

May 1, 2020

VIA Email & 1st Class Mail

Middlesex Borough Joint Land Use Board
1200 Mountain Avenue
Middlesex, NJ 08846

ATTN: Karen Wick – Joint Land Use Board Clerk

**RE: Preliminary and Final Major Site Plan
RG Middlesex, LLC
River Road and Backland Road
Block 353, Lot 1.01 & 1.02
Borough of Middlesex, Middlesex County, NJ
3rd Engineering Review
Application No.: JLUB 2020-003 (Previously P2019-05)
NA Project No.: 7840.M01**

Dear Board Members:

Our office has received the following information in support of a Preliminary and Final Major Site Plan in the above-referenced application:

- Plan entitled “Middlesex Borough Warehouse Project, Preliminary and Final Site Plan Application, Block No. 353, Lots No. 1.01 and 1.02, Borough of Middlesex, Middlesex County, New Jersey”, prepared by Richard Burrow, PE of Langan Engineering and Environmental Services, Inc., dated July 8, 2019, **revised March 27, 2020**, consisting of twenty-two (22) sheets.
- Plan entitled “ALTA/NSPS Land Title Survey 171 River Road”, prepared by David Avery, PLS of Langan Engineering and Environmental Services, Inc. dated January 9, 2019, consisting of two (2) sheets.
- Plans entitled “New Speculative Distributions Center, Middlesex Borough Warehouse Project, Borough of Middlesex, Borough of Middlesex, New Jersey”, prepared by Lawrence Valenza, AIA of Mitchell and Hugeback Architects, Inc., dated September 4, 2019, **revised January 13, 2020**, consisting of two (2) sheets.
- Submission Letter by Matthew Welch, PE, PP, and PTOE of Langan Engineering and Environmental Services, Inc., dated September 6, 2019, consisting of two (2) pages.
- “Stormwater Management Report for Middlesex borough Warehouse Project, Block No. 353, Lot No. 1.01 & 1.02, Borough of Middlesex, Middlesex County, New Jersey”, prepared by Richard Burro, PE of Langan Engineering and Environmental Services, Inc., dated July 8, 2019, **revised March 27, 2020**.
- “Stormwater Management Facilities Operation and Maintenance Manual for Middlesex borough Warehouse Project, Block No. 353, Lot No. 1.01 & 1.02, Borough of Middlesex, Middlesex County, New Jersey”, prepared by Richard Burro, PE of Langan Engineering and Environmental Services, Inc., dated July 8, 2019, **revised March 27, 2020**.
- Plan entitled “NJDEP Freshwater Wetlands Letter of Interpretation: Line Verification. Block No. 363, Lots No. 1 & Block No. 363, Lots No. 2” Division of Land Use Regulation, dated November 20, 2018, consisting of four (4) sheets

DESIGNED BY [REDACTED] • ENGINEERED BY [REDACTED]



- Plan entitled “NJDEP Division of Land Use Regulation” Permit, dated November 21, 2018, consisting of six (6) sheets.
- Plan entitled “NJDEP Remedial Action Protectiveness Biennial Certification Form – Soil,” prepared by Lisa La Fortune, Site/Senior Project Manager of Jacobs, dated May 13, 2019, consisting of four (4) sheets.
- Plan entitled “NJDEP Remedial Action Protectiveness Biennial Certification Form – Soil,” prepared by Lisa La Fortune, Site/Senior Project Manager of Jacobs, dated May 13, 2019, consisting of three (3) sheets.
- Plan entitled “NJDEP Remedial Action Protectiveness Biennial Certification Form – Soil,” prepared by James P. Mack LLC, Licensed Site Remediation Professional (LSRP), dated May 10, 2019, consisting of fifty-three (53) sheets.
- Plan entitled “Flood Hazard Area & Floodway Verification Plan, Boucher & James, Inc.,” prepared by Robert Anastasia, PE of Stormwater Management Engineering, LLC, dated March 28, 2019, revised August 27, 2018, consisting of one (1) sheet.
- Plan entitled “Fresh Water Wetlands Plan, Boucher & James, Inc.,” prepared by Bruce R. Blair, P.L.S of BRB Forensics, LLC, dated March 28, 2018, consisting of one (1) sheet.
- Plan entitled “Middlesex Borough Warehouse Project, Traffic Impact Study, Block No. 353, Lots No. 1.01 & 1.02, Borough of Middlesex, Middlesex County, New Jersey,” prepared by Langan Engineering and Environmental Services, Inc., dated September 26, 2019, revised September 30, 2019, consisting of sixty-eight (68) sheets.
- Plan entitled “Overall Wetland Delineation Plan, Piscataway Township Block No. 3502, Lots No. 1.03, 1.04 & 6.03, Borough of Middlesex Block No. 353, Lots No. 1.01 & 1.02, Block No. 356, Lots. No. 1” prepared by Gary A Veenstra, Professional Land Surveyor of Langan, dated May 22, 2014, revised September 30, 2019, consisting of five (5) sheets.
- Traffic Impact Study for Block 353, Lots 1.01 & 1.02, prepared by Langan, LLC, dated July 12, 2019.
- County of Middlesex Division of the Fire Marshal letter dated September 20, 2019 by William Johnson.
- Ordinance #1974-19, “Redevelopment Plan Block 353, Lots 1.01 and 1.02, Borough of Middlesex, Middlesex County, New Jersey”, prepared by Paul Ricci, PP, AICP of Ricci Planning, dated July 22, 2019, Adopted September 10, 2019.
- Certification Letter from Freehold Soil Conservation District, dated September 26, 2019
- Middlesex Borough ordinance, detailing the vacation of New Market Road, dated September 14, 1955.
- NJDEP Resubmission Package, prepared by Langan Engineering and Environmental Services, Inc., dated January 31, 2020.
- ***Plan entitled, “Middlesex Borough Warehouse Project, Recovery Well Piping Routes,” prepared by Langan Engineering & Environmental Services, dated November 19, 2019, consisting of two (2) sheets.***
- ***Plan entitled, “Middlesex Borough Warehouse Project, Soil Contaminants Overlay,” prepared by Langan Engineering & Environmental Services, dated November 19, 2019, consisting of one (1) sheet.***
- ***“Building 6 Engineering Controls & Financial Assurance Calculations, Rockefeller Logistics Park, Middlesex Borough, New Jersey.***
- ***Cut & Fill Volume Report dated February 21, 2020, consisting of two (2) pages.***
- ***Groundwater Analytical Results Table***
- ***NJDEP 5G3-Authorization to Discharge Permit No. NJ0088323, dated July 2, 2019.***
- ***NJDEP Flood Hazard Area Individual Permit No. 1200-12-004.3 LUP190001, Approval Date April 23, 2020.***
- ***NJDEP Letter of Interpretation – Absent Determination, dated April 23, 2020***



A. PROJECT DESCRIPTION

This Preliminary and Final Major Site Plan is located on Block 353, Lots 1.01 and 1.02 in the Borough of Middlesex, Middlesex County, New Jersey. It is fronted by Baekeland Road to the north, River Road to the southwest, and New Market Road to the southeast, and consists of 30.3 acres. The property is under a redevelopment plan which was recently adopted by the Borough of Middlesex.

The property previously consisted of several buildings with a parking area to the east. Those buildings have since been demolished. The land along River Road is undeveloped besides a single right-in, right-out driveway near the southernmost property corner.

The Applicant is proposing a 400,000 square foot warehouse with 3,845 square feet of office space. There is parking proposed to the north, east, and south of the building with loading docks on the southern end of the building. The Applicant proposes three (3) full movement driveways onto Baekeland Avenue, with the easternmost one for trucks, and one (1) full movement driveway onto River road. Three (3) detention basins for stormwater are proposed in addition to landscaping and lighting.

The Applicant and Owner is RG Middlesex, LLC, located at 92 Headquarters Plaza, 9th Floor, Morristown, New Jersey.

Based upon our review of the Preliminary and Final Minor Site Plan and application, we offer the following comments for the Board's consideration:

B. COMPLETENESS REVIEW

Based upon the plans and supplemental documents submitted in support of this application, we consider the application **COMPLETE** from an engineering standpoint, **as of October 4, 2019**.

C. Variances and Waivers

Our review of the information submitted has identified the following variances and/or design waivers are or may be required:

1. The Applicant may require a design waiver from Ordinance §248-15.A: Detail of Preliminary and Final Site Plans: "A minimum scale of 50 feet to the inch, except where otherwise authorized by the Planning Board."

The Site Plans are provided in a 60 feet to 1 inch scale. Due to the nature of this application, we have no objection from an engineering standpoint to the Board granting this waiver.

2. The Applicant is requesting a design waiver from Ordinance Section §420-60F.(2)(i), Lighting: "Illumination levels shall not exceed those recommended in the IESNA Lighting Handbook, 8th Edition, as amended from time to time."

The Applicant is proposing areas within the southern parking lot which may exceed recommended illumination levels. Due to the nature of this application, we have no objection from an engineering standpoint to the Board granting this waiver.



3. The Applicant is requesting a design waiver from Ordinance Section §420-60 F.(2)(p), Lighting: “The maximum illumination at property lines shall be 0.1 footcandle at grade.”

The Applicant is proposing areas near the access points which may exceed maximum illumination levels. Due to the nature of this application, we have no objection from an engineering standpoint to the Board granting this waiver.

4. The Applicant is requesting a design waiver from Ordinance Section §248-17.B(8) Off-Street Parking and Loading: “Size of driveways. A driveway, exclusive of curb return radii, shall be not less than 12 feet nor more than 24 feet in width”.

The Applicant is proposing 40 foot driveways and is requesting a design waiver. Due to the nature of this application, we have no objection from an engineering standpoint to the Board granting this waiver.

We defer to the Board Planner for a full evaluation of bulk requirements, waivers, and/or variances for the proposed site.

D. GENERAL COMMENTS

1. The floodway line does not reflect the Effective FEMA Map. The Applicant shall indicate what method was used to determine the Flood Hazard Area (FHA) and Floodway. The Applicant shall also provide the FHA Verification approval from NJDEP along with the approved map.

ADDRESSED – The Applicant provided the NJDEP Flood Hazard Area permit.

2. Building heights shall be labeled on the Architectural Plan Elevation Views.

ADDRESSED – Architectural Plans have been provided which show building heights.

3. Baekeland Ave is in poor condition and shows signs of sever base failure and shall be repaired and repaved as a part of this project.

CONTINUING COMMENT – The Applicant shall provide testimony to contributing its share of the road improvements along their street frontage of Baekeland Avenue.

4. The plans indicate that the south side of Baekeland Ave will have new sidewalk and curb. The proposed curb shall be concrete curb and gutter.

CONTINUING COMMENT – The Applicant shall provide testimony to contributing its share of the road improvements along their street frontage of Baekeland Avenue.

5. There is a note on the Site Plan that proposed Baekeland Avenue improvements, including curb and sidewalk by others, and references a plan by Vernick & Vena dated May 2016. These improvements and improvements to River Road shall be constructed as part of this project and schedule.

CONTINUING COMMENT – The Applicant shall provide testimony to contributing its share of the road improvements along their street frontage of Baekeland Avenue.

6. All existing roads shall be stationing for the purpose of identifying location along roads.

PARTIALLY ADDRESSED – Stationing has been provided for Baekeland Avenue, but not River Road. Please provide.



7. All proposed driveways shall also be stationed.
ADDRESSED – We do recommend stationing along the main driveways be provided for ease of identify locations; however we find it acceptable without stationing.
8. There are a number of structures shown on the survey just south of Baekeland Ave that appear to be some sort of vaults. Please identify these objects.
ADDRESSED – The Applicant has provided the groundwater treatment system recovery well piping plan which does confirm these are monitoring wells.
9. A site visit on September 26, 2019 revealed that there is a large soil stockpile on site. Please provide the Freehold Soil Conservation District (FSCD) permit for the soil stockpile.
CONTINUING COMMENT— The Applicant has indicated that the project will be resubmitted to the FSCD as a condition of approval
10. The Applicant shall provide a Cut and Fill Report indicating the total amount of material that will have to be removed from the site or the amount of material that will have to be brought into the site. The report shall also indicate the number of trucks that will be accessing the site each day and the time frame that they will be operating. The report's calculations shall include swell and shrinkage of the soils that will be trucked into or out of the site.
PARTIALLY ADDRESSED – The provided Cut & Fill Report is not clear if the quantities are for just soil, or demolished materials as well. It also does not appear to account the existing stockpile or swell & shrinkage of the soils. It appears that there will be a net export of over 20,000 cubic yards; however the subtotals are not clear.

E. PLANS (Dated July 8, 2019, Revised March 27, 2020)

Cover Sheet (Sheet CS001)

- ***All other comments have been previously addressed.***

Zoning Statistics and Notes (Sheet CS002)

1. UTILITY NOTES:
 - a. General -
 - i. Note three (3) shall be modified to indicate all current applicable standards.
 - ii. Note four (4) states “Sanitary and water laterals shall have a minimum horizontal spacing of 10 feet”. This note shall be modified to read “Sanitary and water lines shall have a minimum horizontal spacing of ten (10) feet”. It should also state the lines shall have a minimum vertical separation of eighteen (18) inches.
 - iii. Note six (6) references the City of Bayonne. This note shall be modified to state the correct Municipality.
 - b. Water Supply -
 - i. Note seven (7) shall also indicate that the location of all hydrants shall be approved by the Fire Marshall.
 - ii. Note thirteen (13) references the City of Bayonne. This note shall be modified to state the correct Municipality.



- iii. Note 3, now removed, had indicated that all water mains are to be class 52, cement-lined ductile iron pipe. Water mains proposed on the Utility Plan now show C900 pipe. Please include a note of this pipe material within the utility notes and provide brief testimony for this change.

ADDRESSED – This information has revised accordingly.

- ***All other comments have been previously addressed.***

Site Plan (Sheet CS101)

§248-15 Detail of Preliminary and Final Site Plans:

[Amended 2-25-2014 by Ord. No. 1846]

Requires that the preliminary and final site plans shall be drawn, show or be accompanied by the following:

1. Location of existing rock outcrops, high points, watercourses, depressions, ponds, marshes, wooded areas and other significant features, including flood hazard boundaries as defined by Chapter 244, Flood Damage Prevention, of the Borough of Middlesex.

ADDRESSED – The Applicant provided the NJDEP Flood Hazard Area permit.

6. §248-17 Off-Street Parking and Loading: B(8) states, “Size of driveways. A driveway, exclusive of curb return radii, shall be not less than 12 feet nor more than 24 feet in width”.

The Applicant is proposing 40 foot driveways and is requesting a design waiver. Due to the nature of this application, we have no objection from an engineering standpoint to the Board granting this waiver.

CONTINUING COMMENT – No further action required by the Applicant.

Engineering Comments:

1. There are a number of structures shown on the plan just south of Baekeland Avenue that appear to be some sort of vaults. Please identify these objects.

ADDRESSED – The Applicant has provided the groundwater treatment system recovery well piping plan which does confirm these are monitoring wells.

2. It was observed on a site visit September 26, 2019 there is a protected conduit on the site that has a sign stating “Emergency Shut Off for Propylene and Hexane Facility”. Please explain, in writing, exactly what this was for.

ADDRESSED – We are satisfied with the documentation provided about this facility’s history and potential safety hazard.

3. There is a manhole labeled “steam manhole”. Please provide a document describing the site’s original utilities and their status.

ADDRESSED – We are satisfied with the documentation provided about this facility’s history and potential safety hazard.

- ***All other comments have been previously addressed.***



Grading Plan (Sheet CG101)

1. A barrier shall be provided in the truck parking to the south of the building to prevent the trucks from leaving the pavement and rolling into the basins.

ADDRESSED – The proposed curb now has an 18” depth into the subgrade.

2. Existing and proposed top of curb and bottom of curb spot grades shall be provided along the existing roadways at proposed driveway locations in order to assure a smooth transition into the existing roadways.

ADDRESSED – This information has been provided.

3. Please show spot grades at all building corners and doors.

ADDRESSED – This information has been provided.

4. The Applicant shall provide a Cut and Fill Report indicating the total amount of material that will have to be removed from the site or the amount of material that will have to be brought into the site. The report shall also indicate the number of trucks that will be accessing the site each day and the time frame that they will be operating. The report's calculations shall include swell and shrinkage of the soils that will be trucked into or out of the site.

PARTIALLY ADDRESSED – The provided Cut & Fill Report is not clear if the quantities are for just soil, or demolished materials as well. It also does not appear to account the existing stockpile, or swell & shrinkage of the soils. It appears that there will be a net export of over 20,000 cubic yards; however the subtotals are not clear.

5. The additional spot grades which have been provided on the revised Grading Plan call out the elevations near door locations along the perimeter of the building with 'BC' (Bottom of Curb), even where there does not appear to be any additional curb. Please clarify and revise accordingly.

ADDRESSED – These spot grades have been revised to remove the 'BC' notation.

Drainage Plan (Sheet CG201)

- ***All other comments have been previously addressed.***

Storm Water Management:

1. The applicant is increasing impervious coverage by more than ¼ acre and disturbing more than an acre; therefore the project is considered a MAJOR DEVELOPMENT pursuant to NJDEP's regulations and is therefore subject to the stormwater regulations for Attenuation, Water Quality and Groundwater Recharge.

The applicant shall provide the following information for a major development:

- a) 5G3- Construction stormwater permit authorization number

ADDRESSED – The Applicant has provided the 5G3 Permit.

- b) Total area of disturbance (acres)

ADDRESSED – The total disturbance area of 31.1 acres is noted on the plans.

- c) If a NJDEP land use permit is required

ADDRESSED – The Applicant provided the NJDEP Flood Hazard Area permit.



