new roof stack silencers on the roof of the building. This second project was completed in June 2012. Working in collaboration with the Town of Malta Noise Committee, the company sought feedback from nearby residents on the impact of the first two (2) projects. The feedback was provided to the Noise Committee at a meeting in Malta Town Hall on September 17, 2012. At that meeting, GLOBALFOUNDRIES advised that the third set of monitoring data had been collected by Novus from September 5, 2012 through September 14, 2012.

In late December 2012, GLOBALFOUNDRIES announced a third project to be completed during the second quarter of 2013. This project involves the installation of acoustic absorption materials on the interior of the building in a manner designed to absorb sound generated by the CPS units. It is expected that upon completion of this third project there will be a further reduction in decibel levels emanating from ESB 1.

In January 2013, Novus prepared and distributed its fourth Noise Monitoring Report. As was the case with the three (3) previous reports, Novus concluded that the facility has remained in compliance with the limits established by the LFTC PDD.

ESB 2 and Fab 8.2 In connection with the expansion of Fab 8.1, the Town of Malta Planning Board approved a site plan amendment for the construction of ESB 2. This second electric service building will also serve to support the TDC. Construction drawings for ESB 2 have been prepared and submitted to the Town of Malta Building and Planning Department.

ESB 2 has been designed as an acoustic enclosure with engineering focused on the reduction of the level of noise emanating from the building. The design of ESB 2 provides for a high sound transmission classification (STC) of 63 for its exterior walls. The STC for the original ESB 1 design was 21. Interior acoustic absorption has recently been installed in ESB 1.

Both the placement of the building and its acoustical design incorporate elements and measures that were not part of ESB 1. Among those elements and measures are the following:

1. ESB 2 is located in the interior of the Fab 8 Campus so as to make use of the shielding provided by adjacent buildings. ESB 1 is at the northerly edge of the Fab 8 Campus and is not shielded on the north by other buildings.

2. Acoustic seals on all doors.

3. No doors from rooms housing CPS units directly to the building exterior.

4. Vestibules at major building exterior entrances and exit locations.

5. Acoustic absorption materials on ceiling and in walls of rooms housing CPS units.

6. Acoustic louver and acoustic silencer noise reduction at air intake locations.

7. Conical silencer noise reduction at CPS room exhaust locations.

Fab 8.2: Fab 8.2 will contain a third electrical service unit (ESB 3). The design of this unit has not been completed, and it is possible that the unit may be housed wholly

within the Central Utility Building (CUB) that will be constructed with Fab 8.2. This third unit will nevertheless incorporate appropriate elements and measures to achieve performance comparable to those described above that have been engineered for ESB 2 to continue the focus of the company on continued reduction and abatement of decibel levels in a manner designed to ensure compliance with the limits established by the LFTC PDD.

Comment 1-7: What are the anticipated sound levels, by octave band, at the previously identified receptor locations? What are the anticipated sound levels, by octave band, at the nearest residence on Featherfoil Way? What are the anticipated sound levels, by octave band level, at the nearest residence in the Town of Stillwater? (Noise)

Response: Consistent with the provisions of the Construction Noise Monitoring Plan and the Site Plan Approval of the Malta Planning Board of July 7, 2009, four (4) locations were selected for noise monitoring at points roughly 180 degrees around the construction site. The location of these four (4) noise monitoring points is presented as Figure 1-7.

Figure 1-7: Noise Monitoring Points

GLOBALFOUNDRIES has not collected data for "the nearest residence on Featherfoil Way," although Site #1 is relatively close to Featherfoil Way. GLOBALFOUNDRIES has also not collected data for the "nearest residence in the Town of Stillwater."

At GLOBALFOUNDRIES' request, Novus Engineering did collect octave bandwidth data at the four (4) monitoring points during the monitoring periods of (i) January 31,

2012 through February 20, 2012, (ii) September 5, 2012 through September 14, 2012, and (iii) December 3, 2012 through December 17, 2012.

Section 4 of the Novus report of January 2013, provides a detailed discussion of "Octave Band Noise Levels." That discussion with the corresponding tables is set forth as follows:

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4.2 Octave Band Noise Levels

4.2.1 Explanation of Octave Bands

As a part of this noise study, Novus was also asked to record, analyze and report on the octave band noise levels at each of the monitoring sites. Inclusion of this data will now allow for comparison to the second evaluation criterion provided in the Monitoring Plan.

Octave bands are a common division of the full audible spectrum into ten bands, identified by center frequencies ranging from 16 to 16,000 Hz. It is typical for octave band analyses to include only the frequencies between 31.5 and 8,000 Hz because noise levels outside this range often do not contribute significantly. It can be useful to consider octave band noise levels because they provide additional information compared to the combined (total) noise level.

When considering octave band levels, it is important to point out several distinctions compared to the corresponding total (LAeq) noise levels discussed elsewhere in this report. First, octave band levels are given as un-weighted (linear) values. This means that the standard A-weighting applied to LAeq levels has not been applied. Second, because octave band levels are un- weighted, any given value cannot be directly compared to an LAeq level. Third, the evaluation of octave band levels is dependent on the frequency range in question. The human ear is not consistently sensitive across the entire audible spectrum. This is the reason for the A-weighting curve, which accounts for the ear's decreased sensitivity at lower frequencies.

Since octave band noise levels consist of a range of discrete noise levels that make up the audible spectrum, they can be combined to arrive at the overall noise level. In order to determine the corresponding LAeq level from a set of octave band data, first A-weighting corrections are applied to the linear dB values. Then, logarithmic addition is used to combine the levels at each frequency band into a single dBA value.

4.2.2 Summary of Octave Band Measurements

The octave band noise levels measured at each of the four monitoring locations between December 3 and 17, 2012 are shown in Tables 8 – 10. The levels presented for each monitoring site are the 10-day average of the measured noise level at each distinct octave band. Each octave band is identified by its corresponding center frequency. A graphical representation of these measurements is included in Figures 6 – 8 in Appendix C.

Table 8
Average Daytime Octave Band Noise Levels Measured at Monitoring Sites (dB)
December, 2012

	31.5 Hz	*63 Hz*	*125 Hz*	*250 Hz*	*500 Hz*	*1 kHz*	*2kHz*	*4 kHz*	*8 kHz*
Limits	*70.0*	*64.0*	*61.0*	*57.0*	*53.0*	*49.0*	*46.0*	*43.0*	*40.0*
Site 1	*58.0*	*50.4*	*45.3*	*40.8*	*39.0*	*35.3*	*29.4*	*25.3*	*23.5*
Site 2	*61.0*	*58.6*	*47.2*	*42.5*	*42.6*	*39.7*	*31.5*	*25.5*	*22.6*
Site 3	*60.9*	*59.1*	*49.5*	*46.3*	*46.7*	*42.9*	*36.7*	*31.2*	*28.2*
Site 4	*58.3*	*57.0*	*49.5*	*42.3*	*43.2*	*44.7*	*40.2*	*32.8*	*26.3*

Table 9
Average Nighttime Octave Band Noise Levels Measured at Monitoring Sites (dB)
December, 2012

	31.5 Hz	*63 Hz*	*125 Hz*	*250 Hz*	*500 Hz*	*1 kHz*	*2kHz*	*4 kHz*	*8 kHz*
Limits	*64.0*	*58.0*	*51.0*	*46.0*	*43.0*	*39.0*	*36.0*	*33.0*	*30.0*
Site 1	*59.8*	*50.4*	*44.6*	*40.6*	*38.4*	*33.0*	*25.3*	*21.5*	*19.3*
Site 2	*61.7*	*54.7*	*46.0*	*42.7*	*41.9*	*36.4*	*27.8*	*23.3*	*20.1*
Site 3	*61.8*	*54.4*	*48.4*	*44.5*	*43.6*	*37.5*	*30.6*	*23.3*	*19.3*
Site 4	*58.3*	*50.1*	*41.1*	*39.2*	*39.1*	*35.4*	*28.1*	*23.0*	*20.5*

Table 10
Average 3AM – 6AM Octave Band Noise Levels Measured at Monitoring Sites (dB)
December, 2012

	31.5 Hz	*63 Hz*	*125 Hz*	*250 Hz*	*500 Hz*	*1 kHz*	*2kHz*	*4 kHz*	*8 kHz*
Limits	*64.0*	*58.0*	*51.0*	*46.0*	*43.0*	*39.0*	*36.0*	*33.0*	*30.0*
Site 1	*61.1*	*50.1*	*44.5*	*40.7*	*39.1*	*32.6*	*23.4*	*21.4*	*18.0*
Site 2	*62.1*	*53.8*	*44.7*	*42.4*	*42.0*	*36.1*	*27.2*	*23.4*	*21.1*
Site 3	*61.6*	*53.9*	*47.4*	*43.0*	*42.4*	*36.8*	*29.9*	*24.6*	*21.0*
Site 4	*58.9*	*51.1*	*43.1*	*40.4*	*40.5*	*36.7*	*29.5*	*22.8*	*19.9*

The octave band measurements shown above correspond to the same data used to calculate the LAeq noise levels in Tables 5 - 7. Due to the large quantity of data contained within the entire array of octave band measurements recorded as part of this study, the table above contains the average levels over the course of the study.

By comparing the measured level at each monitoring site to the corresponding limits, Novus is able to evaluate conditions around the site using the second criterion given in the Monitoring Plan. Looking at the results in Tables 8 - 10, it is clear that for each octave band all four monitoring sites experienced daytime noise levels below the Monitoring Plan

thresholds, except for a single value. In Table 9, the 500 Hz band at Site 3 contains an average level slightly.

5.3 Evaluation of Project Noise Levels (Octave Band Information Only)

In order to evaluate how the measured octave band levels compare to the specified limits, Novus has simplified the data from Tables 8, 9 and 10 to include the maximum average levels across all of the monitoring sites. That is, at each octave band the loudest level from any of the monitoring sites has been isolated. This maximum has then been compared to the limits from the Monitoring Plan to calculate the difference. These results are provided in Tables 14 - 16, below.

Table 14
Evaluation of Maximum Average Daytime Octave Band Noise Levels for All Monitoring Locations (dB) December, 2012

Location	31.5 Hz	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2kHz	4 kHz	8 kHz
Maximum, Sites 1-4	61.0	59.1	49.5	46.3	46.7	44.7	40.2	32.8	28.2
Limit	70	64	61	57	53	49	46	43	40
Amt. Below Limit	9.0	4.9	11.5	10.7	6.3	4.3	5.8	10.2	11.8

Table 15
Evaluation of Maximum Average Nighttime Octave Band Noise Levels for All Monitoring Locations (dB) December, 2012

Location	31.5 Hz	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2kHz	4 kHz	8 kHz
Maximum, Sites 1-4	61.8	54.7	48.4	44.5	43.6	37.5	30.6	23.3	20.5
Limit	64	58	51	46	43	39	36	33	30
Amt. Below Limit	2.2	3.3	2.6	1.5	(0.6)	1.5	5.4	9.7	9.5

Table 16
Evaluation of Maximum Average 3AM – 6AM Octave Band Noise Levels for All Monitoring Locations (dB) December, 2012

Location	31.5 Hz	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2kHz	4 kHz	8 kHz
Maximum, Sites 1-4	62.1	53.9	47.4	43.0	42.4	36.8	29.9	24.6	21.1

Limit	*64*	*58*	*51*	*46*	*43*	*39*	*36*	*33*	*30*
Amt. Below Limit	*1.9*	*4.1*	*3.6*	*3.0*	*0.6*	*2.2*	*6.1*	*8.4*	*8.9*

As can be seen in Table 14, the measured daytime noise levels are well below the limit across all frequency bands. The levels shown in Tables 15 and 16 are much closer to the limit, but all are below the limit except for one of the frequency bands measured during the nighttime period. As shown in Table 15, the maximum of the average nighttime readings at each site exceeded the limit by 0.6 dB at 500 Hz. The fact that this maximum occurred at Site 3 makes sense, since this location is closest to the facility.

The results of Tables 11 - 13 demonstrate that the facility continues to operate at overall noise levels below the required daytime limits. The results of Tables 14 and 16 demonstrate that daytime and 3AM – 6AM facility operation across all frequency bands results in noise levels less than the octave band limits provided in the Monitoring Plan. The results in Table 15 demonstrate that at eight of the nine octave bands, average noise levels are below the specified limits, however at 500 Hz the limit is slightly exceeded.

It is worth noting that this exceedance of 0.6 dB is less than the tolerance limit for Type 1 sound level meters. At 500 Hz the measurement tolerance of the sound meter is +/- 1 dB. This comparison illustrates the small magnitude of the exceedance.

5.4 Summary (for Octave Band Information Only)

Based on the results summarized in Tables 5 – 16 Novus can draw the following conclusions:

Typically daytime octave band noise levels at all four monitoring locations are below the specified thresholds across the entire frequency range. Likewise, octave band noise levels measured between 3AM and 6AM are below the nighttime limits across the entire frequency range. Nighttime (8PM – 3AM) octave band noise levels are typically below the limits for eight of the nine octave bands. An exceedance of 0.6 dB was measured at Site 3.

The octave band noise level measurements also demonstrate that the facility has continued to operate within compliance, with the single exception of roughly one-half a decibel at the 500 Hz band, primarily the result of monitoring at Site 3. Importantly, the human ear is not capable of discerning a sound level difference of less than one decibel.

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Novus also provided a summary of Octave Band Data for February and September 2012 by letter dated March 8, 2013. This letter has been submitted to the Town of Malta as a supplement to the January 2013 Novus report. In the March 8, 2013 letter, Novus provides the following information:

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For your information, we have also provided summary tables of the octave band noise levels measured during the daytime for each of the noise studies that were carried out. These

results are shown in Tables 3 and 4. Please keep in mind that octave band results are given as un-weighted dB levels; therefore, results at any one octave band are not directly comparable to the total LAeq levels given above.

Table 3
Average Daytime Octave Band Noise Levels Measured at Monitoring Sites (dB[9])
September, 2012

Location	31.5 Hz	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2kHz	4 kHz	8 kHz
Site 1	53.9	48.7	44.7	39.1	36.6	33.0	32.1	34.9	30.1
Site 2	65.1	56.9	47.2	42.2	40.2	36.2	33.2	34.3	29.1
Site 3	60.6	55.5	47.7	44.5	43.2	38.1	32.8	32.7	31.2
Site 4	54.8	55.4	51.1	40.3	39.6	41.2	37.6	32.6	29.6

Table 4
Average Daytime Octave Band Noise Levels Measured at Monitoring Sites (dB)
February, 2012

Location	31.5 Hz	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2kHz	4 kHz	8 kHz
Site 1	53.5	51.5	47.0	41.3	38.4	34.4	29.0	27.1	25.5
Site 2	55.6	54.8	48.3	42.2	39.0	34.8	28.4	26.7	24.5
Site 3	56.9	55.7	47.7	42.6	40.6	37.6	32.3	29.0	25.9
Site 4	54.8	54.0	47.6	41.5	39.0	39.4	35.1	30.5	26.3

Table 5 has been provided to show the difference in measured octave band noise levels between the two studies. In this table, positive values indicate increases from February to September, while negative values represent a decrease in the octave band level.

[9] Octave band levels are provided as linear (un-weighted) decibel values.

Table 5
Change in Average Daytime Octave Band Noise Level Measurements (dB)
Between February and September, 2012

Location	*31.5 Hz*	*63 Hz*	*125 Hz*	*250 Hz*	*500 Hz*	*1 kHz*	*2kHz*	*4 kHz*	*8 kHz*
Site 1	*0.4*	*-2.8*	*-2.3*	*-2.2*	*-1.8*	*-1.3*	*3.1*	*7.8*	*4.6*
Site 2	*9.5*	*2.1*	*-1.1*	*-0.1*	*1.2*	*1.4*	*4.8*	*7.6*	*4.5*
Site 3	*3.7*	*-0.3*	*-0.1*	*1.9*	*2.7*	*0.5*	*0.5*	*3.7*	*5.3*
Site 4	*0.0*	*1.5*	*3.5*	*-1.2*	*0.6*	*1.8*	*2.5*	*2.1*	*3.2*

The data in Table 5 displays several obvious trends. First and foremost, the measured differences in the range from 63 Hz to 1 kHz are essentially negligible at all four monitoring locations. The greatest change in this range is a 3.5 dB increase at Site 4, which may be attributable a slight increase in construction noise near this location. Overall, however, changes of less than 3 dB are not readily perceivable to the human ear and can easily be the result of seasonal variations in ambient noise levels.

The second noticeable trend is the overall increase in noise levels in the range from 2 kHz to 8 kHz. Across all monitoring sites there is up to an 8 dB increase at frequencies in this range. This is typical of data recorded during summer months compared to measurements taken during the winter. Increased insect activity as well as wind rustling foliage will often result in increased high frequency noise levels. Also, very high frequency sound waves (> 4 kHz) are much more readily attenuated over distance by collisions with air molecules, so it is unlikely that GlobalFoundries noise sources contribute significantly at such a great distance in this upper frequency range.

The third part of the data that stands out is the spike at 31.5 Hz at Site 2 and the smaller increase at Site 3. It is likely that this increase is due to either a change in construction activity at the site, or is due to increased noise from air or road traffic. Very low frequency sound waves propagate easily over long distances, so contribution from a variety of distant sources (highways, airplanes, etc) can sometimes exist. Based on a review of the notes Novus recorded while taking measurements, this increase appears to be the result of a combination of increased construction vehicle activity at the facility as well as loud airplanes passing overhead. Generally, sounds near the bottom of the audible spectrum are not as easily perceived by the ear, therefore changes at this lowest octave band are of much lesser concern compared to higher frequencies.

It may be worth noting that, for the octave bands that have been of most concern (250 and 500 Hz) we did note a small decrease from February to September at Site 1. Site 1 is the monitoring location in closest proximity to residences northwest of the facility; therefore measurements at this location are of particular importance. However, for the reasons discussed earlier in this letter, it is too early to draw conclusions from this data about the effectiveness of the mitigation measures pursued at the site.

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The Construction Noise Monitoring Plan establishes the following Octave Band Nighttime and Daytime Limits. The predicted sound levels at residential receptors will be in compliance with these limits. GLOBALFOUNDRIES proposes to continue compliance with these established limits as presented in Table 1-7.

Table 1-7: Octave Band Nighttime and Daytime Limits

Location	31.5 Hz	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2kHz	4 kHz	8 kHz
Nighttime Maximum	64	58	51	46	43	39	36	33	30
Daytime Maximum	70	64	61	57	53	49	46	43	40

Comment 1-8: In Section 3.5 storm water management practices are described. Implementation of current standards is represented. The ownership, operation and maintenance responsibilities of these measures should be clarified. (Storm Water)

Response: GLOBALFOUNDRIES will own, operate and maintain the storm water facilities.

Comment 1-9: In Section 3.10 it is stated that an overhead 115kV power transmission system will be extended from the existing LFTC Substation to a high voltage (HV) electrical substation to provide a circuit to the CUB-ESB. A figure depicting the new overhead wire route should be provided in the SSDEIS for review. (Proposed Action)

Response: The potential proposed routes of the overhead wire route from the LFTC Substation to the new HV electrical substation are provided in draft drawings provided in Appendix O. The provision of overhead transmission lines to HV electrical substations on site is among the existing conditions previously considered and consistent with previously approved site plans and building permits. The proposed route will be more formally depicted with the site plan application for Fab 8.2.

Comment 1-10: Section 3.17 describes permits and approvals necessary to support this application. In review of supporting reports included under separate appendices, it is apparent that certain services to support the project will require certain improvements and related

approvals/permits and or approvals to support service, such as the SCWA and the SCSD#1. Provide a summary of approvals and permits required by supporting authorities that are required to service the proposed action. (Permits and Approvals)

Response: Potential permits and approvals subject to separate environmental reviews consistent with the Prior SEQRA Record for off-site utilities and roadway improvements include:

- Public water supply permit modification for improvements associated with SCWA water treatment plant and intake.
- NYSDOT approval of off-site roadway improvements on State roads.
- PSC Certificate of Environmental Compatibility and Public Need for E-30 natural gas pipeline.

Comment 1-11: The SSDEIS should discuss public safety impacts, particularly additional emergency response calls and coordination with local responders, as a result of the new Fab, based on experience with the existing Fab. (Emergency Services)

Response: Public safety impacts represent a SEQRA baseline condition that is unchanged as a result of the proposed action which represents the third phase of development at the Fab 8 Campus. GLOBALFOUNDRIES has and will continue coordinate with local responders, including the continuation of routine meetings and engagement.

Refer to Response to Comment 15 for a summary of historical incident reports.

Comment 1-12: The Applicant will be using large areas of LFTC off their property for construction. How will this affect the potential to build out the rest of the campus? Applicant to clarify. (Construction Impacts)

Response: No permanent structures are proposed outside of GLOBALFOUNDRIES' property. It is not expected that the proposed use of LFTCEDC properties within Development Area 1 during construction for Fab 8.2 would have any negative impact on the potential build out of the LFTC Campus. Indeed, the work is and will be planned in collaboration with property owners so that improvements are compatible with and add value to potential future uses, while also being temporary in nature and capable of removal. During construction, the off-site construction logistics area temporarily would be used by GLOBALFOUNDRIES consistent with an existing

agreement with LFTCEDC. Once construction is completed, the construction logistics area would be available for additional development and restored if necessary (i.e., in the event that no continuing, beneficial use of those improvements is approved).

It is important to note that the proposed use has significant real time beneficial impact in adding value to the land, as well as providing income to LFTCEDC for land use rent payment, thus enabling further, continued Fab 8 Campus operations. Moreover, LFTCEDC is committed to supporting the successful full build out of the Fab 8 Campus as the anchor for continued development. All other combined potential development within the LFTC Campus is minor relative to the capital investment and investment in people that GLOBALFOUNDRIES has made to date. The proposed PDD amendments seek to enable continued investment by GLOBALFOUNDRIES in Malta and Stillwater.

Comment 1-13: Regarding construction logistics, the development of FAB 8.2 will increase employment from 1,900 to 2,500 construction workers. Construction efforts indicate that large areas off the Applicant's property will be needed for parking, laydown areas, soil disturbance, the proposed batch plant, storm water, electric and temporary roads. The SSDEIS does not provide an assessment of simultaneous construction of TDC and FAB 8.2 as it relates to these impacts. This assessment should be provided. (Construction Impacts)

Response: The maximum, cumulative number of construction workers would potentially occur during concurrent construction operations associated with TDC and Fab 8.2. TDC construction started on March, 11 2013 and is projected to be completed in December 2014 (22 months). During the TDC construction period the average daily number of construction workers is estimated to ramp to a maximum of approximately 800 construction workers during the period of January to March, 2014 (during months 11-13).

Fab 8.2 has an estimated construction schedule of 38 months (3 years, 2 months). During the Fab 8.2 construction period the average daily number of construction workers is estimated to ramp to a maximum of 1,900 construction workers during month 17.

If the peak periods of these two (2) construction projects were to be concurrent, then the cumulative, maximum number of construction workers would be 2,700. It is more likely that the peak periods for these two (2) construction projects would not be concurrent, particularly since TDC construction has already been initiated, while Fab

8.2 is seeking right-to-build approvals as a precedent condition to making a decision on construction. Accordingly, the peak of 2,500 construction workers for both TDC and Fab 8.2 is estimated.

Comment 1-14: The Applicant shall document the statement on pages 16/17 that "…extensive hazmat training" for local providers is being provided. (Emergency Services)

Response: GLOBALFOUNDRIES (and its predecessor company) has been engaged with state, local and federal public safety and emergency service providers since before start of construction on Fab 8.1 Currently, GLOBALFOUNDRIES continues to lead routine (i.e., monthly or as determined by the group) meetings with local emergency services providers, including the Malta Ridge and Round Lake Fire Departments. Trainings, drills, site tours, and information sharing are ongoing. Equipment needs were evaluated and determined to be adequate for anticipated response scenarios; chemical inventory lists have been provided along with appropriate Emergency Response Guidebook (ERG) response numbers; any unique chemicals are reviewed at regular emergency response meetings; and site tours have been conducted during construction, start-up and operation. Recent engagements include building evacuation drills with Malta Ridge Fire Department; site overview, presentation, and tour for Round Lake Fire Department; and sponsoring a high voltage response training course conducted by National Grid. As the site continues to expand GLOBALFOUNDRIES will continue to communicate and coordinate additional drills, tours, and joint trainings.

Comment 1-15: Quantify increased demands on local emergency responders in light of the experience to date from Fab 8.1. Quantify the resultant cost implications. (Emergency Services)

Response: Since initiating operations at the Fab 8 Campus in 2009, the following emergency service calls have been made:

Table 1-15: Summary of Fab 8 Emergency Calls

	Malta Ambulance	Personal Medical	Malta Ridge Fire	Malta Ridge Call Description
2011				
Aug	8	3	0	
Sept	5	3	0	
Oct	6	3	3	Sprinkler Waterflow Alarm - False Alarm Upon Startup of Fire Pump, Fall into RMF, Possible Chemical Exposure (determined to be water)
Nov	4	2	0	
Dec	2	1	0	
2011 Totals	25	12	3	
2012				
Jan	2	1	0	
Feb	2	1	0	
Mar	2	2	0	
Apr	5	3	2	Fire Pump Activation (cancelled at gate), Motor Vehicle Accident (car struck light post)
May	3	2	0	
June	3	0	1	Construction Gator Roll-Over Accident
July	1	1	0	
Aug	1	1	0	
Sept	2	2	1	Fire Alarm Projects Building (False Alarm)
Oct	3	2	0	
Nov	2	1	0	
Dec	1	0	0	
2012 Totals	27	16	4	
2013				
Jan	2	0	0	
Feb	5	4	0	
Mar	2	2	0	

The cost for a fire or call can be highly variable depending upon a number of factors including most importantly the specific nature of the response. Assuming a typical emergency response call of $1,200 per call for ambulance and $2,000 per call for fire, this correlates to a 2012 yearly cost of $6,000 for the Malta Ridge Fire Department, a 2012 yearly cost of $32,400 for Malta Ambulance, and a 2012 yearly cost of $19,200 for

Personal Medical. Those costs are compensated through various direct and indirect means.

Comment 1-16: Have local emergency responders been involved in the preparation of the Community Notification and Evacuation Plan, Hazard Analysis and the Integrated Contingency Plan (ICP). What is the status of these plans? (Emergency Services)

Response: The ICP was developed and implemented for the Fab 8 Campus and provided to local response agencies and Saratoga Hospital in early 2012. Additionally a detailed Emergency Response Gap Analysis was completed in 2009, updated in 2011, and is in the process of being updated again at present with participation from multiple local response agencies (Both Malta Ridge and Round Lake Fire Officials have met with the consultant). Any gaps identified during the initial analysis were closed and no additional gaps were noted during the subsequent 2011 review. Site response pre-planning information has been prepared and submitted to local response agencies using the "COAL WAS WEALTH"[10] format and any updates to site plans or logistics has been shared. GLOBALFOUNDRIES will provide copies of the ICP and the Site Responses Pre-planning information to the Town now and a current Gap Analysis once it is available.

Comment 1-17: Based on experience to date, compare the risk of tractor trailer accidents on roadways from traffic associated with Fab 8.2 to that calculated in the original GEIS, or to that calculated from tractor trailer accident data from a source acceptable to the Town of Malta. (Emergency Services)

Response: There have been no known records of tractor trailer accidents with GLOBALFOUNDRIES heavy vehicles since the site has become active.

A review of the accident data provided by NYSDOT for the period from July 2009 through April 2012 on the travel route between Exit 11 and US Route 9, via the Round Lake Bypass, indicated one incident involving a truck. The single heavy vehicle accident was at the Exit 11 Northbound ramp intersection during icy road conditions.

[10] The firefighting acronym "COAL WAS WEALTH" covers 13 points that can included in a facility's size-up to enhance operations for everyone on the fire ground, from the probationary firefighter at their first fire, up to and including the highest ranking chief of your department.

There were no documented truck accidents along the Curry Road or Round Lake Bypass links during this study period.

At the time of the 2012 traffic counts, the Intermodal Yard (on Route 67 in Halfmoon) was operational and was included in the existing traffic counts. An additional 16 AM peak hour trips and 26 PM peak hour trips was included in the traffic impact study to account for potential future expansion at the Intermodal site. This information was obtained directly from the Norfolk Southern Railway Design and Construction Department.

A review of current heavy vehicle trips along Stonebreak Road Extension (adjacent to the security booth) indicated daily heavy vehicle traffic of approximately 90 vehicles, equating to approximately 1.8% of the total site traffic. It is expected that similar heavy vehicle traffic will be generated as part of Fab 8.2 development.

Comment 1-18: Discuss how changes in chemicals employed in Fab 8.2 affect the risk analysis as discussed in the GEIS. (Health and Safety)

Response: The chemicals to be employed in Fab 8.2 are outlined in the IRR, Appendix C to SSDEIS. Table 6-1 of the IRR lists the approximate amounts of chemical storage for acids, caustics, solvents/organics, chemical mechanical polish (CMP) slurries, oxidizers, and other facility chemicals. The types and relative amounts of chemicals (and gases) are consistent with those analyzed in the prior GEIS and characterized in the two prior IRR reports which have emphasized that the suite of chemicals in a fab are subject to variation as a function of continuous technology development and integration.

In general, Fab 8.2 proposes to store on-site a larger amount of individual chemicals than previously presented in the two prior IRR's, using larger storage containers. The increased amount of storage does not directly relate to an increased risk factor. Chemical handling is mitigated by bulk chemical storage and delivery, which reduces the possibility of an inadvertent release into the environment. The continued storage of chemicals associated with Fab 8.2 is believed to be a SEQRA baseline condition, which is unchanged. Chemical delivery, storage and use will continue to be regulated by chemical bulk storage regulations, and GLOBALFOUNDRIES will continue to implement appropriate Emergency Planning and Community Right-To-Know Act (EPCRA) reporting requirements. A site Emergency Response Team (ERT) will provide immediate 24/7 response, stabilization, and recovery to any chemical spills or gas leaks.

Comment 1-19: Discuss the safety of the roundabout at the intersection of Rt. 9 and the Round Lake By-Pass. Specifically, discuss the design and safety of this roundabout in light of increased truck traffic as a result of Fab 8.2. (Transportation)

Response: The design of this existing roundabout was reviewed and approved by NYSDOT prior to construction. In general, NYSDOT's review and approval process exists to ensure that proposed intersection improvements on State roads operate with an acceptable level of safety and in conformance with applicable NYSDOT design criteria based on safe roadway operations.

A summary of accident history at the US Route 9/NY Route 67/Round Lake Bypass intersection is included in Chapter 2, Section D of the Traffic Impact Study. This data indicates there were 20 incidents at this intersection during the 33 month period from July 2009 through April 2012 with eight non-reportable (indicating no injury and less than $1,000 in property damage), nine property damage, and three injury accidents none of which involved heavy vehicles. The types of accidents varied and did not indicate a prevalent accident type. Under the proposed build-out of the Fab 8 Campus, this intersection is estimated to operate at LOS B conditions during the AM and PM peak hours with the proposed mitigation to add a left-turn lane on the eastbound Round Lake Bypass intersection approach and the associated change in vehicle deflection on the eastbound approach. A collision diagram is included under Appendix L.

Information provided by NYSDOT indicated that the traffic analysis for the Round Lake Bypass Project identified two lane entrances and exits northbound, southbound and westbound and a single lane entrance and exit eastbound at the roundabout at US Route 9/NY Route 67. A review of the Final Environmental Impact Statement (December 5, 2006) indicated that the detailed intersection analysis for the Round Lake Bypass was based upon PM peak hour traffic volumes when volumes on the westbound approach are higher due to traffic exiting LFTC; in addition, current and future through traffic volumes on US Route 9 are less than the projected future traffic volumes in the Round Lake Bypass Study (refer to Figures in Appendix L). An analysis of the 2022 Build conditions with a second through lane on the westbound approach and two exit lanes results in an overall LOS E during the AM peak hour (with LOS F on the eastbound approach) and an overall LOS B during the PM peak hour (refer to Appendix L). The high traffic volumes in the AM peak hour in the 2022 Build condition for the

Fab 8 Campus indicate the need for an eastbound left-turn lane as proposed. A review of the conceptual layout of the proposed intersection improvement on the eastbound approach does not preclude the ability to widen the westbound exit if a future need for westbound capacity is realized. A revised conceptual layout of the eastbound left-turn lane that can incorporate a future modification of the westbound exit is included in Appendix L.

Comment 1-20: Identify and illustrate at the concept plan level the "complete streets" alternative to the proposed improvements at the Rt. 9/67/Dunning Street roundabout discussed in the GEIS. What are the pros and cons of this alternative? What are the costs? (Transportation)

Response: The alternative mitigation option would construct connector roadways consistent with the Town of Malta Highway Access Planning Guide prepared by CHA in August 2003 (Figure B4, the Parallel Access Roads Concept) and the Downtown Malta Form-Based Code document , dated January 15, 2013 (Figure 6.2, Downtown Future Street Map). These plans recommend a local street network parallel to Routes 9 and 67, providing additional capacity both north/south and east/west through Downtown Malta. Geometrically, roadway connections currently exist in the southeast and southwest quadrants of the Routes 9/67/Dunning Street intersection, leaving the northern quadrants to be physically constructed. In addition to the connector roads, improvements to the roundabout include reconfiguring of the eastbound and westbound approaches to accommodate two through travel lanes in each direction.

The construction of the above improvements are summarized below and shown on the figures referenced above and the attached concept plan of the roundabout included in Appendix L:

- Construction of the connector road in the northwest quadrant (Kelch Drive to the Kendall Way, existing ring road around Price Chopper). This is an extension of the Route 67 roundabout intersection with Kelch Drive providing an east/west connection. This will require right-of-way and affect approximately two properties. The anticipated construction cost is $1.7 million.