2. According to the applicant there is groundwater contamination at the site, which could possibly be exacerbated by complying with the groundwater recharge requirement. A letter has been provided by an LSRP, stating that due to the ongoing groundwater remediation at the site, groundwater recharge is not recommended at the project site. Therefore the site is exempt from providing groundwater recharge.
CONTINUING COMMENT – No further action required by the Applicant.
3. Due to the presence of a flood hazard line on the property, the applicant shall request a jurisdictional determination from NJDEP.
ADDRESSED – The Applicant provided the NJDEP Flood Hazard Area permit.
4. From review of the Existing Watershed Map, it appears that runoff from south of the property line comes into the site. Please provide enough topography to show the extent of off-site drainage onto the property and revise the Existing and Proposed Watershed Maps accordingly. In addition the existing and proposed hydrologic models should take this flow into account.
ADDRESSED – The models now take the flows from the adjacent lot into account.
5. On the Existing & Proposed Watershed Maps, please provide TC path segment markers.
ADDRESSED – Segment markers have been added to both maps.
6. In a bioretention basin, the system must have sufficient storage volume to contain the Water Quality Design Storm, without consideration to outflows.
NOT ADDRESSED – The Applicant indicated this permit will be provided upon receipt.
7. The volume calculations for bioretention basin 2, start at elevation 36.7, however the Grading and Drainage Plans show the bottom at elevation 37.
ADDRESSED – The basin bottom has been labeled & outfall grate reflects the reports.
8. Test pits showing depth to the seasonal high groundwater table shall be provided within the bioretention and detention basins. The test pit shall be included in the stormwater report with the location of the test pit shown on the post-development drainage area map.
CONTINUING COMMENT – Test pits are not required as long as they are not required by NJDEP.
9. All soil testing should be done in accordance with Appendix “E” of the New Jersey Stormwater Best Management Practices Manual.
CONTINUING COMMENT – Test pits are not required as long as they are not required by NJDEP.
10. Since the project is a redevelopment the applicant only needs to provide a 50% removal rate of Total Suspended Solids (TSS) for the area of vehicle trafficked areas being reconstructed and 80% TSS removal for any areas of newly constructed vehicle trafficked areas. The applicant is achieving water quality through the use of the bioretention basins, which provide 90% TSS removal. Calculations have been provided that show the 90% TSS removal provided in the bioretention basins meets the required TSS removal rate for the project.
CONTINUING COMMENT – No further action required by the Applicant.



11. Emergency spillway calculations have been provided, which show spillways of 78ft, 67ft and 95ft respectively for the three basins. The Grading and Drainage Plans should show the locations of the spillways with widths and elevations. A minimum freeboard should also be accounted for.

ADDRESSED – This information has been provided.

12. Details shall be provided for the following:
- Trash Rack, - ***Provided***
 - Emergency Spillway, - ***Provided***
 - Underdrain in the Bioretention Basins, - ***Provided***
 - Low Flow Channel. – ***Provided***

13. A maintenance plan for the proposed stormwater management system has been provided; a complete review will be done when the stormwater design has addressed all of the recommendations.

CONTINUING COMMENT – No further action required by the Applicant.

14. The Stormwater Management Plan is subject to the review and approval from other agencies such as Middlesex County and the Freehold Soil Conservation District. Their independent review may find additional items that need to be addressed, which may require additional plan revisions.

CONTINUING COMMENT –The Applicant has indicated that the project will be resubmitted to the FSCD as a condition of approval

34. Review of the Hydrograph Summary Report seems to show that the proposed model is adding a hydrograph from the existing model.

ADDRESSED – The hydrographs appear to be correctly modeled.

35. The grate elevation for the detention basin outlet structures should be raised so that the grate does not interfere with flow through the weirs up to the 100-yr storm elevation.

NOT ADDRESSED– The grate elevations for the detention basins should be set so that the grates bottoms are at or above the 100-year storm elevation. Given a typical grate depth of 5 inches, this would be 34.26 & 33.37 for detention basins 1 & 2, respectively.

36. The grate elevation for the Bioretention Basin 2 outfall structure, shown on the Drainage Plan, shall be raised to 37.4, as detailed in the Stormwater report.

ADDRESSED – The elevation of the outfall grate now reflects the reports.

- ***All other comments have been previously addressed.***

Utility Plan (Sheet CU101)

1. All potential utility crossings shall be detailed with encasements as necessary.
ADDRESSED – Encasements have been provided where clearances between utility crossings do not meet applicable standards.
2. There are a number of structures (vaults, manholes, lines, etc....) shown on the survey along the south side of the property that appear to be some sort of Utilities. Please identify these objects and provide a detailed map of all the objects and utilities. This is needed in order to determine the structures and utilities to be removed.



ADDRESSED – The Applicant has provided the groundwater treatment system recovery well piping plan which does confirm these are monitoring wells.

3. We defer to the Borough Sanitary Sewer Consultant, Jerome Sheehan, for further comments on the sanitary sewer.

CONTINUING COMMENT – We defer to the Borough Sanitary Sewer Consultant, Jerome Sheehan, for further comments on the sanitary sewer.

- ***All other comments have been previously addressed.***

Soil Erosion & Sediment Control Plan (Sheet CE101)

NOTE 1: The Soil Erosion & Sediment Control Plans have been approved by the Freehold Soil Conservation District (FSCD); therefor Najarian forgoes its previous comment. Due to changes in the Grading, Drainage, and Soil Erosion & Sediment Control Plans, the Applicant may be required to resubmit this project to the FSCD for approval.

CONTINUING COMMENT –The Applicant has indicated that the project will be resubmitted to the FSCD as a condition of approval

- ***All other comments have been previously addressed.***

SESC Stormwater Diversion Plan (Sheet CE-102)

- ***All other comments have been previously addressed.***

Soil Erosion and Sediment Control Notes (Sheet CE-501)

- ***All other comments have been previously addressed.***

Soil Erosion & Sediment Control Details (Sheet CE-502)

- ***All other comments have been previously addressed.***

Tree Removal Plan (Sheet TR-101)

- ***All other comments have been previously addressed.***

Landscape Plan (Sheet LP-101)

1. Plantings proposed near the entrances to the site are very large and should be revised with regards to site triangles, (if required). Using plant material that allows for clear sight lines from a height of three to six (3-6) feet would help to ensure safe vehicular circulation in these areas and on adjoining public roads.

PARTIALLY ADDRESSED – The applicant has indicated that a note to periodically limb trees near access points has been provided; however was not found on the plans.

Landscape Notes and Details (Sheet LP-501)

- ***All other comments have been previously addressed.***



Lighting Plan (Sheet LL-101)

1. We ask that the Engineer please ensure that site be properly illuminated for internal circulation and minimize any external conflict from light spilling over onto the adjacent roadway(s) or properties. The Applicant should provide lighting on the site which meets the requirements for a facility of this type; we note the Applicant's reference to the Borough Ordinance.

CONTINUING COMMENT – The Applicant has indicated that they shall provide testimony for this comment.

2. We observe that the Applicant utilizes a Light Loss Factor (*LLF*) of 0.90 in their calculation. Please provide some justification for this figure, through either brief testimony or calculations. Does this account for environmental factors?

CONTINUING COMMENT – The Applicant shall provide testimony

3. The intensities for all existing & proposed street lighting shall be shown on the plans.

CONTINUING COMMENT – The Applicant has indicated that they shall provide testimony for this comment.

4. The lighting intensities are too low at the proposed driveways. Please revise accordingly.

CONTINUING COMMENT – The Applicant has indicated that they shall provide testimony for this comment.

5. Please ensure that the provided lighting design complies with the guidelines set forth within Sections §248-17.B(12), §420-60.F, and any other applicable standards within the Borough Ordinance and/ or referenced standard.

CONTINUING COMMENT – The Applicant will be seeking a waivers from §420-60F.(2)(i) and §420-60 F.(2)(p). No further action is required by the Applicant.

6. Please ensure that all luminaires are designed, installed and maintained to prevent light intrusion. Please ensure that glare from the proposed fixtures is minimized along the adjacent properties.

CONTINUING COMMENT – No further action required by the Applicant.

- ***All other comments have been previously addressed.***

Lighting Notes and Details (Sheet LL-501)

- ***All other comments have been previously addressed.***

Construction Details I (Sheet CS-501)

1. The rear exposure of the “12-Inch High Concrete Curb” shall be indicated.

ADDRESSED – The proposed curb now has an 18” depth into the subgrade.

Construction Details II (Sheet CS-502)

1. ***We have no comments at this time.***

Construction Details III (Sheet CS-503)

- *All other comments have been previously addressed.*

Construction Details IV (Sheet CS-504)

- I. We defer to the Fire Marshal for the fire protection stand pipes and hydrants review.*

Truck Circulation Plan (Sheet CS201)

1. Turning area four and five (4 & 5) shows the trucks having to drive into oncoming traffic in order to ingress and egress the driveways. This is not acceptable. The plans calls for 56 Loading docks and 52 Trailer parking spaces with 341 car parking spaces. This will be a very busy facility and will experience many opportunities for regular vehicle conflicts if the site remains as designed. This layout shall be redesigned to avoid any and all potential vehicle conflicts.

CONTINUING COMMENT – The Applicant shall provide testimony for this comment.

Utility Removal and Easement Modification Exhibit (Sheet CD101)

1. This plan only shows the removal of PSE&G easements, pipe lines, stormwater and sanitary lines, however there appears to be numerous other structures (pipes, manholes, vaults, etc.) that are not labeled and may be associated with utilities. Please show and label all utilities and their structures.

ADDRESSED – We are satisfied with the documentation provided about this facility’s history, potential safety hazard, and removal of existing utilities.

F. TRAFFIC IMPACT STATEMENT REVIEW (Dated September 26, 2019, Revised September 30, 2019)

BACKGROUND

Based upon the provided Traffic Impact Study and Site Plan provided, the proposed project seeks to develop a single-building warehouse facility along the southeast corner at the intersection of River Road & Baekeland Ave in Middlesex Borough. The proposed development intensity is for 400,000 SF of warehouse space. The existing site is a vacant lot. The project site would have access via (3) three stop-controlled driveways along Baekeland Avenue and (1) one stop-controlled driveway along River Road.

TRAFFIC ANALYSIS COMMENTS

1. We have reviewed the Traffic Impact Study provided by the Applicant’s Engineer for the proposed development. The Applicant indicates that traffic volume data was collected through manual traffic counts on Thursday, June 20, 2019, from 6:00AM – 9:00AM and 3:00PM – 6:00PM. Traffic data was collected at two (2) locations, the intersection of River Rd & Ridge Rd and the intersection of River Rd & Baekeland Ave/ Raritan Ave. Based upon this data the Applicant established peak hours of 7:30AM – 8:30AM for the AM Peak Hour and 4:45PM – 5:45PM for the PM Peak Hour.

We have reviewed the traffic volume data provided in Figure 2 and Appendix B within the provided report. Please indicate if the site intends to route its traffic north through the intersection of Lincoln Blvd (CR 607) & River Rd (CR 622); if so, we ask that they provide additional data collection and capacity analysis for this signalized intersection.



CONTINUING COMMENT – The Applicant has indicated that testimony will be provided in regards to this comment.

2. The Applicant indicates that they performed a capacity analysis for the following locations:

- River Road (CR 622) and Ridge Road
- River Road (CR 622) and Raritan Avenue
- River Road (CR 622) and Baekeland Avenue
- River Road (CR 622) and Site Driveway 1
- Baekeland Avenue and Site Driveway 2
- Baekeland Avenue and Site Driveway 3
- Baekeland Avenue and Site Driveway 4

We have reviewed the provided Synchro reports. Please note that there are some minor discrepancies between the provided Synchro reports and Figure 7; particularly with the labeling of volumes for Driveway #3 and Driveway #4. We kindly request the Applicant provide copies of their Synchro files for our review.

We note from the provided Synchro reports and Table 3 within the report that the WB approach of Baekeland Ave at its intersection with River Rd experiences a decline in level of service in the PM Peak Hour going from a LOS/Delay of D/26.6 in the No-Build to an E/36.8 in the Full Build. Does the Applicant propose any form of traffic improvements at this intersection in order to mitigate their traffic impact(s)?

CONTINUING COMMENT – The Applicant indicated that the discrepancies are mislabels which do not impact results. Testimony shall be provided in regards to this comment.

3. The Applicant utilized the collected data to project their traffic figures forward to a 2021 Full-Build year and provide an analysis for a three (3) year build-out period.

We agree with Applicant's chosen methodology as it typically yields a more conservative analysis from the standpoint of potential traffic impacts.

CONTINUING COMMENT – No further action required by the Applicant.

4. The Applicant has provided trip generation figures based upon the ITE Trip Generation Manual, 10th Edition. Trip generation for this type of facility greatly varies depending on the user. The trip generation provided is for the “fitted curve” of the traffic generator.

If the Applicant is unable to define an end user at this time, it is our recommendation that as a condition of approval the Applicant be required to perform a follow-up study one year's time from the project being completed and the site being occupied. This will allow the Board and its professionals to see if the impacts from the site are in line with that presented within the Applicant's analysis.

CONTINUING COMMENT – The Applicant has agreed to conduct a follow up study.

5. The Applicant indicates that only approximately 20% of traffic to the site will be comprised of heavy vehicle traffic based on demographic data and travel patterns observed for the area.

Please provide some testimony in support of this conclusion. Typically, it is our experience that facilities of this type experience higher heavy vehicle volume based upon the shipping patterns of the tenant (please see comment #4 above).

CONTINUING COMMENT – The Applicant has indicated that testimony will be provided in regards to this comment.

6. We note that the Applicant's Engineer utilized the NJDOT Background Traffic Growth Rates Table. We agree with the use of the Department's background growth rate data for the roadway network.



CONTINUING COMMENT – No further action required by the Applicant.

- Please provide information regarding pedestrian access and circulation throughout the site. Please ensure that ADA compliant facilities are provided throughout the property and its surrounding frontage, as dictated by current accessibility guidelines.

CONTINUING COMMENT – No further action required by the Applicant.

- We agree with the use of the Borough’s code for the proposed parking at the site (Borough Ordinance Section §247-17 “Off-Street Parking and Loading”).

Please ensure that the site meet’s the Borough’s requirements for loading berth size and spacing. The site would provide 55 loading docks, 141 trailer spaces, and 341 regular parking spaces meeting the Borough requirement of 80 parking spaces (1 space for every 5,000 SF of warehouse).

CONTINUING COMMENT – No further action required by the Applicant.

- Please note that the traffic impact study was based on the Land Use Code 150 (Warehouse) for the purpose of trip and parking generation. We agree with the conclusions of the report and the use of this data. HOWEVER, it is very important to note that the range of trip generation and parking demand greatly varies depending on the user of this space. Also, the ratio of any other alternative use space on site compared to warehouse space will significantly alter the peak hour trip generation and passenger vehicle parking demand.

CONTINUING COMMENT – The Applicant has indicated that testimony will be provided in regards to this comment.

- Below is the ITE Parking Generation Manual time of day distribution for parking demand. This can give us some indication of the intensity of site use by time of day for an average facility of this type. From this we can reasonably expect that this site will be utilized at its highest intensity between 2PM and 4PM clearly outside the traffic peak hour.

CONTINUING COMMENT – No further action required by the Applicant.

Time of Day Distribution for Parking Demand

The following table presents a time-of-day distribution of parking demand on a weekday at 11 general urban/suburban study sites.

Hour Beginning	Percent of Weekday Peak Parking Demand
12:00-4:00 a.m.	1
5:00 a.m.	3
6:00 a.m.	8
7:00 a.m.	27
8:00 a.m.	57
9:00 a.m.	79
10:00 a.m.	83
11:00 a.m.	87
12:00 p.m.	91
1:00 p.m.	91
2:00 p.m.	97
3:00 p.m.	100
4:00 p.m.	91
5:00 p.m.	73
6:00 p.m.	47
7:00 p.m.	26
8:00 p.m.	20
9:00 p.m.	17
10:00 p.m.	1
11:00 p.m.	1

- Please provide information regarding site distance for each of the proposed access points.

CONTINUING COMMENT – The Applicant has indicated that testimony will be provided in regards to this comment.

SITE PLAN & CIRCULATION COMMENTS

- Based upon the provided Site Plans, we observe that the site proposes for three (3) access points along Baekeland Ave and one (1) access point along River Rd. All access points are governed by a STOP Sign control and would permit full movements. Internally, the site would permit for a minimum 24’ wide drive aisle and bi-directional circulation. Loading areas are located along the south side of the proposed structure. The parking areas along the



north and south sides of the structure are separated by an emergency service road on the west side and concrete curb on the east side. Each of the proposed sections would have access via two (2) driveways, with the south side parking/loading area accessible from both Baekeland Ave and River Rd, and the north side parking area accessible only from Baekeland Ave.

We agree with the Applicant's choice of placing both driveways which will service heavy vehicle traffic as far back from the intersection as possible.

CONTINUING COMMENT – No further action required by the Applicant.

2. We ask that the Applicant provide pedestrian/ADA accessible sidewalks throughout the site and adjoining public sidewalk. This will provide access for both pedestrian pass-by trips along the front of the building. Please provide information to ensure the site is conducive to safe and efficient pedestrian circulation.

CONTINUING COMMENT – The Applicant has indicated that testimony will be provided in regards to this comment.

3. We recommend that the Applicant's Engineer consider implementing signage and striping throughout the site to ensure proper internal and external circulation of traffic. Please review the regulatory signage and provide new signs at appropriate locations. Please ensure that the appropriate signs and pavement markings are in place in order to minimize any conflicts from the drive-through lane, adjacent loading areas, and parking aisles.

Please provide a signing and striping plan which details the proposed traffic controls on site.

CONTINUING COMMENT – The Applicant has indicated that testimony will be provided in regards to this comment.