- Construction of the connector road in the northeast quadrant (opposite Hemphill Place to the north and then west to connect to the CVS traffic signal on Route 9).

Similarly this connector also requires right-of-way and will affect approximately four properties. The anticipated construction cost is $1.6 million.

- The construction of the improvements to the roundabout to accommodate the additional eastbound and westbound lanes will require minor right-of-way takings and will affect approximately eight properties, potential utility impacts with an anticipated construction cost of approximately $1.5 million.

The implementation of the connector roadways will require upgrades to signing in the corridor and education to the public. The pros of this mitigation alternative are that it is consistent with the Town vision and minimizes impacts to the surrounding properties at the roundabout. The cons of this alternative are that the construction of the connector roadways will require the acquisition of private property.

The Phasing presented in the Traffic Impact Study was re-evaluated and summarized based upon full time equivalent employees (FTE). A summary of the phasing is included in Appendix N. The concept plans associated with each of the proposed improvements identified in the Phasing summary are also included in Appendix L.

Comment 1-21: If additional traffic from the project is not routed onto Dunning Street as assumed in the traffic analysis, assess the impacts to the rest of the transportation system. (Transportation)

Response: Traffic from the project was distributed onto Hermes Road (7%) as this roadway is presently being used as a public road. This assumption is valid and further reinforced by the STEP Master Plan which provides connectivity with the LFTC Campus.

However, in response to the comment, an analysis was completed at the critical US Route 9/NY Route 67/Dunning Street intersection with the 7% of the GLOBALFOUNDRIES site generated traffic and 20% of the existing Hermes Road traffic diverted from Hermes Road. The results of the analysis for the Build condition with improvements are comparable to those expected in the Build conditions (with connector roadways) with the development of Fab 8.2. The traffic diversions from Hermes Road at the US Route 9/NY Route 67/Dunning Street intersection and the detailed level of service summary sheets are included in Appendix L.

Comment 1-22: Section 5.3 states that the total average water usage rate for the FAB 8 Campus (including FAB 8.2) is 10.7 MGD. The Applicant should also identify what the current existing demand is at the SCWA plant, and describe the specific proposed water system improvements required to serve Fab 8.2. Additionally, the Applicant shall describe the approval status of such improvements. Are the improvements consistent with those discussed in the GEIS and SGEIS? Will there be sufficient capacity to service the remainder of the LFTC park at full build-out? Provide verification from the Saratoga County Water Corporation that service can be provided and the schedule for the same. (Water)

Response: Based on the SCWA's 2012 Annual Water Quality Report, the public water system served the following customers: Town of Wilton Water & Sewer Authority, Town of Ballston, Clifton Park Water Authority, Village of Stillwater, GLOBALFOUNDRIES, and Luther Forest Technology Campus Economic Development Corporation (LFTCEDC). The total water produced in 2012 was 1410.8 million gallons. The daily average of water treated and pumped to the distribution system was 3.865 million gallons a day. Their highest single daily flow occurred in April and was recorded at 7.004 million gallons per day. The amount of water delivered to customers was 1248.9 million gallons. This leaves an unaccounted for total of 161.99 million gallons. This water was used to flush mains, fire hydrant maintenance and other operational needs. (11% of the total amount produced).

The existing SCWA system has the capability of producing 14 MGD of potable water, and can be expandable to 26 MGD to meet potential additional future demands. The SCWA system has a maximum raw water intake and water treatment rate of 26 MGD, and all facilities associated with the SCWA system, including transmission piping have been designed to accommodate the full build out of the system. The initial build out of the raw water intake structures and water treatment plant has a peak capacity of 14 MGD, corresponding to an initial average daily demand of 7 MGD. Phased expansions have been incorporated into the design of the SCWA system such that as the average daily demand nears 7 MGD, the water treatment plant and raw water pump station will be expanded (i.e., Phase II) without involving the replacement of existing unit operations or increasing the footprint of buildings. Phase II improvements at the SCWA water treatment plant will increase average daily capacity to 12 MGD.

Similarly, as the average daily flow of the SCWA system nears 10 MGD, the water treatment plant and raw water pump station are planned to be expanded a second time

(i.e., Phase III) to the ultimate plant capacity of 26 MGD, corresponding to an average daily demand of approximately 16 MGD. The finished water main for the SCWA system extends into the LFTC Campus and has the ability to accommodate up to 20 MGD flows.

The Phase II and III water system improvements described above are consistent with the Prior SEQRA Record, as well as SCWA's existing water supply permit. At present, there are not any specific known plans to construct the Phase II or III water system improvements depending upon the timing of potential additional future demands. It is important to point out that the current Fab 8 Campus water usage rate (as of December 2012) associated with Fab 8.1 and Administrative Building 2 is approximately 1.9 MGD.

A letter of service has been received from SCWA for Fab 8.2. Refer to Appendix G.

It is not the GLOBALFROUNDRIES' responsibility to demonstrate capacity for other, unplanned projects in the LFTC Campus. That said, Development Area 1 is the only authorized use in the LFTC Campus with significant water demands. The primary and secondary public water supplies for the LFTC Campus have additional capacity to support other ancillary development. The existing SCWA water supply line to the LFTC Campus has a design flow of 20 MGD and the water plant can be expanded to a flow rate of up to 26 MGD. Assuming an average daily flow rate of 10.7 MGD for the Fab 8 Campus, inclusive of Fab 8.2, this would leave 9.3 MGD flow capacity in the existing line to the LFTC Campus. This amount of water would be sufficient to support ancillary development throughout the LFTC Campus. In addition, a secondary water supply (Saratoga Water Services) could also be used.

Comment 1-23: Regarding Section 5.4 – What is the current natural gas demand from the Global Foundries project and how does it compare to the estimates in the GEIS? Describe proposed natural gas system improvements by National Grid required to serve Fab 8.2. Describe the approval status of such improvements. Are the improvements consistent with those discussed in the GEIS and SGEIS? Provide verification from National Grid that natural gas service can be provided and the schedule for the same. Will there be sufficient capacity to service the remainder of the LFTC park at full build-out? (Natural Gas)

Response: Fab 8.2 has an estimated average natural utilization rate of 401,692 CFH. In comparison, the Prior SEQRA Record estimated an average natural gas utilization rate of 104,000 CFH per each of three (3) phases of fab development. The current Fab 8

Campus natural gas usage rate (as of December 2012) associated with Fab 8.1 and Administrative Building 2 is approximately 224,600 CFH.

It is not the GLOBALFROUNDRIES' responsibility to demonstrate capacity for other, unplanned projects in the LFTC Campus. That said, Development Area 1 is the only authorized use in the LFTC Campus with significant natural gas demands. It is assumed that National Grid would have additional capacity to support other ancillary development in the LFTC Campus, and that the availability of natural gas would not constrain such additional development.

GLOBALFOUNDRIES has received a letter of service for natural gas from National Grid for Fab 8.2. Refer to Appendix H. It is important to note that the letter of service is focused on the ability of the utility provider to meet the estimated average rate of use. Peak flows are subject to contractual negotiations with the utility provider, final engineering design plans, and internal management by GLOBALFROUNDRIES. Ultimately, GLOBALFOUNDRIES has the ability to control peak flow rates, depending upon the utility provider's ability to meet peak flows.

Comment 1-24: Section 5.5 states "The existing two (2) double circuit 115 Kv lines have the capability of providing a significant amount of electric power to the FAB 8 Campus." The Applicant shall quantify the term "significant" used in the referenced sentence. What is the current electric demand from the Global Foundries project and how does it compare to the estimates in the GEIS? Further, the Applicant shall describe proposed electric system improvements by National Grid required to serve Fab 8.2. Describe the approval status of such improvements. Are the improvements consistent with those discussed in the GEIS and SGEIS? Will there be sufficient capacity to service the remainder of the LFTC park at full build-out? Provide verification from National Grid that electric service can be provided and the schedule for the same. (Electric Power)

Response: The existing two (2) double circuit 115KV lines that connect to the LFTC electric substation have the ability to transmit approximately 220 MW of electric power which is adequate to support the Fab 8 Campus, inclusive of Fab 8.2.

Fab 8.2 has an estimated average electric power usage of 128 MW. In comparison, the Prior SEQRA Record estimated an average electric power rate of 40 MW per each of three (3) phases of fab development. The current Fab 8 Campus electric power usage

rate (as of December 2012) associated with Fab 8.1 and Administrative Building 2 is approximately 61.3 MW.

The potential National Grid system improvements needed to accommodate Fab 8.2 are not presently known, however all such system improvements are subject to separate environmental reviews and the approval authority of the New York State Public Service Commission (PSC). National Grid is presently studying the system improvements that will be required to accommodate Fab 8.2.

It is not GLOBALFROUNDRIES' responsibility to demonstrate capacity for other, unplanned projects in the LFTC Campus. That said, Development Area 1 is the only authorized use in the LFTC Campus with significant electric power demands. It is assumed that National Grid would have additional capacity to support other ancillary development in the LFTC Campus, and that the availability of electric power would not constrain such additional development.

GLOBALFOUNDRIES has received a letter of service for electric power from National Grid for Fab 8.2. Refer to Appendix H. It is important to note that the letter of service is focused on the ability of the utility provider to meet the estimated average rate of use. Peak usage rates are subject to contractual negotiations with the utility provider, final engineering design plans, and internal management by GLOBALFROUNDRIES. Ultimately, GLOBALFOUNDRIES has the ability to control peak usage rates, depending upon the utility provider's ability to meet peak flows.

Comment 1-25: Regarding Section 5.6; the Applicant shall provide verification from SCSD#1 that sewer service can be provided to FAB 8.2. Will there be sufficient capacity to service the remainder of the LFTC park at full build-out? (Sewer)

Response: GLOBALFOUNDRIES has received a letter of service from SCSD#1 for Fab 8.2. Refer to Appendix I. Peak wastewater flow rates are planned to be controlled to a rate of 9.5 MGD on site by GLOBALFOUNDRIES using an equalization tank as further described in Appendix F to the SSDEIS, Preliminary Water and Wastewater Plan. The equalization tank will dampen short duration peak flows (twice per day for 30 minute durations) that are expected to occur, allowing the discharge rate of the pump station to be designed for the average day flow rate of 9.5 MGD. In effect, the wastewater flows will be dampened by project design to be no larger than 9.5 MGD. This will prevent

overloading of the SCSD#1 off-site gravity trunk sewer which has a capacity of 10 MGD.

It is not GLOBALFROUNDRIES' responsibility to demonstrate capacity for other, unplanned projects in the LFTC Campus. That said, Development Area 1 is the only authorized use in the LFTC Campus with significant waste water demands. It is assumed that SCSD#1 would have additional capacity to support other ancillary development in the LFTC Campus. With the use of equalization at the pump station, the existing Fab 8 Campus and Fab 8.2 would be able to use the existing 30-inch sewer main along Cold Spring Road without exceeding its 10 MGD transmission capacity; however there would be only 0.5 MGD transmission capability remaining in the existing main. Development Area 5 in LFTC could be developed by making a connection to the SCSD#1 main at the Route 9-Stonebreak Road intersection which would eliminate the flow constraint in the 30-inch main. In summary, the limited availability of wastewater transmission capacity in the LFTC Campus would constrain development until which time as additional transmission capacity is realized.

Comment 1-26: The PDD amendments should include a modification that, should an offsite emergency occur from a product to be delivered to GF, that GF be required to immediately notify the Village and the Town, and that they also send appropriate personnel to the emergency scene so they can assist first responders to understand the nature of the material involved. (Emergency Services)

Response: Emergency response is a SEQRA baseline condition that is unchanged by the proposed action. The current regulatory framework is appropriate and sufficient to manage off-site emergencies. First-responders to incidents are trained in emergency response, and it is not the role of a manufacturing facility to provide emergency response personnel to assist with off-site incidents or to report such incidents. No PDD change is appropriate.

Comment 1-27: The Applicant should show a redlined version to reflect changes between 2008 and 2013 IRRs, as they relate to FAB 8.2 and submit the same for review by the Town. (IRR)

Response: The GF IRR for Fab 8.2 is provided as Appendix C to the SSDEIS and is dated January 2013; it describes operations specific to the proposed action. The AMD IRR for Fab 8.1 was dated July 2008 and described operations specific to AMD's proposed three phases of development. The IRR for LFTC, commonly known as the

Abbie Gregg Report done for the Saratoga Economic Development Corporation (SEDC), was dated October 2002 and described "theoretical" semi-conductor manufacturing operations associated with four (4) phases of development. It is important for an informed reader to understand the three (3) versions of the IRR, all of which are included herein as reference sources for this SSFEIS.

To assist with the review of the GF IRR for Fab 8.2, a "red-lined" version of the text of the AMD IRR has been provided as Appendix K. This "red-lined" document compares the IRR for Fab 8.2 with the IRR for Fab 8.1.

Comment 1-28: Please refer to the attached comment letter prepared by Air Resources Group, LLC (ARG), dated February 14, 2013. (Air Resources)

Response: The ARG comments are listed below as the second written comment.

Comment 1-29: Regarding air dispersion modeling results; it is requested that the Applicant provide updated figures based on increasing the stack height by 5-, 10- and 15-feet respectively. Following compilation of the requested information, please compare this to the currently proposed stack height air dispersion modeling and provide an analysis of the statistical significance of each interval of increased stack height. This has been requested by the Town of Stillwater Planning Board. (Air Resources)

Response: Higher stack heights are not necessary to achieve AGC and SGC values which is the regulatory permitting requirement subject to review and approval of NYSDEC.

The impacts of raising the Fab 8.2 stack heights an additional 15 feet were evaluated through additional air dispersion modeling. An increase in height of the acid scrubber exhaust stacks was evaluated and considered as representative.

As acid scrubber exhaust stack analysis takes more than 60 contaminants into account, it is important to note that this run includes contributions of contaminants from Fab 8.1, the TDC and Fab 8.2. Raising the stacks of Fab 8.2 will thus have the greatest impact on those contaminants which discharge predominantly or exclusively through the 8.2 emission points (i.e., the changes will not be "across the board" relative to concentrations). It is also important to note that each contaminant is compared to unique SGC and AGC values, and that the same changes in concentration between

contaminants would not cause the same relative change with respect to the %of SGC or % of AGC.

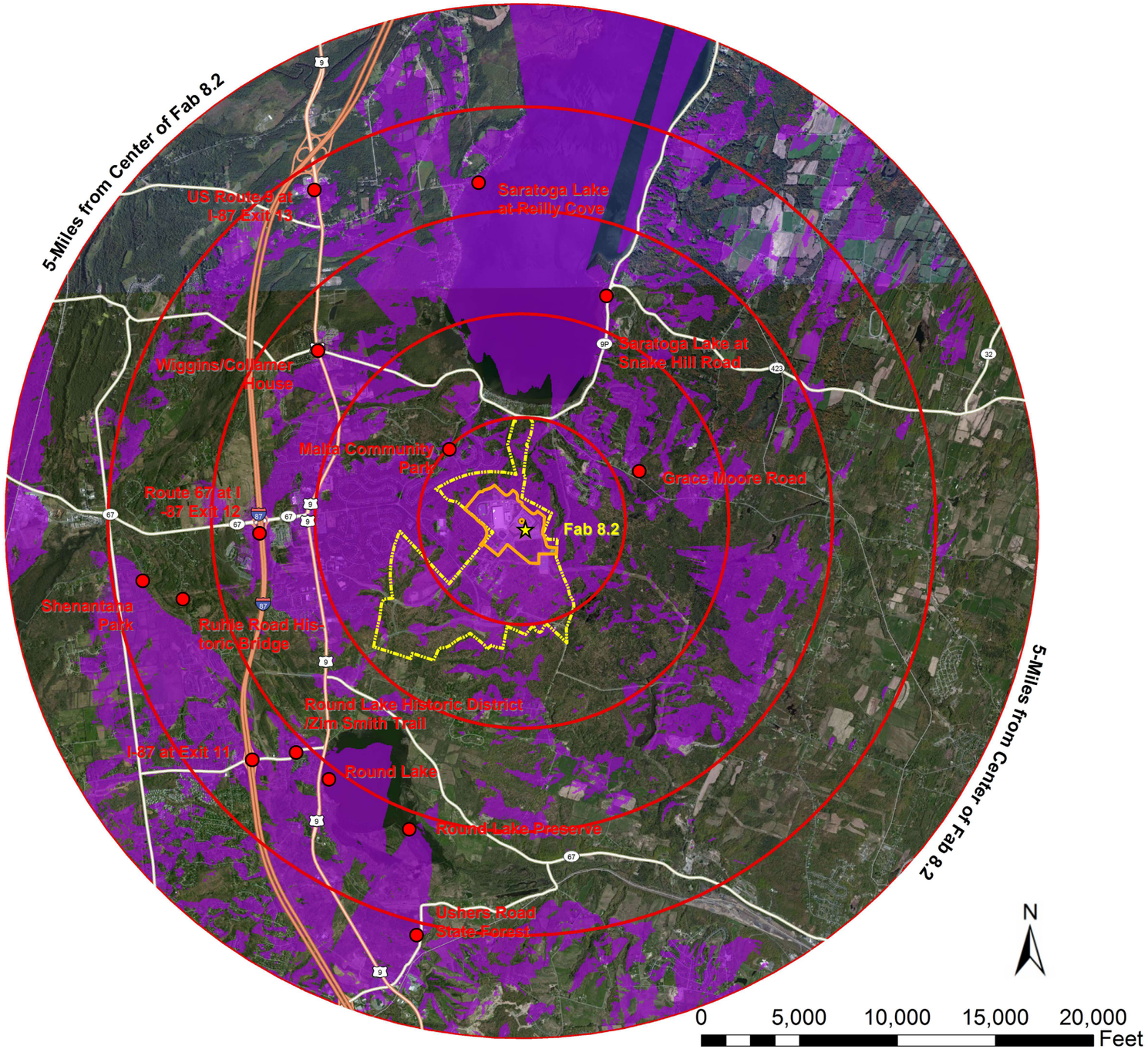
The largest decrease which occurs as a result of the 15 foot increase in stack height on a concentration basis is an approximate 9.63% decrease in the maximum hourly Phosphine concentration (from 0.114 ug/m^3 to 0.103 ug/m^3) which corresponds to a decrease in the % of the SGC for Phosphine from 0.082% to 0.074%.

In total, raising the stacks by 15 feet would only lessen the % of SGC or % of AGC by greater than a 1% reduction in four cases (Chlorine from 94.7% of AGC to 88.2%; Nitric Acid from 18.34% of SGC to 16.6%; Sulfur Hexafluoride from 15.2% of SGC to 14.1%; Sulfur Hexafluoride from 57.6% of AGC to 54.1%). All other decreases would be less than a 1% decrease in the % of respective SGC or AGC, as compared to the January 2013 modeling results with 125 foot stack heights.

As shown by the air dispersion modeling results, higher stack heights are not necessary in order to meet the applicable regulatory requirements (i.e., short term and annual guidance concentrations as established by NYSDEC).

Comment 1-30: The Application indicates that the GIS viewshed analysis is based on a combination of USGS National Elevation Dataset (NED) 10 meter Digital Elevation Models (DEM). The Applicant should consider conducting an additional GIS viewshed analysis that is based on USGS DEM's only in order establish a visual baseline that does not include assumed vegetative heights. (VIA)

Response: A viewshed map based on USGS DEM's only is provided as Figure 1-30.



Legend

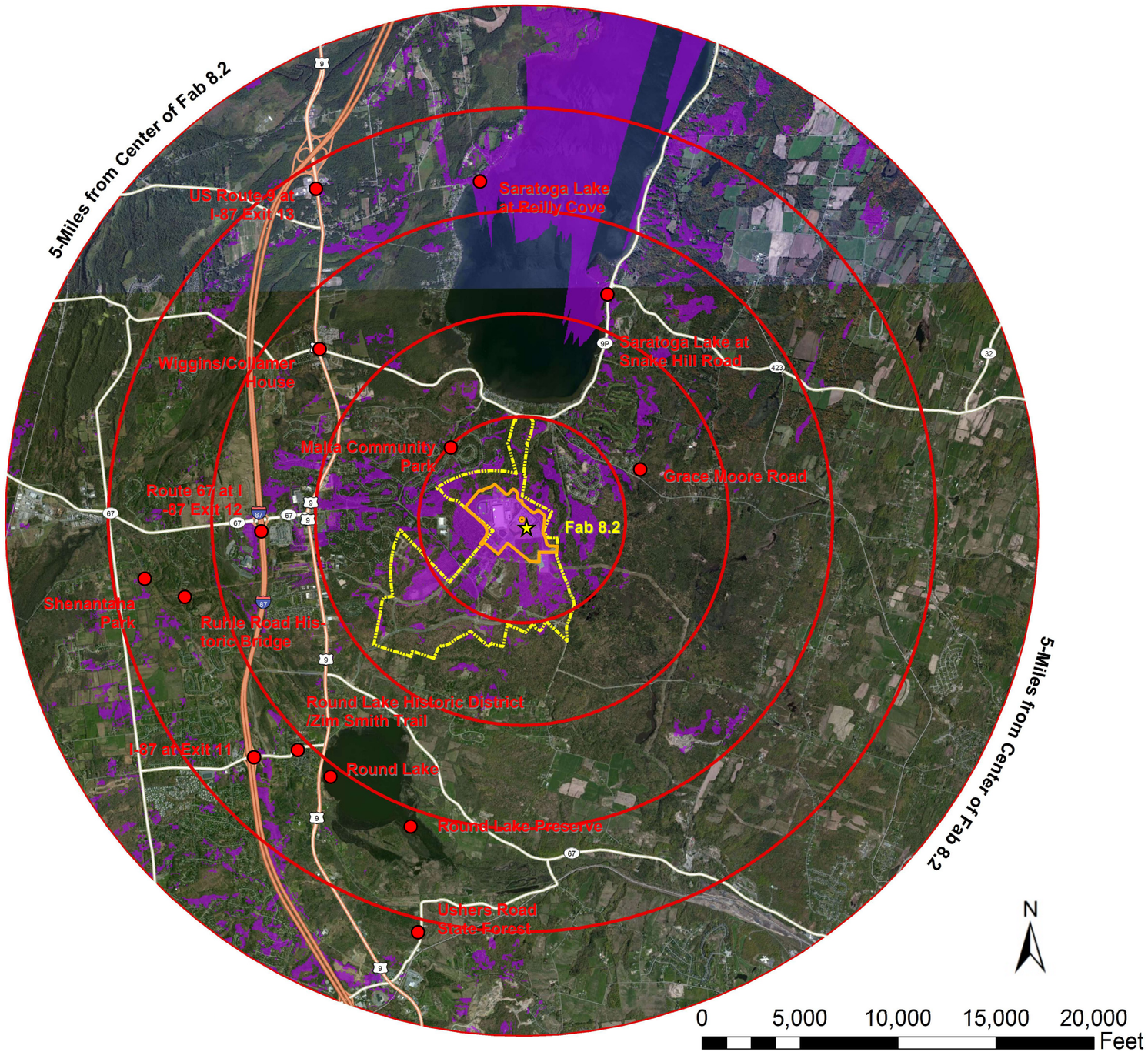
- Proposed Structure at 130'
- Study Area
- Areas of Potential Visibility
- GLOBALFOUNDRIES Site Boundary
- LFTC Site Boundary
- **Visual Resource**

FIGURE 1-30

Bare Earth Viewshed of Structure at 130 Feet

Comment 1-31: The Applicant indicates that the control points for the GIS viewshed analysis were located near the center of the FAB 8.2 building envelope. Given the size of the proposed project, control points should be located at the four corners, and/or along the edge, of the building envelope (similar to the balloon visibility analysis) in order to determine its potential visibility within the five-mile study area. (VIA)

Response: The viewshed analysis has been revised to include control points at the four corners and at the center of the Fab 8.2 structure. Figure 1-30 and Figures 1-31A and 1-31B illustrate potential project visibility using these five (5) control points.

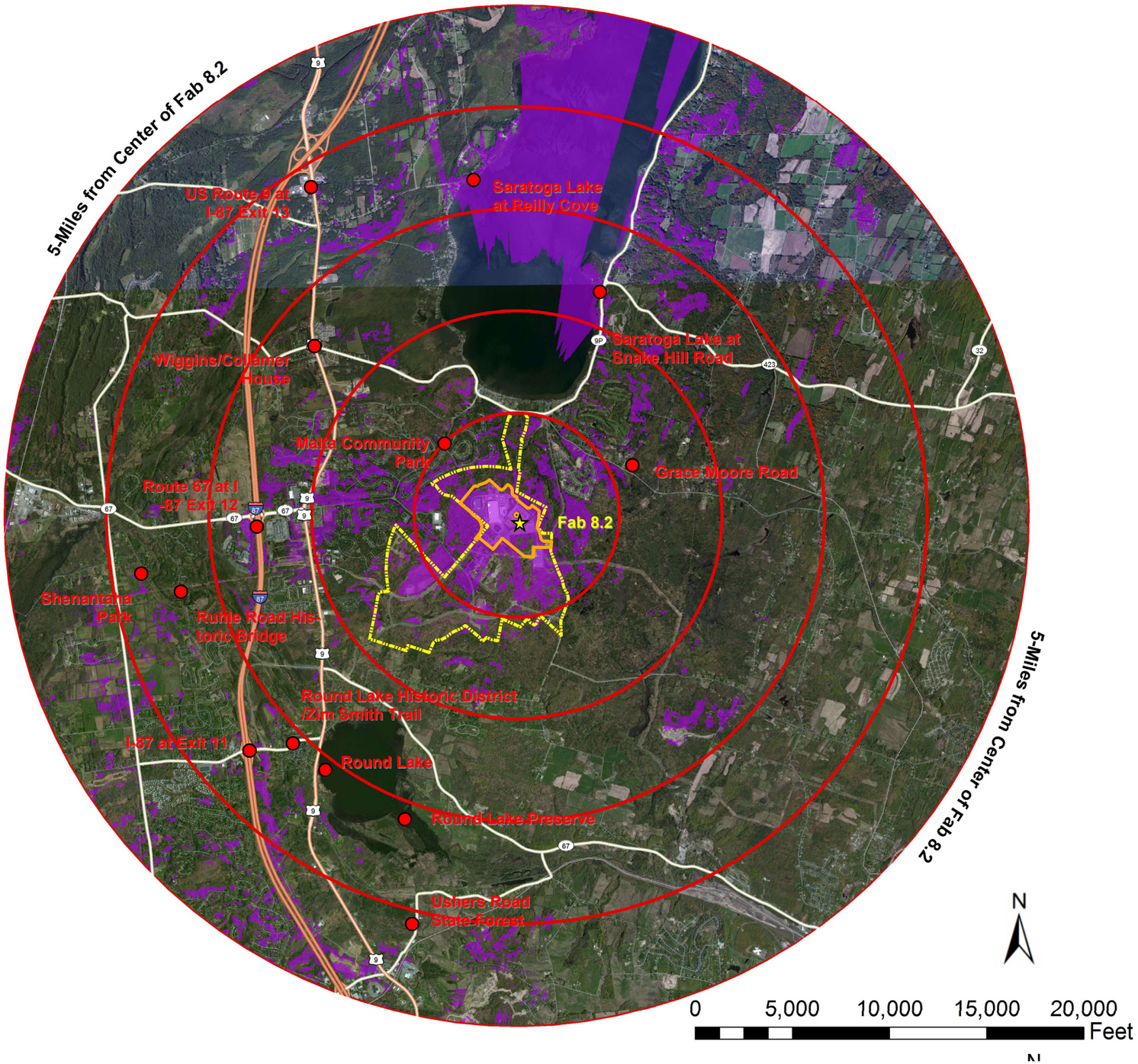


Legend

- Proposed Structure at 120'
- Study Area
- Areas of Potential Visibility
- GLOBALFOUNDRIES Site Boundary
- LFTC Site Boundary
- **Visual Resource**

FIGURE 1-31A

Vegetated Viewshed of Structure at 120 Feet



Legend

- Proposed Structure at 130'
- Study Area
- Areas of Potential Visibility
- GLOBALFOUNDRIES Site Boundary
- LFTC Site Boundary
- **Visual Resource**

FIGURE 1-31B

Vegetated Viewshed of Structure at 130 Feet

Comment 1-32: It is noted in the GIS viewshed analysis that heights of 80 feet were applied to the National Land Cover Dataset's (NLCD) "Evergreen" and "Mixed Forest" land cover classifications and heights of 25 feet were applied to "Woody Wetland" and "Shrub/Scrub" land cover classifications. The Applicant should identify how they arrived at these estimated land cover heights. In addition, the NLCD includes additional land cover classifications that are not identified in the GIS viewshed analysis, including "Deciduous Forest," which is identified as one of the primary land covers in section 3.4.1, Vegetation. The Applicant should incorporate such land cover classification(s), along with the respective estimated heights, into the GIS viewshed analysis. Finally, the analysis should include a discussion regarding visibility conditions during leaf-on and leaf-off conditions. As an alternative, the Applicant may choose not to include "Deciduous Forest" land cover classifications if the intent is to demonstrate leaf-off conditions. If this is the Applicant's intention, then such a discussion should be included in the analysis. (VIA)

Response: "Deciduous Forest" was included as a land cover classification used in Figure 2A National Land Cover Data - Tree Heights. However, reference to deciduous vegetation was inadvertently omitted this from the map legend. This omission is corrected in Figure 1-32. Figures 1-31A and 1-31B similarly include this land cover classification.

The 2011 USGS NLCD classifications used were 41 (Deciduous Forest), 42 (Evergreen Forest), 43 (Mixed Forest), 52 (Shrub/Scrub) and 90 (Woody Wetlands). NLCD Codes 41, 42 and 43 were assigned an average height of 80 feet. Codes 52 and 90 were assigned an average height of 25 feet. These vegetative height metrics are consistent with the assumptions made in the original VIA done in 2002 as part of the LFTC GEIS. Actual tree heights for Codes 41 and 42 in the project area are thought to be higher than 80 feet, but greater heights were not used in order to be consistent with the prior VIA.

Viewshed analysis does not distinguish between leaf-on and leaf off season. Because NLCD data is based on imagery with a 30 meter resolution, only stands of woodland vegetation 30 meters deep or greater are represented. At this depth deciduous vegetation is assumed to represent a complete visual barrier for the purpose of viewshed analysis.

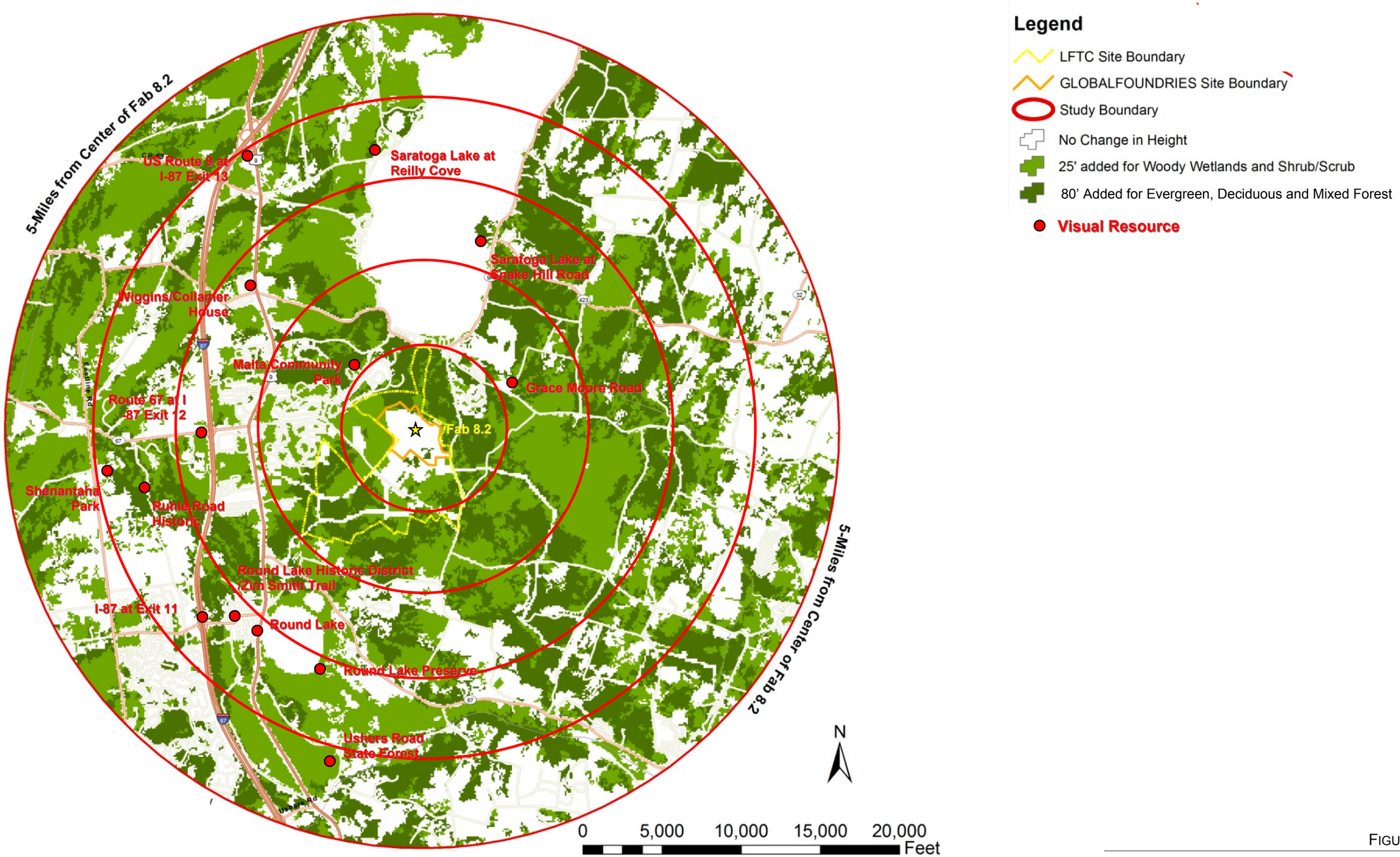


FIGURE 1-32

National Land Coverage Data—Tree Heights

Comment 1-33: Because visibility may decrease as distances increase, it would be helpful if the Applicant added concentric rings that identified one-mile increments from the center of FAB 8.2 to figure's 2A and 2D. (VIA)

Response: One (1)-mile range rings are provided on Figures 1-30, 1-31A 1-31B and 1-32.

Comment 1-34: Given the size and location of the proposed building, along with the surrounding topography, it appears that the northern and eastern portions of the proposed building envelope have the greatest visibility potential within the study area. The Balloon visibility study indicates that balloon representing the northeast corner "could not be located close to its intended position" due to overhead wiring. As such, the balloon visibility study should discuss how the inability to locate a balloon at the northeast corner may or may not have impacted the overall Visibility Study. (VIA)

Response: The location of the balloon representing the northeast corner had no affect on the overall visibility study. Because the northeast balloon could not be located near its intended position, its presence was effectively disregarded in the analysis. In actuality, this balloon was not visible from any off site location and therefore did not provide instance of false project visibility. The absence of a balloon at or near the northeast corner was compensated by the use of four other balloons tethered at known locations.

In addition, a digital 3D model of the proposed project and regional landscape was used to supplement the balloon visibility analysis. This 3D computer model is the same digital file used to create the photo simulations provided in the visual study.

The 3D computer model was developed using Autodesk Civil 3D®, and 3D Studio Max Design® software (3D Studio Max). The computer model was constructed using a digital elevation model (DEM) derived from the National Elevation Data Set (NED)(10 meter resolution) available from the US Geological Survey. Forest cover was derived from the National Land Cover Data set (NLCD)(30 meter resolution).

The 2011 USGS NLCD classifications used were 41 (Deciduous Forest), 42 (Evergreen Forest), 43 (Mixed Forest), 52 (Shrub/Scrub) and 90 (Woody Wetlands). NLCD Codes 41, 42 and 43 were assigned an average height of 80 feet. Codes 52 and 90 were assigned an average height of 25 feet. Within simulated lines-of-sight, the accuracy of defined forest areas was enhanced by digitizing forest areas from digital orthophotos (1m resolution, 2009) downloaded from the NYS GIS Clearinghouse. Forest cover was

modeled using individual 2D elements mapped with generic winter condition deciduous tree images and populated using the “GroundWiz” plug in for 3DS.

To the extent practicable, and to the extent necessary to reveal impacts, the basic dimensions of the proposed Fab 8.2 structure were built into the 3D model. Consequently, the scale, alignment, elevations and location of the visible elements of the proposed structure are true to the conceptual design. The Fab 8.2 building is modeled using a finished floor elevation (FFE) or 314.5 feet and is 110 feet in height throughout. Rooftop appurtenances are based on a potential arrangement provided by the project sponsor (refer to Response to Comment 41 below).

The 3D model includes the basic form of the proposed structure accurate to major dimensions. This "block model" is of sufficient detail to illustrate degree of visibility and visual character of the proposed structure including rooftop appurtenances. For the purpose of this evaluation the main building is assumed to be white in color. Rooftop stacks are assumed to be unfinished metal. A daylight system was created to provide precise sunlight conditions for rendering of shading and shadowing consistent with the date and time of each simulated photograph.

To confirm project visibility, simulated views of the 3D model were rendered from visual receptors that had been visited and photographed visited in the field. In all cases modeled balloons (3D elements placed in the digital model at the precise location and altitude as actual balloons) were visible (or not visible) in simulated views consistent with balloon visibility observed in the field. The use of both ballooning and 3D modeling provides a highly accurate cross check in predicting potential project visibility.

Figure 1-34 is a “bird's eye” view of the 3D model illustrating major project components.

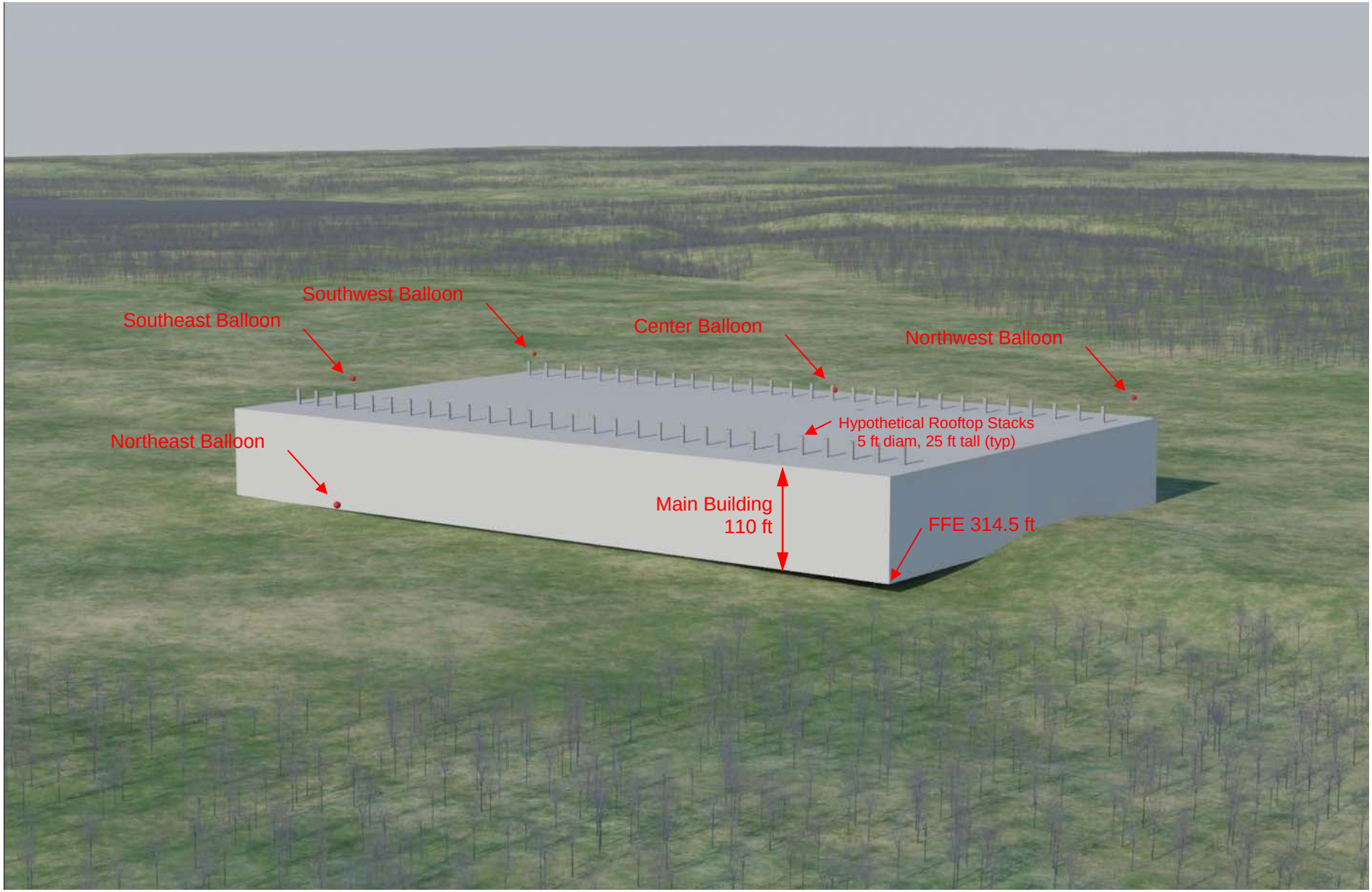


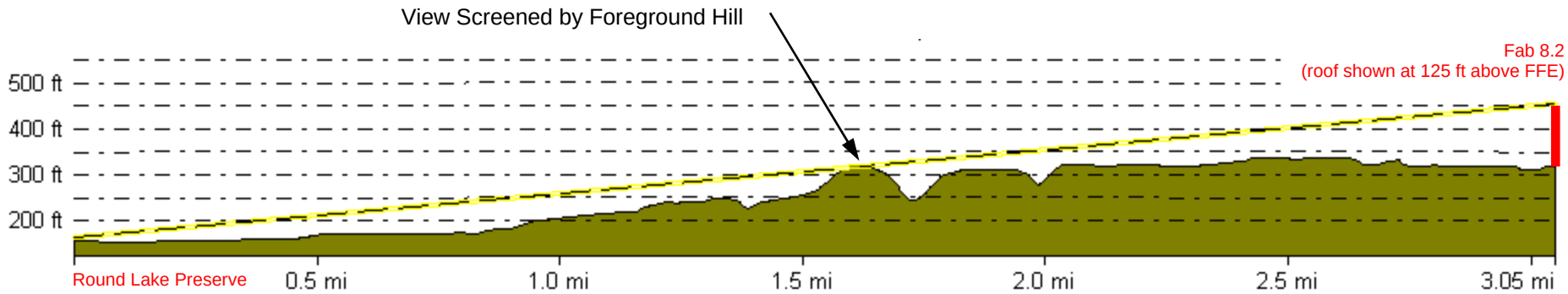
FIGURE 1-34

Three Dimensional Model
Bird's Eye View—Looking Southwest

Comment 1-35: The balloon visibility analysis indicates that the field team was unable to find public access to the Round Lake Preserve on November 30, 2012. However, the Applicant indicates that the line-of-sight between FAB 8.2 and Round Lake Preserve was examined using three-dimensional modeling. The Applicant should indicate if this analysis is intended to supplement the balloon visibility analysis. If so, it would be helpful if the Application provided a more detailed account of how three-dimensional model was developed and used to evaluate potential visibility. Finally, traditional line-of-site analysis includes line-of-site profiles that depict distance and elevation. The application should consider included such a figure in this analysis. (VIA)

Response: The methodology used to develop the three-dimensional model is discussed in the Response to Comment 34 above.

Figure 1-35 provides a line-of-sight profile as well as the previously submitted bare earth simulation from the Round Lake Preserve. Figure 1-30 - Bare Earth Viewshed of Structure at 130 Feet, illustrates areas of potential project visibility excluding the screening value of intervening vegetation. These analyses demonstrate that even without existing trees, Fab 8.2 will be fully screened from the Round Lake Preserve by existing topography.



Line-of-Sight Profile

5x vertical exagerration

Simulated "Bare Earth" View along Line-of-Sight

This illustration depicts the view from the Round Lake Preserve without consideration of existing vegetative cover. From this location Fab 8.2 would be fully screened by intervening landform.

Line-of-Sight Location Map

FIGURE 1-35

Line-of-Sight
Round Lake Preserve

Comment 1-36: The general direction of the proposed building should be identified in Figures 5A-5F, Existing Conditions Photos. (VIA)

Response: A hand held GPS unit was used in the field to identify the direction of the proposed main fabrication building from each photograph location. The proposed Fab 8.2 building location is roughly in the center of each photograph.

Figures 1-36A through 1-36G include an arrow identifying the approximate location of Fab 8.2 within the frame of each photograph.

Photo 1: US. Route 9 at I-87 Exit 13 (12/1/13 1:41pm)

Photo 2: Wiggins/Collamer House (12/1/13 2:09pm)

FIGURE 1-36A

Existing Condition Photos

Photo 3: Saratoga Lake at Reilly Cove (12/1/13 1:48pm)

Photo 4: Saratoga Lake at Snake Hill Road (12/1/13 2:19pm)

FIGURE 1-36B

Existing Condition Photos

Photo 5: Grace Moore Road (12/1/13 2:33pm)

Photo 6: Malta Community Park (12/1/13 2:39pm)

FIGURE 1-36C

Existing Condition Photos

SARATOGA ASSOCIATES

Photo 7: Route 67 at I-87 Exit 12 (12/1/13 3:02pm)

Photo 8: Ruhle Road Historic Bridge (12/1/13 3:13pm)

FIGURE 1-36D

Existing Condition Photos

Photo 9: Shenantaha Park (12/1/13 3:21pm)

Photo 10: I-87 Exit 11 (12/1/13 4:07pm)

FIGURE 1-36E

Existing Condition Photos

Photo 11: Round Lake Historic District/Zim Smith Trail (12/1/13 3:36pm)

Photo 12: Round Lake (12/1/13 4:03pm)

FIGURE 1-36F

Existing Condition Photos

Photo 13: Ushers Road State Forest (12/1/13 3:45pm)

FIGURE 1-36G

Existing Condition Photos

Comment 1-37: In order to evaluate relevant lighting and seasonal conditions, the date and time of the photographs that were used in the Photo/Simulations/Project Visualization should be identified. (VIA)

Response: Existing condition photographs were taken on December 1, 2012 between 1 PM and 4 PM. The weather on this date was mostly cloudy to overcast. The date and time of each photograph is provided in Figures 1-36A through 1-36G.

Comment 1-38: The small, red labeling on Figures 7B and 8B is difficult to read due to font size and respective contrast with background images. These figures should be revised accordingly. (VIA)

Response: These figures have been revised to improve legibility. Refer to Figures 1-40B and 1-40I that are provided as part of the Response to Comment 40.

Comment 1-39: In Figures 7B and 7C and Figures 8B and 8C of the Photo Simulations/Project Visualization, it appears that the proposed building is a brown hue. However, the building appears to be white in the Fab 8.2 Architectural Renderings. The Applicant should verify the proposed building color and ensure that the photo simulations accurately reflect the proposed conditions. (VIA)

Response: These photographic simulations have been updated for clarity. The simulated building is modeled using white as a facade color. The coloration of the structure appears muted consistent with the low angle of the sun during the winter season combined with the overcast weather conditions of the day. Darker shading is also evident on north facing surfaces. Refer to Figures 1-40D, 1-40G, 1-40K and 1-40N that are provided as part of the Response to Comment 40.

Comment 1-40: The contrast on Figures 7A-8C appears dark, making it difficult to distinguish buildings, land forms/land cover, and distances. It appears that the photos may have been taken during poor weather conditions and/or during evening or early morning hours. As such, tethered balloons and photo simulations are difficult to discern. Because the proposed building may have greater illumination/reflectivity during better weather conditions, earlier times of day, and during different seasons, the Applicant should consider providing revised simulations that illustrate these varying light conditions. (VIA)

Response: Base line photographs used in Figures 7A-8C were taken on December 1, 2012 between 1 PM and 2 PM. The weather on this date was overcast. The photos have been lightened to improve clarity. Figures 1-40E, 1-40F, 1-40G 1-40L, 1-40 M and 1-40N include existing condition photographs and photo simulations taken during mostly sunny conditions from Saratoga Lake at Reilly Cove and Saratoga Lake at Snake Hill Road.

Existing View (12/1/12 1:48pm)

FIGURE 1-40A

Project Visualizations
Saratoga Lake at Reilly Cove

Incremental Height Increase Diagram (12/1/12 1:48pm)

FIGURE 1-40B

Project Visualizations
Saratoga Lake at Reilly Cove

Photo Simulation Hypothetical Structure (12/1/12 1:48pm)

FIGURE 1-40C

Project Visualizations
Saratoga Lake at Reilly Cove

Photo Simulation Hypothetical Structure—Annotated View (12/1/12 1:48pm)

FIGURE 1-40D

Project Visualizations
Saratoga Lake at Reilly Cove

Existing View (3/3/12 8:49am)

FIGURE 1-40E

Project Visualizations
Saratoga Lake at Reilly Cove

Photo Simulation Hypothetical Structure (3/3/12 8:49am)

FIGURE 1-40F

Project Visualizations
Saratoga Lake at Reilly Cove

Photo Simulation Hypothetical Structure—Annotated View (3/3/12 8:49am)

FIGURE 1-40G

Project Visualizations
Saratoga Lake at Reilly Cove

Enlargement

Existing View (12/1/12 2:19pm)

FIGURE 1-40H

Project Visualizations
Saratoga Lake at Snake Hill Road

Enlargement

Incremental Height Increase Diagram (12/1/12 2:19pm)

FIGURE 1-40I

Project Visualizations
Saratoga Lake at Snake Hill Road

Photo Simulation Hypothetical Structure (12/1/12 2:19pm)

FIGURE 1-40J

Project Visualizations
Saratoga Lake at Snake Hill Road

Photo Simulation Hypothetical Structure—Annotated View (12/1/12 2:19pm)

FIGURE 1-40K

Project Visualizations
Saratoga Lake at Snake Hill Road

Existing View (12/1/12 2:19pm)

FIGURE 1-40L

Project Visualizations
Saratoga Lake at Snake Hill Road

Photo Simulation Hypothetical Structure (12/1/12 2:19pm)

FIGURE 1-40M

Project Visualizations
Saratoga Lake at Snake Hill Road

Photo Simulation Hypothetical Structure—Annotated View (12/1/12 2:19pm)

FIGURE 1-40N

Project Visualizations
Saratoga Lake at Snake Hill Road

Comment 1-41: Figures 7C and 8C illustrate hypothetical locations of rooftop equipment and stacks. The Applicant should indicate if these locations are based on any existing plans or concepts. Furthermore, the Applications should indicate what materials this equipment will be made of, its color, and weather it has any lighting. (VIA)

Response: Figure 1-34 illustrates the potential arrangement of rooftop stacks used in the 3D model. All stacks are 15 feet tall (125 feet above FFE) and five (5) feet in diameter. All rooftop equipment is assumed to be unfinished metal. Rooftop lighting is not currently planned.

Comment 1-42: In Figure 8C, Project Visualizations, when compared to the 110 foot line in Figure 8B, along with nearby vegetated horizon characteristics, it appears that the proposed building's roofline is dissimilar. The Applicant should review these two figures and verify the accuracy of the photo simulation with respect to the proposed building height a vegetative horizon. (VIA)

Response: Figures 8B and 8C were prepared using the same 3D model and camera alignment to assure accurate overlay and presentation of images. These two (2) images have been reviewed and found to align accurately. Refer to Figures 1-40B and 1-40D, and Figures 1-40I and 1-40K.

Comment 1-43: The Applicant indicates in the Summary and Conclusion section that "no identified sensitive visual resources within the 5-mile study area will be adversely impacted." The Applicant should provide a brief description or comment, for any of the sensitive visual resources that the project may be visible from, that identifies how the existing and proposed conditions will mitigate any potential visual impacts. (VIA)

Response: The visual study identified 14 sensitive visual resources within the study area. Viewshed analysis and balloon study confirmed that the project would be visible from only two (2) of these locations; Saratoga Lake at Reilly Cove and Saratoga Lake at Snake Hill Road. Based on viewshed analysis (refer to Figure 1-31B) similar visibility will also occur from on water locations in the central and western portion of the lake body at distances greater than 2.5 miles from the proposed Fab 8.2 structure.

Photographic simulations representative of Saratoga Lake views were prepared from two (2) shoreline vantage points; Reilly Cove and Snake Hill Road (3.2 and 2.3 miles north of the proposed Fab 8.2 structure respectively). Balloon study and 3D modeling

demonstrate that 110 foot tall Fab 8.2 structure will be substantially, if not completely screened by intervening vegetation from Saratoga Lake vantage points. No additional mitigation is necessary to prevent an adverse impact of this Fab 8.2 structure on the scenic resource of Saratoga Lake.

Balloon study and 3D modeling demonstrate that rooftop appurtenances (up to 125 feet above FFE will be visible at, or slightly above intervening vegetation. This degree of visibility is mitigated by the small scale of these elements combined with distance greater than 2.5 miles. As distances approach three (3) miles elements begin to lose visible detail and become less distinct. Atmospheric hazing begins to change colors to blue-grays, while distinguishable surface characteristics are lost. At this middle to background distance range visual emphasis is on the outline or edge of one landmass or water resource against another. Individual details, such as houses and other built elements are viewed within the context of the overall landscape. The vertical form of visible stacks is also broken by the branching pattern of foreground trees. Scale, distance and the broken appearance combine to substantially reduce the visual contrast and perceived impact of project visibility.

Comment 1-44: The photo simulations and the summary and conclusions indicate that portions of the proposed building may be visible, particularly through the "intervening vegetation" and above the "vegetated horizon," and that anything over the vegetated horizon may introduce elements that are visually contrasting with "the natural landscape of Saratoga Lake." Because it anticipated that the proposed building will be visible from Saratoga Lake (on the water), which is a local and regionally significant natural and recreational resource, without additional mitigation measures, it may not be "reasonable to conclude that simple visibility of the proposed rooftop appurtenances at or slightly above the tree line will not result in a detrimental effect on the perceived beauty of Saratoga Lake." (VIA)

Response: Figures 1-40C, 1-40F, 1-40J and 1-40M in the visual impact study illustrate that much of the proposed project taller than 110 feet in height is fully screened by intervening vegetation. All rooftop appurtenances within view remain low to the horizon and are difficult to perceive. Moreover, the visible portion of the rooftop structures is at such a distance and scale that visual contrast with the surrounding landscape is minimal. Within the context of the south shore of Saratoga Lake, the contrast of the proposed project is visually subordinate to existing structures directly visible along the lake shore.

Comment 1-45: Section 2.0 states that peak water usages is estimated as 125% of the average day flows based on GLOBALFOUNDRIES operation experience. While noted, it is requested that the Applicant provide documentation (meter readings, etc.) demonstrating the same. Also, based on the projected wastewater flows, it appears that the Applicant is indicating that approximately 3.4% of water used at the plant is not discharged to the wastewater system. More information regarding this "loss" of water is requested. It is noted that correctly identifying the anticipated water and wastewater rates is especially important as it relates to the capacity of the existing 30" sewer line (installed between LFTC and the SCSD#1 trunk sewer). The proposed average daily flow of the FAB 8 campus has been noted to be 9.5 MGD, and the capacity of the existing 30" sewer is 10 MGD. The Applicant has appropriately recognized this, by stating that "Once FAB 8.2 is at full capacity, the 30-inch sewer would be at 95% of its design flow..." Given the fact that the Applicant intends to utilize 95% of the capacity of the 30" sewer owned and operated by SCSD#1, it appears prudent that the Applicant provide a letter of service and consent by the SCSD#1 that they do not require improvements to this sewer, or any other portion of their system. (Water, Sewer)

Response: The GLOBALFOUNDRIES Project Management Office is in charge of estimating all future utility demands for the Fab 8 Campus, inclusive of Fab 8.2. Based on existing operational data, planned future operations, and input from the GLOBALFOUNDRIES Facilities Group, the Project Management Office has estimated a peak water flow rate equal to 125% of average daily flows. The 125% peaking factor is based on engineering judgment which includes seasonal variability (e.g., make-up of cooling towers) and variable use operations (e.g., backwashes and other intermittent activities) plus an allowance for occasional operational difficulties that limit ability to reclaim and reuse water from various sources. Estimates of water demands for the Fab 8 Campus are based on anticipated manufacturing activities for the following uses of water: wafer cleaning; non-contact cooling of process equipment; process uses (scrubbers, backwash, etc.); make-up for cooling towers; and sanitary uses.

Available data for the last year has been collected from SCWA pertaining to the existing water flows for the Fab 8 Campus. This data is summarized as follows:

Average Daily Water Consumption from SCWA

End of period	***Total Consumption (gallons)***	***Daily Consumption (MGD)***
2/29/2012	2654,010,000	2.077
4/30/2012	3143,450,000	1.402
5/31/2012	3142,465,000	1.370
6/29/2012	2952,562,000	1.812
7/31/2012	3249,860,600	1.558
8/31/2012	3149,889,400	1.609
10/1/2012	3147,597,000	1.535
10/30/2012	2944,308,000	1.528
11/27/2012	2837,729,000	1.347
12/31/2012	3345,748,000	1.386
1/29/2013	2940,015,000	1.380
2/28/2013	3045,073,300	1.502
3/26/2013	2743,239,000	1.601
4/30/2013	3550,781,700	1.451

There is no available metered water data pertaining to the documentation of peak water flow. The available data is useful for the limited purpose of calculating an average daily flow rate for metered periods, usually one to two months, and then subsequently using this actual water use information to calibrate engineering estimates for future water flows. Based on a review of the available information, it has been found that the future, average projections of water flow rates, as presented in the SSDEIS, serve as an accurate estimation of water flows. GLOBALFOUNDRIES has and will continue to monitor actual water flows and update their facility estimates.

It is important to point out that peak water flows are equilibrated by the 5 MG LFTC storage tank, and that the SCWA has provided a letter of service for Fab 8.2 (refer to Appendix G).

Loss of water is due to evaporation and consumptive use.

Comment noted regarding the importance of accurately estimating projected water and waste water flows.

The Applicant has received a letter of service from SCSD#1 for Fab 8.2. Refer to Appendix I.

Comment 1-46: Section 4.2 states that due to the anticipated water supply demands (10.7 MGD) of the FAB 8 campus (inc. FAB 8.2), Phase II improvements will be needed at the SCWA plant. It is also noted that in Section 4.1 states that Phase II improvements at the SCWA plant would increase its capacity to 12 MGD. This section should discuss what the existing demands are at the SCWA plant, as the proposed addition of FAB 8.2 could promulgate demands greater than 12 MGD, demanding on existing demands, thus requiring Phase III improvements to be made. Applicant to clarify. (Water)

Response: At the present time, it is anticipated that Phase III improvements (up to a capacity of 16 MGD) would be sufficient to service Fab 8.2. This tentative determination is subject to SCWA concurrence and is in part dependent upon future increases in water needs. Refer to Response to Comment 1-22.

Comment 1-47. Section 4.2 discusses that Phase II upgrades will be needed at the SCWA plant, however, there is no discussion regarding the potential additional water storage that may be needed in the SCWA system. Additional storage may be required by either the SCWA or NYSDOH to support the additional water supply demands sought by the Applicant. As such, the Applicant should discuss whether or not additional storage will be required and where this may be sited. (Water)

Response: At the present time, there are no known additional storage requirements being mandated by SCWA or NYSDOH. GLOBALFOUNDRIES does not have a permit from NYSDOH, and SCWA is not requiring additional water storage for Fab 8.2. There are no new tanks needed, nor proposed, to satisfy the fire protection needs for FAB 8.2. The existing SCWA owned 5 MG water storage tank located on Cordero Drive is sufficient to supply water to the Fab 8.2 project including fire flows. In addition

GLOBALFOUNDRIES owns and operates an additional water tank that serves as a back-up, for fire protection only, to the off-site 5 MG water tank.

Comment 1-48: Regarding Chapter I, Study Area and Methodology: The intersections along the access roadways of Luther Forest Boulevard, Stonebreak Road, and Hermes Road should be included in the study. All existing and future site traffic use/will use these intersections. (Transportation)

Response: An analysis of the Stonebreak Road\Hermes Road\Rocket Way intersection with the peak hour trips associated with full build-out of the Fab 8 Campus was conducted. Since this roundabout is expected to facilitate 60% of the peak hour site generated trips, it represented the worst case internal intersection. The results of the analyses indicate LOS C/B conditions during the AM and PM peak hours of adjacent street traffic. The traffic distributions and assignments for the internal road network and the level of service summary at the Stonebreak Road\Hermes Road\Rocket Way intersection are included in Appendix L.

Comment 1-49: Regarding Chapter II, Existing Volumes: The 2012 counts were only conducted for one hour periods. The basis for this should be presented. (Transportation)

Response: Two hour traffic counts at the study area intersections were conducted in 2011 and were used to verify the one hour peaks of 7:00 to 8:00 a.m. and 4:30 to 5:30 PM. Therefore, the traffic counts conducted in 2012 were conducted for the one hour confirmed peak periods which were confirmed to be 7:00 to 8:00 a.m. and 4:30 to 5:30 PM

Comment 1-50: Regarding Chapter II, Existing Volumes: Table 2.2 appears to be mis-titled. (Transportation)

Response: Table 2.2 should be titled "Summary of Automatic Traffic Recorder Count Data".

Comment 1-51: Regarding Chapter II, Existing Conditions: Discussion of the construction worker travel demand management techniques should be quantified as to the extent that the techniques are currently being used and if the techniques such as shuttle buses, ride-sharing and expansion of security checkpoints are practical and realistic. (Transportation)

Response: A detailed assessment of construction workers was not included in the traffic study as they travel to and from the site outside of the peak hours of adjacent street traffic. This assumption is consistent with all prior transportation studies and comparisons and has been confirmed by the two largest contractors currently on the site.

As noted in the traffic study, Wafer Way off of Cold Springs Road was recently opened as an additional access and security checkpoint for construction workers. The opening of this additional driveway helps to disburse traffic by the construction related personnel traveling to and from the Fab 8 Campus. During the construction of Fab 8.2, shuttle buses will be used to transport construction workers from the proposed off-site parking area on LFTCEDC lands (refer to revised Figure 5, Fab8.2 Construction Logistics Plan) which has two (2) proposed points of entrance, one from Cold Springs Road and the second from Cordero Boulevard.

GLOBALFOUNDRIES

FAB 8 CAMPUS
LUTHER FOREST TECHNOLOGY CAMPUS
TOWNS OF MALTA AND STILLWATER
SARATOGA COUNTY, NEW YORK

Figure 5:
Fab 8.2 Construction Logistics Plan

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Comment 1-52: Regarding Chapter II.D, Accident History: The Route 9/Route 67/Dunning Street roundabout is a critical location. NYSDOT modified lane assignments at this intersection in 2009 to eliminate the eastbound and westbound inside lanes from proceeding straight through to Dunning Street and Route 67 due to safety concerns.

Provide collision diagrams and data summaries to enable a review of the crashes. Obtain the actual police reports for the significant number of non-reportable crashes at the Route 9/Route 67/Dunning Street roundabout and include them in the diagrams and summaries. Calculate the crash rates and compare to statewide averages.

Provide the crash history, diagrams, and summaries for the crash history of the Route 9/Route67/Dunning Street roundabout prior to the change in lane usage on the eastbound and westbound approaches.

Identify the "safety concerns" about the Curry Road/Round Lake Road Bypass intersection and whether the data justifies those concerns. Provide a review of the design plans/as-built plans to verify that the roundabout meets the standards to accommodate the level of trucks using the intersection.

The concluding statements at the end of this section cannot be evaluated at this point without the additional information requested above. Identify the increase in crashes, if any, which may occur as a result of re-installing the original lane usage at the Route 9/Route 67/Dunning Street roundabout. Provide crash reduction factors and calculations to support anticipated, if any, crash reductions. (Transportation)

Response: Accident data was obtained from NYSDOT to identify the accident history at the US Route 9/NY Route 67/Dunning Street intersection. Accident summaries were provided by the NYSDOT Safety and Information Management System (SIMS) for an approximate 68-month period beginning at the opening of the roundabout on September 23, 2006 and ending with the most recent available data through April 30, 2012. All accident types, including non-reportable collisions, have been included in the evaluation. It is noted that NYSDOT evaluated the actual police reports (MV-104 reports) for the non-reportable accidents and included the available details in the verbal description reports used in the analysis. An accident analysis was performed in accordance with Highway Design Manual Chapter 5 to quantify the number of

accidents and identify any abnormal accident patterns or concentrations and to determine accident rates. NYSDOT has not developed statewide average accident rates for roundabout intersections; therefore, the comparison to statewide averages is not applicable. Accident collision diagrams are included in Appendix L.

It is noted that NYSDOT modified the signing and pavement markings at this intersection in May and June of 2009 in order to restrict through movements from the inside lanes of the eastbound and westbound approaches. Additional changes to pavement markings and signs were completed in fourth quarter of 2011 and included the addition of cross-hatching pavement markings on the entrance lanes and the addition of "to all lane" supplemental signs below the yield signs on the entrances. Table 1-52A summarizes the overall accident rate for this intersection that occurred from 2006 to 2012 and during the specific time periods that coincide with the modifications.

Table 1-52A: Intersection Accident Rate

Intersection	Number of Accidents	acc/MEV
Route 9/Route 67/Dunning St		
Overall (2,037 days)	243	4.57
Period 1 - 9/23/06 to 4/30/09 (951 days)	130	5.24
Period 2 - 5/1/09 to 11/30/11 (944 days)	107	4.34
Period 3 - 12/1/11 to 4/30/12 (152 days)	6	1.51

acc/MEV=accidents per million entry vehicles

A review of three specific time periods indicates that the accident rate decreased each time NYSDOT implemented a modification to the intersection with a significant decrease in the number of accidents over the latest improvement period. The predominant accident type and manner of collision for this intersection are summarized in Table 1-52B.

Table 1-52B: Accident Type and Manner of Collision

Route 9/Route 67/Dunning St	Type of Accident			Manner of Collision									Total
	Non-Reportable	Property Damage	Injury	Right-Angle	Rear-End	Head on	Left-Turn	Sideswipe	Fixed Object	Right-Turn	Motorcycle	Fire	
Overall - 9/23/06 to 4/30/12	60	168	15	103	28	2	33	69	4	1	2	1	243
Period 1 - 9/23/06 to 4/30/09	38	85	7	57	9	1	16	42	2	1	2	0	130
Period 2 - 5/1/09 to 11/30/11	21	79	7	42	19	1	16	27	2	0	0	0	107
Period 3 - 12/1/11 to 4/30/12	1	4	1	4	0	0	1	0	0	0	0	1	6

[1] A non-reportable accident indicates no personal injuries occurred and property damages totaled less than $1,000.