4. Please ensure that the AutoTURN templates utilized are for vehicles anticipated to be on-site, which may include:

- a. WB-50 or largest wheelbase vehicle expected;
- b. Ambulance;
- c. Refuse Truck; and
- d. Fire Truck

Please provide testimony regarding the refuse pickup, loading zone, parking stalls, and drive aisles.

CONTINUING COMMENT – The Applicant has indicated that testimony will be provided in regards to this comment.

5. The appropriate design standards and permitting should be met for any roadway construction along adjacent to the site, which may include but isn't limited to:

- a. County/Municipal Design Standards;
- b. MUTCD Standards;
- c. American Association of State Highway and Transportation Officials (AASHTO) *A Policy on Geometric Design of Highways and Streets*;
- d. ADA and/or *Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way* (PROWAG); and
- e. *Motor Vehicle and Traffic Laws – Title 39.*

CONTINUING COMMENT – A note should be added to the plans stating design criteria.

6. The Site Plan does not indicate sight distance or exhibit sight lines in either direction from the access driveways. Please provide information to ensure that the unsignalized access points meet AASHTO's *A Policy on Geometric Design of Highways and Streets* Sight Distance Requirements since this is not specified on the plans.

ADDRESSED – The site triangle have been added to the site plans.



G. ENVIRONMENTAL ISSUES

Due to the nature and size of the project and the potential for environmental contamination, freshwater wetlands and flood plain and floodway impacts, the Applicant shall provide a full Environmental Impact Statement for the project.

ADDRESSED – The Applicant has provided an LOI from the NJDEP which determined no wetlands are present.

a. Hazardous Materials

1. The NJDEP Geo-Web Site indicates that the entire site is impacted by ground water contamination.

ADDRESSED – See Hazardous materials comment 3 below.

2. During a site visit on September 26, 2019 the following was observed;

- i. There is an emergency shut-off switch for a “Propylene and Hexane Facility” near the center of the site. Typically emergency shut-off switches are in close proximity to the facility. The Applicant shall provide written documentation about this facility and its function and status.
- ii. An existing steam manhole is in close proximity to the previously demolished buildings. Typically, for industrial facilities of that era there was a single heating plant to heat all the buildings in the area with a large oil tank to fuel the plant. The Applicant shall provide documentation discussing this issue.

ADDRESSED – We are satisfied with the documentation provided about this facility’s history and potential safety hazard.

3. Based on NJDEP information, the former Union Carbide Corporation plant was located in both Piscataway Township and Middlesex Borough. Site operations resulted in soil and groundwater contamination. The most impacted areas appear to be located on the portions of the site located in Piscataway Township, and capping has been employed to address the soil contamination on these lots. Groundwater contamination appears to extend beneath the Middlesex Borough lots, while it does not appear the soil on the Middlesex Borough lots is contaminated. The Applicant shall provide documentation on the pump and treat system for the groundwater contamination that is/was in operation.

CONTINUING COMMENT – While this may be discussed during testimony, the Applicant shall provide documentation providing details of the treatment system and how the system may affect the groundwater table beneath the Site.

Potential vapor intrusion concerns in the proposed building need to be discussed as several volatile organic compounds are present in the groundwater at levels exceeding the NJDEP Vapor Intrusion Screening Levels based on the groundwater analytical results table provided. Relating to the pump and treat system with recovery wells located on the Site, discussion is needed on how the system may affect the contaminant concentrations in groundwater and the NJDEP trigger distances for vapor intrusion mitigation requirements. Please provide testimony.

4. The report that that was provided is the Remedial Action Protectiveness Biennial Certification – Prepared by the LSRP for Union Carbide. The report documents the capping in the contaminated areas of the property, and discusses the site redevelopment operations, where the new buildings constructed in contaminated areas will serve as the cap. The Middlesex Borough lots are not specifically discussed in this report.



ADDRESSED – The Applicant has provided the proposed capping plan.

5. The report provided documents the investigation performed in Piscataway and discusses the soils contamination. The Applicant shall provide all information available on the soil/groundwater contamination, the contaminants of concern, and contaminant concentrations for just the lots located in Middlesex Borough.

ADDRESSED – The figures and table provided address this item. As the information provided indicates groundwater contamination at levels exceeding NJDEP Vapor Intrusion Screening Levels, discussion of vapor intrusion investigation/mitigation is required. The Applicant shall provide testimony.

6. The Applicant shall provide a figure depicting delineation of the soil and groundwater contamination. The Applicant shall also provide an overlay of the proposed project on the delineation figure.

ADDRESSED – See Hazardous materials comment 5 above.

7. The Applicant shall provide documentation that they will not interfere with the remediation actions of the Union Carbide Corporation, and that Union Carbide Corporation is aware of the proposed work.

ADDRESSED – No further action required by the Applicant.

b. Flooding

1. The floodway line does not reflect the Effective FEMA Map. The Applicant shall indicate what method was used to determine the FHA and floodway. The Effective FEMA Map shows the floodway significantly encroaching into the site and impacts the proposed detention basins.

ADDRESSED – The Applicant provided the NJDEP Flood Hazard Area permit.

2. The Applicant shall provide documentation that they have submitted to NJDEP for a FHA Permit.

ADDRESSED – The Applicant provided the NJDEP Flood Hazard Area permit.

c. Wetlands and Water

1. The NJ Geo-Web site indicated that there are wetlands in close proximity to the project site.

ADDRESSED –The Applicant has provided an LOI from the NJDEP which determined no wetlands are present.

2. The Applicant has submitted the following;

- A Letter of Interpretation (LOI) and map for the property, but not for the area outside of the property boundary that may result in a buffer on the site.
- An LOI from NJDEP dated November 20, 2018 is provided for lots in Block 363. The map associated with this includes a portion of Lot 3, which is across River Road from the site in question. This map appears to be the area within 150 feet of Lot 2 and does not appear to include the southern portion of this lot or Lot 3A, which are across from the site. The extent of the delineation should be clarified and the remainder of Lot 3 and Lot 3A delineated or no work shall be proposed within 150 feet of the property line.



- Flood Hazard area permit for lots in Block 363 but not for the project site. The plans show an FHA line, but no FHA verification was provided. Note that the FEMA maps show the floodway extending onto the site. The method used to map the FHA line for the site and the approval from NJDEP shall be provided.

- Freshwater General Permit (GP) 6 and GP 6A for Block 363

The above permits are for lots on Block 363 and the project under review involves lots in Block 353. If the project proposes any impacts to wetlands or wetland buffer, the Applicant would be required to obtain Freshwater Wetlands and Flood Hazard area permits for the subject property in Block 353.

ADDRESSED – The Applicant has provided the LOI & FHA permits. No wetlands are present on the property.

H. ARCHITECTURAL PLANS

1. The Applicant shall provide building heights on the Elevations sheet.

ADDRESSED – This information has been provided.

2. The Applicant shall show all building entrances and indicate the entrances which are handicap accessible.

ADDRESSED – This information has been provided.

3. The Applicant shall indicate the percent building coverage and the total percent lot coverage on the plans.

ADDRESSED – This information has been provided.

I. PERMITS AND APPROVALS

Approvals or letters of service or no interest should be obtained from the following:

- Middlesex County Planning Board - ***Pending***
- Middlesex County Fire Marshal- ***Pending***
- Freehold Soil Conservation District – ***Received, dated September 26, 2019.***
- NJDEP Freshwater wetlands - ***Received, dated April 23, 2020.***
- NJDEP Flood Hazard Area – ***Received, dated April 23, 2020.***
- NJDEP Hazardous Materials- ***Pending***
- Middlesex Borough Traffic Safety Officer- ***Pending***
- Middlesex Borough Construction Official- ***Pending***
- Middlesex Borough Sanitary Sewer Consultant- ***Pending***
- American Water- ***Pending***
- New Jersey Natural Gas - ***Pending***
- All other agencies having jurisdiction- ***Pending***

We reserve the opportunity to further review and comment on this application and all pertinent documentation, pursuant to subsequent submissions and future testimony presented at the public hearing.

Should you have any questions or require any additional information relative to the above-referenced matter, please do not hesitate to contact our office.



Very truly yours,
T.O. NAJARIAN ASSOCIATES, INC



Robert W. Bucco, Jr., PE, CME, CPWM
Middlesex Borough Joint Land Use Board Engineer

cc: William Robertson, Esq. – Board Attorney (via email)
Paul Ricci, PP, AICP – Board Planner (via email)
Barrie Palumbo – Borough Zoning Officer (via email)
Jerome Sheehan – Borough Sanitary Sewer Consultant (via email)
Richard Goldman – Applicant's Attorney (via email)
Richard Burrow, PE – Applicant's Engineer (via email)
Mark Hugeback, AIA – Applicant's Architect (via email)
Jonathan Geraldo – RG Middlesex (via email)

Y:\7840- Middlesex Borough Land Use Board\7840.M01 P2019-04-Rockefeller Group Middlesex, LLC., B 353, Lts 1 & 1.02\6947.M46_P2019-04\Documents\Engineering Reviews\6947.M46- 3rd Engineering Review.docx



February 21, 2020

VIA Email & 1st Class Mail

Middlesex Borough Joint Land Use Board
1200 Mountain Avenue
Middlesex, NJ 08846

ATTN: Karen Wick – Joint Land Use Board Clerk

**RE: Preliminary and Final Major Site Plan
RG Middlesex, LLC
River Road and Baekeland Road
Block 353, Lot 1.01 & 1.02
Borough of Middlesex, Middlesex County, NJ
2nd Engineering Review
Application No.: JLUB 2020-003 (Previously P2019-05)
NA Project No.: 7840.M01**

Dear Board Members:

Our office has received the following information in support of a Preliminary and Final Major Site Plan in the above-referenced application:

- Plan entitled “Middlesex Borough Warehouse Project, Preliminary and Final Site Plan Application, Block No. 353, Lots No. 1.01 and 1.02, Borough of Middlesex, Middlesex County, New Jersey”, prepared by Richard Burrow, PE of Langan Engineering and Environmental Services, Inc., dated July 8, 2019, **revised January 30, 2020**, consisting of **twenty-two (22)** sheets.
- Plan entitled “ALTA/NSPS Land Title Survey 171 River Road”, prepared by David Avery, PLS of Langan Engineering and Environmental Services, Inc., dated January 9, 2019, consisting of two (2) sheets.
- Plans entitled “New Speculative Distributions Center, Middlesex Borough Warehouse Project, Borough of Middlesex, Borough of Middlesex, New Jersey”, prepared by Lawrence Valenza, AIA of Mitchell and Hugeback Architects, Inc., dated September 4, 2019, consisting of two (2) sheets.
- Borough of Middlesex – Site Plan/Subdivision Application package
- Borough of Middlesex –Application Checklist
- Property Owner’s Certification
 - Judith M. Hansen, 9/6/19
- Borough of Middlesex – Tax Certification, 9/9/19
- Borough of Middlesex Application Form for Waiver Request – Application Checklist Item 13, Survey Which Has Been Performed Within the Last Six (6) Months
- Borough of Middlesex Application Form for Waiver Request – §Ordinance 248-17B(8), Driveway Width
- Escrow Agreement by the Borough of Middlesex, dated July 11, 2019, consisting of four (4) pages.

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- Ownership Disclosure List & Deed, book 17556, page 572, recorded July 16, 2019, consisting of fourteen (14) pages.
- Borough of Middlesex Title Exceptions for Block 353, Lots 1.01 and 1.02
- Submission Letter by Matthew Welch, PE, PP, and PTOE of Langan Engineering and Environmental Services, Inc., dated September 6, 2019, consisting of two (2) pages.
- “Stormwater Management Report for Middlesex borough Warehouse Project, Block No. 353, Lot No. 1.01 & 1.02, Borough of Middlesex, Middlesex County, New Jersey”, prepared by Richard Burro, PE of Langan Engineering and Environmental Services, Inc., dated July 8, 2019, **revised January 30, 2020**.
- “Stormwater Management Facilities Operation and Maintenance Manual for Middlesex borough Warehouse Project, Block No. 353, Lot No. 1.01 & 1.02, Borough of Middlesex, Middlesex County, New Jersey”, prepared by Richard Burro, PE of Langan Engineering and Environmental Services, Inc., dated July 8, 2019, **revised January 30, 2020**.
- Plan entitled “NJDEP Freshwater Wetlands Letter of Interpretation: Line Verification. Block No. 363, Lots No. 1 & Block No. 363, Lots No. 2” Division of Land Use Regulation, dated November 20, 2018, consisting of four (4) sheets
- Plan entitled “NJDEP Division of Land Use Regulation” Permit, dated November 21, 2018, consisting of six (6) sheets.
- Plan entitled “NJDEP Remedial Action Protectiveness Biennial Certification Form – Soil,” prepared by Lisa La Fortune, Site/Senior Project Manager of Jacobs, dated May 13, 2019, consisting of four (4) sheets.
- Plan entitled “NJDEP Remedial Action Protectiveness Biennial Certification Form – Soil,” prepared by Lisa La Fortune, Site/Senior Project Manager of Jacobs, dated May 13, 2019, consisting of three (3) sheets.
- Plan entitled “NJDEP Remedial Action Protectiveness Biennial Certification Form – Soil,” prepared by James P. Mack LLC, Licensed Site Remediation Professional (LSRP), dated May 10, 2019, consisting of fifty-three (53) sheets.
- Plan entitled “Flood Hazard Area & Floodway Verification Plan, Boucher & James, Inc.,” prepared by Robert Anastasia, PE of Stormwater Management Engineering, LLC, dated March 28, 2019, revised August 27, 2018, consisting of one (1) sheet.
- Plan entitled “Fresh Water Wetlands Plan, Boucher & James, Inc.,” prepared by Bruce R. Blair, P.L.S of BRB Forensics, LLC, dated March 28, 2018, consisting of one (1) sheet.
- Plan entitled “Soil Erosion and Sediment Control Plan,” prepared by David Puchalski, PE of NewFields, dated April 2, 2018, consisting of one (1) sheet.
- Plan entitled “Existing and Proposed Grading Plan,” prepared by David Puchalski, PE of NewFields, dated April 2, 2018, consisting of one (1) sheet.
- Plan entitled “Remedial Action Detail (Protective Soil Capping System),” prepared by David Puchalski, PE of NewFields, dated April 2, 2018, consisting of one (1) sheet.
- Plan entitled “Freshwater Wetlands general Permit Plan,” prepared by David Puchalski, PE of NewFields, dated April 2, 2018, consisting of one (1) sheet.
- Plan entitled “Riparian Zone Disturbance Plan” prepared by David Puchalski, PE of NewFields, dated April 2, 2018, consisting of one (1) sheet.
- Plan entitled “Middlesex Borough Warehouse Project, Traffic Impact Study, Block No. 353, Lots No. 1.01 & 1.02, Borough of Middlesex, Middlesex County, New Jersey,” prepared by Langan Engineering and Environmental Services, Inc., dated September 26, 2019, revised September 30, 2019, consisting of sixty-eight (68) sheets.
- Plan entitled “Overall Wetland Delineation Plan, Piscataway Township Block No. 3502, Lots No. 1.03, 1.04 & 6.03, Borough of Middlesex Block No. 353, Lots No. 1.01 & 1.02, Block



- No. 356, Lots. No. 1” prepared by Gary A Veenstra, Professional Land Surveyor of Langan, dated May 22, 2014, revised September 30, 2019, consisting of five (5) sheets.
- Traffic Impact Study for Block 353, Lots 1.01 & 1.02, prepared by Langan, LLC, dated July 12, 2019.
 - County of Middlesex Division of the Fire Marshal letter dated September 20, 2019 by William Johnson.
 - Ordinance #1974-19, “Redevelopment Plan Block 353, Lots 1.01 and 1.02, Borough of Middlesex, Middlesex County, New Jersey”, prepared by Paul Ricci, PP, AICP of Ricci Planning, dated July 22, 2019, Adopted September 10, 2019.
 - ***Certification Letter from Freehold Soil Conservation District, dated September 26, 2019***
 - ***Middlesex Borough ordinance, detailing the vacation of New Market Road, dated September 14, 1955.***
 - ***NJDEP Resubmission Package, prepared by Langan Engineering and Environmental Services, Inc., dated January 31, 2020.***

A. PROJECT DESCRIPTION

This Preliminary and Final Major Site Plan is located on Block 353, Lots 1.01 and 1.02 in the Borough of Middlesex, Middlesex County, New Jersey. It is fronted by Baekeland Road to the north, River Road to the southwest, and New Market Road to the southeast, and consists of 30.3 acres. The property is under a redevelopment plan which was recently adopted by the Borough of Middlesex.

The property previously consisted of several buildings with a parking area to the east. Those buildings have since been demolished. The land along River Road is undeveloped besides a single right-in, right-out driveway near the southernmost property corner.

The Applicant is proposing a 400,000 square foot warehouse with 3,845 square feet of office space. There is parking proposed to the north, east, and south of the building with loading docks on the southern end of the building. The Applicant proposes three (3) full movement driveways onto Baekeland Avenue, with the easternmost one for trucks, and one (1) full movement driveway onto River road. Three (3) detention basins for stormwater are proposed in addition to landscaping and lighting.

The Applicant and Owner is RG Middlesex, LLC, located at 92 Headquarters Plaza, 9th Floor, Morristown, New Jersey.

Based upon our review of the Preliminary and Final Minor Site Plan and application, we offer the following comments for the Board’s consideration:

B. COMPLETENESS REVIEW

Based upon the plans and supplemental documents submitted in support of this application, we consider the application **COMPLETE** from an engineering standpoint, as of **October 4, 2019**.



C. Variances and Waivers

Our review of the information submitted has identified the following variances and/or design waivers are or may be required:

1. The Applicant may require a design waiver from Ordinance §248-15.A: Detail of Preliminary and Final Site Plans: "A minimum scale of 50 feet to the inch, except where otherwise authorized by the Planning Board."