As shown in the table, the predominant accident type at this intersection is right-angle collisions occurring between an entering vehicle and a vehicle within the roundabout. The majority of the right angle collisions occurred on the eastbound and westbound approaches as indicated in the collision diagrams. The table indicates that the right-angle collisions decreased slightly after modification of the approaches to limit through travel movements to the outside lanes. The next prevalent accident types are left-turn and sideswipe collisions which typically occurred within the circulating roadway of the roundabout on the northbound and southbound approaches. It is noted that "left-turns" are not permitted at roundabout intersections and that the "left-turn" characterization of collisions on the accident reports typically represents a collision due to motorists improperly changing lanes from the outside lane of the circulating roadway to the inside lane. Based on a review of the data, the most recent roundabout modifications have had the most significant impact on accident reduction at this intersection.

Overall, the primary contributing factors to accidents were failure to yield right-of-way, improper passing or lane usage, following too closely, unsafe lane change, driver inattention, and disregard for traffic control. The table indicates that no fatalities were reported at this intersection and that only 6 percent of accidents involved an injury. The table also indicates that 25 percent of the accidents were considered non-reportable (non-injury collisions with less than $1,000 in damage) while 69 percent of the accidents

were categorized as property damage collisions. This history is consistent with roundabout intersections that typically experience less severe accident types based on the traffic calming nature of the intersection.

It is noted that the proposed mitigation at this intersection would reconstruct the deflection angles on the eastbound and westbound approaches and reassign the eastbound and westbound lane uses to allow through movements from both travel lanes. The reconstruction would eliminate the entry overlap that existed with the previous lane configurations. The proposed mitigation will require review and approval by NYSDOT. The design standards at the time of the roundabout construction did not require as much deflection on the approaches as the current standards. As part of the mitigation, the eastbound and westbound approaches would be reconstructed in order to update the deflection angles of vehicles entering and exiting the roundabout based on the current design standards. Accident reduction factors have not been established by NYSDOT for improving roundabout deflection angles; therefore, a specific accident reduction factor cannot be applied to this intersection to evaluate the safety improvement associated with the proposed mitigation. However, based on engineering judgment, it is expected that the design changes to increase the deflection and eliminate the entry overlap, may reduce right angle and overtaking collisions by further reducing speeds of entering and circulating traffic. Due to the proposed reconstruction of the intersection approaches and other measures already installed by NYSDOT, it is not expected that the proposed mitigation to allow for additional eastbound and westbound through movements will result in accident levels consistent with those previously experienced from 2006 to 2009.

A subsequent search of accidents by NYSDOT at the Curry Road/Bypass Road intersection indicated that there were three total accidents at this location during the 33 months of available accident history rather than the single crash previously stated in the revised Traffic Impact Study dated February 27, 2013. The accident evaluation indicates that in addition to the motorcycle crash previously reported, there were two rear-end collisions (one injury and one property damage accident) that occurred on the southbound Bypass Road approach, both resulting from the motorist following too closely. The collisions at this intersection do not appear to have a specific trend in vehicle direction or discernible pattern. The data did not indicate any heavy vehicles were involved in any of the three collisions. This intersection was designed and built to

meet design standards required by NYSDOT. The use of the mountable apron within the roundabout is designed for off-tracking by large trucks.

Comment 1-53: Regarding Chapter III, Build Year: A build year of 2022 was selected. While the footnote provides some rational for a 2022 build year, the past history of project progress seems to indicate that this is a very conservative build year, bringing with it a conservative analysis, via higher background growth. A more accurate picture may have been developed by using a more realistic build year, or analyzing for an interim build year such as 2018. (Transportation)

Response: Comment noted. The 2022 build year is a realistic estimate of the full build-out of the Fab 8 Campus based on projected headcount data provided by GLOBALFOUNDRIES. It is however noted that the general background growth in the study area of 0.3% per year is low and would not significantly alter the base volumes at the study area intersections between 2018 and 2022 and therefore would not alter the proposed mitigation presented in the traffic study.

Comment 1-54: Regarding Chapter III, No Build Volumes: In addition to a background growth factor, estimates trips from specific other projects are included in the compilation of the No Build volumes. Appendix B provides background data on these trips. However, the revised TIS present figures indicating the Existing volumes and then goes directly to figures presenting the No Build volumes. Figures showing the total volumes associated with the specific other projects should be provided. (Transportation)

Response: Traffic volumes figures outlining the background development projects are included in Appendix L.

Comment 1-55: Regarding Chapter III, Site Volumes: The data collected at the security booths should be presented in tabular format. (Transportation)

Response: The security booth count data collected the week of September 10, 2012 is included in Appendix A to the Traffic Impact Study. The hourly averages are summarized in Table 1-55 below.

Table 1-55: Stonebreak Road Extension Data

Stonebreak Road Extension Access to Fab 8 Campus			
Time	**Entering**	**Exiting**	**Total**
12:00 AM	9	19	28
1:00 AM	7	9	16
2:00 AM	5	10	15
3:00 AM	4	6	10
4:00 AM	13	5	18
5:00 AM	235	10	245
6:00 AM	367	110	477
7:00 AM	689	81	770
8:00 AM	350	50	400
9:00 AM	124	41	165
10:00 AM	68	74	142
11:00 AM	70	162	232
12:00 PM	166	176	342
1:00 PM	165	82	247
2:00 PM	90	92	182
3:00 PM	55	172	227
4:00 PM	52	289	341
5:00 PM	133	615	748
6:00 PM	54	537	591
7:00 PM	26	180	206
8:00 PM	16	50	66
9:00 PM	13	31	44
10:00 PM	25	32	57
11:00 PM	14	33	47
Total	**2,750**	**2,866**	**5,616**

Comment 1-56: Regarding Chapter III, Trip Distribution: Trip distribution is noted as taking into account existing travel patterns, a review of previous distribution used in the original TIS, and a review of roadway/intersection improvements in the study area. A more detailed

discussion should be presented indicating differences in trip distribution between the original study and the 2013 study and the reasons for any differences. Have the distributions been verified by CDTC as in the original study? If a zip code analysis was conducted, the data should be presented. Why is more traffic from I-87 north expected to use Exit 11 instead of Exit 12? Are there significant travel time savings in using Exit 11? (Transportation)

Response: Table 1-56 illustrates a comparison between the current regional distribution patterns and the regional distribution patterns utilized in the original study in 2002.

As shown in the table, the greatest modification was made to traffic destined to and from the east (primarily via NY Route 9P) and traffic traveling to and from the north. Current travel patterns indicate that very few site generated trips are currently using Cold Springs Road to access the site via NY Route 9P and Lake Avenue. The regional model data provided by CDTC and regional information provided by NYSDOT as part of the initial study was reviewed and the regional percentages are consistent with the exception of the shift in traffic to the north and east resulting in a higher percentage of vehicles traveling from the north via I-87 and US Route 9 versus Route 9P. Additional verification with CDTC was not completed as part of the updated study nor was a zip code study completed.

The use of Exit 11 provides a more direct route for vehicles entering the site via the main site driveway (Luther Forest Boulevard); therefore a percentage of southbound vehicles on I-87 were distributed south to Exit 11. An assessment of the expected travel time for the Build conditions (with improvements) for vehicles traveling southbound on I-87 was completed. The assessment indicated that a vehicle using Exit 11 to enter the site via Luther Forest Boulevard versus a vehicle using Exit 12 utilizing Stonebreak Road to enter the site will experience approximately 2.5 minutes additional travel time during the AM and PM peak hours.

Table 1-56: Regional Traffic Distribution Pattern Comparison

Direction of Travel and Facility	Original LFTC TIS	Revised TIS	Difference
From the North	32%	39%	+7
From the South	24%	25%	+1
From the West	22%	22%	0
From the East	22%	14%	-8
Total	**100%**	**100%**	**0**

Comment 1-57: Regarding Chapter III. B, Trip Generation: Provide rational for using original trip generation assumption of the 80% factor versus calculating new trips using the current rate of trips per employee based on data collected at the security booths. (Transportation)

Response: The current travel patterns at the site include a larger percentage of traditional workers since the office staff associated with the administrative buildings is included in the existing counts at the site. As the site continues to ramp up to full production with the development of Fab 8.2, the ratio of off-peak shift workers versus traditional workers will increase at the site. Based on the breakdown of current workers at the site, the current trip generation rate per employee is higher than expected in the future; therefore, the current trip rate at the site was not utilized in the future peak hour trip projections.

The use of the 0.8 factor is consistent with the traffic analysis completed for the Prior SEQRA Record and subsequent approvals for the Administrative buildings and the TDC. For reasons similar to those stated above, the current fluidity at the site with supplemental activities occurring throughout the day including, but not limited to, vendor activities, training, and hiring, the 0.8 factor cannot be verified using the current

travel patterns at the site. However, it is noted that the 0.80 factor utilized for the trip generation estimates at the site since 2002 was based upon operating information provided by Intel Corporation, a land use similar to GLOBALFOUNDRIES.

Comment 1-58: Regarding Chapter IV, Capacity/Level of Service: It is noted that the Capacity/Level of Service Analysis was conducted using software that automates the procedures contained in the 2000 Highway Capacity Manual (HCM). A later version HCM (2010) is available and the latest resources should be utilized in the analysis. Although NYSDOT has not officially endorsed the HCM 2010, they are considering the procedures and Synchro 8 software acceptable. Further, the NYSDOT Highway Design Manual states that capacity analyses are to be consistent with the most recent version of the HCM.

The HCM 2010 has been in use entering its third year. At a minimum, the build conditions for signalized intersections should be re-evaluated using the HCM 2010 procedures, and additional mitigation should be provided where necessary. The procedures affect how multiple lane approaches are handled and they have reduced the base saturation flow rate. As an example, for the PM Build condition at Route 9/Malta Avenue, the average intersection delay increases over 100 seconds/vehicle from 100 seconds/vehicle to over 200 seconds/vehicle when using the HCM 2010.

Include volume-to-capacity ratios with the level of service results. The volume of circulating traffic per lane, and entering traffic for approaches at roundabouts should be presented. This information in schematic format will facilitate review for the agencies and the public.

Provide complete printouts, not just summary sheets that show all inputs and outputs, of the signalized and roundabout analyses of the critical intersections. (Transportation)

Response: As noted in Chapter IV of the Traffic Impact Study, the NYSDOT current approved software includes the latest version of the 2000 software. The NYSDOT Highway Design Manual (referenced above) notes that the approved software programs are announced on the Department's Internet site. The use of the HCS 2000 software is consistent with the latest Department postings. The six intersections where mitigation is recommended are located on NYSDOT roadways and subject to NYSDOT review and approval prior to construction. Accordingly, performing the additional analyses is neither appropriate nor warranted. Refer to the letter from NYSDOT dated March 28, 2013 included in Appendix L.

The tables below provide the volume to capacity (V/C) ratios with the level of service results and a separate table provides the circulating and entering traffic for all approaches to the roundabouts.

Table 1-58A: Level of Service and V/C Summary – AM Peak Hour

Intersection		Control	AM Peak Hour (7:00-8:00)			
			Existing 2012	No-Build 2022	Build 2022	Build 2022 w/Imp
1) Route 9/Malta Ave/Malta Ave Ext.						
Malta Ave EB	LTR	S	C (26.4) [0.68]	C (29.7) [0.74]	C (29.7) [0.74]	--
	[LT]		--	--	--	C (31.5) [0.58]
	[R]		--	--	--	C (27.2) [0.34]
Malta Ave Ext. WB	LTR		B (17.2) [0.09]	B (17.4) [0.11]	B (17.4) [0.11]	**C (25.0)** [0.14]
Route 9 NB	L		D (36.7) [0.35]	D (38.5) [0.50]	D (38.5) [0.50]	D (37.4) [0.41]
	T,TR		C (29.5) [0.44]	C (32.3) [0.63]	C (32.8) [0.65]	C (28.3) [0.52]
Route 9 SB	L		C (34.0) [0.04]	C (34.0) [0.04]	C (34.0) [0.04]	C (33.7) [0.03]
	T,TR		C (30.0) [0.48]	C (34.1) [0.70]	**D (47.9)** [0.91]	C (32.9) [0.73]
Overall				C (32.2)	**D (38.1)**	C (30.9)
2) Route 9/Route 9P/East High St						
East High St EB	LTR	S	C (20.7) [0.24]	C (21.3) [0.32]	C (22.1) [0.42]	--
Route 9P WB	LTR		C (23.6) [0.53]	D (43.0) [0.86]	D (51.9) [0.91]	--
Route 9 NB	L		A (5.7) [0.06]	A (6.0) [0.11]	A (6.4) [0.14]	--
	T,TR		B (15.0) [0.24]	B (16.0) [0.38]	B (16.1) [0.40]	--
Route 9 SB	L		A (5.8) [0.09]	A (6.1) [0.14]	A (6.6) [0.25]	--
	T,TR		B (15.0) [0.24]	B (16.0) [0.37]	B (15.0) [0.48]	--
Overall				C (21.0)	C (22.2)	--
3) Route 9P/Plains Rd						
Route 9P WB	L	TW	A (7.8) [0.16]	A (8.1) [0.22]	A (8.4) [0.23]	--
Plains Rd NB	LR		B (11.7) [0.14]	B (13.6) [0.26]	**C (15.6)** [0.31]	--
4) Route 9P/Lake Rd						
Route 9P WB	L	TW	A (7.5) [0.00]	A (7.6) [0.00]	A (7.8) [0.04]	--
Lake Rd NB	LR		B (13.3) [0.40]	C (16.6) [0.50]	C (23.5) [0.63]	--
5) Lake Rd/Cold Springs Rd						
Lake Rd NB	L	TW	A (7.4) [0.00]	A (7.5) [0.00]	A (7.7) [0.00]	--
Cold Springs Rd EB	LR		B (11.6) [0.07]	B (12.1) [0.07]	B (13.0) [0.10]	--
6) Route 67/East Line Rd						
Route 67 EB	L	S	A (6.7) [0.04]	A (6.7) [0.04]	A (6.7) [0.04]	A (8.9) [0.04]
	TR		B (18.1) [0.83]	D (36.8) [0.97]	**E (70.3) [1.09]**	D (51.4) **[1.01]**
Route 67 WB	L		B (17.0) [0.65]	F (114) **[1.08]**	F (114) **[1.08]**	D (35.2) [0.54]
	TR		A (9.4) [0.51]	B (10.5) [0.59]	B (0.7) [0.60]	A (7.8) [0.48]
East Line Rd NB	LTR		D (38.0) [0.86]	D (44.3) [0.90]	D (44.3) [0.90]	--
East Line Rd SB	[L]		--	--	--	C (32.3) [0.48]
	[TR]		--	--	--	C (33.8) [0.56]
	LTR		D (40.0) [0.87]	D (47.1) [0.91]	D (47.1) [0.91]	--
	[L]		--	--	--	D (46.8) [0.76]
	[TR]		--	--	--	C (30.6) [0.36]
	Overall			D (37.7)	D (51.8)	D (35.7)
7A) Route 67/Exit 12 SB						
Route 67 WB	LT,T	R	A (6.1) [0.49]	A (6.2) [0.44]	A (6.3) [0.45]	--
I-87 Exit 12 SB	L,LT		A (2.3) [0.21]	A (2.9) [0.26]	A (4.3) [0.27]	--
Route 67 EB	T,TR		A (2.9) [0.37]	A (4.2) [0.39]	A (6.5) [0.47]	--
	Overall			A (4.9)	A (5.9)	--
7B) Route 67/Exit 12 NB						
I-87 Exit 12 NB	L,LT	R	A (4.2) [0.29]	A (4.0) [0.26]	A (4.6) [0.29]	--
Route 67 WB	T,T		B (19.2) [0.83]	B (12.5) [0.64]	B (12.8) [0.65]	--
Route 67 EB	LT,T		A (3.6) [0.17]	A (4.1) [0.22]	A (4.7) [0.29]	--
	Overall			A (7.9)	A (8.2)	--
8) Route 9/Route 67/Dunning St						
Route 9 NB	LT,TR	R	A (6.3) [0.22]	B (11.0) [0.43]	B (11.3) [0.45]	A (7.8) [0.34]
Dunning St WB	L,TR		B (12.1) [0.60]	C (26.5) [0.85]	C (29.4) [0.88]	A (8.6) [0.42]
Route 9 SB	LT,TR		B (11.5) [0.44]	C (27.2) [0.76]	**D (45.6)** [0.91]	C (31.5) [0.82]
Route 67 EB	L,TR		B (12.1) [0.55]	C (26.7) [0.85]	**F (116) [1.24]**	D (35.1) [0.85]
	Overall		B (10.9)	C (23.8)	**E (56.0)**	C (22.7)

Table 1-58A: Level of Service and V/C Summary – AM Peak Hour (Cont'd)

Intersection		Control	AM Peak Hour (7:00-8:00)			
			Existing 2012	No-Build 2022	Build 2022	Build 2022 w/Imp
9) Dunning St/Fox Wander W./ Partridge Drum						
Fox Wander W. NB	LTR	R	A (6.4) [0.14]	A (8.8) [0.19]	A (9.7) [0.20]	--
Dunning St WB	LTR		B (10.7) [0.58]	B (13.8) [0.69]	B (14.0) [0.70]	--
Partridge Drum SB	LTR		B (12.7) [0.35]	B (18.1) [0.45]	B (18.4) [0.46]	--
Dunning St EB	LTR		A (5.5) [0.31]	A (7.7) [0.49]	A (8.4) [0.54]	--
	Overall		A (9.0)	B (11.6)	B (11.9)	--
10) Dunning St/Fox Wander East						
Dunning St WB	L	TW	A (7.9) [0.00]	A (8.5) [0.00]	A (8.7) [0.01]	--
Fox Wander E. NB	LR		C (18.2) [0.29]	D (33.5) [0.49]	**E (38.8)** [0.53]	--
11) Dunning St/Plains Rd/ Hermes Rd						
Hermes Rd NB	LT	R	A (4.1) [0.04]	A (4.8) [0.10]	A (5.1) [0.11]	--
Plains Rd WB	TR		A (6.3) [0.40]	A (9.1) [0.55]	A (9.8) [0.58]	--
Dunning St EB	LR		A (5.8) [0.30]	A (9.5) [0.54]	**B (12.0)** [0.63]	--
	Overall		A (6.1)	A (9.0)	**B (10.5)**	--
12) Plains Rd/Wineberry Ln						
Plains Rd EB	L	TW	A (8.4) [0.00]	A (8.8) [0.01]	A (8.9) [0.01]	--
Wineberry Ln SB	LR		B (12.0) [0.05]	B (13.4) [0.06]	B (13.8) [0.06]	--
13) Plains Rd/Rosebay Rd/ Thimbleberry Rd						
EB	LTR	TW	A (9.0) [0.01	A (9.4) [0.01]	A (9.6) [0.01]	--
WB	LTR		A (7.4) [0.00]	A (7.5) [0.00]	A (7.5) [0.00]	--
NB	LTR		B (14.4) [0.18]	C (18.3) [0.23]	C (19.2) [0.25]	--
SB	LTR		B (13.3) [0.01]	C (15.8) [0.01]	C (16.4) [0.02]	--
14) Plains Rd/Larkspur Dr						
Plains Rd EB	L	TW	A (8.1) [0.00]	A (8.4) [0.00]	A (8.5) [0.00]	--
Larkspur Dr SB	LR		B (11.4) [0.04]	B (12.7) [0.04]	B (13.0) [0.05]	--
15) Plains Rd/Ermine Lair						
Plains Rd WB	L	TW	A (7.4) [0.01]	A (7.5) [0.01]	A (7.5) [0.01]	--
Ermine Lair NB	LR		B (11.5) [0.19]	B (13.4) [0.24]	B (13.9) [0.25]	--
16) Route 9/Route 67 (Round Lake)						
Route 9 NB	LT, TR	R	A (4.9) [0.08]	A (6.1) [0.15	B (11.0) [0.33]	**B (12.7)** [0.36]
Route 67 WB	L,TR		A (5.9) [0.23]	A (7.2) [0.30]	A (8.7) [0.37]	A (9.6) [0.39]
Route 9 SB	LT,TR		A (4.9) [0.24]	A (5.7) [0.30]	A (6.5) [0.34]	A (6.5) [0.34]
Round Lake Bypass EB	LTR		B (13.0) [0.44]	B (19.1) [0.60]	**F (262) [1.51]**	--
	[L,TR]		--	--	--	**C (25.9)** [0.84]
	Overall		A (6.8)	A (8.8)	**F (97.9)**	**B (14.8)**
17A) Round Lake Rd/Exit 11 SB						
Round Lake Rd WB	L	TW	B (10.6) [0.19]	B (11.3) [0.24]	B (12.6) [0.30]	--
I-87 Exit 11 SB	LR		B (12.1) [0.28]	B (14.9) [0.30]	**F (610) [2.24]**	--
Round Lake Rd EB	T	S	--	--	--	C (31.9) [0.86]
	R		--	--	--	A (4.1) [0.44]
Round Lake Rd WB	L		--	--	--	B (13.4) [0.60]
	T		--	--	--	A (7.9) [0.29]
I-87 Exit 11 SB	LR		--	--	--	D (37.8) [0.87]
	Overall		--	--	--	C (21.2)
17B) Round Lake Rd/Exit 11 NB						
Round Lake Rd EB	L	S	A (9.4) [0.45]	B (10.3) [0.51]	B (11.2) [0.55]	A (8.0) [0.43]
	T		A (7.8) [0.19]	A (8.2) [0.26]	**B (11.7)** [0.62]	A (8.4) [0.51]
Route Lake Rd WB	T		B (20.0) [0.55]	C (23.1) [0.68]	C (26.2) [0.75]	B (16.0) [0.49]
	R		A (3.1) [0.02]	A (3.2) [0.04]	A (3.3) [0.07]	A (2.5) [0.06]
I-87 Exit 11NB	L		B (16.6) [0.17]	B (16.6) [0.18]	B (16.6) [0.18]	**C (26.6)** [0.23]
	R		B (16.5) [0.15]	B (17.1) [.0.24]	**C (22.8)** [0.65]	**D (49.4)** [0.86]
	Overall		B (13.7)	B (15.1)	B (17.1)	B (18.5)
18) Curry Road/Round Lake Bypass						
Victorian Landing Drwy NB	[LTR]	R	--	A (5.1) [0.05]	A (8.5) [0.08]	--
Round Lake Rd WB	[L]TR		A (5.2) [0.12]	A (5.9) [0.14]	**B (10.2)** [0.22]	--
Round Lake Bp SB	L[T]R		A (5.1) [0.19]	A (5.9) [0.25]	A (6.5) [0.30]	--
Round Lake Rd EB	LT[R]		A (4.3) [0.24]	A (4.9) [0.29]	A (9.0) [0.61]	--
	Overall		A (4.7)	A (5.3)	A (8.5)	--

Table 1-58A: Level of Service and V/C Summary – AM Peak Hour (Cont'd)

Intersection		Control	AM Peak Hour (7:00-8:00)			
			Existing 2012	No-Build 2022	Build 2022	Build 2022 w/Imp
19) Route 9/George Ave						
George Ave EB	LR	S	C (23.0) [0.23]	C (23.3) [0.26]	C (23.3) [0.26]	--
Route 9 NB	L		A (4.6) [0.03]	A (4.6) [0.04]	A (4.6) [0.04]	--
	T,T		A (4.7) [0.07]	A (4.8) [0.12]	A (5.1) [0.17]	--
Route 9 SB	T,TR		A (5.0) [0.16]	A (5.2) [0.20]	A (5.2) [0.21]	--
	Overall		A (7.3)	A (7.0)	A (6.8)	--
20) Route 9/Ushers Rd						
Ushers Rd EB	LT	S	C (26.7) [0.37]	C (27.1) [0.41]	C (30.0) [0.56]	--
	R		A (0.1) [0.16]	A (0.1) [0.17]	A (0.1) [0.17]	--
Ushers Rd WB	LTR		C (26.8) [0.39]	C (27.0) [0.41]	C (27.0) [0.41]	--
Route 9 NB	L		A (5.4) [0.30]	A (5.8) [0.33]	A (5.9) [0.33]	--
	T,TR		A (4.4) [0.07]	A (4.5) [0.12]	A (4.7) [0.16]	--
Route 9 SB	L		B (16.7) [0.00]	B (16.7) [0.00]	B (16.7) [0.00]	--
	T,TR		B (18.9) [0.33]	B (19.7) [0.43]	B (19.9) [0.45]	--
	Overall		B (12.8)	B (13.1)	B (13.2)	--
21) Route 67/Farley Rd						
Route 67 EB	L	TW	A (7.7) [0.00]	A (7.8) [0.00]	A (8.0) [0.00]	--
Farley Rd SB	LR		B (10.5) [0.01]	B (11.0) [0.02]	B (11.5) [0.10]	--
22) Cold Springs Rd/Joyce Rd/Fitch Rd						
Fitch Rd NB	L	TW	A (7.2) [0.00]	A (7.3) [0.00]	A (7.3) [0.00]	--
Joyce Rd EB	LR		A (8.5) [0.00]	A (8.6) [0.00]	A (8.8) [0.00]	--
23) Cold Springs Rd/Elmore Robinson Rd						
Cold Springs Rd SB	L	TW	A (7.2) [0.00]	A (7.3) [0.00]	A (7.4) [0.01]	--
Elmore Rob. Rd WB	LR		A (8.7) [0.00]	A (9.0) [0.03]	A (9.8) [0.09]	--
24) Route 9/Stonebreak Rd/Phaeton						
Route 9 NB	[L]T,TR	R	A (6.0) [0.25]	A (7.3) [0.33]	**B (13.0)** [0.54]	--
Stonebreak Rd WB	L,[T]R		A (4.6) [0.05]	A (5.1) [0.06]	A (5.7) [0.10]	--
Route 9 SB	LT,T[R]		A (4.4) [0.23]	A (5.3) [0.29]	A (6.7) [0.40]	--
Phaeton Lane EB	[L,TR]		--	A (5.7) [0.9]	A (7.2) [0.15]	--
	Overall		A (5.1)	A (6.1)	A (9.1)	--
25) Cold Springs Rd/Cordero Blvd						
Cold Springs Rd NB	L	TW	A (7.3) [0.01]	A (7.4) [0.03]	A (7.8) [0.11]	--
Cordero Blvd EB	LR		A (0.0) [0.00]	A (8.5) [0.02]	**B (10.2)** [0.04]	--
26) Route 67/Luther Forest Blvd						
Route 67 WB	TR	R	A (7.1) [0.28]	A (8.0) [0.34]	**B (15.2)** [0.54]	--
Luther Forest Blvd SB	LR		A (4.5) [0.03]	A (4.7) [0.04]	A (5.5) [0.11]	--
Route 67 EB	LT		A (4.2) [0.21]	A (4.6) [0.25]	A (7.9) [0.54]	--
	Overall		A (5.5)	A (6.0)	A (9.9)	--

Key: TW, AW, S, R = Two-way stop, All-way stop, Signal, or Roundabout controlled intersection
NB, SB, EB, WB = Northbound, Southbound, Eastbound, Westbound intersection approaches
L, T, R = Left-turn, through, and/or right-turn movements, -- = Not applicable
L[T]R = LR represents the existing geometry, LTR represents the future geometry

Table 1-58B: Level of Service and V/C Summary – PM Peak Hour

Intersection		Control	PM Peak Hour (4:30-5:30)			
			Existing 2012	No-Build 2022	Build 2022	Build 2022 w/Imp
1) Route 9/Malta Ave/Malta Ave Ext.						
Malta Ave EB	LTR	S	C (29.4) [0.74]	D (40.3) [0.87]	D (40.3) [0.87]	--
	[LT]		--	--	--	D (48.1) [0.84]
	[R]		--	--	--	C (26.2) [0.26]
Malta Ave Ext. WB	LTR		B (17.9) [0.17]	B (18.1) [0.20]	B (18.1) [0.20]	**C (26.3)** [0.26]
Route 9 NB	L		D (51.7) [0.78]	E (78.5) [0.94]	E (78.5) [0.94]	D (48.5) [0.76]
	T,TR		C (34.3) [0.71]	E (64.5) **[1.00]**	**F (129) [1.18]**	D (48.9) [0.94]
Route 9 SB	L		C (34.6) [0.15]	C (34.6) [0.15]	C (34.6) [0.15]	C (34.3) [0.12]
	T,TR		D (47.9) [0.91]	F (118) [1.16]	F (133) **[1.19]**	D (50.4) [0.95]
	Overall		D (39.3)	E (78.9)	**F (107)**	D (47.2)
2) Route 9/Route 9P/East High St						
East High St EB	LTR	S	C (21.1) [0.36]	C (22.7) [0.49]	C (22.9) [0.50]	--
Route 9P WB	LTR		C (21.0) [0.35]	C (25.3) [0.60]	C (33.3) [0.77]	--
Route 9 NB	L		B (16.2) [0.40]	C (21.5) [0.62]	C (26.1) [0.70]	--
	T,TR		B (16.1) [0.46]	C (20.4) [0.71]	C (23.0) [0.80]	--
Route 9 SB	L		A (7.1) [0.33]	B (10.4) [0.55]	B (13.3) [0.62]	--
	T,TR		A (6.1) [0.18]	A (7.0) [0.28]	A (7.0) [0.29]	--
	Overall		B (13.7)	B (16.9)	B (19.8)	--
3) Route 9P/Plains Rd						
Route 9P WB	L	TW	A (7.9) [0.07]	A (8.2) [0.13]	A (8.2) [0.13]	--
Plains Rd NB	LR		B (12.6) [0.40]	C (18.4) [0.63]	C (22.5) [0.71]	--
4) Route 9P/Lake Rd						
Route 9P WB	L	TW	A (8.3) [0.01]	A (8.6) [0.01]	A (8.7) [0.02]	--
Lake Rd NB	LR		B (12.7) [0.25]	C (15.9) [0.35]	C (19.7) [0.52]	--
5) Lake Rd/Cold Springs Rd						
Lake Rd NB	L	TW	A (7.8) [0.00]	A (7.9) [0.00]	A (7.9) [0.00]	--
Cold Springs Rd EB	LR		B (11.3) [0.04]	B (11.9) [0.05]	B (13.9) [0.81]	--
6) Route 67/East Line Rd						
Route 67 EB	L	S	B (10.3) [0.22]	B (11.5) [0.29]	B (11.5) [0.29]	B (12.7) [0.32]
	TR		C (20.8) [0.82]	C (32.9) [0.94]	**D (37.2)** [0.96]	C (32.5) [0.93]
Route 67 WB	L		D (47.8) [0.87]	F (276) **[1.48]**	F (365) **[1.69]**	C (32.7) [0.58]
	TR		C (27.8) [0.90]	E (69.4) **[1.07]**	**F (108) [1.18]**	C (31.6) [0.96]
East Line Rd NB	LTR		C (31.1) [0.74]	C (33.7) [0.78]	C (33.7) [0.78]	--
East Line Rd SB	[L]		--	--	--	C (32.8) [0.51]
	[TR]		--	--	--	C (34.5) [0.60]
	LTR		C (20.5) [0.24]	C (20.5) [0.24]	C (20.5) [0.24]	--
	[L]		--	--	--	C (29.6) [0.21]
	[TR]		--	--	--	C (29.1) [0.18]
	Overall		C (26.9)	E (63.4)	**F (86.8)**	C (32.0)
7A) Route 67/Exit 12 SB						
Route 67 WB	LT,T	R	A (5.3) [0.43]	A (6.1) [0.43]	A (6.4) [0.46]	--
I-87 Exit 12 SB	L,LT		A (3.5) [0.15]	A (4.1) [0.17]	A (4.7) [0.19]	--
Route 67 EB	T,TR		A (8.8) [0.64]	B (10.2) [0.64]	B (11.1) [0.66]	--
	Overall		A (6.7)	A (7.7)	A (8.3)	--
7B) Route 67/Exit 12 NB						
I-87 Exit 12 NB	L,LT	R	A (4.2) [0.37]	A (3.9) [0.39]	A (4.0) [0.39]	--
Route 67 WB	T,T		B (11.1) [0.61]	B (15.0) [0.68]	B (17.3) [0.75]	--
Route 67 EB	LT,T		A (4.9) [0.38]	A (5.4) [0.37]	A (5.5) [0.38]	--
	Overall		A (6.7)	A (8.3)	A (9.5)	--
8) Route 9/Route 67/Dunning St						
Route 9 NB	LT,TR	R	B (15.7) [0.61]	D (53.1) [0.95]	**F (102) [1.12]**	C (26.8) [0.83]
Dunning St WB	L,TR		C (21.7) [0.73]	F (175) **[1.38]**	F (249) **[1.58]**	C (21.5) [0.68]
Route 9 SB	LT,TR		A (9.4) [0.38]	B (17.6) [0.65]	C (20.1) [0.69]	**C (32.7)** [0.81]
Route 67 EB	L,TR		B (15.2) [0.70]	D (52.7) **[1.04]**	**E (67.1) [1.11]**	D (38.4) [0.89]
	Overall		B (15.5)	E (70.4)	**F (105)**	C (30.3)

Table 1-58B: Level of Service and V/C Summary – PM Peak Hour (Cont'd)

Intersection		Control	PM Peak Hour (4:30-5:30)			
			Existing 2012	No-Build 2022	Build 2022	Build 2022 w/Imp
9) Dunning St/Fox Wander W./ Partridge Drum						
Fox Wander W. NB	LTR	R	A (6.7) [0.09]	A (8.0) [0.10]	A (8.1) [0.10]	--
Dunning St WB	LTR		A (9.2) [0.47]	B (16.1) [0.73]	B (18.5) [0.78]	--
Partridge Drum SB	LTR		A (7.1) [0.15]	B (11.4) [0.22]	B (13.0) [0.24]	--
Dunning St EB	LTR		A (7.2) [0.49]	A (8.9) [0.59]	A (9.0) [0.60]	--
	Overall		A (7.9)	B (12.0)	B (13.3)	--
10) Dunning St/Fox Wander East						
Dunning St WB	L	TW	A (8.4) [0.01]	A (8.9) [0.02]	A (9.0) [0.02]	--
Fox Wander E. NB	LR		C (18.3) [0.19]	D (33.5) [0.34]	**E (37.6)** [0.37]	--
11) Dunning St/Plains Rd/ Hermes Rd						
Hermes Rd NB	LT	R	A (9.4) [0.40]	C (23.9) [0.78]	**D (35.8)** [0.89]	--
Plains Rd WB	TR		A (7.1) [0.26]	B (14.1) [0.51]	B (17.1) [0.57]	--
Dunning St EB	LR		A (4.8)[0.30]	A (6.5) [0.43]	A (6.8) [0.45]	--
	Overall		A (6.8)	B (14.6)	**C (20.6)**	--
12) Plains Rd/Wineberry Ln						
Plains Rd EB	L	TW	A (7.6) [0.02]	A (7.9) [0.02]	A (7.9) [0.02]	--
Wineberry Ln SB	LR		B (10.4) [0.03]	B (11.7) [0.04]	B (11.8) [0.04]	--
13) Plains Rd/Rosebay Rd/ Thimbleberry Rd						
EB	LTR	TW	A (7.5) [0.00]	A (7.7) [0.00]	A (7.8) [00.00]	--
WB	LTR		A (8.3) [0.01]	A (8.7) [0.01]	A (8.8) [0.01]	--
NB	LTR		B (13.3) [0.05]	C (16.7) [0.08]	C (17.3) [0.25]	--
SB	LTR		B (11.4) [0.02]	C (15.1) [0.02]	C (15.5) [0.06]	--
14) Plains Rd/Larkspur Dr				]		
Plains Rd EB	L	TW	A (7.6) [0.01]	A (7.8) [0.01]	A (7.8) [0.01]	--
Larkspur Dr SB	LR		B (10.8) [0.02]	B (12.4) [0.02]	B (12.6) [0.02]	--
15) Plains Rd/Ermine Lair						
Plains Rd WB	L	TW	A (8.1) [0.04]	A (8.5) [0.05]	A (8.6) [0.05]	--
Ermine Lair NB	LR		B (12.3) [0.10]	B (14.9) [0.14]	**C (15.3)** [0.14]	--
16) Route 9/Route 67 (Round Lake)						
Route 9 NB	LT, TR	R	A (5.1) [0.19]	A (6.4) [0.27]	A (7.3) [0.32]	A (7.6) [0.31]
Route 67 WB	L,TR		A (7.6) [0.32]	A (9.9) [0.42]	**C (21.3)** [0.81]	**C (23.4)** [0.79]
Route 9 SB	LT,TR		A (5.8) [0.28]	A (7.5) [0.39]	**B (15.0)** [0.64]	**B (15.7)** [0.64]
Round Lake Bypass EB	LTR		A (7.6) [0.22]	B (10.7) [0.36]	B (17.3) [0.59]	--
	[L,TR]		--	--	--	B (19.2) [0.26]
	Overall		A (6.2)	A (8.0)	**B (15.3)**	**B (16.6)**
17A) Round Lake Rd/Exit 11 SB						
Round Lake Rd WB	L	TW	A (9.5) [0.18]	B (10.1) [0.24]	B (11.8) [0.42]	--
I-87 Exit 11 SB	LR		C (20.1) [0.51]	D (28.9) [0.56]	**F (814) [2.65]**	--
Round Lake Rd EB	T	S	--	--	--	C (21.0) [0.69]
	R		--	--	--	A (3.4) [0.18]
Round Lake Rd WB	L		--	--	--	B (14.6) [0.91]
	T		--	--	--	A (9.7) [0.68]
I-87 Exit 11 SB	LR		--	--	--	D (36.3) [0.82]
	Overall		--	--	--	B (17.2)
17B) Round Lake Rd/Exit 11 NB						
Round Lake Rd EB	L	S	B (11.5) [0.54]	B (14.4) [0.62]	B (15.0) [0.62]	**D (38.2)** [0.81]
	T		A (8.0) [0.23]	A (8.4) [0.30]	A (8.8) [0.36]	A (6.7) [0.30]
Route Lake Rd WB	T		C (31.7) [0.83]	E (63.4) **[1.01]**	**F (267) [1.52]**	D (53.0) [0.99]
	R		A (3.1) [0.02]	A (3.2) [0.03]	A (3.6) [0.18]	A (2.7) [0.16]
I-87 Exit 11NB	L		B (19.4)[]0.52	B (19.6) [0.54]	B (19.6) [0.54]	**C (34.7)** [0.70]
	R		B (16.1) [0.09]	B (16.7) [0.18]	B (17.3) [0.26]	**C (27.6)** [0.35]
	Overall		B (19.9)	C (31.7)	**F (114)**	C (34.0)
18) Curry Road/Round Lake Bypass						
Victorian Landing Drwy NB	[LTR]	R	--	A (4.7) [0.022]	A (5.1) [0.03]	--
Round Lake Rd WB	[L]TR		A (4.6) [0.12]	A (5.2) [0.15]	A (5.8) [0.16]	--
Round Lake Bp SB	L[T]R		A (6.4) [0.33]	A (7.9) [0.43]	**B (18.9)** [0.81]	--
Round Lake Rd EB	LT[R]		A (3.8) [0.20]	A (4.9) [0.29]	A (5.6) [0.36]	--
	Overall		A (5.1)	A (6.3)	**B (13.2)**	--

Table 1-58B: Level of Service and V/C Summary – PM Peak Hour (Cont'd)

Intersection		Control	PM Peak Hour (4:30-5:30)			
			Existing 2012	No-Build 2022	Build 2022	Build 2022 w/Imp
19) Route 9/George Ave						
George Ave EB	LR	S	C (22.7) [0.18]	C (22.9) [0.20]	C (22.9) [0.20]	--
Route 9 NB	L		A (4.8) [0.09]	A (5.0) [0.13]	A (5.1) [0.14]	--
	T,T		A (5.0) [0.16]	A (5.3) [0.22]	A (5.3) [0.23]	--
Route 9 SB	T,TR		A (5.0) [0.15]	A (5.2) [0.22]	A (5.5) [0.27]	--
	Overall		A (6.4)	A (6.3)	A (6.3)	--
20) Route 9/Ushers Rd						
Ushers Rd EB	LT	S	C (33.1) [0.70]	C (35.0) [0.74]	**D (36.2)** [0.75]	--
	R		A (8.7) [0.19]	A (8.7) [0.19]	A (8.7) [0.19]	--
Ushers Rd WB	LTR		C (24.6) [0.29]	C (24.7) [0.29]	C (24.7) [0.30]	--
Route 9 NB	L		A (8.4) [0.53]	B (10.1) [0.62]	B (12.0) [0.67]	--
	T,TR		A (6.5) [0.21]	A (6.9) [0.28]	A (6.9) [0.29]	--
Route 9 SB	L		B (19.4) [0.07]	B (19.5) [0.08]	B (19.5) [0.05]	--
	T,TR		C (21.0) [0.29]	C (22.2) [0.44]	C (23.4) [0.55]	--
	Overall		B (15.2)	B (16.1)	B (17.2)	--
21) Route 67/Farley Rd						
Route 67 EB	L	TW	A (7.5) [0.00]	A (7.6) [0.00]	A (7.6) [0.00]	--
Farley Rd SB	LR		B (10.0) [0.01]	B (11.1) [0.04]	B (12.2) [0.14]	--
22) Cold Springs Rd/Joyce Rd/Fitch Rd						
Fitch Rd NB	L	TW	A (7.2) [0.00]	A (7.3) [0.00]	A (7.4) [0.00]	--
Joyce Rd EB	LR		A (8.7) [0.02]	A (8.8) [0.02]	A (9.2) [0.02]	--
23) Cold Springs Rd/Elmore Robinson Rd						
Cold Springs Rd SB	L	TW	A (7.2) [0.00]	A (7.3) [0.01]	A (7.4) [0.04]	--
Elmore Rob. Rd WB	LR		A (8.6) [0.01]	A (8.8) [0.01]	A (9.1) [0.08]	--
24) Route 9/Stonebreak Rd/Phaeton						
Route 9 NB	[L]T,TR	R	A (4.9) [0.26]	A (7.0) [0.39]	A (8.0) [0.43]	--
Stonebreak Rd WB	L,[T]R		A (6.7) [0.23]	A (8.7) [0.29]	**B (18.4)** [0.70]	--
Route 9 SB	LT,T[R]		A (5.2) [0.25]	A (7.4) [0.39]	**B (10.9)** [0.51]	--
Phaeton Lane EB	[L,TR]		--	A (7.2) [0.18]	A (9.1) [0.21]	--
	Overall		A (5.3)	A (7.4)	**B (11.9)**	--
25) Cold Springs Rd/Cordero Blvd						
Cold Springs Rd NB	L	TW	A (7.3) [0.00]	A (7.3) [0.01]	A (7.3) [0.02]	--
Cordero Blvd EB	LR		A (8.7) [0.04]	A (8.7) [0.07]	**B (10.2)** [0.28]	--
26) Route 67/Luther Forest Blvd						
Route 67 WB	TR	R	A (3.9) [0.13]	A (4.2) [0.16]	A (5.1) [0.19]	--
Luther Forest Blvd SB	LR		A (4.9) [0.15]	A (5.5) [0.18]	**B (10.5)** [0.56]	--
Route 67 EB	LT		A (4.0) [0.17]	A (4.3) [0.21]	A (5.2) [0.28]	--
	Overall		A (4.2)	A (4.6)	A (7.9)	--

Key: TW, AW, S, R = Two-way stop, All-way stop, Signal, or Roundabout controlled intersection
NB, SB, EB, WB = Northbound, Southbound, Eastbound, Westbound intersection approaches
L, T, R = Left-turn, through, and/or right-turn movements, -- = Not applicable
L[T]R = LR represents the existing geometry, LTR represents the future geometry
X (Y.Y) [Z] = Level of Service (Average delay in seconds per vehicle) [volume to capacity]

Table 1-58C: Entering and Circulating Volumes at Roundabout Intersections

Intersection		AM Peak Hour (7:00-8:00)				PM Peak Hour (4:30-5:30)			
		Existing 2012	No-Build 2022	Build 2022	Build 2022 w/Imp	Existing 2012	No-Build 2022	Build 2022	Build 2022 w/Imp
7A) Route 67/Exit 12 SB									
Route 67 WB	LT,T	980 (980)	1325 (1325)	1335 (1335)		965 (965)	1285 (1285)	1375 (1375)	
I-87 Exit 12 SB	L,LT	465 (1130)	590 (1535)	690 (1645)		285 (1110)	355 (1475)	375 (1585)	
Route 67 EB	T,TR	845 (890)	985 (1150)	1085 (1350)		1015 (1065)	1385 (1500)	1405 (1540)	
7B) Route 67/Exit 12 NB									
I-87 Exit 12 NB	L,LT	490 (725)	700 (990)	700 (1190)		810 (1180)	985 (1520)	985 (1560)	
Route 67 WB	T,T	845 (1085)	1120 (1445)	1140 (1455)		780 (1265)	1125 (1660)	1305 (1750)	
Route 67 EB	LT,T	450 (450)	610 (610)	810 (810)		825 (826)	1115 (1115)	1155 (1155)	
8) Route 9/Route 67/Dunning St									
Route 9 NB	LT,TR	335 (695)	520 (1115)	545 (1185)	455 (1095)	790 (1505)	980 (1940)	1180 (2145)	1000 (1965)
Dunning St WB	L,TR	610 (1000)	720 (1335)	725 (1365)	645 (1285)	520 (1290)	760 (1920)	800 (2160)	605 (1965)
Route 9 SB	LT,TR	505 (1190)	735 (1550)	860 (1690)	860 (1690)	530 (1110)	815 (1620)	835 (1770)	835 (1770)
Route 67 EB	L,TR	480 (990)	700 (1345)	850 (1620)	850 (1620)	770 (1275)	1040 (1770)	1065 (1815)	1065 (1815)
9) Dunning St/Fox Wander W./ Partridge Drum									
Fox Wander W. NB	LTR	*86 (396)*	*86 (611)*	*86 (666)*		*51 (651)*	*51 (806)*	*51 (816)*	
Dunning St WB	LTR	*515 (621)*	*625 (731)*	*630 (736)*		*435 (601)*	*695 (866)*	*745 (916)*	
Partridge Drum SB	LTR	*146 (736)*	*151 (851)*	*151 (856)*		*90 (565)*	*91 (826)*	*91 (876)*	
Dunning St EB	LTR	*330 (341)*	*545 (556)*	*600 (611)*		*670 (685)*	*825 (841)*	*835 (851)*	
11) Dunning St/Plains Rd/ Hermes Rd									
Hermes Rd NB	LT	*30 (100)*	*70 (195)*	*80 (205)*		*280 (640)*	*490 (950)*	*560 (1020)*	
Plains Rd WB	TR	*455 (475)*	*550 (605)*	*575 (635)*		*185 (405)*	*275 (675)*	*280 (730)*	
Dunning St EB	LR	*275 (330)*	*490 (570)*	*545 (650)*		*395 (400)*	*540 (555)*	*550 (570)*	
16) Route 9/Route 67 (Round Lake)									
Route 9 NB	LT, TR	140 (510)	235 (235)	350 (1240)	350 (1240)	392 (702)	517 (907)	537 (1017)	537 (1017)
Route 67 WB	L,TR	225 (455)	265 (600)	315 (820)	315 (820)	275 (752)	355 (882)	705 (1367)	705 (1367)
Route 9 SB	LT,TR	580 (620)	700 (760)	720 (830)	720 (830)	610 (762)	785 (1007)	940 (940)	940 (940)
Round Lake Bypass EB	LTR	*245 (680)*	*310 (840)*	*760 (1305)*	--	*150 (585)*	*210 (805)*	*300 (995)*	--
	[L,TR]	--	--	--	760 (1305)	--	--	--	300 (995)
18) Curry Road/Round Lake Bypass									
Victorian Landing Drwy NB	[LTR]	--	*35 (427)*	*35 (877)*		--	*15 (372)*	*15 (462)*	
Round Lake Rd WB	[L]TR	*95 (335)*	*100 (425)*	*100 (875)*		*105 (250)*	*120 (335)*	*120 (425)*	
Round Lake Bp SB	L[T]R	*187 (277)*	*232 (352)*	*287 (407)*		*325 (425)*	*412 (537)*	*817 (942)*	
Round Lake Rd EB	LT[R]	*325 (327)*	*395 (397)*	*845 (847)*		*290 (290)*	*380 (392)*	*470 (482)*	
24) Route 9/Stonebreak Rd/Phaeton									
Route 9 NB	[L]T,TR	440 (675)	560 (865)	730 (1320)		630 (665)	790 (935)	825 (1025)	
Stonebreak Rd WB	L,[T]R	60 (385)	65 (560)	115 (610)		260 (870)	280 (1155)	685 (1560)	
Route 9 SB	LT,T[R]	580 (600)	690 (745)	920 (1000)		535 (620)	730 (935)	770 (1180)	
Phaeton Lane EB	[L,TR]	--	105 (785)	160 (1090)		--	175 (905)	190 (1115)	
26) Route 67/Luther Forest Blvd									
Route 67 WB	TR	*225 (420)*	*260 (485)*	*280 (900)*		*155 (180)*	*185 (220)*	*190 (300)*	
Luther Forest Blvd SB	LR	*25 (230)*	*30 (270)*	*85 (325)*		*140 (290)*	*170 (350)*	*545 (725)*	
Route 67 EB	LT	*280 (285)*	*330 (335)*	*725 (735)*		*225 (240)*	*280 (295)*	*355 (390)*	

Key: NB, SB, EB, WB = Northbound, Southbound, Eastbound, Westbound intersection approaches
L, T, R = Left-turn, through, and/or right-turn movements, -- = Not applicable
L[T]R = LR represents the existing geometry, LTR represents the future geometry
XX (YY) = Entry Flow (Circulating Flow)
Italics = Single-Lane Approach, Non-Italics = Double-Lane Approach
Based on information provided by FHWA in Roundabouts: An Informational Guide, the circulating flow and entering volume of a single lane roundabout should not exceed 1,800 vph. The capacity of a double-lane roundabout (circulating flow and entering volume) varies from 2,400 to 3,600 vph depending on the split of entering and circulating traffic.

Based on information provided by FHWA in Roundabouts: An Informational Guide, the circulating flow and entering volume of a single lane roundabout should not exceed 1,800 vph. The capacity of a double-lane roundabout (circulating flow and entering

volume) varies from 2,400 to 3,600 vph depending on the split of entering and circulating traffic.

To supplement the intersection analysis, roadway link analysis and ramp analyses were conducted in the study area and are summarized on Tables 1-58D through 1-58F.

Table 1-58D: Multi-Lane Facility Level of Service Summary

Location	Build 2022			
	AM Peak Hour		PM Peak Hour	
	NB	SB	NB	SB
US Route 9/NY Route 67 – Dunning St to Stonebreak Rd	A (6.5)	B (11.4)	B (14.0)	A (9.4)
US Route 9/NY Route 67 – Stonebreak Rd to Round Lake Bypass	A (7.5)	A (5.3)	A (8.3)	A (9.6)

Note: X (Y.Y) = Level of Service (Passenger Car/Mile/Lane)

Table 1-58E: Single-Lane Facility Level of Service Summary

Location	Build 2022	
	AM Peak Hour	PM Peak Hour
NY Route 67 – US Route 9 to Luther Forest Blvd	C [0.36]	C [0.36]
Round Lake Bypass – Curry Rd to US Route 9	C [0.36]	C [0.38]

Note: X (Y.Y) = Level of Service [Volume/Capacity]

Table1-58F: Ramp Junction Level of Service Summary

Location		Build 2022	
		AM Peak Hour	PM Peak Hour
Northbound	Exit 11 Off-ramp – Diverge	A (10.0)	C (20.1)
	Exit 11 On-ramp – Merge	B (14.2)	C (25.4)
	Exit 12 Off-ramp – Diverge	B (13.5)	C (25.1)
	Exit 12 On-ramp – Merge	A (8.4)	C (21.0)
Southbound	Exit 12 Off-ramp – Diverge	B (19.8)	B (14.6)
	Exit 12 On-ramp – Merge	C (26.4)	C (21.1)
	Exit 11 Off-ramp – Diverge	C (22.2)	B (16.0)
	Exit 11 On-ramp – Merge	C (23.0)	B (16.9)

Note: X (Y.Y) = Level of Service (Passenger Car/Mile/Lane)

The tables indicate that the ramp junctions and mainline segments of NY Route 67 and Round Lake Road will operate at LOS C or better during the proposed full build-out conditions.

Complete printouts of the intersection analysis at the six (6) key intersections are included in Appendix L.

Comment 1-59: Regarding Chapter IV, Capacity/Level of Service: Quantify the traffic volumes expected to use the series of connector roads that may reduce the congestion at Route 9/Route 67/ Dunning Street as the alternative mitigation plan in lieu of major reconstruction. It is noted that one of the connector roads is already a basis of their analysis – i.e. the western leg at Route 9 at Stonebreak Road – and therefore cannot be considered as alternative mitigation. Using the Town's connector road design guidelines that show narrow streets with parking on both sides, is it realistic to consider 15-25% of the turning movement counts diverting to the connectors?

Regarding the concept plan for the mitigation measures at the Route 9/Route 67/Dunning Street intersection, explain the traffic control for the northbound and westbound bypass lanes. Identify the assumptions for the merging distances east of the roundabout for taking three lanes down to one. Explain why an hourglass concept is preferred for the westbound lanes west of the roundabout.

Additional safety analysis is also requested as stated in earlier comments. (Transportation)

Response: An analysis of the US Route 9/NY Route 67/Dunning Street intersection indicates with the connector roads identified in the Town of Malta's Form Base Codes in place estimated that approximately 15% to 25% of the turning movements and 75% of the eastbound U-turns traveling into the Price Chopper Plaza would divert to the connectors during the peak hours. Figure 1-59A shows the diversion percentages for the specific turning movements while Figure 1-59B quantifies the total traffic diverted to the connector roads for the 2022 Build conditions. Table 1-59C summarizes the revised level of service associated with the alternative mitigation at the US Route 9/NY Route 67/Dunning Street intersection, which would remove the need for construction of northbound and westbound right-turn lanes. The eastbound and westbound approaches would still need to be reconstructed to modify the left-turn lanes to support through movements and increase the deflection. The level of service summary at the US Route 9/NY Route 67/Dunning Street intersection is included in Appendix L.

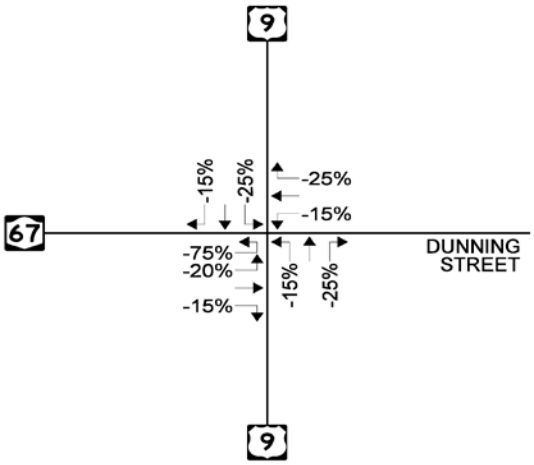

Figure 1-59A: Turning Movement Reductions

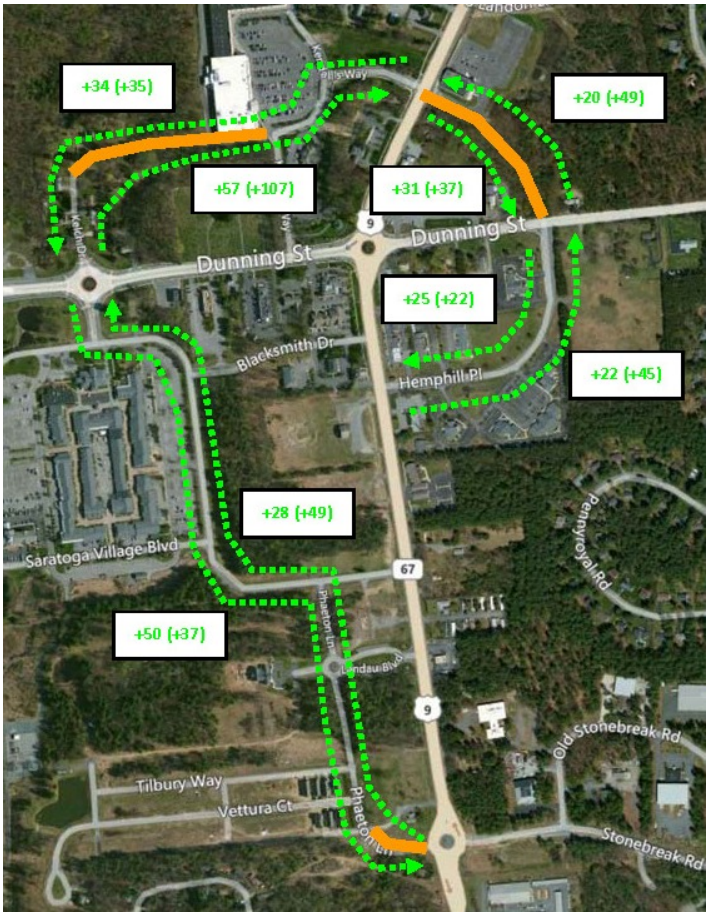

Figure 1-59B: Traffic Volume Diversions onto Connector Roads

(Note the existing U-turn volumes on the eastbound approach are 30 AM peak, 45 PM peak)

Table 1-59C: Intersection Level of Service Summary

Intersection		Control	AM Peak Hour (7:00-8:00)				PM Peak Hour (4:30-5:30)			
			Existing 2012	No-Build 2022	Build 2022	Build 2022 w/Imp	Existing 2012	No-Build 2022	Build 2022	Build 2022 w/Imp
8) Route 9/Route 67/Dunning St										
Route 9 NB	LT,TR	R	A (6.3)	B (11.0)	B (11.3)	B (10.3)	B (15.7)	D (53.1)	**F (102)**	D (50.3)
Dunning St WB	L,TR		B (12.1)	C (26.5)	C (29.4)	B (11.9)	C (21.7)	F (175)	F (249)	D (54.7)
Route 9 SB	LT,TR		B (11.5)	C (27.2)	**D (45.6)**	C (21.8)	A (9.4)	B (17.6)	C (20.1)	**C (20.9)**
Route 67 EB	L,TR		B (12.1)	C (26.7)	**F (116)**	C (20.7)	B (15.2)	D (52.7)	**E (67.1)**	C (21.0)
	Overall		B (10.9)	C (23.8)	**E (56.0)**	B (16.9)	B (15.5)	E (70.4)	**F (105)**	D (36.9)

Key: TW, AW, S, R = Two-way stop, All-way stop, Signal, or Roundabout controlled intersection
NB, SB, EB, WB = Northbound, Southbound, Eastbound, Westbound intersection approaches
L, T, R = Left-turn, through, and/or right-turn movements, -- = Not applicable
X (Y.Y) = Level of Service (Average delay in seconds per vehicle)

It is noted that recent direction from the Malta Town Board indicates the connector road alternative is the preferred mitigation at this intersection. While the question regarding the design of the right-turn lanes is no longer applicable, the Town Engineer requested that the original concept plan showing northbound and westbound right-turn slip lanes be updated to reflect standard deflection angles entering the roundabout to determine potential impacts associated with this alternative. The revised concept plan is included in Appendix L.

Providing two through lanes in the westbound direction on NY Route 67 between US Route 9 and Kelch Drive is not necessary from a roadway capacity standpoint. The hourglass concept is consistent with the original geometric configuration of the roundabout that will be enhanced with improved entering and exiting deflection angles.

Comment 1-60: Regarding Chapter IV, Capacity/Level of Service: Identify ITS components or other mitigation to be implemented that will alert drivers to divert to Exit 11 if unacceptable congestion occurs at Route 9/Route 67/Dunning Street. Include a travel time analysis of using the connector roads and Exit 11 versus using the Route 9/Route 67/Dunning Street intersection.

The discussion also indicates that traffic may divert to Exit 11 if heavy congestion is experienced. While this may help the Route 9/Route 67/Dunning Street intersection, it would add traffic to Exit 11 intersections above that analyzed. What impact would this additional traffic have? (Transportation)

Response: The traffic study does not recommend implementation of ITS components as the proposed mitigation and alternative mitigation for the US Route 9/NY Route 67/Dunning Street intersection provides adequate intersection operations.

An analysis was completed assuming that all of the southbound vehicles on I-87 diverted to exit the highway via the Exit 11 southbound ramp intersection (refer to Appendix L). With an additional 100 vehicles in the AM peak hour and 20 vehicles during the PM peak hour the Exit 11 southbound ramp intersection will operate at LOS C/B during the AM and PM peak hours while the Exit 11 northbound ramp intersection will operate at LOS B/C during the AM and PM peak hours. These levels of service are consistent with the 2022 Build condition analysis presented in the traffic study. An assessment of the expected travel time for the build conditions (with improvements) for vehicles traveling southbound on I-87 was completed and included in the response to Comment 56.

Comment 1-61: Regarding Chapter IV, Capacity/Level of Service: Provide a LOS and delay analysis of the impacts on the proposed road network in the 2022 design year assuming build-out of 500,000, 1,000,000, 1,500,000 and 2,000,000 square feet of additional manufacturing/office space in the LFTC, as was included in the original GEIS. (Transportation)

Response: The current application is seeking to amend the PDD Legislation for the LFTC Campus related to off-site transportation mitigation, which would replace the current phasing plans which was based upon the 500,000 to 2,000,000 ft^2 of ancillary development. The updated traffic analysis is consistent with the Findings Statement of the Prior SEQRA Record, where it notes that additional traffic studies will be required to monitor trip generation and timing of the proposed transportation improvements and to ensure that mitigation measures identified remain valid over time.

It is noted that the analysis included in the traffic impact study includes 600,000 ft2 of STEP development and 441,000 ft2 of office development space on the Fab 8 Campus, including both Administrative Building 1 and 2, accounting for 1,041,000 ft^2 of ancillary development depending upon the land use.

In response to the Town's concern regarding the additional capacity remaining on the surrounding roadway network, an analysis of the critical intersection of US Route 9/NY Route 67/Dunning Street was conducted to determine the amount of additional growth within the LFTC Campus could be supported. An analysis was conducted for the 2022

Build Condition for the PM peak hour and assumed the same distribution patterns analyzed in the traffic study. The results indicated that a development generating between 750 and 1,000 trips can be supported before the intersection operations drop to an overall LOS E condition. This level of development equates to between 600,000 and 800,000 SF of office development or between 750,000 and 1,000,000 SF of research and development space. This equates to total ancillary development potential in the LFTC Campus of between 1,641,000 and 2,041,000 SF depending upon the land use. It is noted that additional detailed analysis of future growth within the Town including the LFTC Campus would be conducted in detail if Town updates their Town GEIS.

The additional distribution of trips at the US Route 9/NY Route 67/Dunning Street intersection as well as the remaining study area intersections are included on figures in Appendix L. The PM peak hour level of service analyses at the US Route 9/NY Route 67/Dunning Street intersection with 750 and 1,000 trips associated with ancillary development is also included in Appendix L.

Comment 1-62. Regarding Chapter IV, Capacity/Level of Service, Appendix E Exit 11A Sensitivity Analysis: Provide a comparative analysis of the LOS/delay impacts on critical – i.e. mitigated - intersections using the same assumptions as the SSDEIS traffic study, but including Exit 11A instead of the alternative mitigation. The analysis should be consistent in terms of trips, trip distribution, and roadway conditions. Also perform the analysis with the same assumptions about LFTC traffic as in the comment above. (Transportation)

Response: The current application is seeking to amend the PDD Legislation for the LFTC Campus related to off-site transportation mitigation, which would include the removal of Exit 11A as part of the off-site mitigation for the construction of Fab 8.2. The study of 28 off-site intersection and proposed mitigation at six of the intersections for full build-out of the Fab 8 Campus resulted in adequate operations during the AM and PM peak hours of adjacent street traffic without Exit 11A. The Traffic Impact Study dated January 25, 2013, revised February 27, 2013, provides a comparison of the analysis in 2002 with Exit 11A to the current build condition analysis. A comparison of the two analysis results indicates that the level of service at the six key intersections are at an overall level of service D or better for either condition.

Regarding the process for a new interchange the following is offered:

As part of the study of the LFTC Campus in 2002, a Draft Conceptual Access Modification Proposal (CAMP, October 2002) was completed and submitted to the Federal Highway Administration (FHWA) for review. The FHWA responded in a memorandum dated February 5, 2003 indicating that their appeared to be no obvious flaws and noted that a full evaluation is necessary before a determination could be made.

A review of the Interstate System Access Informational Guide (August 2010, FHWA) provides details on the process of modifying an Interstate. The next step in progression of the request for an access modification to Interstate 87 would include an Interchange Modification Report (IMR) in which the following eight policy requirements much be addressed:

- The need cannot be addressed adequately by existing interchanges and/or local roads.
- The need cannot be addressed adequately by reasonable transportation system management.
- The proposed change in access does not have a significant adverse impact on safety.
- The proposed access connects to a public road only and will provide for all traffic movements.
- The proposal is consistent with local and regional land use and transportation plans.
- If potential exists for other interchange additions, coordination must occur between future plans.
- The request must demonstrate that appropriate coordination has occurred with future development plans and the proposed interchange modification.
- The proposal should include supporting information and current status of the environmental process.

The IMR must be submitted to the FHWA by the NYSDOT and undergoes a review and comment period by FHWA prior to acceptance or denial.

Appendix 8, Interstate & Other Freeway Access Control & Modifications, of the NYSDOT Project Development Manual should also be referenced for guidance on obtaining FHWA approval for new or revised access points on interstate highways.

A prudent first step in the Exit 11A process as well as for management of the transportation mitigation associated with Fab 8.2 may be to develop a task force to help manage and implement the process.

Comment 1-63: Regarding Chapter V, Mitigation Phasing and Costs: For the Exit 11 ramps, identify the biggest challenge to coordinating the signals. If they can't be coordinated, what other mitigation is needed? For intersections 3, 4, and 5 identify if the required right-of-way is obtainable, and therefore, if the mitigation is practical and achievable. (Transportation)

Response: The reference to the challenge surrounding the coordinating of the signals was in reference to the bridge structure acting as on obstruction in a radio based coordination system potentially resulting in the need to physically connect the signal systems together. The reference was not indicating that the system could not be coordinated and that an alternative mitigation would need to be pursued.

Identification of the potential right-of-way needs at the NY Route 67/East Line Road, US Route 9/NY Route 67/Dunning Street, and US Route 9/Malta Avenue intersections is anticipated to be determined as the project progresses. Two of the three intersections provide potential alternative mitigation plans and all three locations are identified in the Malta GEIS as having improvements implemented on behalf of the Town. It is anticipated that the NY Route 67/East Line Road intersection will require right-of-way and affect approximately six properties with minor strip takings. Mitigation at the US Route 9/NY Route 67/Dunning Street intersection will require right-of-way and impact approximately eleven properties with the initial mitigation plan and eight properties with the alternative mitigation plan to construct the connector roadways. The connector roadway construction will affect approximately six properties. Right-of-way is not anticipated at the US Route 9/Malta Avenue intersection. Additional coordination with the Town as well as NYSDOT regarding the proposed mitigation must continue before additional details on the designs are provided.

Based on available information the proposed mitigation is believed to be practicable and achievable subject to both the Town of Malta and NYSDOT review and approval and the potential for agency assistance with acquiring required right-of-way for such improvements.