The Site Plans are provided in a 60 feet to 1 inch scale. Due to the nature of this application, we have no objection from an engineering standpoint to the Board granting this waiver.

2. The Applicant is requesting a design waiver from Ordinance Section §420-60F.(2)(i), Lighting: "Illumination levels shall not exceed those recommended in the IESNA Lighting Handbook, 8th Edition, as amended from time to time."

The Applicant is proposing areas within the southern parking lot which may exceed recommended illumination levels. Due to the nature of this application, we have no objection from an engineering standpoint to the Board granting this waiver.

3. The Applicant is requesting a design waiver from Ordinance Section §420-60 F.(2)((p),) Lighting: "The maximum illumination at property lines shall be 0.1 footcandle at grade."

The Applicant is proposing areas near the access points which may exceed maximum illumination levels. Due to the nature of this application, we have no objection from an engineering standpoint to the Board granting this waiver.

4. The Applicant is requesting a design waiver from Ordinance Section §248-17.B(8) Off-Street Parking and Loading: "Size of driveways. A driveway, exclusive of curb return radii, shall be not less than 12 feet or more than 24 feet in width".

The Applicant is proposing 40 foot driveways and is requesting a design waiver. Due to the nature of this application, we have no objection from an engineering standpoint to the Board granting this waiver.

We defer to the Board Planner for a full evaluation of bulk requirements, waivers, and/or variances for the proposed site.

D. GENERAL COMMENTS

1. The floodway line does not reflect the Effective FEMA Map. The Applicant shall indicate what method was used to determine the Flood Hazard Area (FHA) and Floodway. The Applicant shall also provide the FHA Verification approval from NJDEP along with the approved map.

CONTINUING COMMENT – The Applicant has indicated that there were inconsistencies with the flood hazard elevation of FEMA Flood Insurance Maps and the NJDEP Flood Hazard Area Maps and that discussions were held with NJDEP, Land Use Regulation (LUR) that NJDEP LUR agreed that the FEMA floodway was



not accurate. The applicant submitted additional information to NJDEP for a Hardship Exception to the Flood Hazard Area Individual Permit application to allow construction in the mapped floodway. The NJDEP FHA Individual Permit should be provided when obtained.

2. Building heights shall be labeled on the Architectural Plan Elevation Views.
NOT ADDRESSED – *The Applicant has indicated that they will provide the revised Architectural Plans under a separate cover.*
3. Is a basement proposed in the building? If so it should be shown in the plans with elevations and basement heights.
ADDRESSED – *The Applicant has noted that no basement is proposed in the building.*
4. Does the Applicant propose any mezzanines in the building? If so they should be shown on the plans with elevations and heights.
ADDRESSED – *The Applicant has noted that no mezzanines are proposed.*
5. If New Market Road has been vacated, documentation of the vacation shall be provided.
ADDRESSED – *A copy of the New Market Road vacation ordinance, adopted September 14, 1955 has been provided.*
6. Baekeland Ave is in poor condition and shows signs of sever base failure and shall be repaired and repaved as a part of this project.
PARTIALLY ADDRESSED – *The Applicant noted that these improvements are being planned by Piscataway Township and are shown on the plans for reference only. The Applicant should contribute its proportional share of the improvements along their street frontage of Baekeland Avenue.*
7. The plans indicate that the south side of Baekeland Ave will have new sidewalk and curb. The proposed curb shall be concrete curb and gutter.
PARTIALLY ADDRESSED – *The Applicant noted that these improvements are being planned by Piscataway Township and are shown on the plans for reference only. The Applicant should contribute its proportional share of the roadway improvements along their street frontage of Baekeland Avenue.*
8. There is a note on the Site Plan that proposed Baekeland Avenue improvements, including curb and sidewalk by others, and references a plan by Vernick & Vena dated May 2016. These improvements and improvements to River Road shall be constructed as part of this project and schedule.
PARTIALLY ADDRESSED – *The Applicant noted that these improvements are being planned by Piscataway Township and are shown on the plans for reference only. The Applicant should contribute its proportional share of the improvements along their street frontage of River Road.*
9. All existing roads shall be stationed for the purpose of identifying location along roads.
NOT ADDRESSED – *Stationing has not been provided on the Site Plans.*
10. All proposed driveways shall also be stationed.
NOT ADDRESSED – *Stationing has not been provided on the Site Plans.*



11. Driveway and Utility Profiles shall be provided.

ADDRESSED – *The applicant has noted that all utilities are designed to provide minimum clearances as required. Driveway & Utility Profiles have been provided in the Stormwater Management Report, revised January 31, 2020.*

12. There are a number of structures shown on the survey just south of Baekeland Ave that appear to be some sort of vaults. Please identify these objects.

NOT ADDRESSED – *The Applicant has indicated that these structures are groundwater monitoring wells. However, groundwater monitoring wells are already called out on the survey. Please confirm the identity of these objects.*

13. A site visit on September 26, 2019 revealed that there is a large soil stockpile on site. Please provide the Freehold Soil Conservation District permit for the soil stockpile.

CONTINUING COMMENT – *Approval from the Freehold Soil Conservation District (FSCD) has been provided. Due to changes in the Grading, Drainage, and Soil Erosion & Sediment Control Plans, the Applicant may be required to resubmit this project to the FSCD for approval.*

14. Per Ordinance Section §351-23 a recycling plan shall be provided.

ADDRESSED – *The Applicant has indicated that a recycling plan will be submitted under a separate cover as the final amounts & location of refuse will depend on the building tenants. The Applicant shall submit a plan prior to final approval.*

15. The Applicant shall provide a Cut and Fill Report indicating the total amount of material that will have to be removed from the site or the amount of material that will have to be brought into the site. The report shall also indicate the number of trucks that will be accessing the site each day and the time frame that they will be operating. The report's calculations shall include swell and shrinkage of the soils that will be trucked into or out of the site.

NOT ADDRESSED – *The applicant has indicated that no significant export of material is anticipated and that the existing stockpile will be used to raise the site elevations with any excess to be placed within a berm along Baekeland Avenue. We still request that a Cut & Fill Report be provided to confirm if the existing stockpile is sufficient for these elevation raises and if any material will be removed from or brought to the site.*

16. The Applicant shall consolidate lots 1.01 and 1.02 by deed or file map.

ADDRESSED – *The Applicant noted that the lots will be consolidated by deed.*

E. PLANS (Dated July 8, 2019, Revised January 30, 2019)

Cover Sheet (Sheet CS001)

1. Adjacent property owners within 200 feet of the project limits shall be shown on the plan.

ADDRESSED – *This information has been provided.*

2. A signed owner's certification statement shall be added to the Cover Sheet.

ADDRESSED – *Not required as the Applicant is also the owner of the property.*



3. New Market Road shall be labeled on the plan.
ADDRESSED—New Market Road has been vacated.

Zoning Statistics and Notes (Sheet CS002)

1. ZONING TABLE NOTES:
 - a. The allowed building heights in stories shall be added to the zoning table.
 - b. The maximum driveway width shall be shown in the proposed column as 40
ADDRESSED – This information has been provided.
2. GENERAL NOTES:
 - a. Note one (1) refers to the “Boundary and Topographic Survey”. The title of the survey is “ALTA/NSPS LAND TITLE SURVEY”. The Applicant shall modify the plan to indicate the same.
 - b. Note four (4) states “the contractor shall furnish, install, test, and complete all work to the satisfaction of the engineer”. This note shall be modified to indicate all work shall be performed to the satisfaction of the Borough Engineer.
ADDRESSED – This information has revised accordingly.
3. GRADING AND DRAINAGE NOTES:
 - a. Note two (2) indicates that “site grading shall not proceed until soil erosion measures have been installed. See Sheets CE101 for erosion control measures.” This note shall be modified to include sheets CE501 & CE502 (soil erosion notes and details).
 - b. Note four (4) shall state that all fill brought to the site must be “clean fill certified”.
ADDRESSED – This information has revised accordingly.
4. UTILITY NOTES:
 - a. General -
 - i. Note three (3) shall be modified to indicate all current applicable standards.
 - ii. Note four (4) states “Sanitary and water laterals shall have a minimum horizontal spacing of 10 feet”. This note shall be modified to read “Sanitary and water lines shall have a minimum horizontal spacing of ten (10) feet”. It should also state the lines shall have a minimum vertical separation of eighteen (18) inches.
 - iii. Note six (6) references the City of Bayonne. This note shall be modified to state the correct Municipality.
 - b. Water Supply -
 - i. Note seven (7) shall also indicate that the location of all hydrants shall be approved by the Fire Marshall.
 - ii. Note thirteen (13) references the City of Bayonne. This note shall be modified to state the correct Municipality.
ADDRESSED – This information has revised accordingly.
 - iii. **Note 3, now removed, had indicated that all water mains are to be class 52, cement-lined ductile iron pipe. Water mains proposed on the Utility Plan now show C900 pipe. Please include a note of this pipe material within the utility notes and provide brief testimony for this change.**



Site Plan (Sheet CS101)

§248-15 Detail of Preliminary and Final Site Plans:

[Amended 2-25-2014 by Ord. No. 1846]

Requires that the preliminary and final site plans shall be drawn, show or be accompanied by the following:

1. A minimum scale of 50 feet to the inch, except where otherwise authorized by the Planning Board. All distances shall be in feet and decimals of a foot, and all bearings shall be given to the nearest 10 seconds.

The Applicant has provided the site plan in a scale of 1 inch = 60 feet. This makes the plans very cluttered and difficult to review. The Applicant shall reduce the scale and use a match line if necessary.

ADDRESSED – The Applicant will be requesting a design waiver for the scale used. The Applicant has also revised the drawings to add 1 inch = 20 feet scale blow ups of ADA parking areas.

2. The names of all owners of record at all adjacent properties and any property directly across from any official street and the block and parcel number of the property and a key map showing general location of the site to adjacent properties.

The Applicant shall provide the names, addresses, lot and Block numbers of all the adjacent owners within 200 feet of the property in question.

ADDRESSED – This information has been provided.

3. Location of existing rock outcrops, high points, watercourses, depressions, ponds, marshes, wooded areas and other significant existing features, including flood hazard boundaries as defined by Chapter 244, Flood Damage Prevention, of the Borough of Middlesex.

The FHA Line shown on the plans do not reflect the Effective FEMA Map. It appears the NJDEP mapping and FEMA mapping conflict. An NJDEP FHA Verification approval and map must be provided and referenced on the plans.

CONTINUING COMMENT – The Applicant has provided a copy of the Hardship Exception request submitted to NJDEP. The FHA approvals shall be provided prior to final approval.

4. Title, date, north arrow, scale, name and address of record owner and name, address and New Jersey professional license number and seal of the engineer, architect or land surveyor preparing the site development plan, to appear in a box at the lower right-hand corner of the site plan which shall contain the date of revisions.

The Applicant shall provide the name and address of record owner with a certification statement signature line.

ADDRESSED – Not required as the Applicant is also the owner of the property.

5. A survey prepared by a surveyor licensed in the State of New Jersey, which survey shall show the boundaries of the parcel and the limits of all proposed streets, easements and any other property to be dedicated to public use.

The plans do not show New Market Road. This shall be added to the plans.

ADDRESSED – New Market road has been previously vacated.



6. §248-17 Off-Street Parking and Loading: B(8) states, “Size of driveways. A driveway, exclusive of curb return radii, shall be not less than 12 feet or more than 24 feet in width”.”

The Applicant is proposing 40 foot driveways and is requesting a design waiver. Due to the nature of this application, we have no objection from an engineering standpoint to the Board granting this waiver.

CONINUING COMMENT – No further action required by the Applicant.

Engineering Comments:

1. The Applicant shall show all building entrances on the plans and indicate the entrances which are handicap accessible.
ADDRESSED – All building entrances are shown on the plans. The Applicant has indicated that the locations of handicap accessible entrances are shown on the revised Architectural Plans which will be submitted under a separate cover.
2. The Applicant shall indicate the percent building coverage and the total percent lot coverage on the Site Plan.
ADDRESSED – This information has been provided.
3. All the directional signs shall be labeled with message and details of the signs shall be provided.
ADDRESSED – This information has been provided.
4. All islands shall be dimensioned.
ADDRESSED – This information has been provided.
5. Former New Market Road shall be labeled on the plans.
ADDRESSED – Not required as New Market Road has been previously vacated.
6. There are a number of structures shown on the plan just south of Baekeland Avenue that appear to be some sort of vaults. Please identify these objects.
NOT ADDRESSED –The Applicant indicated that these structures are groundwater monitoring wells. However, groundwater monitoring wells are already called out on the survey. Please confirm the identity of these objects.
7. It was observed on a site visit September 26, 2019 there is a protected conduit on the site that has a sign stating “Emergency Shut Off for Propylene and Hexane Facility”. Please explain, in writing, exactly what this was for.
NOT ADDRESSED – The Applicant has indicated that this was a previous use which has since been demolished. Please provide written documentation about this facility, its function and status, and any potential safety hazard risks.
8. There are also a number of vent pipes that are not labeled. Please identify these pipes on the plans.
ADDRESSED –The vent pipes are labeled on the ATLAS/NSPS Land Title Survey.
9. There is a manhole labeled “steam manhole”. Please provide a document describing the site’s original utilities and their status.
PARTIALLY ADDRESSED – See Engineering Comment 7 above.



10. All handicap (HC) ramps shall be labeled with their type.
ADDRESSED – All HC ramps are shown on the site plans as parallel ramps.
11. Per the Middlesex County Fire Marshal letter dated September 20, 2019, fire lanes and signs shall be added to all non-parking areas and roadways around the building. A Knox box shall be installed at the fire department pump room and shown on the drawings. We defer all other comments regarding these matters to the Middlesex County Division of the Fire Marshal.
ADDRESSED – Fire lanes and signs as well as the Knox box have been added to the revised drawings. We defer all other comments regarding these matters to the Middlesex County Division of the Fire Marshal.

Grading Plan (Sheet CG101)

1. The blowup sections of the HC ramps do not appear to meet ADA requirements. All plans must be ADA & barrier free compliant.
ADDRESSED – All HC ramp designs meet ADA requirements.
2. The seven (7) foot wide parallel ramp appears to have a seven (7) percent slope at the building. Please ensure all plans are ADA compliant.
ADDRESSED – These parallel ramps do have a 7% running slope, which is in conformance with the ADA slope requirement of a 1V:12H.
3. The HC ramps with warning surfaces shall be shown with spot grades to show they meet ADA requirements.
ADDRESSED – Detectable warning surfaces have been provided.
4. The slopes of all the sidewalks shall be labeled on the plans.
ADDRESSED – The slopes of all sidewalks have been provided.
5. All HC accessible door locations shall be shown on the plans with finish floor elevations.
ADDRESSED – The finish floor elevation is 49.0 for the entire building. Locations of HC accessible doors are shown on the Architectural Plans.
6. Spot grades shall be provided along the south side of the building loading dock area.
ADDRESSED – Additional spot grades have been provided at this location.
7. When a parking lot or roadway has a side slope of 3:1 or greater with a total drop in elevation of four (4) feet or more, a guide rail shall be provided.
ADDRESSED – A guiderail has been added to the north parking lot. The south parking lot utilizes a 12 inch high slotted curb and a 5 foot split-rail fence.
8. Show all overhead/personnel doors with spot elevations.
ADDRESSED – The finish floor elevation is 49.0 for the entire building
9. The bottom of all detention basins shall be graded with either spot grades or contours to show how the basin will drain.
ADDRESSED – Contours have been provided for all detention basin bottoms.



10. Calculations shall be provided for all Rip-Rap aprons.
ADDRESSED – This information has been provided.
11. The Applicant shall show the emergency spillway for all the basins.
ADDRESSED – The locations and grading for the emergency spillways have been provided on the Grading Plan.
12. A detail shall be added to the edge of pavement in the truck parking lot to the south of the building, showing a depressed curb to prevent the surface course from spalling due to the truck loading.
ADDRESSED – This area is to be 12 inch high slotted curb.
13. A barrier shall be provided in the truck parking to the south of the building to prevent the trucks from leaving the pavement and rolling into the basins.
PARTIALLY ADDRESSED – This area is to be 12 inch high slotted curb which will act as a truck-stopping barrier. The Applicant shall revise the 12” Curb detail to provide a minimum 18” concrete depth into the subgrade. Assurance should also be provided showing that this curb will stop a tractor trailer.
14. It is not clear as if there is curbing along the south side of the trucking parking lot south of the building. There is a label at each end of the lot indicating there is a transition from six (6) inch to twelve (12) inch curb.
ADDRESSED – A callout for the slotted curb at this location has been provided.
15. There are no inlets proposed along the southern limit of pavement to the south of the loading docks. However, they appear to show curbing. If curbing is proposed then inlets and piping to the basins will be required.
ADDRESSED – This area is to be 12 inch high slotted curb which allows direct drainage to the detention basin.
16. Existing and proposed top of curb and bottom of curb spot grades shall be provided along the existing roadways at proposed driveway locations in order to assure a smooth transition into the existing roadways.
NOT ADDRESSED – Additional spot grades have not been provided at the requested locations.
17. Please show spot grades at all building corners and doors.
NOT ADDRESSED – Please provide exterior spot grades at all building corners.
18. The Applicant shall provide a Cut and Fill Report indicating the total amount of material that will have to be removed from the site or the amount of material that will have to be brought into the site. The report shall also indicate the number of trucks that will be accessing the site each day and the time frame that they will be operating. The report’s calculations shall include swell and shrinkage of the soils that will be trucked into or out of the site.
NOT ADDRESSED – The applicant has indicated that no significant export of material is anticipated and that the existing stockpile will be used to raise the site elevations with any excess to be placed within a berm along Baekeland Avenue. We still request that a Cut & Fill Report be provided to confirm if the existing stockpile



is sufficient for these elevation raises and if any material will be removed from or brought to the site.