2. Letter dated February 14, 2013 from Air Resources Group, LLC to the Chazen Companies.

Comment 2-1: The modeling summary states that refined modeling was followed relative to select fluoride emissions (i.e., hydrogen fluoride [HF] and nitrogen trifluoride [NF3]), and indicated conformance with the 6NYCRR Part 257-8 standard. Appendix B of "Appendix D" contains USEPA Memoranda for refined modeling of NOx and SO_2, but not for the halogens so I'd like to clarify what modeling refinement was performed for HF or other halogens in particular. (Air Resources)

Response: As set forth within the NYSDEC DAR-1 AGC/SGC Tables (dated 10/18/10), on Page 11, Item (E) DAR-1 "Equivalent" One-hour and Annual Fluoride Standards, it is stated:

There are 4 separate gaseous fluoride standards with different averaging times: one month (0.8 µg/m3), one-week (1.65 µg/m3), 24 hour (2.85 µg/m3) and 12 hour (3.7 µg/m3). None of these standards have one-hour or annual averaging periods.

A DAR-1 "equivalent" annual standard was derived for fluoride compounds as a guideline for determining environmental ratings or assessing an initial compliance analysis with the New York State fluoride standards. This "equivalent" annual standard was assigned to fluorine (CAS: 07782-41-4) and other inorganic gaseous fluoride compounds for which the DAR-1 "equivalent" standard was less than any preliminary AGC value. The DAR-1 "equivalent" annual standard was based solely on the one month standard for gaseous fluoride as it is reasonably protective of both the one month and one week standards.

A DAR-1 "equivalent" one-hour standard was also derived for fluoride compounds as a guideline for assessing compliance with the short-term State Fluoride standards. This "equivalent" standard was assigned to fluorine (CAS: 07782-41-4) and other inorganic contaminants for which the DAR-1 "equivalent" fluoride standard was less than any preliminary SGC value. The DAR-1 "equivalent" one hour standard was based on the 12 hour standard for gaseous fluoride and is protective of both the 24 hour and 12 hour standards.

- DAR-1 "Equivalent" annual Fluoride Standard = 0.8/12 = 0.067 (F) µg/m3.
- DAR-1 "Equivalent" one-hour Fluoride Standard = 3.7/0.7 = 5.3 (F) µg/m3.

As such, the modeling was conducted using the AERMOD software for Hydrogen Fluoride and Nitrogen Trifluoride to determine if the Part 257 standards are met for these compounds. The "refinement" consisted of utilizing the same AERMOD software but selecting averaging periods of 12 hours, 24 hours and 1 month; and subsequently comparing the model output to the Part 257 standards (the modeling software is not equipped to do a weekly averaging time as the options consist of 1, 2, 3, 4, 6, 8, 12, 24 hour, monthly and annual periods).

Comment 2-2: Absent from the modeling summary tables produced for the TDC (October 2012) but in data tables I have from July 2008 and April 2010, the Fab 8.2 report contains a Multi-Chemical Analysis Model Run (for non-HAPs and HAPs at insignificant levels) showing modeled concentrations relative to their AGCs and SGCs, as well as rate in tons per year, for a host of parameters. The "largest" emission of a single process parameter is nitrous oxide (> 1200 tpy), with one of the highest pound per hour discharge rates, and is only 28% of its AGC. The high numbers should be verified by C.T. Male. (Air Resources)

Response: The emission rates modeled reflect the current intended operations. NYSDEC has not established an SGC for nitrous oxide, and has established an AGC of 210 ug/m^3. The emissions data and the associated input and output data for the air dispersion model have been validated and the reported result is accurate.

Comment 2-3: EPA just recently (January 2013) lowered the NAAQS annual PM2.5 standard from 15 to 12 micrograms per cubic meter. Since modeling is performed as PM2.5 and I've seen no PM10 information, it is appropriate to inquire about the correlation between site generated PM, PM10 and PM2.5, since at least total PM will exceed 15 tpy with Fab 8.2. If PM10/PM2.5 policy criteria are met, including direct emissions and/or secondary formation in the atmosphere, then further addressing under SEQRA may be warranted. GF should address this. (Air Resources)

Response: For the purposes of air dispersion modeling completed during this project, all PM emission factors used were assumed to consist of PM-2.5 unless specific information was available to discern between PM/PM-10/PM-2.5. Using this conservative estimate within the modeling performed indicates that the project and the facility as a whole would not exceed the referenced NAAQS for PM-2.5.

Comment 2-4: It would be supportive of our understanding of the Fab Campus emissions and air quality to know the NAAQS increases (or otherwise changes) for the Fab 8.2 addition and for the total facility. (Air Resources)

Response: The modeling results included within the DEIS are indicative of all phases of the GLOBALFOUNDRIES Fab 8 Campus up to and including the project. An actual per phase breakdown of impacts was not completed as the intent of the SEQRA effort was to demonstrate compliance with the NAAQS for the entire site rather than for individual components. However, if desired, a comparison of the historic SEQRA record for the prior phases of development against the SEQRA record for the current project would provide a general assessment of the incremental impacts.

Comment 2-5: It would be useful to know all circumstances that contribute to the need for, or result from, transitioning from an ASF to a Title V permit. (Air Resources)

Response: As noted within this section of ARG's document, the need for a Title V permit was rooted in the Greenhouse Gas (GHG) Emissions from the facility exceeding 100,000 tons per year. This triggering of the need for a Title V permit occurred as a result of the GHG emissions associated with Fab 8.1 by itself. Neither the TDC nor Fab 8.2 project was the initial trigger for requiring a Title V permit.

Absent the Title V threshold being triggered by the GHG emissions, the combined Fab 8.1 and TDC operations would not have required a Title V permit. However, based on the data used for the air dispersion modeling effort associated with the Fab 8.2 project, it is anticipated the total emissions of hydrogen chloride (HCl) will exceed the 10 tpy threshold for individual hazardous air pollutants, and the facility would have triggered the need for a Title V permit as a result.

Issuance of a Title V Permit to the facility has resulted in additional reporting, including changes in reporting requirements from annual to semi-annual, as well as the requirement to prepare annual emissions statements, to name a few.

Comment 2-6: EPA just recently (January 15, 2013) lowered the NAAQS annual PM2.5 standard from 15 to 12 micrograms per cubic meter. Thus Particulate Matter (PM2.5) Model Run #2 which reported a concentration 70.88% of the standard (15ug/m^3) is actually 88.6% of the new standard, up from 63% after the TDC was added. File PM02 (PDF Page 48; table on page 28 of 30). (Air Resources)

Response: The model results summary for PM-2.5 (page 28 of 30) has been updated to include this change. No impact relative to the status of compliance with the NAAQS has resulted from the decrease in allowable concentration. Refer to Appendix D, Supplemental Air Modeling Data.

Comment 2-7: In Summary of Air Modeling Results (Table page 1 of 30) the SO2 Run #01 did not total correctly from the "maximum" and "background"; the correct total should be 46.41 ug/m^3. (Air Resources)

Response: Comment noted. The summary table, page 1 of 30, has been revised. Refer to Appendix D, Supplemental Air Modeling Data.

Comment 2-8: The Draft PDD Amendment, Air Pollution Control, states that "…The first phase of development will be below Title V thresholds (i.e., not a Major Source of air pollutants) and will be permitted under a NYSDEC State Facility Permit." This is old language; verb tenses need updating to better reflect that the facility will now be operating with a Title V air permit. (Air Resources)

Response: Comment noted. The final PDD amendment language will reflect that Fab 8.1, the first phase of development, has become a Title V air emission source. As explained in the SSDEIS, this is due to new greenhouse gas (GHG) regulations promulgated by USEPA.

3. Community Response Board (CRB) Meeting Minutes dated March 13, 2013

Comment 3-1: GF expanded original traffic analysis to include all original intersections reviewed under the first EIS and used current traffic counts from 2010-2012. General questions on the data collected include:

- *How did they determine peak AM and PM hours? Peak PM should run for a longer period since end time does not accurately reflect commuters from Albany/Schenectady areas.*
- *Do data counters have a time stamp or just total count with specified time period?*
- *How were percentages calculated for trip distribution? The rate of use at Hermes Road appears to be higher than what is stated.*

- *Can shifts at the different buildings be staggered to alleviate some of the stacking at various intersections at both peak and off peak times? (Transportation)*

Response: The morning and afternoon peak hours of adjacent street traffic typically occur between the hours of 7:00 and 9:00 a.m. and 4:00 and 6:00 PM The AM and PM peak hours for the subject study area were determined based upon two-hour turning movement counts conducted in 2011. A review of continuous count data on US Route 9, NY Route 67, Round Lake Road, and Dunning Street confirmed that the afternoon peak hour does not extend beyond the 6:00 PM hour as traffic volumes after 6:00 PM are less.

The data counter for both turning movement counts and automatic traffic counts are time stamped.

Trip distributions presented in the initial traffic study prepared in 2002 were developed in cooperation with the Capital District Transportation Council (CDTC) and NYSDOT. The trip distributions in the updated traffic study were verified and adjusted based upon current travel patterns in the study area.

Seven percent of the GLOBALFOUNDRIES peak hour trips were distributed to the site via Hermes Road. Not all traffic currently using Hermes Road is associated with the Fab 8 Campus.

The traffic impact study assessed the impacts associated with the Fab 8 Campus during the AM and PM peak hours of adjacent street traffic and provides mitigation at six (6) study area intersections to provide adequate operating conditions. No additional shifting of peak hour trips is proposed at this time.

Comment 3-2: The report defines Hermes Road as one of the key entrances into the facility. Local residents have long fought to exclude this road as a main entrance to the tech campus. During the initial EIS, there was discussion about keeping this entrance for emergency access only. While CRB acknowledges that access is needed for facilities along Hermes Road, it is suggested that access be better controlled between GF and rest of the campus through the use of security gate or some other measure such as an emergency barrier. During initial discussions for LFTC, it was proposed that permanent barriers be installed with access only for emergency vehicles, and we would ask that the Town again consider this option. This would prevent commuter traffic. CRB acknowledges that development around the area has had a large impact

on traffic on Dunning/Plains Roads, but there needs to be consideration for protection of the existing neighborhoods. (Transportation)

Response: Hermes Road is a privately owned roadway, and GLOBALFOUNDRIES does not control the accessibility of this road. An analysis of the impacts of closing Hermes Road to GLOBALFOUNDRIES traffic was completed in response to a Town comment and did not result in changes to the proposed intersection mitigation presented in the traffic study. Refer to Responses to Comments 3-1 and 3-11.

Comment 3-3: Mitigation measures are needed to steer traffic to Stone Break and Route 67 entrances and away from Hermes Road. Neighbors have difficulty exiting local neighborhoods onto Dunning and Plains, particularly in the evening hours. (Transportation)

Response: The traffic impact study accounts for 93% of the site generated traffic entering and exiting the site via Stonebreak Road, Luther Forest Boulevard, or Cordero Boulevard based upon current and future expected travel patterns. The analysis results further indicate that additional capacity exists at these three (3) access driveways to handle additional traffic if diverted from Dunning Street.

Comment 3-4: GF is suggesting mitigation at various roundabouts and street intersections to improve traffic flow. Who would pay for these improvements and who would be responsible for maintenance? While the mitigation measures would speed traffic through the intersections, they appear to defeat the intentions of the recent downtown district for a more walkable town. (Transportation)

Response: As presented in the SSDEIS, funding sources from the potential pools of State, local and private funds, as well as the approach for the off-site transportation improvements have not yet been determined. GLOBALFOUNDRIES acknowledges that these must be determined and the mitigation implemented before the relevant traffic thresholds are reached. GLOBALFOUNDRIES is a stakeholder and active participant in those discussions and actions, especially given the significant scale of its investment to date in Malta and the Fab 8 Campus, as well as future investment of multiples more.

The Town has indicated that the alternative mitigation plan at the US Route 9/NY Route 67/Dunning Street enhancing roadway connections should be progressed in lieu of constructing additional turn lanes on the northbound and westbound approaches of

the roundabout. The implementation of additional connectors to reduce traffic and minimize the cross-section of the roundabout is consistent with Malta's Highway Access Planning Guide and the Downtown Malta Form Based Code.

Comment 3-5: The SSDEIS is light on mass transit options. CDTA offered bus service in 2011, but many feel that the line was installed too soon. Targeted mass transit should be studied further. Has a study been done to see where workers live? This type of study could be used to develop targeted mass transit systems. It was pointed out that many of the residents of Chapel Hill (East Line Road in Ballston) work in LFTC. If a shuttle service were set up from Malta Mall, it would decrease the number of vehicles along Round Lake Road. This section of Malta has experienced tremendous growth and increased traffic pressures because of developed in the town and outlying towns. (Transportation)

Response: A transit feasibility study for the combined LFTC and STEP Campuses was completed in 2011. This transit feasibility study analyzed three (3) conceptual service alternatives consisting of a commuter shuttle, diversion of CDTA Route 409, and a lunchtime shuttle. The commuter shuttle option would provide connection to the existing CDTA Northway Express Route service via the Exit 12 Park and Ride lot. The diversion of CDTA Route 409 option would modify the existing Route 409 service to run through the LFTC Campus. The lunchtime shuttle option would connect to downtown businesses. This 2011 report concluded that shuttle service was not feasible due to ridership demand metrics not being met.

Comment 3-6: The study reinforces the need for Exit 11A since many of the town's intersections are reaching failing grades by DOT standards. Exit 11A will provide a more direct and faster route into the campus and take pressure off of the secondary roadways. The process needs to start now. There is concern that if the Exit 11A trigger is removed from the EIS, there will be little political and economic pressure to develop the exchange. Mitigation of the roundabouts takes away the incentive. (Transportation)

Response: The proposed off-site intersection improvements will adequately mitigate traffic impacts from the project. While the construction of Exit 11A is not recommended as mitigation resulting from the proposed growth at the Fab 8 Campus, GLOBALFOUNDRIES is supportive of the initiative to pursue Exit 11A as a future long term solution to growth within the Town. Mitigation for Exit 11A includes the formation of a task force by the Town of Malta whose mission is to work with the

appropriate agencies to assist with the planning and implementation of a new Northway Exit 11A.

Comment 3-7: Has there been a review of the facility emergency plan for evacuation of LFTC personnel? Are vehicles directed away from residential areas (LF) in order to allow safe evacuation of the surrounding neighborhoods? (Emergency Response)

Response: Emergency excavation routes for the Fab 8 Campus rely upon the utilization of all existing entrances. All truck traffic would continue to use only the Stonebreak Road and Route 67 entrances to access State Roads. Consistent with the existing trip distribution, it is anticipated that a small amount of non-truck traffic would exit to either the Dunning Street or Cold Spring Road corridors.

Comment 3-8: The revised visual impact study better illustrates the impacted view from the lake and Stillwater neighborhoods. Does the law allow for mitigation fees to be imposed and for money to be used to improve other view sheds in Malta? (VIA)

Response: The existing PDD does not provide a mechanism for assessment of mitigation fees associated with visual impact. The proposed action is not anticipated to result in an incremental adverse impact and no mitigation fees are proposed.

Comment 3-9: Will new utility lines be above ground or underground? (Water/Sewer/Natural Gas/Electric Power)

Response: All water, sewer, and natural gas lines will be underground. New electric lines from the LFTC Substation to the Fab 8 Campus will be overhead, and a combination of overhead and underground electric lines will be installed internal to the Fab 8 Campus.

Comment 3-10: Will the construction of upgrades to power and gas impact Dunning Street traffic? (Electric Power/Natural Gas)

Response: No, there are no planned upgrades for electric power or natural gas along the Dunning Street corridor.

Comment 3-11: Appendix H page 103 mentions an alternative access to NYSERDA from route 9 such that the Dunning Street access is no longer used. I would like to see that alternative explored. (Transportation)

Response: Comment noted. The existing roadway network internal to the LFTC Campus presently provides alternative access for the STEP Park, however there is no plan to discontinue use of the Hermes Road main access.

Comment 3-12: Sales tax relief is requested. What is the impact on the finances of the town? the county? What is the financial impact of additional commuters and trucks on town and county roads? other services-ambulance, fire, --Might financial impacts be studied regionally? (Economic Impact)

Response: Economic impacts are an existing baseline SEQRA condition that is unchanged by the proposed action. The local and regional economic impacts were previously studies as part of the GEIS for LFTC and remain valid.

Comment 3-13: The tables of modeling data on fluoride, chloride and hydrochloric acid data discharges are very hard to read. I would like to see a simple table with annual discharges - current model, full build model and DEC limits. What I think I read is that chlorine discharge will be 95% of allowable. That is very close to the limit. I would like the PDD to list where DEC is taking measurements and at what frequency. I don't think chlorine is monitored locally. (Air Resources)

Response: The existing air dispersion modeling results are comprehensive and legible and compare estimated air emission levels with NYSDEC short term and long term guidance values. Refer to Response to Comment 7-9 regarding required compliance air monitoring. The existing PDD requires that air permits be obtained from NYSDEC and that the Town be copied on permit submissions. No change to the PDD in this regard is anticipated.

Comment 3-14: The traffic section page 15 includes consideration of check points to distribute construction traffic. Might check points be used to distribute worker traffic? (Transportation)

Response: All GLOBALFOUNDRIES workers (and visitors) use the main entrance. In the future, as a planned connector road is build from the existing Cordero Boulevard-Luther Forest Boulevard intersection towards the main entrance, an additional route internal to the LFTC Campus could be used.

Comment 3-15: On noise-I think there needs to be better definition of undesirable sounds and triggers that require remediation. If remediation is required, then homeowners affected might be financially compensated until the remediation is complete. Was consideration given to putting

the additional new units underground? Have homes affected lost value? Might the CRB recommend financial compensation for homeowners were the value of their homes is reduced because of any new noise from the new units? (Noise)

Response: Refer to Responses to Comments 1-6 and 1-7. Additional noise mitigation measures have been implemented by GLOBALFOUNDRIES with the objective of improving noise levels to the surrounding residential areas. It is not practicable to install new CPS units underground. Based on the proposed additional noise mitigation measures for Fab 8.2, a reduction in the value of residential homes is not anticipated. Noise levels during operation of Fab 8.2 will be subject to continued monitoring to demonstrate compliance with the PDD noise thresholds.

4. Undated letter from Lynda Bablin of Malta.

Comment 4-1: GLOBALFOUNDRIES should he held to their original PDD approval requirements and have an Exit 11A constructed prior to being granted a certificate of occupancy for Fab 8.2. The PDD should not be modified to remove the Exit 11A requirement. (Transportation)

Response: GLOBALFOUNDRIES is supportive of a new Exit 11A. However, there presently is not a demonstrated need for a new interchange on I-87 based on existing traffic data. Moreover, there has not been advanced planning for Exit 11A, and it takes several years to apply for and obtain permission from FHWA before a new interchange on a Federal Highway could be constructed. In recognition of these facts, GLOBALFOUNDRIES has proposed alternative off-site intersection improvements in order to obtain the right to build Fab 8.2. Mitigation for Exit 11A includes the formation of a task force by the Town of Malta whose mission is to work with the appropriate agencies to assist with the planning and implementation of a new Northway Exit 11A.

Comment 4-2: I believe it is very short sighted to exclude the significant increase in traffic that has already taken place as a result of such projects as Ellsworth Commons, and other projects, that will bring the number of additional vehicles going through Malta into the thousands per day, not including Fab 8.2. (Transportation)

Response: The traffic study includes projected trips associated with the full build out of the Fab 8 Campus and accounts for both existing and planned projects in the area,

including Ellsworth Commons and other projects. In addition a background growth rate is included in the traffic study.

Comment 4-3: GLOBALFOUNDRIES' alternative traffic mitigation is extremely lame and inadequate, and will accomplish little if anything as it relates to the smooth flow of traffic throughout Malta. (Transportation)

Response: The traffic study indicates that alternative traffic mitigation proposed by GLOBALFOUNDRIES has indicated that adequate levels of services will be achieved at off-site intersections.

Comment 4-4: I find it shocking all of a sudden that the intersection of Malta Avenue Extension and Route 9 is problematic. Creating a right-turn lane is going to increase the danger for people exiting onto Route 9 south from Hearn Road as they depart the medical project.

Response: The proposed mitigation at the Malta Avenue Extension-Route 9 intersection includes a proposed right-turn lane onto Route 9 south. This mitigation is proposed to address the projected build out of the Fab 8 Campus. It is not anticipated that the new turning land will present a danger to traffic exiting the Hearn Road facility.

5. Carol Marotta, Stillwater Planning Board, fax dated April 6, 2013.

Comment 5-1: According to the documents submitted, there is minimal impact to Stillwater roads. However Cold Spring will be the main access road for the estimated 2,500 Construction Workers and the shuttles, and there has been no detailed analysis provided. (Transportation)

Response: Consistent with the Prior SEQRA Record, the updated Traffic Impact Study (February 27, 2013) includes a detailed assessment of six (6) intersections within the Town of Stillwater including Route 9P/Lake Road, Lake Road/Cold Springs Road, Cold Springs Road/Cordero Boulevard, Cold Springs Road/Elmore Robinson Road, Cold Springs Road/Joyce Road, and Route 67/Farley Road.

Additional detail on Construction Worker traffic is included in the Response to Comment 1-51.

Comment 5-2: The Cold Spring Road/Lake Road intersection is awkward due to angle of intersection and curves and hills on both roads. Common sense points toward need to address this intersection. (Transportation)

Response: Comment noted. The Cold Springs Road/Lake Road intersection was analyzed in detail in the updated Traffic Impact Study and is estimated to operate at level of service A/B conditions through the 2022 Build conditions with no proposed mitigation. A review of accident records for this intersection has not disclosed the presence of an abnormally high amount of traffic incidents, despite the existing intersection configuration.

Comment 5-3: In the 2003 Transportation Analysis Level of Service based on the previous 4 Phase build-out, added a signal to Lake Road/9P in Phase 3, and then a signal to Lake/Cold Spring in Phase 4 (p. 175 in section 4.5 Transportation Volume 1 DEIS LFTC). Now that 4 Phases/fabs are 3 fabs for full build-out, these intersections definitely need further consideration. (Transportation)

Response: The updated Traffic Impact Study includes a detailed evaluation of the Lake Road/Route 9P and Lake Road/Cold Springs Road intersections. Based on the updated existing and projected future traffic volumes, mitigation is not recommended at either intersection as level of service A/C (9P/Lake) and A/B (Lake/Cold Springs) conditions are maintained at these intersections through the 2022 Build conditions.

Comment 5-4: Phase 3 in 2003 was "defined as development that generates 1,800 during the AM peak hour of adjacent street traffic and 1,875 during the PM peak hour (p. 177, 2003). Current traffic projections using the "factor of 0.8" show 2,034 AM and 1,974 trips for PM (p. 26 SSDEIS Appendix G Traffic Impact Analysis, 3.1.13). Current figure are in excess of the Phase 3 thresholds. (Transportation)

Response: Comment noted. Table 3.2 in the updated Traffic Impact Study provides a comparison of the Fab 8 Campus peak hour trip generation to the trip thresholds for the Prior SEQRA Record.

Comment 5-5: If eliminate the 0.8 factor, traffic projections increase to 963 current employees AM plus the proposed 1,580= 2,543 and in PM, 935 plus 1,533= 2,468. These figures are now in excess of 2003 Phase 4 thresholds of 2,400 AM and 2,500 PM. There is no mass transit, most

vehicles I've observed entering or leaving have only one occupant, and most people prefer the flexibility and control of traveling independently and alone. (Transportation)

Response: Comment noted. The use of the 0.8 factor is consistent with the traffic analysis completed for the Prior SEQRA Record. Trip generation information provided by the Institute of Transportation Engineers (ITE) for an office land use (which typically operates with traditional workers) was referenced to compare trip generation characteristics. Based on ITE data, an office land use generates trips at a rate of 0.48 trips per employee during the AM peak hour and 0.46 trips per employee during the PM peak hour; therefore, the application of a 0.80 factor is conservative.

Comment 5-6: I did not see "applying a factor of 0.8 to account for fluctuations in schedules: (p. 26, 2013) of workers in the 2003 analysis. Does this mean that 20% of the workforce is not at work? So, employees will be on vacation or otherwise off site 10 weeks/year? (52 weeks/yr x .20 = 10.4 weeks/yr). (Transportation)

Response: The use of the 0.8 factor is consistent with the traffic analysis completed for the Prior SEQRA Record. For clarification, the factor is applicable to flow of traffic during the peak hours and does not imply that fluctuations during a single hour equates to vacation time.

Comment 5-7: Prevailing winds come from west and north, so Stillwater is downwind from factory. The levels of Chlorine, Fluorines, and particulates (both 2.5 and the even smaller 10) are pushing the maximum allowable. Why all the different time segments – maximum hourly, maximum 12-hr, 24-hr and 1-month. Then lbs per year. (Air Resources)

Response: Prevailing winds generally come from the west-northwest and the south (refer to wind rose provided in Appendix D). All air contaminants are estimated to have concentrations that are within SGC and AGC values which is a SEQRA baseline condition that is unchanged. The various time segments and rate estimates are consistent with the generally accepted standards associated with air permitting regulations in New York State.

Comment 5-8: If hourly is maxed, shut down process so that the daily or annual average is reduced? Is this manipulation allowable and acceptable? (Air Resources)

Response: This manipulation is not appropriate. Fab 8.2 will be permitted and operated pursuant to a modified Title V permit from the NYSDEC. Compliance monitoring will be done pursuant to the NYSDEC permit for Fab 8.2.

Comment 5-9: In the 2008 SFEIS for 3 fabs, the numbers are significantly less (Table 4, p. 15, Appendix E Air Permit Application), and there are actual Maximum Hourly Concentration Data for each contaminant based on the Receptor Grid with Topographic data. This information is missing from current Appendix D, Summary of Emission Point Modeling. (Air Resources)

Response: Refer to Response to Comment 6-1 which provides isopleths maps identical to those provided in the 2008 SFEIS for AMD's proposed development.

Comment 5-10: Why such a dramatic increase of contaminants? Is there a remedy – more efficient scrubbers, oxidizers, stack dimensions, grade of chemical? (Air Resources)

Response: There is not a dramatic increase of air contaminants. The SEQRA baseline condition of achieving NAAQS, SGC, AGC or Part 257 (for fluorides) is unchanged, and the model results demonstrate compliance with all applicable standards.

Comment 5-11: There are regulations about how much fluorides in ppm can be eaten by "grazing ruminants" – cows, horses, sheep, deer, etc. This is of concern. (Air Resources)

Response: It is not reasonable to suspect that fluoride levels from Fab 8.2 would create a situation in which there would be teeth or bone density impacts to farm animals. The air emission levels for fluoride contaminants are very low in comparison to the levels present in plants that could cause such an impact. Fluoride compound air emission concentrations are estimated to be below applicable air standards which are based on human health impact and environmental studies.

Comment 5-12: The 2003 DEIS had 4 locations investigated, Snake Hill, Lake Road Condominiums (Saratoga Ridge), Grace Morre Road, and Unch Road. This time, just Snake Hill and Grace More Road were investigated. What about Brown's Beach and Saratoga Lake Golf Course? Stacks are definitely visible from Snake Hill and shore and ridge properties along the lake. Factory view is usually not a positive for real estate value. It is important that the public be aware of this and acknowledges and accepts the effect of the visual impact. Could alternative locations be used? (VIA)

Response: There is not expected any significant adverse visual impact associated with the nominal 15 foot height increase associated with Fab 8.2. Refer to Responses to Comments 1-30 to 1-44 for additional details regarding visual impact analyses. All locations within the 5-mile study area were evaluated in the visual impact assessment. The locations chosen for taking photographs and doing visual simulations were based on the GIS mapping and field observations during the ballooning portion of the visual impact assessment, at the discretion of the visual impact assessment expert conducting the study. The results of the GIS mapping demonstrate that there is not the opportunity for viewing the proposed Fab 8.2 structures at either Brown's Beach or the Saratoga Lake Golf Course.

Alternative locations for Fab 8.2 are not feasible; it is a project requirement that this new facility be proximal to the existing Fab 8 Campus buildings (i.e., Fab 8.1, Admin 2, and TDC).

Comment 5-13: Water, Sewer, Natural Gas, Electric – use of basically all capacity for the rest of LFTC and Stillwater along Cold Spring/Elmore Robinson corridor. Applicant proposes running another sewer line in ROW next to existing sewer line for 8. Will there be room for anything else? (Water, Sewer, Natural Gas, Electric Power)

Response: Comment noted. Refer to Responses to Comments 1-22 (water), 1-23 (natural gas), 1-24 (electric power), 1-25 (sewer) regarding utility capacity utilization. There is available room for additional utilities along Cold Spring Road.

Comment 5-14: The approximately 22 stacks for Fab 8.2 appear as a solid mass when viewed from a distance. (VIA)

Response: Comment noted.

Comment 5-15: Location of 8.2 - pushed right up against the buffer border and located so that the topography slopes away site. This will be a perfect conduit for the operational, as well as construction noise, to fall down the ravines to negatively affect Saratoga Glen, Saratoga Ridge, and other residents along Cold Spring and 9P. Also, the screening and buffering of this location is dependent on the adjoining landowners (Mackay and other individual lot owners) to not remove the trees on their property.

If 8.2 were relocated more like the fan design as originally proposed, that would site the fab farther back. This would eliminate the visual impacts of higher stacks, and move the fab away

from edge and descending ravines to lessen noise impact. Figure 3, Balloon Location Map, in Appendix E, Visual Impact Analysis, distinctly shows how the ravines fall away from site and provide opening for both more visual and noise impact. By relocating the fab to previous location, this may even provide room for an earthen berm to be constructed to further isolate the site from existing residents and the undeveloped R-R property across Cold Springs Rd from site. (Noise, VIA, Alternatives)

Response: Fab 8.2 is proposed to be located wholly within Development Area 1 of LFTC, and area specifically approved and zoned for development.

Construction and operational noise will continue to be managed in accordance with the existing noise monitoring plan and subject to the very strict noise limitations of the PDD. There is no reason to believe that the topographic features noted to the north of the proposed Fab 8.2 will serve to facilitate the off-site propagation of noise.

As presented in Response to Comment 2-2 and explained in the SSDEIS, it is not a practicable alternative to move the proposed location of Fab 8.2 to the south, away from existing buildings associated with the Fab 8 Campus.

The existing buffer and deed dedicated area to the north of the proposed Fab 8.2 location will serve to mitigate the visual impacts of project. It is not a reasonable assumption to assume that this visual "buffering" area to the north would be clear-cut.

Construction of an earthen berm to the north of Fab 8.2 is not part of the proposed action, nor is such a feature warranted as there are no adverse impacts that would be mitigated by such a feature.

Comment 5-16: The additional enlargements of visibility at Snake Hill and Riley Cove are "eye-opening". This information shows that there is a detrimental effect on the perceived beauty of a place, including the building and the stacks. The fab will definitely be visible to property owners and lakeside residents along 9P from Snake Hill to approximately Luther Road. It is also very probable that it will be visible from Browns Beach and Make Your Own Way. Views were only taken from lake level, while many homes are elevated above the lake on ridges, so this increased height will definitely "impair" their viewshed and have a "detrimental effect" on their property values. (VIA)

Response: The visual impact study done as part of the SSDEIS indicates in fact that there will not be a detrimental effect on the perceived beauty of a place from vantage

points on Saratoga Lake, consistent with standard accepted visual impact assessment protocols. The visual impact study concludes:

"Based on the GIS viewshed analysis, balloon study, and 3D modeling/photo simulation it is reasonable to conclude that simple visibility of the proposed rooftop appurtenance at or slightly above the tree line will not result in a detrimental effect on the perceived beauty of Saratoga Lake; nor will such height increase necessarily impair the quality of the lake environs or cause the diminishment of public enjoyment or appreciation of the resource."

This conclusion is unchanged and further supported by the additional visual animations done at the request of the Malta Town Board and provided herein as Appendix M.

It is noted that visual impacts are in part a matter of perception by individuals, and that there is some level of increased off-site visibility resulting from the proposed height increase for Fab 8.2. In response to this increased visibility, visual mitigation is proposed.

Visual mitigation includes screening, fabrication, or painting those portions of Fab 8.2 with potential visibility, such as the upper portion of the buildings and the stacks, with muted colors such as gray. No reflective material will be used on visible portions of the buildings or stacks. In addition, rooftop lighting, if required, will be minimized, and lighting fixtures will be downward facing and shielded.

Comment 5-17: Alternative Designs - The SSDEIS states that the proposed location for Fab 8.2 would be no more protective of the environment. This is not accurate. The proposed alternative location as part of the original fan layout would be more protective to the environment:

- *Eliminate visual issues by moving fab away from edge and the descending landscape.*
- *Positively affect the noise issue by minimizing sound-travel down ravines.*
- *Provide an area to build a berm to further protect visual and sound levels. Providing extra dirt for berm reduces the need for such build up elevation and massiveness of the Temporary Parking Lot, eliminating visual issues on Cold Springs Road.*

I also have the following questions:

- *How was Grace Moore Road chosen? At this location there is a 10-foot rise across Lake Road topped with white pines that appear to be toward end of their life cyle (thinning out). Was the balloon seen between the trees?*
- *Did analysts drive around looking for the balloons to be visible, or just chose spots?*
- *Only 2 locations were Stillwater, Malta has 12?*
- *Will the Saratoga Lake Golf Course be visible, Saratoga Glen or Saratoga Ridge?*
- *Will the fab be visible as drivers turn up Lake Road from 9P to enter Stillwater? (VIA, Noise)*

Response: An alternative location for Fab 8.2 would not be more protective of the environment than the proposed location. It is important to point out that Fab 8.2 is proposed to be located within a designated development area of the LTFC Campus. The nominal 15 foot height increase does not present any significant incremental adverse impact. Noise will continue to be controlled in accordance with the existing strict noise standards, and acoustical enclosures will be used to further mitigate noise in the electric service building for Fab 8.2. Refer to Response to Comment 1-6.

The Grace Moore Road location was chosen based on the GIS mapping results. No balloons were observed from this location.

The analysts did drive around the 5-mile study area looking for balloon visibility. This was not a random type of analysis however, and the scientific results of the GIS analysis were used as a basis for the driving pattern, as was the prior selection of off-site vantage points used in the prior GEIS visual study.

Locations for the visual simulations were based on the GIS mapping results, the prior GEIS visual study, and the NYSDEC visual impact assessment policy requirements.

No visual impact has been determined for the Saratoga Lake Golf Course, Saratoga Glen, and Saratoga Ridge. Drivers heading south on Lake Road from Route 9P will not be able to view any Fab 8.2 structures.

Comment 5-18: The entire visual analysis is based on the existing vegetation hiding the fab. However, trees reach end of life and die, or property owners decides to remove for development. Then the fab would no longer be hidden. Can requirements be included in Site Plan to mandate maintenance and replacement of official buffer trees, and also those hiding the proposed fab on adjoining lands? (VIA)

Response: Intervening landforms, structures and vegetation all play an important role in the visual impact assessment; the entire visual analysis does not depend upon vegetation hiding the new structures. In some areas intervening vegetation plays a more dominant role than in others.

There is an existing 100-foot buffer area that surrounds the entire LFTC Campus, including Development Area 1. The purpose of this buffer is to provide a vegetated area serving to mitigate off-site visual impacts, as well as providing an expanded setback for buildings.

The site plan review process for Fab 8.2, as well as for any other proposed development in Malta or Stillwater would provide an opportunity to assess maintenance of existing buffers and consideration of any new buffers. It is important to note however that this process has already been done for the LFTC Campus. All of the proposed development by GLOBALFOUNDRIES associated with Fab 8.2 is within a designated development area, or otherwise is an allowable use within a buffer area (i.e., buried utilities along Cold Spring Road).

Comment 5-19: A bare earth simulation should be done from Snake Hill; additionally the 9P/Lake Road intersection may be a possible location as well? One was done for Round Lake, whereas Saratoga Lake is a Class A waterway – this should be considered. (VIA)

Response: A bare earth simulation was done for the Round Lake Preserve in response to Town of Malta comments with the sole of objective of demonstrating that intervening landform by itself would prevent any visibility from that location. Additional bare earth simulations are not appropriate in that landform is only one factor that impacts the ability to perceive a proposed structure from off-site locations. The NYSDEC classification of water sources is not directly relevant to visual impact assessment. Class A means that the water source is being used as a public water supply as its highest and best use.

Comment 5-20: Applicant proposed to delete Exit 11A and replace with proposed off-site modifications to existing intersections and roundabouts. Exit 11A should remain as the goal. It was part of the original plan for its ability to take traffic directly from I-87 to the Campus without negatively impacting local roads. Proposed modifications max out intersections and are not effective long term solutions. (Transportation)

Response: Comment Noted. The Applicant has indicated their support for future planning of Exit 11A.

Comment 5-21: Routes 9/67/Dunning Street roundabout- this is a vital intersection for residents to reach their homes and services. Additional new-built lanes for right turns onto and from Dunning St from and onto Route 9 north are proposed. However, they both require property from existing businesses whose properties would be significantly impacted. So, this probably is not realistic, and will not happen. So then there is the talk of using Hemphill Place and the future connection to CVS as substitutes. If this is being considered, then these intersections need to be analyzed. Hemphill is already used to avoid the roundabout. Will there be another roundabout here to facilitate traffic being able to get onto Dunning? (Transportation)

Response: The Malta Town Board has indicated a preference to move forward with the alternative mitigation plan (i.e., connector roads) at the Route 9/67/Dunning Street intersection in support of the connector roadways. Additional details and analysis of this alternative are included in Responses to Comments 1-20, 1-21, 1-59 and 1-62. A roundabout at the Hemphill Road/Dunning Street intersection is not proposed.

Comment 5-22: The Revised Appendix G, Traffic Impact Analysis, describes Construction Worker, and then fab employee, Traffic on Cold Springs Road. The 9P/Lake Rd/Cold Springs Road intersection is not conducive to high volumes of traffic due to hill with speeds in excess of what is posted, angled intersection, and then very close together intersections (including Stewarts) negatively impacting stacking and ability to make turns. It doesn't matter what time it is, it is awkward and therefore not safe as currently configured. What is the Summary of accidents for this intersection? (Transportation)

Response: Accident data obtained from NYSDOT indicated that one reported accident occurred at this intersection during the latest available period from April 30, 2009 through April 30, 2012. The accident was a property damage accident involving alcohol use. The data indicating a single reported accident in the three (3) year period does not indicate that the awkward geometry explained in the comment is resulting in safety issues at this intersection.

Comment 5-23: Trip Distribution Figure 3.3 projects that 8% of Fab 8.2 will use this Cold Springs Road intersection. So during AM peak (7-8 AM), 8% of the 2,034 trips equal 163 vehicles, or approximately 3 vehicles/minute. PM peak (4:30 to 5:30 PM) would be 158 vehicles,

or approximately 2 ½ vehicles/minutes. However, Figure 3.4 only shows 90 vehicles AM Peak and 80 vehicles PM peak. Why the discrepancy? (Transportation)

Response: Table 3.1 in the updated Traffic Impact Study indicates 1,131 new vehicle trips entering during the AM peak hour and 1,009 new vehicle trips exiting the site associated with the future proposed build-out of the Fab 8 Campus with Fab 8.2. The 8% trip distribution applied to the 1,131 and 1,009 trips equates to the 90 vehicles and 80 vehicles shown on Figures 3.4 and 3.5.

Comment 5-24: There are also the "shift and non-traditional workers" who will work 6 AM to 6 PM, so these people will be arriving and leaving during the same time frame. So with 1,674 trips (837 entering, 837 exiting) (p.28) at both 6 AM and 6 PM, 8% of this is 134 vehicles. ½ traveling to and ½ traveling from the site, so that there will be conflicts due to intersection configuration. So, in reality, based on human nature and the demands of the workplace, it is highly likely that all of the traffic will actually be occurring at roughly the same time. Regular workers arrive earlier of stay later which overlaps with shift workers. Then shift workers running late, work overtime, or leave late due to a variety of situations. (Transportation)

Response: As noted in the traffic study (Chapter III, Section C), travel by shift workers occur outside of the 7-8 AM and 4:30 to 5:30 PM peak hours of adjacent street traffic. Consistent with the Prior SEQRA record, a detailed assessment of the off-peak periods was not conducted. The traffic study illustrates how the shift worker peak will generate fewer trips than the peak hour of adjacent street traffic; therefore the analysis results outlined in the Traffic Impact Study represent worst-case conditions.

6. Letter dated April 1, 2013 from the Chazen Companies.

Comment 6-1: Provide a map or figure showing anticipated ground level concentrations of pollutants from Fab 8.2 similar to that provided in the original GEIS. (Air Resources)

Response: In consultation with the Town of Malta's technical consultants it was decided to produce isopleths maps for all model results which showed 50% or greater of the values for NAAQS, SGC, AGC or Part 257 (for the fluorides). These parameters include:

- PM2.5 – 24-hour and annual hourly

- NO2 – 1-hour
- SO2 - Annual hourly
- Fluorides – 12-hour, 24-hour and 1-month
- Chlorine – Annual hourly
- SF6 - Annual hourly
- SiF4 - Annual hourly
- WF6 - Annual hourly

Refer to isopleths maps provided in Appendix D. The isopleths maps demonstrate compliance with their applicable SGC and AGC for each of the parameters.

Comment 6-2: Prepare a continuous 3D simulation of the view of Fab 8.2 along the shoreline of Saratoga Lake from limits to be determined in consultation with Chazen, and a continuous 3D visual simulation from Saratoga Lake from limits to be determined in consultation with Chazen. (VIA)

Response: Two (2) visual animations have been done as requested and in consultation with Chazen. These video animations were done for cross lake and centerline routes. Refer to Appendix M which contains an electronic version of the visual animations.

Comment 6-3: Address how visibility of Fab 8.2 would be affected if some or all of the trees between the Global Foundries site and Saratoga Lake were cut down. (VIA)

Response: If some or all of the trees between the project site and Saratoga Lake theoretically were cut down, portions of Fab 8.2 would be more visible from Saratoga Lake and points north. The theoretical results of this hypothetical situation are shown on Figure 1-30 for a clear-cut condition, and further discussed in Response to Comment 1-30. It is highly unlikely that all trees would be cut, since there is a protected buffer area to the north of the project site, owned by LFTCEDC. Also the wetlands area to the north is deed protected in perpetuity as was required by a special condition of the U.S. Army Corps of Engineers (Corps) Section 404 Permit for the original build out of the LFTC Campus. Local land use laws serve to further control clear-cutting.

Comment 6-4: Assess the benefits, impacts and feasibility of constructing a new road or making improvements to the existing roadways in the area east of Round Lake Road in the vicinity of Ushers Road or as an alternative to the Exit 11A connection. (Transportation)

Response: Constructing a new connection road from Exit 10 to LFTC does not appear to be feasible based on the extent of known, mapped wetlands in the vicinity of Round Lake and the presence of potential habitat for Karner Blue butterflies. The existing Route 9 corridor south of the Route 9/67/Round Lake Bypass intersection represents an alternative travel route for traffic entering and exiting the LFTC Campus from the south.

7. Comments from Robert Barshied, Chairman Stillwater Planning Board (undated).

Comment 7-1: The original estimated natural gas total site consumption (for the 3 FABs) was 312,000 CFH. The new total is 691,561 CFH (120 % increase).

1) Why such a significant increase?

2) Will the proposed consumption leave any National Grid capacity for other future projects outside the Tech Park?

3) Can a "stub" gas line be located on Cold Spring Road for future connection to the proposed Stillwater Business Park? (Natural Gas)

Response: The estimated increase in natural gas use for Fab 8.2 is attributed to a larger interior building space required for heating, and a larger clean room manufacturing space which correlates to a higher natural gas use rate for production tools and treatment units.

A new natural gas line would need to be constructed by National Grid to service the area in Stillwater zoned as Business Park. Future projects would need to similarly engage in dialogue with National Grid regarding the availability of natural gas for their proposed development.

A "stub" gas line on Cold Spring Road does not appear to be feasible since there are no existing lines along this roadway. The Town of Stillwater and the developers of the business park zoned lands are encouraged to contact National Grid directly to plan for natural gas service.

Comment 7-2: The original estimated total electric power was 120 MW. The new is 266 MW. (122 % increase) Why such a significant increase? (Electric Power)

Response: The estimated increase in electric power use for Fab 8.2 is attributed to a larger clean room manufacturing space, a more complex and diversified tool set, and the use of higher amounts of water and sewer requiring pumping and treatment.

Comment 7-3: The original estimated sewage flow was 9 MGD. The new is 10.7 MGD. Won't this flow totally consume the existing sewer capacity running down Fitch Road leaving no capacity for any future customers at the Stillwater Business Park? This should be addressed now. (Sewer)

Response: The estimated combined flow rate for the Fab 8 Campus, inclusive of Fab 8.2 is 9.5 MGD. An equalization tank will be used to normalize flow rates. The reported design capacity of the Cold Spring Road sewer line is 10 MGD; this leaves a balance of 0.5 MGD of available capacity for the Cold Spring Road sewer line. In addition, some development in LFTC could be accommodated by directing sewer flow towards the SCSD#1 trunk line along Stonebreak Road. In terms of timing, it is estimated that the peak flows for the Fab 8.2 facility would be achieved in 2022, leaving an adequate timeframe for planning of additional capacity that might be needed in support of local and regional development. Also it is important to point out that SCSD#1 is in the process of planning a new North Plant site which would free up additional excess capacity of the existing trunk line to the existing Mechanicville plant.

Comment 7-4: The stacks are proposed to be raised by 15 feet. Is this a direct result of air modeling indicating potential air quality compliance problems or another reason? (Air Resources)

Response: The stacks are proposed to be raised by 15 feet to provide for an adequate separation between the air intakes and discharges. There is additionally a benefit of increased air dispersion as a result of the proposed height increase; refer to Response to Comment 1-29 regarding the benefit of additional height to air quality.

Comment 7-5: Appendix C Section 7.0 "Unavoidable Adverse Impacts". There is no mention or discussion of increased air pollution. It seems there should be. (Air Resources)

Response: There is not an unavoidable adverse air impact associated with Fab 8.2. The existing baseline SEQRA condition is to achieve AGC and SGC values at the property line. Air modeling for Fab 8.2 continues to demonstrate compliance with this condition and is additionally subject to the review and permit authorization of NYSDEC. The

mitigating condition of designing, constructing, and operating the facility in accordance with a NYSDEC Title V air permit will serve to effectively eliminate an unavoidable adverse air impact.

Comment 7-6: There is a proposed Continuous Air Monitoring program but it appears this is at the stacks only. I suggest there be similar monitoring "on the ground" at numerous locations in the "landing areas" downwind in Stillwater. Ambient air pollutant concentrations are very important to determine air quality compliance. On the ground continuous monitoring is critical. (Air Resources)

Response: The specific monitoring requirements will be provided in the Title V Air Permit issued by NYSDEC. Continuous monitoring at the stack is not anticipated to be required, but rather will be specified for specific process air emission control systems. On the ground continuous air monitoring is not believed to be necessary to demonstrate compliance, nor would such monitoring necessarily be representative of air quality associated with the Fab 8 Campus emissions.

Comment 7-7: Appendix D "Air Emission Modeling". There is no map showing locations in the Town of Stillwater that corresponds to the 30 page data table of modeling results. There should be. Where are the concentrations of air contaminants the greatest-close to the plant or several miles away? (Air Resources)

Response: The greatest concentrations of air contaminants are on the GLOBALFOUNDRIES site close the emission sources. The property boundary (i.e., fence) is the beginning point of compliance for purposes of air modeling and extends outward from the property line. Both the AGC and SGC concentrations must be met starting at the property boundary and extending outward. Refer to Response to Comment 6-1 regarding maps that depict representative modeling results.

Comment 7-8: Section 4.0 "Modeling Results". HF and Ntriflouride both exceeded air guidance concentrations (AGC) during initial modeling and needed "remodeling". To me this indicates a very thin margin for error. Specifically, page 1 of 30 shows Fluorides (1 month) at .79 micro grams per cubic meter or 96.32 % of allowed. It also shows the "allowed" level at .820 MG/CM. However the DEC regulations included in this Section (Subpart 257-8 Fluorides) lists the allowable Fluorides at.800 UG/CM (1 PPB). If the .800 is used in lieu of .820 the actual % of allowed level becomes 98.75 %. Close enough that there is no room for any operational error which always occurs in the "real world". (Air Resources)

Response: An iterative approach to demonstrate compliance with air standards is a common and accepted practice. The air modeling indicates compliance with all AGC and SGC values, including Fluorides. It will be GLOBALFOUNDRIES' requirement to demonstrate compliance with its Title V air permit, subject to the review of NYSDEC. It is important to note that redundancy (i.e., N+1) is built into the air pollution systems to allow for maintenance of systems and operational flexibility.

Stack testing will be completed in accordance with standard USEPA/NYSDEC testing methods. Testing protocols will require the review and approval of NYSDEC prior to testing. Process condition parameters, such as scrubber water flow rate or oxidizer temperature, will subsequently be monitored to demonstrate that future operations are consistent with those occurring at the time the tests were completed.

Comment 7-9: As noted in the report, final air modeling cannot be done until specific equipment is selected. However, the very nature of the air contaminants are some of the "worst offenders" from any manufacturing processes. Models are just that-models. When they show compliance very close to allowable limits a doubling of effort is warranted to "get it right". (Air Resources)

Response: Comment noted. It is standard, accepted protocol to employ air dispersion models to estimate air emissions and demonstrate compliance. The model results will be reviewed by NYSDEC and provide a basis for issuance of an air permit. Once equipment is selected, the air modeling will be done again to demonstrate compliance. Specific special conditions of the air permit would mandate the continuous monitoring of process and control system parameters upon which the emission calculations and the compliance modeling is based.

8. Saratoga County Planning Board Referral Review dated March 26, 2013.

Comment 8-1: The board suggested that a possible alternative to Exit 11A would be to construct a new road or make improvements to the existing roadways in the area to the East of Round Lake in the vicinity of Ushers Road, thus diverting traffic to Exit 10 to alleviate congestion at Exits 11 and 12. (Transportation)

Response: All practicable alternatives associated with a new Exit 11A will need to be thoroughly reviewed in an Access Modification Plan which would be submitted to FHWA for review. A Conceptual Access Modification Plan was submitted to FHWA in

2002 as part of the original GEIS for LFTC, and FHWA made the tentative determination that a new Exit 11A "appears feasible". Within that same correspondence FHWA pointed out that a "full" Access Modification Plan needs to be submitted. Refer to Response to Comment 6-4 regarding the feasibility of a new road east of Round Lake.

9. Letter dated April 16, 2013 from NYSDEC Region 5.

Comment 9-1: The Summary of Model Inputs shows hydrogen chloride emissions of more than 13.49 tons per year. Emissions of over 10 tons per year will be subject to the Semiconductor MACT, which requires stricter controls on hydrogen chloride, hydrogen fluoride and chlorine emissions. It does not appear, in the SSDEIS that the modeling took Semiconductor MACT into account. Please revise the modeling to reflect inputs that are in compliance with the Semiconductor MACT. (Air Resources)

Response: The air dispersion modeling associated with the Fab 8.2 SSDEIS does in fact represent compliance with the semiconductor MACT, which has a scrubber outlet concentration limit of 0.42 ppm for inorganic HAP. The exhaust flow rates, TPY of emissions, and the associated concentrations used in the modeling are as follows:

Table 9-1: Air Dispersion Modeling Summary

Phase	Chlorine		Hydrogen Chloride		Hydrogen Fluoride	
	Tons/yr	PPM	Tons/yr	PPM	Tons/yr	PPM
Fab 8.1	0.132	0.0081	2.65	0.32	1.61	0.35
8.1 Ext.	0.349	0.039	3.96	0.38	1.60	0.42
TDC	0.049	0.0074	1.37	0.40	0.77	0.41
Fab 8.2	1.90	0.072	5.50	0.40	2.69	0.36
Total TPY	2.43	--	13.49	--	6.67	--

10. Saratoga County Planning Board Preliminary Review dated March 6, 2013.

Comment 10-1: The Board requested that any information relating to the mitigation measures explored for the increased stack height be provided for review. (Transportation)

Response: Comment noted. The Board will be provided with copies of the SSFEIS and Findings Statement. Visual mitigation includes screening, fabrication, or painting those portions of Fab 8.2 with potential visibility, such as the upper portion of the buildings and the stacks, with muted colors such as gray. No reflective material will be used on visible portions of the buildings or stacks. In addition, rooftop lighting, if required, will be minimized, and lighting fixtures will be downward facing and shielded.

Comment 10-2: Before and after Levels of Service should be provided for all studied intersections. The Board recommends that additional intersections outside of the Town of Malta should be studied as there will be impacts to these intersections as a result of the construction of Fab 8.2. (Transportation)

Response: Comment noted. The traffic study was done for 28 intersections in the Towns of Malta and Stillwater. Before and after levels of service are provided in the traffic study.

Comment 10-3: The LOS information was updated as of March 1 following a review of that report by Chazen engineering. The Board is evaluating and assessing the information pertaining

to the additional intersections and will be providing further comment following our meeting of March 21, 2013. (Transportation)

Response: Comment noted.

11. NYSDOT Correspondence dated April 23, 2013

Comment 11-1: We agree that a detailed review of accidents at the Route 9/Route 67/Dunning Street roundabout is necessary in light of the less than desirable performance to date. Recommendations for potential mitigation measures due to the anticipated increases in traffic while taking into consideration safety factors, including vehicular speeds and right-of-way needs, should be included in the analysis.

We note that the TIS considers alternative mitigation measures including the implementation of connector roadways around this major intersection. These connector roadways appear to be consistent with several recent Town of Malta planning documents. The Department sees the need for a more thorough "pro's & con's" evaluation of these roadway connections versus the proposed right-turn slip lanes at the Route 9/Route 67/Dunning Street intersection to be able to identify a preferred alternative.

Another traffic safety related element that needs to be considered to address speeds that will result from the proposed additional through-lanes eastbound and westbound at this intersection are the approach defection angles into the roundabout. (Transportation)

Response: A detailed accident assessment of the Route 9/Route 67/Dunning Street intersection is included in Response to Comment 1-52.

The Applicant has also provided pros and cons information in Response to Comment 1-20. The primary "pro" of the alternative mitigation plan for Route9/Route67/Dunning Street intersection is that it is consistent with the Town vision and planning, and minimizes impacts to current operating businesses. The Town of Malta has identified the alternative mitigation at the Route 9/Route 67/Dunning Street intersection as the preferred measure.

Both mitigation options for the Route 9/Route 67/Dunning Street intersection include modification to the deflection angles at the roundabout approaches. The design will include detailed review and approval by NYSDOT.

Comment 11-2: Regarding the Curry Road/Round Lake Bypass intersection, the design of the roundabout is consistent with the design criteria in effect at the time and specifically accommodates tractor trailer trucks. Roundabouts as a form of traffic control at an intersection eliminate the potential for right angle accidents which are inherent at a conventional traffic signal controlled intersection. (Transportation)

Response: Comment noted.

Comment 11-3: We defer to the Town of Malta on the appropriate design build year and the methodology used for the trip generation estimate values. (Transportation)

Response: Comment noted.

Comment 11-4: We agree that the 2010 Highway Capacity Manual incorporates significant changes in the methodology for calculating delay and to date the Department has not issued an Engineering Bulletin requiring its use. We see a value in using the 2000 Highway Capacity Manual software on this specific project due to the many prior analysis completed for this and other projects in the Town of Malta. Keeping the highway capacity methodology consistent for this Supplemental Environmental Impact Statement will produce a clearer understanding of impacts resulting from the changes in the project and the transportation network operations since the original traffic impact studies.

Ultimately it is the responsibility of the SEQRA Lead Agency to approve the appropriate highway capacity methodology, and we have no objection to the Town of Malta approving the 2000 Highway Capacity Manual for use on this project. Any revisions or supplemental analysis to the Traffic Impact Analysis must be submitted to NYSDOT for review. (Transportation)

Response: Comment noted.

Comment 11-5: At this time the NYSDOT plan for ITS facilities does not include elements in the vicinity of Exits 11 and 12 of 1-87, nor is it likely that real time monitoring of traffic flow at the Route 9 and 67 roundabout will be implemented in the near future due to our financial constraints. (Transportation)

Response: Comment noted.

Comment 11-6: In general, the Department concurs with the conclusions and recommendations of the TIS, including the six (6) identified mitigation measures. The NYSDOT also concurs, based on the analysis presented in the study, that the construction of 1-87 Exit 11A is not

warranted to accommodate the development proposed in the current PDD Amendment. The Department believes the ultimate need for Exit 11A is best evaluated as part of an amendment to Malta's Townwide GEIS. It would be through this mechanism that overall transportation needs in the area can be identified and compared to various improvement alternatives.

Appendix 8 (Interstate and Other Freeway Access Control and Modifications) of the NYSDOT Project Development Manual should be consulted on the access modification process as it would relate to the addition of an Exit 11A on 1-87. (Transportation)

Response: Comments noted.

Comment 11-7: We have been provided a copy of the March 26, 2013 Saratoga County Planning Board Referral Review (GML Section 239 review) which raises a conceptual new road improvement in the vicinity of Ushers Road as an alternative to be considered in light of the proposed elimination of the 1-87 Exit 11A for this phase of development of the LFTC. The Department concurs with the conclusion in the TIS that the impacts of the current proposal can be mitigated with alternative measures in lieu of Exit 11A; measures that do not appear to have as significant cost and environmental impact implications. Perhaps the alternative suggested by the County has some merit for consideration as part of the broader evaluation of Exit 11 A as part of an update to Malta's Town Wide GEIS rather than as part of the current PDD Amendment. (Transportation)

Response: Comments noted. Refer to Response to Comment 6-4 regarding the feasibility of a new road east of Round Lake.

Comment 11-8: One of the six identified mitigation measures is the proposed modification of the Route 9/Route 67/Round Lake Bypass intersection with the addition of an eastbound lane. We had raised a question of how this proposed capacity improvement relates to the envisioned future westbound lane configuration through this intersection. A review of the design approval documents from the timeframe of this intersection's design was conducted and findings summarized in Creighton Manning's response to comments and in Appendix F of the TIS. Our previous comment regarding this proposed improvement has been adequately addressed. (Transportation)

Response: Comment noted.

Comment 11-9: The Mitigation Phasing and Conceptual Costs section of the TIS includes some preliminary identification of anticipated right-of-way needs, however we believe a more complete

summary of specific needs, including the anticipated acquisition mechanisms, will need to be developed as the proposed improvement designs are progressed. (Transportation)

Response: Agreed, additional details on the right-of-way needs will be identified as the designs are progressed.

Comment 11-10: Other than the above noted comments, our review of the TIS did not yield additional comments beyond the scope of the technical review comments given by The Chazen Companies. Please be advised that our review of this material is strictly from a traffic impact related standpoint. There may be other environmental impacts to address germane to the project under the jurisdiction of the Town of Malta as the SEQRA Lead Agency. (Transportation)

Response: Comment noted.

12. Letter dated April 23, 2013 from Terri Korb, Town of Saratoga Resident

Comment 12-1: My first concern is with the proposed additional 15' height of 22 new smokestacks, of which I am opposed. The neighborhood in which I live can already see the current GF facility and its smokestacks. I have attached pictures taken from Brown Road, Stillwater, NY. The once beautiful view of the Helderberg Mts. and nearby trees has become tainted by a sprawling white mass. It's hard not to notice the GF facility and smokestack plume with every ride to work or drive to town. I am concerned about the white mass not only doubling in size horizontally, but now also growing vertically as well. I hope GF will consider the following solutions and the towns consider proposing them and enforcing them.

1. *Perhaps the top 30' of all buildings and roofs be painted green in color or covered with a colored material to better blend with the trees.*
2. *Perhaps a study be done to compare the benefits of the 15' additional height in comparison to the current height, as it is my understanding no test was done (or specks given) for the stacks that were originally accepted. Is the additional height truly necessary? If the answer is yes, then…*
3. *Perhaps a written stipulation/contingency be added that if GF should close the facility or discontinue use of the stacks, GF must take the stacks down within a certain amount of time at GF expense. (VIA)*

Response: The view from Brown Road in the Town of Saratoga is a unique combination of high elevation and a direct axis of view in the direction of the existing Fab 8 Campus buildings. As evidenced by the viewshed map, this condition does not occur in many other places. This view is limited to a very short section of Brown Road (about 200 feet or so) beginning approximately 150 feet east of the intersection with Hill Road. It is possible that one or two homes in this area may experience a similar view; however the view in the direction of GLOBALFOUNDRIES from most homes appears to be screened by existing vegetation. Neighbors will experience this view when driving or walking this section of Brown Road.

There appears to be no aesthetic resources of statewide significance (that would trigger a SEQRA concern) in this area.

The view is currently impacted by the existing Fab 8 Campus and will be similarly be impacted by the expanded facility with or without the proposed height increase of 15 feet. If granted, the proposed height increase would marginally increase the visual impact compared to construction of Fab 8.2 without the height increase from this vantage point.

Painting the stacks a darker color is a possible mitigation measure.

There are no specific closure requirements applicable to Fab 8.2.

Visual mitigation includes screening, fabrication, or painting those portions of Fab 8.2 with potential visibility, such as the upper portion of the buildings and the stacks, with muted colors such as gray. No reflective material will be used on visible portions of the buildings or stacks. In addition, rooftop lighting, if required, will be minimized, and lighting fixtures will be downward facing and shielded.

Comment 12-2: My second concern is in regard to the traffic situation (aka 11A or not 11A). I am opposed to changing the roads/neighborhoods to accommodate more traffic to the Tech Park. I drive Dunning Road daily to and from work and altering the roundabouts again not only takes away from the current charm but also from the hours spent developing a specific code for a more "user friendly" Malta. Is it my understanding that a drawn plan for 11A does not exist? Should that not have occurred with the original proposal/acceptance? 11A is the only way to accommodate the needs of GF. My thoughts… begin the 11A process. (Transportation)

Response: A conceptual design plan exists for Exit 11A. As part of the original GEIS for LFTC, FHWA determined that the new Exit 11A exit "appears feasible". It is anticipated that additional planning/design work associated with continuing the Exit 11A process will be initiated following completion of the SEQRA review process for Fab 8.2.

Comment 12-3: Does GF have a time commitment to the area? My understanding is that there is a 7-12 year life for facilities such as GF. What happens to all the infrastructure should that occur? Should GF leave, what is the attraction to keep people in Malta? I understand a good number of workers are choosing not to live in Malta. (General & Miscellaneous Comments)

Response: GLOBALFOUNDRIES is currently ramping up production at Fab 8.1 and building a new Technology Development Center (TDC) at the Fab 8 Campus. Although there is no specific time commitment for how long GLOBALFOUNDRIES will operate their facilities, there is every indication that semiconductor manufacturing and research activities will be active in LFTC for the foreseeable future. It should be noted that many GLOBALFOUNDRIES employees have chosen to live in Malta, as well as other nearby communities.

13. Email from Mike Hartman, Chazen, dated April 14, 2013.[11]

Comment 13-1 (A, B, C, and D): Reconciliation of volumes between Fab 8.2 study and Round Lake Road Corridor Study, impact on Mitigation at Exit 11, Distribution of Fab 8.2 trips to Round Lake Road intersections west of Exit 11, and impacts. (Transportation)

Response: In response to questions raised regarding the base traffic volumes used in the Round Lake Road Corridor Study and the GLOBALFOUNDREIS Fab 8 Campus Study the following is offered:

The Round Lake Corridor Study was a planning level study that utilized available traffic volume data in the corridor from other completed studies. The

[11] Only the "new" comments presented in this email have been treated as substantive comments. All other comments contained in this email are related to Chazen's prior written comments which are responded to separately herein.

GLOBALFOUNDRIES Fab 8 Campus Study was a site specific traffic impact study that included updated traffic counts (2012).

At the Exit 11 intersections, the Round Lake Road Study used January 2011 traffic counts which were increased using general seasonal factor data provided by NYSDOT. When compared, the 2012 raw traffic counts which were conducted in July (the peak seasonal month) had volumes lower than the 2011 seasonally adjusted counts. This indicates that the general seasonal factors result in over-estimation of the seasonal variations in this corridor which resulted in high base traffic volumes in the Round Lake Road Study.

The available traffic count data (from different months/seasons) was used to better define the seasonal variations in the study area and allowed for the application of more accurate seasonal factors in the GLOBALFOUNDRIES Fab 8 Study.

The Round Lake Road Corridor Study included between 250 and 300 trips in the background condition associated with highly conceptual planned unit development projects located in the Town of Ballston. These trips were added to the planning level study of the Round Lake Corridor (per the direction of the Round Lake Road Steering Committee), but are not appropriate to add into the GF8 site specific traffic impact study.

The Round Lake Road Study assumed traffic volumes associated with two chip fab plants in the design year growth. The proposed GLOBALFOUNDRIES Fab 8 Study included traffic volumes associated with ramp up of the current approved uses and the addition of Fab 8.2; which equates to approximately the same number of trips generated in the Round Lake Road corridor.

Recent concerns were expressed by the Town regarding the interaction/impact of the Ruhle Road/Raylinski Road intersection and Exit 11 ramp intersections. Although not observed during Creighton Manning Engineering's recent data collection in the Round Lake Corridor, backups on Round Lake Road westbound from the Ruhle Road/Raylinsky Road intersection sometimes occur during the PM peak hour. The scope of the Round Lake Road Study includes addressing this congestion.

To determine the impacts on the Round Lake corridor directly associated with the proposed GLOBALFOUNDRIES Fab 8.2, the Ruhle Road/Raylinsky Road intersection

was analyzed for No-Build and Build conditions, with and without Fab 8.2. Traffic volumes from the Round Lake Road Corridor Study representing 2011 Existing conditions and 2021 No-Build and Build conditions were updated to represent 2012 Existing Conditions and 2022 No-Build and Build conditions to be consistent with the GLOBALFOUNDRIES traffic design conditions. An assessment of both improvement alternatives identified in the Corridor Study (construction of eastbound and westbound left-turn lanes on Round Lake Road or the construction of a single lane roundabout) was conducted at the Ruhle Road/Raylinsky Road intersection and is included in Appendix L. The Town of Malta GEIS recommended the construction of eastbound and westbound left-turn lanes at the Round Lake Road/Ruhle Road/Raylinsky Road intersection.

The analysis indicates that this intersection will operate at adequate overall levels of service with all approaches operating at LOS D or better during No-Build and Build conditions (with GLOBALFOUNDRIES) with only signal timing improvements; however, a review of the westbound Round Lake Road approach indicates that the 95th percentile queue will extend up to and through the Exit 11 Southbound ramp intersection located approximately 775-feet to the east during both No-Build and Build conditions. This assessment confirms the need to improve exists regardless of future growth at GLOBALFOUNDRIES. The evaluation indicates that the construction of eastbound and westbound left-turn lanes on Round Lake Road or the installation of a roundabout will provide adequate operations at this intersection. With either mitigation option, the 95th percentile queues on the westbound Round Lake Road approach are reduced and will not extend back to the Exit 11 southbound ramp; however, the roundabout option provides significant queuing benefits on the westbound approach when compared to the signalized option (approximately 250 to 300-feet less queuing on the westbound approach during the AM and PM peak hours).