19. *The additional spot grades which have been provided on the revised Grading Plan call out the elevations near door locations along the perimeter of the building with 'BC' (Bottom of Curb), even where there does not appear to be any additional curb. Please clarify and revise accordingly.*

Drainage Plan (Sheet CG201)

1. Direction of flow arrows shall be shown on all storm sewer pipes.
ADDRESSED – This information has been provided.
2. Spot grades or contours shall be provided to show how the basins will drain and that there will not be any standing water.
ADDRESSED – This information has been provided.
3. Pipe profiles shall be provided.
ADDRESSED – This information has been provided.
4. Energy grade lines shall be provided on all piping profiles.
ADDRESSED – This information has been provided.
5. The fifteen (15) inch pipe between CB206 & 206 is at a 0.37% slope. This should be increased to a minimum slope of 0.5%.
ADDRESSED – The Stormwater network has been redesigned and all pipe slopes meet the minimum requirements.
6. All inlets shall be labeled with their type.
ADDRESSED – A noted has been added to the Drainage Plan stating all inlets are to be Type B unless otherwise noted.
7. When inlets or manholes have more than one invert in or invert out they shall be labeled with the location of each (such as N, S, E, or W).
ADDRESSED – This information has been provided.
8. The leader for MH #108 should be redrawn to clearly show that it points to the MH.
ADDRESSED – This information has been revised.
9. All fifteen (15) inch and eighteen (18) inch storm sewer pipes should have a minimum slope of 0.5% where possible.
ADDRESSED – The Stormwater network has been redesigned and all pipe slopes meet the minimum requirements.
10. Calculations for all Rip-Rap aprons shall be provided.
ADDRESSED – This information has been provided in the report.
11. The pipe between CB 401 and FES 401 shall be labeled.
ADDRESSED – This information has been provided.



12. Low flow swales shall be shown in all basins.
ADDRESSED – This information has been provided.
13. A detail for the underdrain in the basins shall be provided.
ADDRESSED – This information has been provided.
14. The emergency spillway shall be labeled and graded on the plan.
ADDRESSED – This information has been provided.

Storm Water Management:

1. The applicant is increasing impervious coverage by more than ¼ acre and disturbing more than an acre; therefore the project is considered a MAJOR DEVELOPMENT pursuant to NJDEP's regulations and is therefore subject to the stormwater regulations for Attenuation, Water Quality and Groundwater Recharge.

The applicant shall provide the following information for a major development:

- a) 5G3- Construction stormwater permit authorization number
NOT ADDRESSED – The Applicant will supply under separate cover prior to construction.
 - b) Total area of disturbance (acres)
ADDRESSED – The total disturbance area of 31.1 acres is noted on the plans.
 - c) If a NJDEP land use permit is required
NOT ADDRESSED – The Applicant shall provide a NJDEP Flood Hazard Area individual Permit.
2. According to the applicant there is groundwater contamination at the site, which could possibly be exacerbated by complying with the groundwater recharge requirement. A letter has been provided by an LSRP, stating that due to the ongoing groundwater remediation at the site, groundwater recharge is not recommended at the project site. Therefore the site is exempt from providing groundwater recharge.
CONTINUING COMMENT – No further action required by the Applicant.
 3. Due to the presence of a flood hazard line on the property, the applicant shall request a jurisdictional determination from NJDEP.
NOT ADDRESSED – The Applicant has indicated that a Flood Hazard Area Verification and Individual Flood Hazard Area Permit Application with a request for a hardship exception is under NJDEP review and will be provided as prior to final approval.
 4. On NJ Soils Map figure 4, please indicate the Hydrologic Soil Group for the soils.
ADDRESSED – The Hydrologic Soil Groups for the soils have been added.
 5. From review of the Existing Watershed Map, it appears that runoff from south of the property line comes into the site. Please provide enough topography to show the extent of off-site drainage onto the property and revise the Existing and Proposed Watershed Maps accordingly. In addition the existing and proposed hydrologic models should take this flow into account.
NOT ADDRESSED – The Applicant' engineer has stated that topography has been provided to the ridgeline, which is the curb of the adjacent lot. However, the pre-



and post-development models must take into account any flow coming from the adjacent property. From review of the plans it is clear that there is flow coming into the site from adjacent properties.

6. On the Existing and Proposed Watershed Maps, please provide segment markers on the TC paths.
PARTIALLY ADDRESSED – *Segment markers have been added to the Proposed Watershed Map; however they are still missing on the Existing Watershed Map.*
7. The TC for segment 1 for Proposed Watershed 1 – Pervious appears incorrect as stormwater flows toward the parking lot, not toward the access drive.
ADDRESSED – *The Tc has been revised accordingly.*
8. The TC for segment 1 for Proposed Watershed 2C – Pervious appears incorrect as stormwater flows toward the upper parking lot.
ADDRESSED – *The Tc has been revised accordingly.*
9. The design of the bioretention basins shall not include infiltration (exfiltration) in the routing calculations for quantity control. The infiltration is only used to determine whether or not the basin drains within 72 hours. The proposed models (2-, 10-, 25-, 100-, and water quality) should be run without considering infiltration.
ADDRESSED – *The models have been revised to exclude the exfiltration component from the quantity calculations.*
10. In a bioretention basin, the system must have sufficient storage volume to contain the Water Quality Design Storm, without consideration to outflows.
PARTIALLY ADDRESSED – *The applicant' engineer has stated that the bioretention basin has been designed in accordance with NJDEP requirements. We agree provided a permit is acquired from NJDEP for the bioretention basins.*
11. The volume calculations for bioretention basin 2, start at elevation 36.7, however the Grading and Drainage Plans show the bottom at elevation 37.
NOT ADDRESSED – *The Applicant' engineer has stated that the bottom of the basin is at elevation 36.7. A note should be added to the grading and drainage plan accordingly. Additionally, the outfall grate for this basin shall be revised to the grate elevation of 37.4, as shown in the Stormwater report.*
12. The model for the proposed detention basin shall use a tailwater elevation that corresponds to the floodplain elevation of the Raritan River. This elevation shall be based on flood hazard verification from NJDEP.
ADDRESSED – *The Applicant' engineer has stated that the tailwater elevation was determined through the Urban Drainage Design Manual.*
13. It appears that the detention basin has a berm that goes above existing grade for at least a portion of the basin. Any part of the basin that goes above existing grade shall have a 10 foot minimum top width of the berm. The sides of the basin adjacent to the property line and River Road should be reviewed.
ADDRESSED – *The basin has been redesigned and this condition no longer exists, therefore no top width is required.*



14. Test pits showing depth to the seasonal high groundwater table shall be provided within the 2 bioretention basins and the detention basin. The test pit shall be included in the stormwater report with the location of the test pit shown on the post-development drainage area map.

PARTIALLY ADDRESSED – *The Applicant's engineer has stated that the basins have an impermeable liner to prevent infiltration, which would also prevent groundwater from impacting the detention design. We therefore agree that test pits are not required as long as they are not required by NJDEP.*

15. All soil testing should be done in accordance with Appendix "E" of the New Jersey Stormwater Best Management Practices Manual.

PARTIALLY ADDRESSED – *The Applicant's engineer has stated that the basins have an impermeable liner to prevent infiltration, which would also prevent groundwater from impacting the detention design. We therefore agree that test pits are not required as long as they are not required by NJDEP.*

16. Since the project is a redevelopment the applicant only needs to provide a 50% removal rate of Total Suspended Solids (TSS) for the area of vehicle trafficked areas being reconstructed and 80% TSS removal for any areas of newly constructed vehicle trafficked areas. The applicant is achieving water quality through the use of the bioretention basins, which provide 90% TSS removal. Calculations have been provided that show that the 90% TSS removal provided in the bioretention basins meets the required TSS removal rate for the project.

CONTINUING COMMENT – *No further action required by the Applicant.*

17. Provide calculations showing the bioretention & detention basins drain in 73 hours.

ADDRESSED – *The report has been revised to show that all the basins drain within 72 hours.*

18. Emergency spillway calculations have been provided, which show spillways of 78ft, 67ft and 95ft respectively for the three basins. The Grading and Drainage Plans should show the locations of the spillways with widths and elevations. A minimum freeboard should also be accounted for.

PARTIALLY ADDRESSED – *The locations for the spillways have been shown; however the elevations of the spillways should also be shown.*

19. The detention basin shall be provided with a low flow channel at a minimum slope of 0.5% and a basin bottom graded at 2.0% to the low flow channel.

ADDRESSED – *This information has been provided.*

20. The underdrain in the bioretention basin should be provided with cleanouts or inspection ports.

ADDRESSED – *This information has been provided.*

21. Label the 100-year water surface elevation of the basins on the Grading Plan.

ADDRESSED – *This information has been provided.*

22. Provide calculations to show that system OCS#601 has the capacity for the 100-year storm from the detention basin.

ADDRESSED – *The calculations have been provided.*



23. Provide information on the Drainage Plan for the existing drainage pipe out of the EX MH on River Road that the detention basin discharges into.
ADDRESSED – Information on the existing pipe has been provided.
24. The detail for the outlet control structure should be revised to show ladder rungs.
ADDRESSED – This information has been provided.
25. Details shall be provided for the following:
- Trash Rack, - **Provided. Please rename this detail to Trash Rack Detail.**
 - Emergency Spillway, - **Provided**
 - Underdrain in the Bioretention Basins, - **Provided**
 - Low Flow Channel. - **Provided**
26. The soil bed in the bioretention basin should meet the specification for the soil bed in accordance with NJDEP's, Best Management Practices (BMP) Manual, page 7.20 and page 9.1.7.
ADDRESSED – A Note has been added stating that the soil bed shall be in accordance with NJDEP's BMP manual section 9.1.7.
27. Filter fabric should be used in the bioretention bed to separate the planting mix, sand and gravel layers.
ADDRESSED – Filter fabric has been provided in to bioretention basin.
28. Notes should be added to the plans for the protection of the bioretention bed during construction to eliminate soil compaction and reduce the amount of sediment into it.
ADDRESSED – A note for protection of the bioretention bed has been added to the Soil Erosion & Sediment Control Plan.
29. A note should be added to the plans that the bioretention bed should not be installed until all areas upstream of the basin are stabilized in accordance with the local SCD.
ADDRESSED – This construction sequence note has been added to the Soil Erosion & Sediment Control Plan.
30. A maintenance plan for the proposed stormwater management system has been provided; a complete review will be done when the stormwater design has addressed all of the recommendations.
CONTINUING COMMENT – No further action required by the Applicant.
31. The maintenance plan should also include any site specific stormwater details, such as details of the outlet control structure and bioretention basin.
ADDRESSED – The maintenance plan has been revised accordingly.
32. Maintenance of the bioretention basins should be in accordance with Chapter 9 of the New Jersey BMP Manual.
ADDRESSED – The maintenance plan has been revised accordingly.
33. The Stormwater Management Plan is subject to the review and approval from other agencies such as Middlesex County and the Freehold Soil Conservation District. Their independent review may find additional items that need to be addressed, which may require additional plan revisions.



CONTINUING COMMENT – Approval from the Freehold Soil Conservation District (FSCD) has been provided. Due to changes in the Grading, Drainage, and Soil Erosion & Sediment Control Plans, the Applicant may be required to resubmit this project to the FSCD for approval.

34. The Applicant shall show the access drive for the maintenance of the Basins.
ADDRESSED – This information has been provided.

ADDITIONAL COMMENTS

35. ***Review of the Hydrograph Summary Report seems to show that the proposed model is adding a hydrograph from the existing model.***
36. ***The grate elevation for the detention basin outlet structures should be raised so that the grate does not interfere with the flow through the weirs up to the elevation of the 100-yr storm.***
37. ***The grate elevation for the Bioretention Basin 2 outfall structure, shown on the Drainage Plan, shall be raised to 37.4, as detailed in the Stormwater report.***

Utility Plan (Sheet CU101)

1. The sanitary pipe between MH 204 and MH 205 shall be labeled.
ADDRESSED – This information has been provided.
2. There are a number of manholes that have a ten (10) foot pipe drop which will require a special manhole detail. Please indicate this on the plan and provide a detail of said manhole.
ADDRESSED – These manholes have been revised to call out “Drop Manholes.”
3. The wall thickness of deep or drop manholes shall be called out on the detail.
ADDRESSED – A note has been added stating that structural design is to be determined by the precaster. The contractor shall submit all shop drawings to the Borough prior to ordering.
4. Details shall be provided for the PVC internal drop.
ADDRESSED – This detail is provided in the Drop Sanitary Manhole detail.
5. All proposed fire hydrant locations shall be labeled.
ADDRESSED – This information has been provided.
6. The Applicant should consider placing a fire hydrant near the east end of the eastern truck parking area. We defer to the Fire Marshall for the final locations of all fire hydrants and additional concerns.
CONTINUING COMMENT – We defer to the Fire Marshall for the final locations of all fire hydrants and additional concerns.
7. The location of all thrust blocks shall be shown on the Utility Plan.
ADDRESSED – This information has been provided.



8. All potential utility crossings shall be detailed with encasements as necessary.
NOT ADDRESSED – *Utility crossings have been provided with exterior elevations of each pipe at the crossings. These crossings have been reviewed and it appears encasements may be required at the south east corner of the building, where the water main crosses the sanitary sewer and has less than 10 foot separation from the storm sewer. The Applicant shall review these crossing for conformance with NJAC 7.14 and call out where encasements will be required.*

9. There are a number of structures (vaults, manholes, lines, etc....) shown on the survey along the south side of the property that appear to be some sort of Utilities. Please identify these objects and provide a detailed map of all the objects and utilities. This is needed in order to determine the structures and utilities to be removed.
NOT ADDRESSED – *The Applicant has indicated that these structures are groundwater monitoring wells. However, groundwater monitoring wells are already called out on the survey. Please confirm the identity of these objects.*

10. We defer to the Borough Sanitary Sewer Consultant, Jerome Sheehan, for further comments on the sanitary sewer.
CONTINUING COMMENT – *We defer to the Borough Sanitary Sewer Consultant, Jerome Sheehan, for further comments on the sanitary sewer.*

Soil Erosion & Sediment Control Plan (Sheet CE101)

NOTE 1: *The Soil Erosion & Sediment Control Plans have been approved by the Freehold Soil Conservation District (FSCD); therefor Najarian forgoes its previous comment. Due to changes in the Grading, Drainage, and Soil Erosion & Sediment Control Plans, the Applicant may be required to resubmit this project to the FSCD for approval.*

1. Construction vehicles should have a right in and right out only on River Road.
ADDRESSED – *See Note 1 above.*

2. The silt fence along the southern property should call out a Heavy Duty Silt Fence with wire support. This will prevent the fence from collapsing during periods of heavy rain.
ADDRESSED – *See Note 1 above.*

3. The Applicant shall show the filter fabric extending under the pipe and four (4) inches below the topsoil at the end of the Rip-Rap apron.
ADDRESSED – *See Note 1 above.*

SESC Stormwater Diversion Plan (Sheet CE-102)

1. Maximum slopes shall be indicated on the temporary diversion swales plans and details.
ADDRESSED – *See Note 1 under Soil Erosion & Sediment Control Plan.*

2. The Applicant shall provide stormwater calculations to verify the flows and velocity for the swales to assure that they will remain stable during storm events.
ADDRESSED – *See Note 1 under Soil Erosion & Sediment Control Plan.*



Soil Erosion and Sediment Control Notes (Sheet CE-501)

1. TREE PROTECTION:

- i. Tree Protection note number (2) indicates that tree protection “planking” shall be done in accordance with the detail on this sheet. There is no detail on this sheet.
- ii. Tree protection Note 8.A.2 discusses the use of tree wells. A tree well detail shall be provided.
- iii. Tree protection Note 8.C discusses the use of tree dry laid stone walls or other retaining structure for trees that are more than sixteen (16) inches above existing grade. A wall detail shall be provided.

ADDRESSED – See Note 1 under Soil Erosion & Sediment Control Plan.

2. SEQUENCE OF CONSTRUCTION:

- i. The construction of the diversion swales shall be included in the Sequence of Construction.

ADDRESSED – See Note 1 under Soil Erosion & Sediment Control Plan.

Soil Erosion & Sediment Control Details (Sheet CE-502)

1. The filter fabric shall be shown extending under the pipe and four (4) inches the topsoil at the end of the Rip-Rap apron.

ADDRESSED – See Note 1 under Soil Erosion & Sediment Control Plan.

2. The temporary diversion swale shall show the location and the attachment of the erosion control blanket.

ADDRESSED – See Note 1 under Soil Erosion & Sediment Control Plan.

3. Detailed grading shall be provided for each Rip-Rap apron.

ADDRESSED – See Note 1 under Soil Erosion & Sediment Control Plan.

4. A heavy duty silt fence shall be used along the southern border of the property and shall have regular overlapped openings with stone and hay bale filters to prevent the silt the silt fence from failing during periods of heavy rains.

ADDRESSED – See Note 1 under Soil Erosion & Sediment Control Plan.

5. A tree well detail shall be provided.

ADDRESSED – See Note 1 under Soil Erosion & Sediment Control Plan.

6. For trees more than sixteen (16) inches above existing grade, a retaining wall detail shall be provided.

ADDRESSED – See Note 1 under Soil Erosion & Sediment Control Plan.

Tree Removal Plan (Sheet TR-101)

1. Per Section §395-15 (A). Street address of site should be provided (if assigned) and include a certification that the plan complies with the requirements of this article.

ADDRESSED – This information has been provided.



2. Per Section §395-15 (B). Please clarify where tree removal is to take place. Applicant should indicate/identify on the plan where the “Zone of Work” is and/or the Limit of Disturbance. The Applicant shall show the trees to be removed with an X on the tree.
ADDRESSED – This information has been provided.