Comment 13-2 (E): Traffic control required at intersection of connector road with Route 9 and Route 67. (Transportation)

Response: Based on a planning level assessment, it is anticipated that the intersection of Dunning Street/Hemphill Place/Connector Roadway will be an unsignalized intersection with an extension of the two-way left-turn lane on Dunning Street or controlled with a traffic signal. It is anticipated that the US Route 9/Saratoga Village Boulevard intersection will remain unsignalized with vehicles utilizing the existing

two-way left-turn lane on US Route 9 for turning movements. Additional study of these intersections and verification of traffic control will be completed during detail design.

Comment 13-3 (F): Did Creighton Manning look at signal timing changes at the 9/Malta Avenue and 67/East Line Road as mitigation (temporary or final)? (Transportation)

Response: Traffic signal timing and phasing modifications were reviewed as mitigation alternatives prior to initiating geometric changes at an intersection. Traffic signal timing and phasing modification were also considered during the development of the mitigation phasing plan.

14. Email from Carol Marotta dated April 7, 2013.

Comment 14-1: I located Creighton Manning's plan for 11A in the 1/16/2003 DEIS for LFTC in Volume 1, section 4.5 Transportation pp. 167 - 177.

Figure 4.2 shows Step 1 (Initial Access for Phases 1 & 2) Improvement Scenario including the upgraded western entrance to Village of Round Lake, the By-Pass, "at grade intersection with Route 9 opposite Route 67", and then the main entrance to LFTC off 67 and connection to Stone Break Road. Phase 1 extensive improvements have been completed, as well as additional accommodations to the Village of Round Lake (upgraded eastern entrance), and hamlet of Maltaville (dead end 67 to eliminate through traffic).

Figure 4.3 shows Step 2 (Final Access for Phases 3 & 4) Improvement Scenario. It includes 11A Interchange at the current most northwest location of By-Pass that then "Four Lane Highway between Exit 11A and LFTC site". This involved a "modified diamond interchange with Route 9, Route 67 and Access Road"; the intent was for the major 4-lane road to bring traffic directly into LFTC and was "expected to significantly reduce traffic volumes through Route 67/Exit 12/Dunning Street corridor" (p.173) and to get it off the local streets.

The multiple Roundabouts along Route 67 at Exit 12, including Dunning Street, were already in place for the above Scenarios. Level of Service at Routes 9/67/Dunning Street maintained A rating through Step 1 (Phases 1 & 2), with a Level C for PM Peak in Phase 2. After Step 2 Improvements (including 11A), Level of Service again was A for both peaks. This is significantly different from what is currently being proposed. (Transportation)

Response: Refer to Response to Comment 1-62 regarding the LOS comparison for the proposed mitigation versus the previous estimates provided in the GEIS for LFTC with Exit 11A.

Comment 14-2: What is this 0.8 factor to reduce projected traffic in current SSDEIS explanation of traffic? It was not used in 2003. Global employees only work 80% of the time? They get 10 weeks off? Without that factor, the traffic is 20% higher - huge difference. (Transportation)

Response: Refer to Response to Comment 1-57 regarding the 0.8 factor. The use of the 0.8 factor is consistent with the traffic analysis completed for the Prior SEQRA Record and subsequent approvals for the Administrative buildings and the TDC.

15. Letter dated April 25, 2013 from Capital District Transportation Committee

Comment 15-1: The Traffic Impact Study included no discussion or specific alternatives related to pedestrians, bicyclists or transit rider. It is vital that Transportation Demand Management (TDM) initiatives (i.e. vanpools, carpools, local jitney or transit services, bicycle and pedestrian facilities, etc.) be a part of any mitigation package being considered by the Town. TDM initiatives have proven to be effective at reducing single occupant vehicle trips and motor vehicle emissions. They also support the Town's long term vision which includes offering residents and visitors multi-modal transportation options. (Transportation)

Response: Comment noted. Potential travel demand strategies are presented in the traffic study for shift workers and construction workers including ridesharing, shuttles, transit and the use of off-site parking.

The traffic impact study is focused on maintaining an acceptable level of service at off-site intersections. To the extent that new roads or significant upgrades to existing intersections are part of the off-site mitigation measures, it is anticipated that sidewalks would be considered during the design process and incorporated into the final design, to the extent feasible and consistent with local planning documents.

It should be noted that the LFTC Campus has multi-use trails associated with all roadways internal to the Campus with connectivity provided to the surrounding roads.

GLOBALFOUNDRIES encourages the use of carpooling and has designated carpool parking along with bike racks.

Comment 15-2: The new Form Based Code and other town plans recommend a connector or new street network throughout the "downtown" area. As envisioned, this street network would integrate complete street, access management and traffic calming principles into its design. A major benefit of this network would be to provide alternative routes for travelers currently limited to using US Route 9 and the US Route 9/67 Dunning Street roundabout for every motor vehicle trip. The Town is encouraged to work with GLOBALFOUNDRIES on the development of this street network as an alternative to adding capacity to US Route 9. (Transportation)

Response: The connector road option for off-site mitigation is being pursued by the Town of Malta working cooperatively with GLOBALFOUNDRIES, instead of increasing the capacity of the Route 9/67/ Dunning Street intersection with the addition of northbound and westbound right-turn lanes. It is agreed that providing alternative routes for travelers around this intersection is a better option, consistent with local planning studies.

Comment 15-3: With respect to US Route 9, several of the Town's planning studies call for the implementation of traffic calming on US Route 9 as the "downtown" area transitions from a strictly suburban, auto oriented environment to a more urban, multi-modal environment. The new Form Based Code specifically calls for the implementation of this vision in what is known as the Core are of US Route 9 or the segment from just north of Ellsworth Commons to Saratoga Village Boulevard. We encourage the Town to review the previously completed Linkage studies and other Town planning work as a means to evaluate implementation options for the Route 9 vision as they relate to the GLOBALFOUNDRIES proposal. Traffic calming treatments considered in previous planning work include road narrowing, pedestrian refuge islands, speed reductions, high visibility crosswalks, on-street parking etc. These ideas need more exploration before they can reach implementation stage. (Transportation)

Response: Comments noted regarding the use of traffic calming measure along Route 9.

<u>16. Email from Tony Tozzi, Director, Malta Building and Planning Department, dated May 7, 2012</u>

Comment 16-1: The following public comments were received and reported by the Town of Malta as a result of the Fab 8.2 public viewing event on Saturday, May 4, 2013. (VIA, Quality of Life, General & Miscellaneous Comments)

- *Kathy Lawrenz, 39 Manning Cove. Able to see balloons – do not want GF in Malta*
- *A call from Mrs. Whalen of Riley Cove who said the balloons were barely visible.*
- *I live in Saratoga and the visual impact is "nothing serious" (unanimous).*
- *I don't feel that the view of the proposed GF plant is "not much of an impact" (unanimous).*
- *There is "little impact" (Abe Friedman).*
- *The balloons appear significantly above the tree lines, and I feel this is a major visual impact. I live on Hill Road. I prefer to have them not there, particularly due to the emissions. I live on a ridge that looks onto the GF site (Paul Murphy).*
- *I viewed the GF site from my boat on the Lake. I was over near Snake Hill and I was not able to see any balloons.*
- *(Stillwater resident on the tour who lives on Snake Hill Road, and his wife): Their general impression was that they did not want to see the proposed fab, but in a conversation with Stu indicated that if that side of the building was painted in a darker color, it would help to camouflage is. They seemed more concern about potential emissions.*
- *(Stillwater resident who was on the trip) – was concerned about air emissions. Indicated that the site could probably be seen from higher vantage point when we were near Fitch Road in the Town of Saratoga.*
- *Why is it not scheduled when the boats are seaworthy? Can it be rescheduled in a month when the lake is an appropriate depth and the view is 'seeable' from the lake? (Dr. Salvatore).*
- *We took our boat out from the South Shore and when parallel to Snake Hill the balloons were barely visible above the trees. I don't think there will be much if any visual impact from the building. If there is concern what has been done on Long Island with cellular towers is to make them look like trees. The top of the structure can be painted light blue to blend with the sky or a camo configuration to blend with the trees. (Neal Cramer).*
- *Balloons – no problem – minor impact (Edward Dweck).*
- *Our opinion is that the smoke stacks would be offensive to us and we do not approve of increasing the height of any of them. We are also concerned about changes in our air and lake water quality and safety. We would like GLOBALFOUNDRIES to address these issues before they build any smoke stacks. We feel that our quality of life is being compromised due to big business. Sincerely, Tina and Bill Mott.*

Response: Consistent with the visual impact analyses performed to date for Fab 8.2, the balloons flown on May 4, 20012 were able to be viewed at several off-site locations. These locations include the shoreline and waters of Saratoga Lake (Snake Hill Road, Riley Cove, Manning Cove) and the cleared and elevated ridge area along Brown Road near the intersection with Hill Road, west of Saratoga Lake. From these locations with the naked eye, the balloons were either barely evident as black specks on the horizon, or not perceptible depending upon viewer eyesight. With magnification, the balloons became more evident and their color was perceptible. These observations serve to support the conclusions provided in the visual impact analysis.

Making the stacks look like trees is not a practicable mitigation method; however painting the stacks darker colors so that they blend into the existing tree line is a possible mitigation measure that will be further explored. Visual mitigation includes screening, fabrication, or painting those portions of Fab 8.2 with potential visibility, such as the upper portion of the buildings and the stacks, with muted colors such as gray. No reflective material will be used on visible portions of the buildings or stacks. In addition, rooftop lighting, if required, will be minimized, and lighting fixtures will be downward facing and shielded.

Several boats were observed on Saratoga Lake during the balloon public viewing on May 4, 2013.

Quality of life and water quality issues are considered to be a SEQRA background condition and are unchanged as a result of Fab 8.2.

Air resources information is provided in Responses to Comments 2-1 to 2-8.

17. Email dated May 5, 2013 from Lynda Bablin

Comment 17-1: I just viewed the video on the Town's website as it relates to GF view from Saratoga Lake. My question is, why was the view so obvious in the pictures published in the Gazette, but even at 8X enlargement, nothing is visible on the video? Please advise. (VIA)

Response: (From Tony Tozzi, Director, Malta Building and Planning Department via email to Lynda Bablin on May 6, 2013) I believe the difference is likely due to the difference in elevation. Snake Hill Road, where the Gazette photo was taken from

(actually taken from the 2nd floor of the house) appeared to me to be substantially higher in elevation than the lake. The photo was also enlarged quite a bit, so it is not what one would see by their naked eye.

I received a voice message from a boater who indicated that they were on the lake surface over by Snake Hill, and they could not see balloons.

I think there's a similar situation on the other side of the lake. When I was at Riley Cove, I don't recall seeing the balloons, except on the portion of the road that has a significant grade up atop a small ridge (although the SSDEIS does show a spot along the shore where the original balloons were seen). I also received reports from two or three others that said they could see the balloon, and that they were 'on a ridge'.

The animation, of course, is at the lowest elevation possible, given that it is on the lake.

2.3 Public Hearing Comments and Responses

A public hearing on the SSDEIS took place on March 25, 2013 and the SEQRA public hearing was on April 14, 2013. Transcripts of these two (2) public hearings are provided in Appendix C. In summary, two (2) people commented on the SSDEIS during the first public hearing, and four (4) people commented during the SEQRA public hearing. Comments from each of the speakers are summarized below along with responses to their comments.

1. Carol Henry, Chair of Malta Community Response Board (CRB)[12]

Comment 1-1: Construction noise was addressed adequately in the previous SEIS and the construction team quickly addressed concerns and complaints during the construction period. (Noise)

Response: Comment noted.

Comment 1-2: Significant noise problems developed during the startup of the facility, and while GLOBALFOUNDRIES has completed two mediation projects and are designing a third project, production noise still is a problem. The report states that GLOBALFOUNDRIES will be incorporating lessons learned from the previous project and will be incorporating the modifications into the new design. However, no detail is given, and it must be noted that the modifications still have not solved the problem. Are they changing the CPS model, which is the continuous power system? If so, are any used locally so that we can go and visit the installation? What about the building structure material (masonry as opposed to metal)? They're still talking about using metal buildings and, during our meetings with GLOBALFOUNDRIES, they had talked about masonry being a better sound absorber. More detail on the construction of the building is needed. (Noise)

Response: Refer to Responses to Comments 1-6 and 1-7 in Section 2.2.

Comment 1-3: Was consideration given to installing the 8 units underground, which was also mentioned during our many meetings with GLOBALFOUNDRIES? (Noise)

[12] The public hearing comments of Carol Henry closely mirror the written comments provided the CRB draft minutes. Refer to written comment number 3, Community Response Board (CRB) Meeting Minutes dated March 13, 2013.

Response: No, this is not a practicable alternative design.

Comment 1-4: Has the topography been studied in the new location? Stillwater neighborhoods may be more directly impacted with the location of the new electrical services building. Has there been any computer modeling done to anticipate potential impacts? (Noise)

Response: The existing topography in the vicinity of Fab 8.2 is a known site condition. It will be GLOBALFOUNDRIES' continued requirement to demonstrate compliance with the noise standards that are part of the PDD. Acoustical design engineers working for GLOBALFOUNDRIES are in charge of modeling potential future noise levels at the compliance points subject to field verification during operation. Noise mitigation measures are unchanged for Fab 8.2.

Comment 1-5: No changes are made to the noise monitoring station and the established thresholds. As noted in numerous meetings regarding the CPS noise, the monitoring stations are located on the property line edge and are located in gullies. It has been demonstrated that the noise reaches neighborhoods at its high points. Can the locations and thresholds be modified to allow more flexibility to adjust for problem areas that may arise? We suggest that testing be allowed for monitoring offsite at the point of complaint as needed. (Noise)

Response: GLOBALFOUNDRIES will continue to monitor operation noise in consultation with the Town of Malta and their technical representatives. The locations of specific noise monitoring points can be modified as necessary to address Town concerns. Monitoring on private residential properties is not recommended as part of a fixed monitoring network of points.

Comment 1-6: We applaud GLOBALFOUNDRIES for measuring octave bands in its latest noise monitoring reports since it better measured the complaints heard within the neighborhood. The band reading monitoring should be included in the SEIS, as well as the establishment of compliance thresholds for actions for acoustic and octave bands and required action if the thresholds are broken. (Noise)

Response: Refer to Responses to Comments 1-6 and 1-7 in Section 2.2.

Comment 1-7: Include a process for investigating, measuring and mitigating noise. What is the acceptable variance from 100 percent? What about financial compensation for property value loss? (Noise)

Response: Refer to Response to Comments 3-15 in Section 2.2.

Comment 1-8: The traffic report glosses over problem areas and does not adequately address the impact this growth has had on the community. General questions on the data include:

- *How did they determine AM and PM hours?*
- *Peak PM should run for a longer period of time since the end time does not accurately reflect commuters coming home from the Albany and Schenectady areas.*
- *Do data counters have a time stamp or just a total count within the specified time period?*
- *How are the percentages calculated for trip distribution? The rate of use at Hermes Road appears to be higher than what is stated.*
- *Can shifts at the different buildings be staggered to eliminate some of the stacking at the various intersections at both peak and off peak times? (Transportation)*

Response: Refer to Response to Comment 3-1 in Section 2.2.

Comment 1-9: Page 15 of the Traffic Analysis includes consideration of check points to distribute construction traffic. Can the check points be used to also distribute worker traffic? (Transportation)

Response: Refer to Response to Comment 3-1 in Section 2.2.

Comment 1-10: The report defines Hermes Road as one of the key entrances into the facility. Local residents have long fought to exclude this road as a main entrance to the tech campus. During the initial Environmental Impact Statement, there was discussion about keeping this entrance for emergency access only. While the CRB acknowledges that access is needed for the facilities along Hermes Road, it is suggested that access be better controlled between GF and the rest of the campus through the use of a security gate or some other measure such as an emergency barrier. During the initial discussions for LFTC, it was proposed that permanent barriers be installed with access only for emergency vehicles, and we ask that the Town consider this option again. It would prevent commuter traffic going along Hermes Road and Dunning Street. The CRB acknowledges that development around the area has had a large impact on the traffic on Dunning/Plains Roads, but there needs to be consideration for the protection of the existing neighborhoods. (Transportation)

Response: Refer to Response to Comment 3-2 in Section 2.2.

Comment 1-11: Mitigation measures are needed to steer traffic to Stone Break Road and the Route 67 entrances and away from Hermes Road. Neighbors have difficulty exiting local neighborhoods onto Dunning and Plains, particularly in the evening hours. Appendix H, page 103, mentions an alternate access to the NYSERDA from Route 9 such that Dunning Street would no longer be the main access point. These and other alternatives should be explored. (Transportation)

Response: Refer to Response to Comments 3-3, 3-4 and 3-11 in Section 2.2.

Comment 1-12: GF is suggesting mitigation at various roundabouts and street intersections to improve traffic flow. Who would pay for these improvements and who would be responsible for maintenance? While the mitigation measures would speed traffic through these intersections and roundabouts, they appear to defeat the intentions of the recent downtown district for a more walkable town. (Transportation)

Response: Refer to Response to Comment 3-4 in Section 2.2.

Comment 1-13: The DSEIS is light on mass transit options. CDTA offered bus service in 2011, but many feel that the line was installed too soon. Targeted mass transit should be studied further. Has a study been done to see where the workers live? This type of study could be used to develop targeted mass transit systems. It was pointed out that many residents of Chapel Hill -- that's on East Line Road in Ballston -- work in LFTC. If a shuttle service were set up from Malta Mall, it would decrease the number of vehicles along Round Lake Road. This section of Malta has also experienced tremendous growth and increased traffic pressures because of the development in the town and outlying towns. (Transportation)

Response: Refer to Response to Comment 3-5 in Section 2.2.

Comment 1-14: The study reinforces the need for Exit 11A since many of the town's intersections are reaching failing grades by DOT standards. Exit 11A will provide a more direct and faster route into the campus and take pressure off of the secondary roads. The process needs to start now. There is a concern that if the Exit 11A trigger is removed from the EIS and from the PDD, there will be little political and economic pressure to develop this interchange. Mitigation of the roundabouts takes away the incentive. (Transportation)

Response: Refer to Response to Comment 3-6 in Section 2.2.

Comment 1-15: Has there been a review of the facility emergency plan for the evacuation of LFTC personnel? Are vehicles directed away from the residential areas, particularly in Luther Forest, in order for safe evacuation of the surrounding neighborhoods? (Emergency Services)

Response: Refer to Response to Comment 3-7 in Section 2.2.

Comment 1-16: GLOBALFOUNDRIES has requested an increase in overall height from 110 feet to 125 feet for stacks and other -- and I cannot pronounce this word -- buildings. The revised visual impact study better illustrates the impact of view from the lake and Stillwater neighborhoods; however, further detail is needed. The other structures that could be on the roof go anywhere from penthouses, rooftop units and other mechanical equipment. And it's a lot different than looking at a single stack. Also, as seen from the other buildings, stacks tend to be clustered together, so the visual impact will be more pronounced. Also, as written, the revised language would allow the main building to be constructed to 110 feet, thus making the main building visible at the current tree line. Does the law allow for mitigation fees to be imposed and for the money to be used to improve other view sheds within the town? (VIA)

Response: Refer to Response to Comment 3-8 in Section 2.2.

Comment 1-17: Will the construction of the upgrades to power and gas impact Dunning Street traffic? (Electric Power/Natural Gas)

Response: No. Refer to Response to Comment 3-10 in Section 2.2.

Comment 1-18: GLOBALFOUNDRIES has recently been granted sales tax relief through the County IDA. What is the impact on the finances of the town and county? (Economic Impact)

Response: Refer to Response to Comment 3-12 in Section 2.2.

Comment 1-19: What is the financial impact of additional commuters and trucks on town and county roads? (Transportation)

Response: There are no specific financial impact associated with additional commuters and truck on town and county roads. Off-site transportation mitigation measures are proposed at six (6) intersections associated with Fab 8.2.

Comment 1-20: What about financial impact on the emergency services? (Emergency Services)

Response: Refer to Response to Comment 3-12 in Section 2.2.

Comment 1-21: Tables of the modeling data on fluoride, chloride and hydrochloric acid data discharge are very hard to read. We ask that the data be formatted into a simpler table with annual discharges -- current model, full build model and DEC limits. We recommend that the report state DEC monitoring locations and the frequency in which the monitoring takes place. We are particularly concerned with the chlorine level which appears to be close to acceptable levels. (Air Resources)

Response: Refer to Response to Comment 3-13 in Section 2.2.

2. Carol Marotta, Stillwater Resident[13]

Comment 2-1: If the higher stacks are going to be visible and if higher stacks could possibly improve air quality for us, then we would like to have that investigated. (VIA)

Response: Refer to Response to Comment 7-4 in Section 2.2. Increased stack height would not significantly result in improved air quality but would have the potential to create a more significant visual impact. A height increase of 15 feet is proposed for Fab 8.2 to balance visual impacts with air quality impacts such that there is not a significant adverse impact to either visual character or air quality.

Comment 2-2: Alternative designs - the applicant has said that they want to keep it there, so that it's in a straight line, rather than in more of a fan formation. However, if the siting were returned to the original fan type siting, rather than in the straight line, it would pull FAB 8.2 away from the edge of the property where the property drops off into pretty substantial ravines. That's the reason why the FAB and the stacks are visible from Saratoga Lake is because of the topography. If you push it back, the visual impacts will disappear. So, I think that the alternatives should be at least examined to see if it is doable. The explanation is that it's the easiest and least expensive. So, I'm not sure that that's really a valid concern. (Alternatives)

Response: The alternative design for a fan layout is not a practicable alternative for Fab 8.2 which needs to be physically connected and proximal to Fab 8.1 and TDC. The fan layout was originally proposed by AMD with individual fabs operating in relative

[13] Carol Marotta is on the Stillwater Planning Board, but is presenting her personal comments during the public hearing.

isolation of each other. The fan-shaped alternative layout is no longer considered a practicable alternative for GLOBAFOUNDRIES' planned operations for Fab 8.2.

Comment 2-3: Regarding the traffic mitigation, I also feel that it would not be the right move to give up on 11A. Once it's out of documentation, it's pretty much "out of sight, out of mind" and not part of the mix. I truly believe that when this LFTC was designed, that was put in there for a very good reason -- to get the traffic directly to the site and to keep it off the local roads. Some of the options for spreading the traffic around instead of Exit 11A, I think those of us who drive these roads know that they're not really adequate solutions because we are going to have additional development. With LFTC, the GLOBALFOUNDRIES will be drawing more people and we can't give all capacity to 8.2. It's not the right thing to do, and it's going to make it much more difficult for the Town of Malta, Stillwater, Ballston, everyone, to deal with the traffic. So, yeah, it may not get built for ten years, but I think we still have to keep it in the mix and have movement toward it. Whether it's designing it, going ahead with getting the property, whatever is required for long term planning. I think it would be very shortsighted to just put in turning lanes and, you know, add extra turns. (Transportation)

Response: Refer to Response to Comment 3-6 in Section 2.2. GLOBALFOUNDRIES is supportive of the initiative to pursue Exit 11A as a future long term solution to growth within the Town. It also should be noted that a new Exit 11A would likely be required to connect to State or County Roads, and not just the LFTC Campus as a condition of FHWA approval. Mitigation for Exit 11A includes the formation of a task force by the Town of Malta whose mission is to work with the appropriate agencies to assist with the planning and implementation of a new Northway Exit 11A.

3. Mike Smith, Burnt Hills Resident

Comment 3-1: They're going to flood us right out because the influx of people coming here, most of them people, those 4000 or so hired, they're all outside people. I'm not prejudice against any people, but they all are going to have brand new housing, and it's not going to be much green left. And I just hate to see it happen. I'm adamantly opposed to these huge things. My grandchildren are going to have to move out of Burnt Hills, and I just, I can't help it. I just don't like the idea of GLOBALFOUNDRIES from day one, and that's all I can say about it. (General & Miscellaneous Comments)

Response: Comment noted.

4. Cathy Lawrenz, Manning Cove Resident

Comment 4-1: Is the 11A exit totally off the books if this is passed or can be considered in the future? Because the traffic has gotten very heavy in this area, I no longer use Price Chopper. Merchants might be concerned about how busy it's going to be here. (Transportation)

Response: Exit 11A is not off the table but is unlikely to happen in the immediate future. There will need to be a feasibility study process that will take place and GLOBALFOUNDRIES is anticipated to have some level of involvement in cooperation with the Town of Malta. Mitigation for Exit 11A includes the formation of a task force by the Town of Malta whose mission is to work with the appropriate agencies to assist with the planning and implementation of a new Northway Exit 11A.

Comment 4-2: Then my second issue is with the height of the building. I live on the lake and don't want to see a factory or stacks, and I would hope that would be part of the consideration. There are many people on the lake that I'm sure will be concerned with it, as well. (VIA)

Response: Refer to Responses to Comments 1-30 through 1-44 in Section 2.2.

5. Steve Gottmann, Malta Resident

Comment 5-1: I live on the lake. As it is now, from sitting out on my deck, I can see the stack from -- not the actual stack, but the plume when the factory is running, and I don't see how a small stack is going to make a difference to the effect that it has visually on me. (VIA)

Response: Comment noted.

Comment 5-2: I'm in support of the project and GLOBALFOUNDRIES, and I appreciate the Town's efforts to accommodate them. (General & Miscellaneous Comments)

Response: Comment noted.

Comment 5-3: The major issue is the traffic mitigation and, you know, I'm looking forward to hearing greater information regarding that. But one of the things that I view it as there's two

sides to this. Everybody complains about the traffic, but we've just been through an extensive moratorium in the Town and came up with a new downtown and, you know, complete streets planned and all this stuff, and traffic is what's necessary to drive business. Now, we want to do that in a positive way, and I know the town is working towards that, but the worst thing that we can have is an empty FAB and empty buildings. And I appreciate the efforts to promote growth and opportunity here for the residents and the children in the future in the Town of Malta. (Transportation)

Response: Comment noted. The Traffic Study presented GLOBALFOUNDRIES proposed off-site transportation mitigation measures at six (6) intersections. Refer to Response to Comment 1-62 in Section 2.2 for additional details pertaining to revised off-site transportation mitigation measures that meet with the Town's and NYSDOT's approval.

6. Bob Barshied, Chair of the Stillwater Planning Board

Comment 6-1: It's been a pleasure to work with Malta on this project for a long time and, similar to the Malta Planning Board, the Stillwater Planning Board voted unanimously to recommend approval of this project. (General & Miscellaneous Comments)

Response: Comment noted.

Comment 6-2: We live in a heavily regulated state, and DEC looks over the shoulder of everything, and I have some confidence in their environmental reviews of this. And I'd like to close in saying that GLOBALFOUNDRIES has always been responsible and they have been responsive to our questions, and they have not come to the table saying, you know, that we will have no impacts. They will. But they have worked hard to address them, and I know that the Town of Stillwater is happy to have them, but they're happier to have them if they do things correctly, and I believe that they will. (Miscellaneous & General Comments)

Response: Comment noted.

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4.0 ACRONYMS AND ABBREVIATIONS

The following table contains a list of acronyms and abbreviations that are used within this SSFEIS.

Acronyms and Abbreviations

3D	three dimensional
acc/MEV	accidents per million entry vehicles
AEDs	automatic electronic defibrillators
Ag & Markets	Department of Agriculture and Markets
AGC	Annual Guideline Concentrations
AGI	Abbie Gregg, Inc.
ADA	Americans with Disabilities Act
ADAAG	Americans with Disabilities Act Accessibility Guidelines
AMD	Advanced Micro Devices, Inc.
AMD IRR	Advanced Micro Devices, Inc. Industry Requirements Report
ANSI	American National Standards Institute
BACT	Best Available Control Technology
BAT	Best Available Technology
BMP	Best Management Practices
BTF	Bump-Test Facility
CAM	Compliance Assurance Monitoring
Campus	Luther Forest Technology Campus
CEG	Center for Economic Growth
CERCLA	Comprehensive Environmental Response, Compensation &
CFH	Cubic feet per hour
CFR	Code of Federal Regulations
CNMP	Construction Noise Monitoring Plan
CO	Carbon Monoxide
Corps	United States Army Corps of Engineers
CPS	Continuous Power Source
CRB	Community Response Board
C.T. Male	C.T. Male Associates Engineering, Surveying, Architecture
CUB	Central Utility Building
CVD	Chemical Vapor Deposition
dBA	Decibel (A-Weighted Scale)
DEM	Digital Elevation Models
DGEIS	Draft Generic Environmental Impact Statement
DOT	Department of Transportation

DRE	Destruction and Removal Efficiency
DRP	Data Retrieval Plan
EAF	Environmental Assessment Form
EM&CP	Environmental Management and Construction Plans
ENB	Environmental Notice Bulletin
EPCRA	Emergency Planning and Community Right to Know Act
ERG	Emergency Response Guidebook
ESB	Electric Service Building
ESDC	Empire State Development Corporation
FAA	Federal Aviation Administration
Fab	Fabrication Clean Room Facility
Fab 8.1	Fab 8 Module 1
Fab 8.2	Fab 8 Module 2
FC	Foot Candles
FEMA	Federal Emergency Management Agency
FGEIS	Final Generic Environmental Impact Statement
FHWA	Federal Highway Administration
FM	Factory Mutual Insurance Underwriters
FOIL	Freedom of Information Law
ft^2	Square Feet
FTE	Full Time Equivalent Employees
FWW	Freshwater Wetland
GEIS	Generic Environmental Impact Statement
GF IRR	GLOBALFOUNDRIES Industry Requirements Report
GHG	Greenhouse Gas
GPM	Gallons Per Minute
HAA	Hartgen Archeological Associates, Inc.
HAP	Hazardous Air Pollutant
HAZWOPER	Hazardous Work Operations and Emergency Responses
HCM	Highway Capacity Manual
HPMP	Historic Properties Management Plan
HV	High Voltage
ICP	Integrated Contingency Plan
IDA	Saratoga County & Mechanicville-Stillwater Industrial
IRR	Industry Requirements Report
ISO	Industry Standards Organization
IPP	Industrial Pretreatment Program
JD	Jurisdictional Determination
kV	Kilovolt
lbs/hr	Pounds per hour

LEED™	Leadership in Energy & Environmental Design™
LEPC	Local Emergency Planning Commission
LFTC	Luther Forest Technology Campus
LFTCEDC	Luther Forest Technology Campus Economic Development
LOS	Level of Service
MG	Million Gallons
MGD	Million gallons per day
MMBTU	Million British Thermal Units
MRFA	Malta Rocket Fuel Area, inactive hazardous waste disposal site
MS4	Municipal Separate Storm Sewer System
MSDS	Material Safety Data Sheet
MSHA	Mine Safety & Health Administration
MSL	Mean sea level
MW	Megawatt
MWh	Megawatt-hour
NAAQS	National Ambient Air Quality Standards
NED	National Elevation Dataset
NFPA	National Fire Prevention Association
NLCD	National Land Classification Database
nm	Nanometers
NO_x	Oxides of Nitrogen
NPL	National Priorities List
NWI	National Wetland Inventory
NYCRR	New York State Codes, Rules and Regulations
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
NYSDOS	New York State Department of State
NYSDOT	New York State Department of Transportation
NYSDPS	New York State Department of Public Service
NYSECCC	New York State Energy Conservation Construction Code
NYSEG	New York State Electric and Gas
NYSERDA	New York State Energy, Research & Development Authority
NYSHPO	New York State Historic Preservation Office
OPRHP	Office of Parks, Recreation, and Historic Places
OSHA	Occupational Safety & Health Administration
PDD	Planned Development District
pH	Potential of Hydrogen (measure of acidity)
PHEV	Plug-in Hybrid Electric Vehicle
PILOT	Payment in lieu of taxes.
PM_{10}	Particulates, 10 microns or less

POTW	Publicly Owned Treatment Works
POU	Point-of-Use
PPM	Parts per million
PSC	New York State Public Service Commission
PSI	Pounds per Square Inch
PSM	Process Safety Management
PSNS	Pretreatment Standards for New Sources
R&D	Research and Development
RMP	Risk Management Plan
SCS	Soil Conservation Service
SCSD #1	Saratoga County Sewer District No. 1
SCWA	Saratoga County Water Authority
SDEIS	Supplemental Draft Environmental Impact Statement
SFEIS	Supplemental Final Environmental Impact Statement
SEDC	Saratoga Economic Development Corporation
SERC	State Emergency Response Commission
SEQRA	State Environmental Quality Review Act
SSDEIS	Second Supplemental Draft Environmental Impact Statement
SSFEIS	Second Supplemental Final Environmental Impact Statement
SGC	Short-Term Guideline Concentrations
SO_2	Sulfur Dioxide
SPCC	Spill Prevention, Control & Countermeasures Plan
SPDES	State Pollutant Discharge Elimination System
SPR	Spill Prevention Report
SSP	Site Security Plan
STC	Sound Transmission Classification
STEP	Saratoga Technology Energy Park
SUNY	State University of New York
SVA	Security Vulnerability Assessment
SWPPP	Stormwater Pollution Prevention Plan
Test Station	Malta Test Station
TDC	Technology Development Center
TDM	Transportation Demand Management
The Board	Town of Malta Town Board
TIS	Traffic Impact Study
TSD	Treatment, Storage & Disposal Facility
TTO	Total Toxic Organics
TPY	Tons per year
µm	Microns
UAlbany	University at Albany

USDA	United States Department of Agriculture
USDHS	United States Department of Homeland Security
USDOE	United States Department of Energy
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Services
USGS	United States Geological Survey
V/C	Volume to Vapacity
VIA	Visual Impact Assessment
VOC's	Volatile Organic Compounds
VOIP	Voice Over Internet Protocol
vph	Vehicles per hour
WFCA	Western Fire Chiefs Association
WWTP	Wastewater Treatment Plant

5.0 SUBJECT INDEX

The following table is a subject index for this SSFEIS, following the substantive subject format previously used in the Prior SEQRA Record.

SSFEIS Tabulation of Comments by Subject Reference

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