3. Per Section §395-15 (E). Applicant notes that 112 trees with a DPM of 4” or greater to be removed. These trees should be identified on the plan and in the “Tree Survey” table.
ADDRESSED – This information has been provided.

4. Per Section §395-15 (G) 2. The Plan states that 670 trees are required to be planted at 2.5” caliper, but only 534 are proposed. Similarly, the plan indicates that 371 trees are required to be planted at 4” caliper, but none are proposed. Applicant should clarify if they are seeking relief from this requirement, planting these trees on public property per the Ordinance or contributing to the Borough Tree Replacement Fund.
ADDRESSED – The Applicant has indicated that they will be contributing to the Borough Tree Replacement fund. Using the proposed trees shown on the current drawings as credit counted towards replacement of the trees being removed, the remaining required contribution to be made for the nonreplaced trees per §395-18 shall be \$23,400.

5. Per Section §395-6 (D). Applicant should revise tree planting details to include tree wrap (on deciduous tree detail only) and anchoring measures. A note should be included which states that all tree wrap and anchoring shall be removed after one year from time of installation or after the first growing season, whichever is sooner. All straps/anchoring should allow the tree trunk to move 2”-3” before catching so proper trunk taper can be established.
ADDRESSED – This information has been provided.

Landscape Plan (Sheet LP-101)

1. The second note on the Ordinance Compliance Chart appears to be referenced incorrectly. Applicant should check the note with regards to Section 420-64 (B) and revise the chart accordingly.
ADDRESSED – This information has been revised accordingly.

2. The four (4) evergreen trees proposed on the Plant Schedule (Japanese Cedar, American Holly, Redcedar and White Pine) should be specified by height, not by caliper. The Applicant shall revise with the appropriate plant heights for these species.
ADDRESSED – This information has been revised accordingly.

3. The Applicant should revise the plant symbol for the Ilex opaca – American Holly (IO) to more accurately represent the size of this tree. American Holly matures to a medium to large tree, however the plant symbol used approximates a much smaller shrub-sized plant.
ADDRESSED – This information has been revised accordingly.

4. Once the Ilex opaca tree symbol is revised to a more appropriate size, the Applicant should examine the location and spacing of these trees wherever they are located on the plan. Especially along the foundation of the proposed building, these trees should



be located/spaced so as to allow proper form to develop. Applicant should also consider lawn, planting bed and building maintenance in spacing and placement of the plant material.

ADDRESSED – *The Applicant has indicated that more spacing has been provided.*

5. The plant labels and leaders are unclear on some areas of the plan. The label leaders do not extend to all plant symbols in the grouping and in some cases; groupings of plants under one call out are separated by other species. This, combined with the small scale of the drawings and underlying linework, makes the plant call outs difficult to read. The Applicant should label plants whose symbols are contiguous as one grouping and use a separate leader/call out for them.

ADDRESSED – *This information has been revised to clearly display all callouts.*

6. Plantings proposed near the entrances to the site are very large and should be revised with regards to sight triangles, (if required). Using plant material that allows for clear sight lines from a height of three to six (3-6) feet would help to ensure safe vehicular circulation in these areas and on adjoining public roads.

PARTIALLY ADDRESSED – *All plantings have been proposed outside of sight triangles. However, the proposed Scarlet Oaks which abut the sight triangles may still pose a clear sight conflict after time for growth. We recommend that these trees be moved or a note provided that states to periodically limb all branches less than 6 feet above grade to maintain a clear line of sight at all access points.*

7. *We would like to note that changes have been made to the Landscaping Plan which we find acceptable. Alterations to the rear yard landscaping buffer abutting Route 287 have been reviewed and we offer the following comments on this buffer:*

- a. *Plant species are all full-sized evergreen trees.*
- b. *Proposed planting size is listed as min 8' ht., which really means 8-10'ht.*
- c. *Tree spacing appears to be about 10 feet on center.*
- d. *Proposed plantings are continuous along the buffer.*
- e. *Width at planting for 8-10 ' ht. evergreens should be 4-5 feet*
- f. *Evergreens are generally pyramidal in shape and coverage at bottom will fill in ahead of the upper portions of the evergreen screen*
- g. *The plantings in front of the evergreens are ornamental mid-sized deciduous trees that offer color, bloom, and other desirable characteristics*
- h. *Ornamental trees are wide at the top and have only trunks at the bottom*

The screen will be effective by blocking lower sight lines with evergreens and blocking upper sight lines with ornamental deciduous trees. At planting, the effectiveness of blocking off site views will be approximately 40-50 % and will reach 100% within 7-10 years (assuming good health, watering, disease control, fertilization and standard rates of growth).

Landscape Notes and Details (Sheet LP-501)

1. Applicant should add a Tree Protection Detail to this sheet to be installed around existing trees that are to remain.

ADDRESSED – *This information has been provided.*



2. Per Section §395-6 (D). Applicant should revise tree planting details to include tree wrap (on deciduous tree detail only) and anchoring measures. A note should be included which states that all tree wrap and anchoring shall be removed after one year from time of installation or after the first growing season, whichever is sooner. All straps/anchoring should allow the tree trunk to move 2"-3" before catching so proper trunk taper can be established. This note should be included on detail and in note number 23 of the General Landscape Planting Notes.

ADDRESSED – This detail has been revised accordingly.

3. A note should be added to the Planting Soil Specifications and referenced in the Bioretention Basin Cross Section Detail for Bioretention Basin Soil Beds that reads: The soil bed material must consist of the following mix, by weight: 85-95% sand, with no more than 25% of the sand as fine or very fine sands; no more than 15% silt and clay with 2% to 5% clay content. The entire mix must then be amended with 3 to 7% organics, by weight.

ADDRESSED – This detail has been revised accordingly.

Lighting Plan (Sheet LL-101)

1. We ask that the Engineer please ensure that site be properly illuminated for internal circulation and minimize any external conflict from light spilling over onto the adjacent roadway(s) or properties. The Applicant should provide lighting on the site which meets the requirements for a facility of this type; we note the Applicant's reference to the Borough Ordinance.

CONTINUING COMMENT – The Applicant shall address all lighting comments below and provide testimony.

2. Please provide a lighting plan sheet which details calculations areas, lighting statistics, and proposed luminaire details (quantity, mounting height, angle, orientation, etc.).

ADDRESSED – This information has been provided.

3. The Lighting Plan presented shows one, continuous calculation zone for the entire site; while the statistical table highlights different calculation zones. We recommend that the Applicant show multiple calculation zones for areas of interest; such as parking areas, loading areas, intersections (*both internal and external*), and driveways.

ADDRESSED – Multiple calculation zones in areas of interest have been provided.

4. Please provide a table which details your Luminaire Locations. This table should identify the following information for each luminaire: location (x, y, and z), mounting height, angle of orientation, angle of tilt, and aim (x, y, and z).

ADDRESSED – This information has been provided.

5. Per IESNA Lighting guidelines, please provide lighting calculations for horizontal illuminance and vertical illuminance for parking/loading areas, and calculations for horizontal illuminance for all other areas (*building perimeter, driveways, intersections, drive aisles, etc.*).

ADDRESSED – This information has been provided.



6. We observe that the Applicant utilizes a Light Loss Factor (*LLF*) of 0.90 in their calculation. Please provide some justification for this figure, through either brief testimony or calculations. Does this account for environmental factors?
CONTINUING COMMENT – The Applicant shall provide testimony
7. The intensities for all existing & proposed street lighting shall be shown on the plans.
NOT ADDRESSED – The Applicant shall provide the existing street light intensities. No street lights are currently proposed.
8. The lighting intensities are too low at the proposed driveways. Please revise accordingly.
NOT ADDRESSED – The Applicant shall provide the minimum 1.0 fc lighting intensity for the driveways on Baekeland Avenue up to the right of way.
9. Please ensure that the provided lighting design complies with the guidelines set forth within Sections §248-17.B(12), §420-60.F, and any other applicable standards within the Borough Ordinance and/ or referenced standard.
CONTINUING COMMENT – The Applicant will be seeking a waiver from §420-60F.(2)(i) and §420-60 F.(2)(p). No further action is required by the Applicant.
10. The Applicant shall revise Ordinance Compliance Chart note referencing §248-17 B. 12 (b) to 1.0 fc min at River Rd Drive to match the Statistics table on this sheet.
ADDRESSED – The chart has been revised accordingly.
11. Applicant shall revise the fourth note in the Ordinance Compliance Chart to read 2.5% (not 25%) at an angle of 90 degrees above nadir. Also revise the section referenced to be §420-60 F (2) g.
ADDRESSED – This chart has been revised accordingly.
12. Although the Borough Ordinance does not specify a mounting height requirement for building-mounted fixtures, it is recommended that the 25-foot mounting height required for pole-mounted fixtures be used (30' is proposed). This is preferred for uniformity on the site unless there are features on the building (such as doors or windows) that prevent it.
ADDRESSED – All fixtures have been lowered to 25 feet.
13. Please ensure that all luminaires are designed, installed and maintained to prevent light intrusion. Please ensure that glare from the proposed fixtures is minimized along the adjacent properties.
CONTINUING COMMENT – No further action required by the Applicant.

Lighting Notes and Details (Sheet LL-501)

1. The height of the wall mounted fixtures shall be indicated on the notes and details.
ADDRESSED – This information has been provided.
2. A scale for the photogrammetric lighting template shall be provided.
ADDRESSED – The Lighting Plan may be used for the scaled lighting template



3. The Applicant shall add the mounting height and pole base height to the Light Fixture and Pole detail for clarity.
ADDRESSED – This information has been provided on the Lighting Plan.
4. The Applicant shall add the Manufacturer and Model number information to the Light Fixture and Pole detail for clarity.
ADDRESSED – This information has been provided on the Lighting Plan.
5. Per section §420-60 (F) 2. h, Applicant should add a note stating all light fixtures shall be equipped with automatic timing devices and shall use shielded light fixtures.
ADDRESSED – This note has been provided on the Lighting Plan.
6. Per section §420-60 (F) 2. J [1], Applicant should add a note stating that during nonoperating hours of the business, all outdoor lighting not necessary for safety and security purposes shall be reduced, activated by motion-sensor devices or turned off.
ADDRESSED – This note has been provided on the Lighting Plan.
7. Note three (3) shall indicate “current standards”.
ADDRESSED – This note has been revised accordingly.
8. Note six (6) discusses an “Electrification Plan” which is not part of the plan set. The Applicant shall either modify the note or provide the plan.
ADDRESSED – This note has been revised accordingly.
9. Note thirteen (13) is not applicable and should be removed.
ADDRESSED – This note has been removed.
10. Only shielded fixtures may be utilized, per the Borough Ordinance. Unshielded spotlight or floodlight fixtures attached to buildings are prohibited. Please add a note to the plans stating such.
ADDRESSED – This note has been provided on the Lighting Plan.

Construction Details I (Sheet CS-501)

1. The “Guiderail” detail shall indicate that it is the current NJDOT Detail including all Baseline Document Changes. A note shall be added to the Guide Rail Detail indicating when rub rail shall be used.
ADDRESSED – This note has been provided.
2. The rear exposure of the “12-Inch High Concrete Curb” shall be indicated.
NOT ADDRESSED – This note information been provided. However, if this curb is to be used as stopping protection for trucks accessing the site, we recommend that the Applicant provide a minimum of 18 inches of depth into the subgrade.
3. A note shall be added to the plans indicating that all traffic signs shall be in accordance with current MUTCD standards.
ADDRESSED – This note has been provide to the Sign Post detail.
4. The “Concrete Pavement Section” detail shall be noted for all aprons, not just for truck aprons.
ADDRESSED – This note has been revised accordingly.



5. All HC sidewalk ramps shall include warning surfaces. NJDOT details shall be provided for each type of ramp and warning surface. The ramp types shall be called out on the site plan.

ADDRESSED – *All HC ramps include warning surfaces. Details have been and ramp types provided.*

Construction Details II (Sheet CS-502)

1. We have no comments at this time.

Construction Details III (Sheet CS-503)

1. The “Drop Sanitary Manhole” detail shall indicate the type and size of the internal drop pipe.

ADDRESSED – *The detail has been revised to note that the drop pipe shall match incoming sanitary pipe.*

2. The wall thickness shall be specified for manholes over ten (10) feet deep.

ADDRESSED – *Structural design of manholes shall be indicated on shop drawings provided by the contractor prior to approving.*

3. The “Trench Detail for Gas, Electric, Cable, and Telephone” shall call the ASTM or NJDOT equivalent for the processed sand around the utility pipes.

ADDRESSED – *The sand has been called out as AASHTO No. 67 or equivalent.*

Construction Details IV (Sheet CS-504)

1. We defer to the Fire Marshal for the fire protection stand pipes and hydrants review.

Truck Circulation Plan (Sheet CS201)

1. Turning area four and five (4 & 5) shows the trucks having to drive into oncoming traffic in order to ingress and egress the driveways. This is not acceptable. The plans calls for 56 Loading docks and 52 Trailer parking spaces with 341 car parking spaces. This will be a very busy facility and will experience many opportunities for regular vehicle conflicts if the site remains as designed. This layout shall be redesigned to avoid any and all potential vehicle conflicts.

CONTINUING COMMENT – *The revised turning templates still display these circulation issues. The Applicant shall provide testimony regarding truck circulation concerns.*

2. Truck turning templates shall be provided for the truck loading spaces at the southeast and southwest loading docks.

ADDRESSED – *Additional templates have been provided.*

Utility Removal and Easement Modification Exhibit (Sheet CD101)

1. This plan only shows the removal of PSE&G easements, pipe lines, stormwater and sanitary lines, however there appears to be numerous other structures (pipes,



manholes, vaults, etc....) that are not labeled and may be associated with utilities. Please show and label all utilities and their structures.

CONTINUING COMMENT – The Applicant has noted that many on-site utilities have been or are scheduled to be removed. The Applicant shall provide documentation supporting this and provide testimony regarding all previous on-site utilities.

F. TRAFFIC IMPACT STATEMENT REVIEW (Dated September 26, 2019, Revised September 30, 2019)

BACKGROUND

Based upon the provided Traffic Impact Study and Site Plan provided, the proposed project seeks to develop a single-building warehouse facility along the southeast corner at the intersection of River Road & Baekeland Ave in Middlesex Borough. The proposed development intensity is for 400,000 SF of warehouse space. The existing site is a vacant lot. The project site would have access via (3) three stop-controlled driveways along Baekeland Avenue and (1) one stop-controlled driveway along River Road.

TRAFFIC ANALYSIS COMMENTS

1. We have reviewed the Traffic Impact Study provided by the Applicant's Engineer for the proposed development. The Applicant indicates that traffic volume data was collected through manual traffic counts on Thursday, June 20, 2019, from 6:00AM – 9:00AM and 3:00PM – 6:00PM. Traffic data was collected at two (2) locations, the intersection of River Rd & Ridge Rd and the intersection of River Rd & Baekeland Ave/ Raritan Ave. Based upon this data the Applicant established peak hours of 7:30AM – 8:30AM for the AM Peak Hour and 4:45PM – 5:45PM for the PM Peak Hour.

We have reviewed the traffic volume data provided in Figure 2 and Appendix B within the provided report. Please indicate if the site intends to route its traffic north through the intersection of Lincoln Blvd (CR 607) & River Rd (CR 622); if so, we ask that they provide additional data collection and capacity analysis for this signalized intersection.

CONTINUING COMMENT – The Applicant has indicated that testimony will be provided in regards to this comment.

2. The Applicant indicates that they performed a capacity analysis for the following locations:

- River Road (CR 622) and Ridge Road
- River Road (CR 622) and Raritan Avenue
- River Road (CR 622) and Baekeland Avenue
- River Road (CR 622) and Site Driveway 1
- Baekeland Avenue and Site Driveway 2
- Baekeland Avenue and Site Driveway 3
- Baekeland Avenue and Site Driveway 4

We have reviewed the provided Synchro reports. Please note that there are some minor discrepancies between the provided Synchro reports and Figure 7; particularly with the labeling of volumes for Driveway #3 and Driveway #4. We kindly request that the Applicant provide copies of their Synchro files for our review.

We note from the provided Synchro reports and Table 3 within the report that the WB approach of Baekeland Ave at its intersection with River Rd experiences a decline in level of service in the PM Peak Hour going from a LOS/Delay of D/26.6 in the No-Build to an E/36.8



in the Full Build. Does the Applicant propose any form of traffic improvements at this intersection in order to mitigate their traffic impact(s)?

CONTINUING COMMENT – The Applicant indicated that the discrepancies are mislabels which do not impact results. Testimony will be provided in regards to this comment.

3. The Applicant utilized the collected data to project their traffic figures forward to a 2021 Full-Build year and provide an analysis for a three (3) year build-out period.
We agree with Applicant's chosen methodology as it typically yields a more conservative analysis from the standpoint of potential traffic impacts.
CONTINUING COMMENT – No further action required by the Applicant.
4. The Applicant has provided trip generation figures based upon the ITE Trip Generation Manual, 10th Edition. Trip generation for this type of facility greatly varies depending on the user. The trip generation provided is for the “fitted curve” of the traffic generator.
If the Applicant is unable to define an end user at this time, it is our recommendation that as a condition of approval the Applicant be required to perform a follow-up study one year's time from the project being completed and the site being occupied. This will allow the Board and its professionals to see if the impacts from the site are in line with that presented within the Applicant's analysis.
CONTINUING COMMENT – The Applicant has agreed to conduct a follow up study.
5. The Applicant indicates that only approximately 20% of traffic to the site will be comprised of heavy vehicle traffic based on demographic data and travel patterns observed for the area.
Please provide some testimony in support of this conclusion. Typically, it is our experience that facilities of this type experience higher heavy vehicle volume based upon the shipping patterns of the tenant (please see comment #4 above).
CONTINUING COMMENT – The Applicant has indicated that testimony will be provided in regards to this comment.
6. We note that the Applicant's Engineer utilized the NJDOT Background Traffic Growth Rates Table. We agree with the use of the Department's background growth rate data for the roadway network.
CONTINUING COMMENT – No further action required by the Applicant.
7. Please provide information regarding pedestrian access and circulation throughout the site. Please ensure that ADA compliant facilities are provided throughout the property and its surrounding frontage, as dictated by current accessibility guidelines.
CONTINUING COMMENT – No further action required by the Applicant.
8. We agree with the use of the Borough's code for the proposed parking at the site (Borough Ordinance Section §247-17 “Off-Street Parking and Loading”).
Please ensure that the site meet's the Borough's requirements for loading berth size and spacing. The site would provide 55 loading docks, 141 trailer spaces, and 341 regular parking spaces meeting the Borough requirement of 80 parking spaces (1 space for every 5,000 SF of warehouse).
CONTINUING COMMENT – No further action required by the Applicant.
9. Please note that the traffic impact study was based on the Land Use Code 150 (Warehouse) for the purpose of trip and parking generation. We agree with the conclusions of the report and the use of this data. HOWEVER, it is very important to note that the range of trip



generation and parking demand greatly varies depending on the user of this space. Also, the ratio of any other alternative use space on site compared to warehouse space will significantly alter the peak hour trip generation and passenger vehicle parking demand.

CONTINUING COMMENT – The Applicant has indicated that testimony will be provided in regards to this comment.

- Below is the ITE Parking Generation Manual time of day distribution for parking demand. This can give us some indication of the intensity of site use by time of day for an average facility of this type. From this we can reasonably expect that this site will be utilized at its highest intensity between 2PM and 4PM clearly outside the traffic peak hour.

CONTINUING COMMENT – No further action required by the Applicant.

Time of Day Distribution for Parking Demand

The following table presents a time-of-day distribution of parking demand on a weekday at 11 general urban/suburban study sites.

Hour Beginning	Percent of Weekday Peak Parking Demand
12:00-4:00 a.m.	1
5:00 a.m.	3
6:00 a.m.	8
7:00 a.m.	27
8:00 a.m.	57
9:00 a.m.	79
10:00 a.m.	83
11:00 a.m.	87
12:00 p.m.	91
1:00 p.m.	91
2:00 p.m.	97
3:00 p.m.	100
4:00 p.m.	91
5:00 p.m.	74
6:00 p.m.	47
7:00 p.m.	26
8:00 p.m.	20
9:00 p.m.	17
10:00 p.m.	1
11:00 p.m.	1

- Please provide information regarding site distance for each of the proposed access points.

CONTINUING COMMENT – The Applicant has indicated that testimony will be provided in regards to this comment.

SITE PLAN & CIRCULATION COMMENTS

- Based upon the provided Site Plans, we observe that the site proposes for three (3) access points along Baekeland Ave and one (1) access point along River Rd. All access points are governed by a STOP Sign control and would permit full movements. Internally, the site would permit for a minimum 24' wide drive aisle and bi-directional circulation. Loading areas are located along the south side of the proposed structure. The parking areas along the north and south sides of the structure are separated by an emergency service road on the west side and concrete curb on the east side. Each of the proposed sections would have access via two (2) driveways, with the south side parking/loading area accessible from both Baekeland Ave and River Rd, and the north side parking area accessible only from Baekeland Ave.

We agree with the Applicant's choice of placing both driveways which will service heavy vehicle traffic as far back from the intersection as possible.

CONTINUING COMMENT – No further action required by the Applicant.

- We ask that the Applicant provide pedestrian/ADA accessible sidewalks throughout the site and adjoining public sidewalk. This will provide access for both pedestrian pass-by trips along the front of the building. Please provide information to ensure the site is conducive to safe and efficient pedestrian circulation.

CONTINUING COMMENT – The Applicant has indicated that testimony will be provided in regards to this comment.



3. We recommend that the Applicant's Engineer consider implementing signage and striping throughout the site to ensure proper internal and external circulation of traffic. Please review the regulatory signage and provide new signs at appropriate locations. Please ensure that the appropriate signs and pavement markings are in place in order to minimize any conflicts from the drive-through lane, adjacent loading areas, and parking aisles.
Please provide a signing and striping plan which details the proposed traffic controls on site.
CONTINUING COMMENT – The Applicant has indicated that testimony will be provided in regards to this comment.

4. Please ensure that the AutoTURN templates utilized are for vehicles anticipated to be on-site, which may include:
- WB-50 or largest wheelbase vehicle expected;
 - Ambulance;
 - Refuse Truck; and
 - Fire Truck

Please provide testimony regarding the refuse pickup, loading zone, parking stalls, and drive aisles.

CONTINUING COMMENT – The Applicant has indicated that testimony will be provided in regards to this comment.

5. The appropriate design standards and permitting should be met for any roadway construction along adjacent to the site, which may include but isn't limited to:
- County/Municipal Design Standards;
 - MUTCD Standards;
 - American Association of State Highway and Transportation Officials (AASHTO) *A Policy on Geometric Design of Highways and Streets*;
 - ADA and/or *Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way (PROWAG)*; and
 - Motor Vehicle and Traffic Laws – Title 39.*

CONTINUING COMMENT – A note should be added to the plans stating the design criteria.

6. The Site Plan does not indicate sight distance or exhibit sight lines in either direction from the access driveways. Please provide information to ensure that the unsignalized access points meet AASHTO's *A Policy on Geometric Design of Highways and Streets* Sight Distance Requirements since this is not specified on the plans.
ADDRESSED – The site triangle have been added to the site plans.

G. ENVIRONMENTAL ISSUES

Due to the nature and size of the project and the potential for environmental contamination, freshwater wetlands and flood plain and floodway impacts, the Applicant shall provide a full Environmental Impact Statement for the project.

CONTINUING COMMENT: The applicant has not provided a full Environmental Impact Statement but has addressed many of the environmental issues. The applicant has provided a copy of the Hardship Exception submitted to NJDEP, but not of the freshwater wetlands application for the subject property. A copy of that application should be provided. In addition, the NJDEP permits should be provided when obtained.



The applicant is transforming vegetated area to warehouse. A minimal number of trees are proposed and the applicant is indicating that a contribution to the tree replacement fund will be provided. Testimony should be provided as to why additional trees cannot be saved or planted on the subject property.

a. Hazardous Materials

1. The NJDEP Geo-Web Site indicates that the entire site is impacted by ground water contamination.

NOT ADDRESSED – The Applicant has indicated that the contamination is the responsibility of Union Carbide Corporation and is being monitor/remediated via on-site monitoring and recovering wells. Please provide documentation addressing the groundwater contamination concerns in the comments below.

2. During a site visit on September 26, 2019 the following was observed;

- i. There is an emergency shut-off switch for a “Propylene and Hexane Facility” near the center of the site. Typically emergency shut-off switches are in close proximity to the facility. The Applicant shall provide written documentation about this facility and its function and status.
- ii. An existing steam manhole is in close proximity to the previously demolished buildings. Typically, for industrial facilities of that era there was a single heating plant to heat all the buildings in the area with a large oil tank to fuel the plant. The Applicant shall provide documentation discussing this issue.

NOT ADDRESSED – The Applicant has indicated that this was a previous use which has since been demolished. Please provide written documentation about this facility, its function and status, and any potential safety hazard risks.

3. Based on NJDEP information, the former Union Carbide Corporation plant was located in both Piscataway Township and Middlesex Borough. Site operations resulted in soil and groundwater contamination. The most impacted areas appear to be located on the portions of the site located in Piscataway Township, and capping has been employed to address the soil contamination on these lots. Groundwater contamination appears to extend beneath the Middlesex Borough lots, while it does not appear the soil on the Middlesex Borough lots is contaminated. The Applicant shall provide documentation on the pump and treat system for the groundwater contamination that is/was in operation.

NOT ADDRESSED – While this may be discussed during testimony, the Applicant shall provide documentation providing details of the treatment system and how the system may affect the groundwater table beneath the Site.

4. The report that that was provided is the Remedial Action Protectiveness Biennial Certification – Prepared by the LSRP for Union Carbide. The report documents the capping in the contaminated areas of the property, and discusses the site redevelopment operations, where the new buildings constructed in contaminated areas will serve as the cap. The Middlesex Borough lots are not specifically discussed in this report.

NOT ADDRESSED – The Applicant has indicated that, due to a presence of historic fill, a proposed capping plan will be provided under a separate cover.



5. The report provided documents the investigation performed in Piscataway and discusses the soils contamination. The Applicant shall provide all information available on the soil/groundwater contamination, the contaminants of concern, and contaminant concentrations for just the lots located in Middlesex Borough.

NOT ADDRESSED – While this may be discussed during testimony, the Applicant shall provide all available documentation on the soil/groundwater contamination on the lots located in Middlesex Borough.

6. The Applicant shall provide a figure depicting delineation of the soil and groundwater contamination. The Applicant shall also provide an overlay of the proposed project on the delineation figure.

NOT ADDRESSED -- The Applicant has indicated that they will provide this information under a separate cover.

7. The Applicant shall provide documentation that they will not interfere with the remediation actions of the Union Carbide Corporation, and that Union Carbide Corporation is aware of the proposed work.

NOT ADDRESSED – The Applicant has indicated that they will provide the above documentation under a separate cover.

b. Flooding

1. The floodway line does not reflect the Effective FEMA Map. The Applicant shall indicate what method was used to determine the FHA and floodway. The Effective FEMA Map shows the floodway significantly encroaching into the site and impacts the proposed detention basins.

CONTINUING COMMENT – The Applicant has noted that a Flood Hazard Area Verification and Individual Flood Hazard Area Permit Application is under NJDEP review and will be provided prior to final approval.

2. The Applicant shall provide documentation that they have submitted to NJDEP for a FHA Permit.

CONTINUING COMMENT – The Applicant has noted that a Flood Hazard Area Verification and Individual Flood Hazard Area Permit Application is under NJDEP review and will be provided prior to final approval.

c. Wetlands and Water

1. The NJ Geo-Web site indicated that there are wetlands in close proximity to the project site.

CONTINUING COMMENT – See Wetlands and Water comment G.c.2 below.

2. The Applicant has submitted the following;
 - o A Letter of Interpretation (LOI) and map for the property, but not for the area outside of the property boundary that may result in a buffer on the site.
 - o An LOI from NJDEP dated November 20, 2018 is provided for lots in Block 363. The map associated with this includes a portion of Lot 3, which is across River Road from the site in question. This map appears to be the area within 150 feet of Lot 2 and does not appear to include the southern portion of this lot or Lot 3A, which are across from the site. The extent of the delineation should be clarified



and the remainder of Lot 3 and Lot 3A delineated or no work shall be proposed within 150 feet of the property line.

- Flood Hazard area permit for lots in Block 363 but not for the project site. The plans show an FHA line, but no FHA verification was provided. Note that the FEMA maps show the floodway extending onto the site. The method used to map the FHA line for the site and the approval from NJDEP shall be provided.
- Freshwater General Permit (GP) 6 and GP 6A for Block 363

The above permits are for lots on Block 363 and the project under review involves lots in Block 353. If the project proposes any impacts to wetlands or wetland buffer, the Applicant would be required to obtain Freshwater Wetlands and Flood Hazard area permits for the subject property in Block 353.

CONTINUING COMMENT – *The Applicant has indicated that a “multit-application” has been submitted to NJDEP, which will include an updated LOI. A copy of the application was not provided. The applicant shall provide a copy of the LOI & FHA permits for Block 353, Lot 1 & Lot 2, from the NJDEP upon receipt.*

H. ARCHITECTURAL PLANS

1. The Applicant shall provide building heights on the Elevations sheet.
NOT ADDRESSED – *The Applicant has indicated that they will provide the revised Architectural Plans under a separate cover.*
2. The Applicant shall show all proposed mezzanines.
ADDRESSED – *The Applicant has indicated that no mezzanines are proposed.*
3. The Applicant shall show all building entrances and indicate the entrances which are handicap accessible.
NOT ADDRESSED – *The Applicant has indicated that they will provide the revised Architectural Plans under a separate cover.*
4. The Applicant shall indicate the percent building coverage and the total percent lot coverage on the plans.
NOT ADDRESSED – *The Applicant has indicated that they will provide the revised Architectural Plans under a separate cover.*

I. PERMITS AND APPROVALS

Approvals or letters of service or no interest should be obtained from the following:

- Middlesex County Planning Board - **Pending**
- Middlesex County Fire Marshal- **Pending**
- Freehold Soil Conservation District – **Received, dated September 26, 2019.**
- NJDEP Freshwater wetlands - **Pending**
- NJDEP Flood Hazard Area – **Pending**
- NJDEP Hazardous Materials- **Pending**
- Middlesex Borough Traffic Safety Officer- **Pending**
- Middlesex Borough Construction Official- **Pending**
- Middlesex Borough Sanitary Sewer Consultant- **Pending**
- American Water- **Pending**

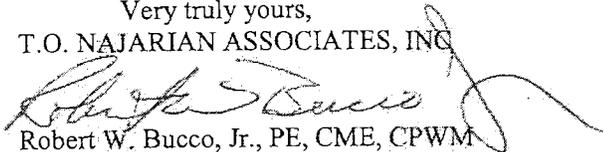


- New Jersey Natural Gas - *Pending*
- All other agencies having jurisdiction- *Pending*

We reserve the opportunity to further review and comment on this application and all pertinent documentation, pursuant to subsequent submissions and future testimony presented at the public hearing.

Should you have any questions or require any additional information relative to the above-referenced matter, please do not hesitate to contact our office.

Very truly yours,
T.O. NAJARIAN ASSOCIATES, INC.


Robert W. Bucco, Jr., PE, CME, CPWM
Middlesex Borough Joint Land Use Board Engineer

cc: Board Members (via email)
William Robertson, Esq. – Board Attorney (via email)
Paul Ricci, PP, AICP – Board Planner (via email)
Barrie Palumbo – Borough Zoning Officer (via email)
Jerome Sheehan – Borough Sanitary Sewer Consultant (via email)
Richard Goldman – Applicant's Attorney (via email)
Richard Burrow, PE – Applicant's Engineer (via email)
Mark Hugeback, AIA – Applicant's Architect (via email)

November 11, 2019

VIA Email & 1st Class Mail

Middlesex Borough Planning Board
1200 Mountain Avenue
Middlesex, NJ 08846

ATTN: Karen Wick – Planning Board Clerk

**RE: Preliminary and Final Major Site Plan
RG Middlesex, LLC
River Road and Baekeland Road
Block 353, Lot 1.01 & 1.02
Borough of Middlesex, Middlesex County, NJ
1st Engineering Review
Application No.: P2019-05
NA Project No.: 6947.M46**

Dear Board Members:

Our office has received the following information in support of a Preliminary and Final Major Site Plan in the above-referenced application:

- Plan entitled “Middlesex Borough Warehouse Project, Preliminary and Final Site Plan Application, Block No. 353, Lots No. 1.01 and 1.02, Borough of Middlesex, Middlesex County, New Jersey”, prepared by Richard Burrow, PE of Langan Engineering and Environmental Services, Inc., dated July 8, 2019, revised September 4, 2019, consisting of twenty-one (21) sheet.
- Plan entitled “ALTA/NSPS Land Title Survey 171 River Road”, prepared by David Avery, PLS of Langan Engineering and Environmental Services, Inc., dated January 9, 2019, consisting of two (2) sheets.
- Plans entitled “New Speculative Distributions Center, Middlesex Borough Warehouse Project, Borough of Middlesex, Borough of Middlesex, New Jersey”, prepared by Lawrence Valenza, AIA of Mitchell and Hugeback Architects, Inc., dated September 4, 2019, consisting of two (2) sheets.
- Borough of Middlesex – Site Plan/Subdivision Application package
- Borough of Middlesex –Application Checklist
- Property Owner’s Certification
- Judith M. Hansen, 9/6/19
- Borough of Middlesex – Tax Certification, 9/9/19
- Borough of Middlesex Application Form for Waiver Request – Application Checklist Item 13, Survey Which Has Been Performed Within the Last Six (6) Months
- Borough of Middlesex Application Form for Waiver Request – §Ordinance 248-17B(8), Driveway Width
- Escrow Agreement by the Borough of Middlesex, dated July 11, 2019, consisting of four (4) pages.
- Ownership Disclosure List & Deed, book 17556, page 572, recorded July 16, 2019, consisting of fourteen (14) pages.

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- Borough of Middlesex Title Exceptions for Block 353, Lots 1.01 and 1.02
- Submission Letter by Matthew Welch, PE, PP, and PTOE of Langan Engineering and Environmental Services, Inc., dated September 6, 2019, consisting of two (2) pages.
- “Stormwater Management Report for Middlesex borough Warehouse Project, Block No. 353, Lot No. 1.01 & 1.02, Borough of Middlesex, Middlesex County, New Jersey”, prepared by Richard Burro, PE of Langan Engineering and Environmental Services, Inc., dated July 8, 2019, revised September 4, 2019.
- “Stormwater Management Facilities Operation and Maintenance Manual for Middlesex borough Warehouse Project, Block No. 353, Lot No. 1.01 & 1.02, Borough of Middlesex, Middlesex County, New Jersey”, prepared by Richard Burro, PE of Langan Engineering and Environmental Services, Inc., dated July 8, 2019, revised September 4, 2019.
- Plan entitled “NJDEP Freshwater Wetlands Letter of Interpretation: Line Verification. Block No. 363, Lots No. 1 & Block No. 363, Lots No. 2” Division of Land Use Regulation, dated November 20, 2018, consisting of four (4) sheets
- Plan entitled “NJDEP Division of Land Use Regulation” Permit, dated November 21, 2018, consisting of six (6) sheets.
- Plan entitled “NJDEP Remedial Action Protectiveness Biennial Certification Form – Soil,” prepared by Lisa La Fortune, Site/Senior Project Manager of Jacobs, dated May 13, 2019, consisting of four (4) sheets.
- Plan entitled “NJDEP Remedial Action Protectiveness Biennial Certification Form – Soil,” prepared by Lisa La Fortune, Site/Senior Project Manager of Jacobs, dated May 13, 2019, consisting of three (3) sheets.
- Plan entitled “NJDEP Remedial Action Protectiveness Biennial Certification Form – Soil,” prepared by James P. Mack LLC, Licensed Site Remediation Professional (LSRP), dated May 10, 2019, consisting of fifty-three (53) sheets.
- Plan entitled “Flood Hazard Area & Floodway Verification Plan, Boucher & James, Inc.,” prepared by Robert Anastasia, PE of Stormwater Management Engineering, LLC, dated March 28, 2019, revised August 27, 2018, consisting of one (1) sheet.
- Plan entitled “Fresh Water Wetlands Plan, Boucher & James, Inc.,” prepared by Bruce R. Blair, P.L.S of BRB Forensics, LLC, dated March 28, 2018, consisting of one (1) sheet.
- Plan entitled “Soil Erosion and Sediment Control Plan,” prepared by David Puchalski, PE of NewFields, dated April 2, 2018, consisting of one (1) sheet.
- Plan entitled “Existing and Proposed Grading Plan,” prepared by David Puchalski, PE of NewFields, dated April 2, 2018, consisting of one (1) sheet.
- Plan entitled “Remedial Action Detail (Protective Soil Capping System),” prepared by David Puchalski, PE of NewFields, dated April 2, 2018, consisting of one (1) sheet.
- Plan entitled “Freshwater Wetlands general Permit Plan,” prepared by David Puchalski, PE of NewFields, dated April 2, 2018, consisting of one (1) sheet.
- Plan entitled “Riparian Zone Disturbance Plan” prepared by David Puchalski, PE of NewFields, dated April 2, 2018, consisting of one (1) sheet.
- Plan entitled “Middlesex Borough Warehouse Project, Traffic Impact Study, Block No. 353, Lots No. 1.01 & 1.02, Borough of Middlesex, Middlesex County, New Jersey,” prepared by Langan Engineering and Environmental Services, Inc., dated September 26, 2019, revised September 30, 2019, consisting of sixty-eight (68) sheets.
- Plan entitled “Overall Wetland Delineation Plan, Piscataway Township Block No. 3502, Lots No. 1.03, 1.04 & 6.03, Borough of Middlesex Block No. 353, Lots No. 1.01 & 1.02, Block No. 356, Lots. No. 1” prepared by Gary A Veenstra, Professional Land Surveyor of Langan, dated May 22, 2014, revised September 30, 2019, consisting of five (5) sheets.



- Traffic Impact Study for Block 353, Lots 1.01 & 1.02, prepared by Langan, LLC, dated July 12, 2019.
- County of Middlesex Division of the Fire Marshal letter dated September 20, 2019 by William Johnson.
- Ordinance #1974-19, "Redevelopment Plan Block 353, Lots 1.01 and 1.02, Borough of Middlesex, Middlesex County, New Jersey", prepared by Paul Ricci, PP, AICP of Ricci Planning, dated July 22, 2019, Adopted September 10, 2019.

A. PROJECT DESCRIPTION

This Preliminary and Final Major Site Plan is located on Block 353, Lots 1.01 and 1.02 in the Borough of Middlesex, Middlesex County, New Jersey. It is fronted by Baekeland Road to the north, River Road to the southwest, and New Market Road to the southeast, and consists of 30.3 acres. The property is under a redevelopment plan which was recently adopted by the Borough of Middlesex.

The property previously consisted of several buildings with a parking area to the east. Those buildings have since been demolished. The land along River Road is undeveloped besides a single right-in, right-out driveway near the southernmost property corner.

The Applicant is proposing a 400,000 square foot warehouse with 3,845 square feet of office space. There is parking proposed to the north, east, and south of the building with loading docks on the southern end of the building. The Applicant proposes three (3) full movement driveways onto Baekeland Avenue, with the easternmost one for trucks, and one (1) full movement driveway onto River road. Three (3) detention basins for stormwater are proposed in addition to landscaping and lighting.

The Applicant and Owner is RG Middlesex, LLC, located at 92 Headquarters Plaza, 9th Floor, Morristown, New Jersey.

Based upon our review of the Preliminary and Final Minor Site Plan and application, we offer the following comments for the Board's consideration:

B. COMPLETENESS REVIEW

Based upon the plans and supplemental documents submitted in support of this application, we consider the application **COMPLETE** from an engineering standpoint, **as of October 4, 2019.**

C. GENERAL COMMENTS

1. The floodway line does not reflect the Effective FEMA Map. The Applicant shall indicate what method was used to determine the Flood Hazard Area (FHA) and Floodway. The Applicant shall also provide the FHA Verification approval from NJDEP along with the approved map.
2. Building heights shall be labeled on the Architectural Plan Elevation Views.
3. Is a basement proposed in the building? If so it should be shown in the plans with elevations and basement heights.



4. Does the Applicant propose any mezzanines in the building? If so they should be shown on the plans with elevations and heights.
5. If New Market Road has been vacated, documentation of the vacation shall be provided.
6. Baekeland Ave is in poor condition and shows signs of sever base failure and shall be repaired and repaved as a part of this project.
7. The plans indicate that the south side of Baekeland Ave will have new sidewalk and curb. The proposed curb shall be concrete curb and gutter.
8. There is a note on the Site Plan that proposed Baekland Avenue improvements, including curb and sidewalk by others, and references a plan by Vernick & Vena dated May 2016. These improvements and improvements to River Road shall be constructed as part of this project and schedule.
9. All existing roadways shall be stationed for the purpose of identifying location along the roads.
10. All proposed driveways shall also be stationed.
11. Driveway and Utility Profiles shall be provided.
12. There are a number of structures shown on the survey just south of Baekeland Ave that appear to be some sort of vaults. Please identify these objects.
13. A site visit on September 26, 2019 revealed that there is a large soil stockpile on site. Please provide the Freehold Soil Conservation District permit for the soil stockpile.
14. Per Ordinance Section §351-23 a recycling plan shall be provided.
15. The Applicant shall provide a Cut and Fill Report indicating the total amount of material that will have to be removed from the site or the amount of material that will have to be brought into the site. The report shall also indicate the number of trucks that will be accessing the site each day and the time frame that they will be operating. The report's calculations shall include swell and shrinkage of the soils that will be trucked into or out of the site.
16. The Applicant shall consolidate lots 1.01 and 1.02 by deed or file map.

D. PLANS (Dated July 8, 2019, Revised September 4, 2019)

Cover Sheet (Sheet CS001)

1. Adjacent property owners within 200 feet of the project limits shall be shown on the plan.
2. A signed owner's certification statement shall be added to the Cover Sheet.
3. New Market Road shall be labeled on the plan.



Zoning Statistics and Notes (Sheet CS002)

1. ZONING TABLE NOTES:
 - a. The allowed building heights in stories shall be added to the zoning table.
 - b. The maximum driveway width shall be shown in the proposed column as 40 and 70 feet.

2. GENERAL NOTES:
 - a. Note one (1) refers to the "Boundary and Topographic Survey". The title of the survey is "ALTA/NSPS LAND TITLE SURVEY". The Applicant shall modify the plan to indicate the same.
 - b. Note four (4) states "the contractor shall furnish, install, test, and complete all work to the satisfaction of the engineer". This note shall be modified to indicate all work shall be performed to the satisfaction of the Borough Engineer.

3. GRADING AND DRAINAGE NOTES:
 - a. Note two (2) indicates that "site grading shall not proceed until soil erosion measures have been installed. See Sheets CE101 for erosion control measures." This note shall be modified to include sheets CE501 & CE502 (soil erosion notes and details).
 - b. Note four (4) shall state that all fill brought to the site must be "clean fill certified".

4. UTILITY NOTES:
 - a. General -
 - i. Note three (3) shall be modified to indicate all current applicable standards.
 - ii. Note four (4) states "Sanitary and water laterals shall have a minimum horizontal spacing of 10 feet". This note shall be modified to read "Sanitary and water lines shall have a minimum horizontal spacing of ten (10) feet". It should also state the lines shall have a minimum vertical separation of eighteen (18) inches.
 - iii. Note six (6) references the City of Bayonne. This note shall be modified to state the correct Municipality.
 - b. Water Supply -
 - i. Note seven (7) shall also indicate that the location of all hydrants shall be approved by the Fire Marshall.
 - ii. Note thirteen (13) references the City of Bayonne. This note shall be modified to state the correct Municipality.

Site Plan (Sheet CS101)

§248-15 Detail of Preliminary and Final Site Plans:

[Amended 2-25-2014 by Ord. No. 1846]

Requires that the preliminary and final site plans shall be drawn, show or be accompanied by the following:

1. A minimum scale of 50 feet to the inch, except where otherwise authorized by the Planning Board. All distances shall be in feet and decimals of a foot, and all bearings shall be given to the nearest 10 seconds.



The Applicant has provided the site plan in a scale of 1 inch = 60 feet. This makes the plans very cluttered and difficult to review. The Applicant shall reduce the scale and use a match line if necessary.

2. The names of all owners of record at all adjacent properties and any property directly across from any official street and the block and parcel number of the property and a key map showing general location of the site to adjacent properties.

The Applicant shall provide the names, addresses, lot and Block numbers of all the adjacent owners within 200 feet of the property in question.

3. Location of existing rock outcrops, high points, watercourses, depressions, ponds, marshes, wooded areas and other significant existing features, including flood hazard boundaries as defined by Chapter 244, Flood Damage Prevention, of the Borough of Middlesex.

The FHA Line shown on the plans do not reflect the Effective FEMA Map. It appears the NJDEP mapping and FEMA mapping conflict. An NJDEP FHA Verification approval and map must be provided and referenced on the plans.

4. Title, date, north arrow, scale, name and address of record owner and name, address and New Jersey professional license number and seal of the engineer, architect or land surveyor preparing the site development plan, to appear in a box at the lower right-hand corner of the site plan which shall contain the date of revisions.

The Applicant shall provide the name and address of record owner with a certification statement signature line.

5. A survey prepared by a surveyor licensed in the State of New Jersey, which survey shall show the boundaries of the parcel and the limits of all proposed streets, easements and any other property to be dedicated to public use.

The plans do not show New Market Road. This shall be added to the plans.

6. §248-17 Off-Street Parking and Loading: B(8) states, "Interior driveways shall be at least 24 feet wide where used with ninety-degree-angle parking, at least 20 feet wide where used with sixty-degree-angle parking and at least 15 feet wide where used with forty-five-degree-angle parking. Where used with parallel parking or where there is no parking, interior driveways shall be at least 12 feet wide for one-way traffic movement and at least 22 feet wide for two-way traffic movement".

The Applicant is proposing 40 foot and 70 foot driveways and is requesting a design waiver. Due to the nature of this application, we have no objection from an engineering standpoint to the Board granting this waiver.

Engineering Comments:

1. The Applicant shall show all building entrances on the plans and indicate the entrances which are handicap accessible.
2. The Applicant shall indicate the percent building coverage and the total percent lot coverage on the Site Plan.
3. All the directional signs shall be labeled with message and details of the signs shall be provided.



4. All islands shall be dimensioned.
5. Former New Market Road shall be labeled on the plans.
6. There are a number of structures shown on the plan just south of Baekeland Avenue that appear to be some sort of vaults. Please identify these objects.
7. It was observed on a site visit September 26, 2019 there is a protected conduit on the site that has a sign stating "Emergency Shut Off for Propylene and Hexane Facility". Please explain, in writing, exactly what this was for.
8. There are also a number of vent pipes that are not labeled. Please identify these pipes on the plans.
9. There is a manhole labeled "steam manhole". Please provide a document describing the site's original utilities and their status.
10. All handicap (HC) ramps shall be labeled with their type.
11. Per the Middlesex County Fire Marshal letter dated September 20, 2019, fire lanes and signs shall be added to all non-parking areas and roadways around the building. A Knox box shall be installed at the fire department pump room and shown on the drawings. We defer all other comments regarding these matters to the Middlesex County Division of the Fire Marshal.

Grading Plan (Sheet CG101)

1. The blowup sections of the HC ramps do not appear to meet ADA requirements. All plans must be ADA & barrier free compliant.
2. The seven (7) foot wide parallel ramp appears to have a seven (7) percent slope at the building. Please ensure all plans are ADA compliant.
3. The HC ramps with warning surfaces shall be shown with spot grades to show they meet ADA requirements.
4. The slopes of all the sidewalks shall be labeled on the plans.
5. All HC accessible door locations shall be shown on the plans with finish floor elevations.
6. Spot grades shall be provided along the south side of the building in the loading dock area.
7. When a parking lot or roadway has a side slope of 3:1 or greater with a total drop in elevation of four (4) feet or more, a guide rail shall be provided.
8. Show all overhead/personnel doors with spot elevations.



9. The bottom of all detention basins shall be graded with either spot grades or contours to show how the basin will drain.
10. Calculations shall be provided for all Rip-Rap aprons.
11. The Applicant shall show the emergency spillway for all the basins.
12. A detail shall be added to the edge of pavement in the truck parking lot to the south of the building, showing a depressed curb to prevent the surface course from spalling due to the truck loading.
13. A barrier shall be provided in the truck parking to the south of the building to prevent the trucks from leaving the pavement and rolling into the basins.
14. It is not clear as if there is curbing along the south side of the trucking parking lot south of the building. There is a label at each end of the lot indicating there is a transition from six (6) inch to twelve (12) inch curb.
15. There are no inlets proposed along the southern limit of pavement to the south of the loading docks. However, they appear to show curbing. If curbing is proposed then inlets and piping to the basins will be required.
16. Existing and proposed top of curb and bottom of curb spot grades shall be provided along the existing roadways at proposed driveway locations in order to assure a smooth transition into the existing roadways.
17. Please show spot grades at all building corners and doors.
18. The Applicant shall provide a Cut and Fill Report indicating the total amount of material that will have to be removed from the site or the amount of material that will have to be brought into the site. The report shall also indicate the number of trucks that will be accessing the site each day and the time frame that they will be operating. The report's calculations shall include swell and shrinkage of the soils that will be trucked into or out of the site.

Drainage Plan (Sheet CG201)

1. Direction of flow arrows shall be shown on all storm sewer pipes.
2. Spot grades or contours shall be provided to show how the basins will drain and that there will not be any standing water.
3. Pipe profiles shall be provided.
4. Energy grade lines shall be provided on all piping profiles.
5. The fifteen (15) inch pipe between CB206 & 206 is at a 0.37% slope. This should be increased to a minimum slope of 0.5%.
6. All inlets shall be labeled with their type.



7. When inlets or manholes have more than one invert in or invert out they shall be labeled with the location of each (such as N, S, E, or W).
8. The leader for MH #108 should be redrawn to clearly show that it points to the MH.
9. All fifteen (15) inch and eighteen (18) inch storm sewer pipes should have a minimum slope of 0.5% where possible.
10. Calculations for all Rip-Rap aprons shall be provided.
11. The pipe between CB 401 and FES 401 shall be labeled.
12. Low flow swales shall be shown in all basins.
13. A detail for the underdrain in the basins shall be provided.
14. The emergency spillway shall be labeled and graded on the plan.

Storm Water Management:

1. The applicant is increasing impervious coverage by more than $\frac{1}{4}$ acre and disturbing more than an acre; therefore the project is considered a MAJOR DEVELOPMENT pursuant to NJDEP's regulations and is therefore subject to the stormwater regulations for Attenuation, Water Quality and Groundwater Recharge.

The applicant shall provide the following information for a major development:

- a) 5G3- Construction stormwater permit authorization number
 - b) Total area of disturbance (acres)
 - c) If a NJDEP land use permit is required
2. According to the applicant there is groundwater contamination at the site, which could possibly be exacerbated by complying with the groundwater recharge requirement. A letter has been provided by an LSRP, stating that due to the ongoing groundwater remediation at the site, groundwater recharge is not recommended at the project site. Therefore the site is exempt from providing groundwater recharge.
 3. Due to the presence of a flood hazard line on the property, the applicant shall request a jurisdictional determination from NJDEP.
 4. On NJ Soils Map, figure 4, please indicate the Hydrologic Soil Group for each of the soils.
 5. From review of the Existing Watershed Map, it appears that runoff from south of the property line comes into the site. Please provide enough topography to show the extent of off-site drainage onto the property and revise the Existing and Proposed Watershed Maps accordingly. In addition the existing and proposed hydrologic models should take this flow into account.
 6. On the Existing and Proposed Watershed Maps, please provide segment markers on the TC paths.



7. The TC for segment 1 for Proposed Watershed 1 – Pervious appears incorrect as stormwater flows toward the parking lot, not toward the access drive.
8. The TC for segment 1 for Proposed Watershed 2C – Pervious appears incorrect as stormwater flows toward the upper parking lot.
9. The design of the bioretention basins shall not include infiltration (exfiltration) in the routing calculations for quantity control. The infiltration is only used to determine whether or not the basin drains within 72 hours. The proposed models (2-, 10-, 25-, 100-, and water quality) should be run without considering infiltration.
10. In a bioretention basin, the system must have sufficient storage volume to contain the Water Quality Design Storm, without consideration to outflows.
11. The volume calculations for bioretention basin 2, start at elevation 36.7, however the Grading and Drainage Plans show the bottom at elevation 37.
12. The model for the proposed detention basin shall use a tailwater elevation that corresponds to the floodplain elevation of the Raritan River. This elevation shall be based on a flood hazard verification from NJDEP.
13. It appears that the detention basin has a berm that goes above existing grade for at least a portion of the basin. Any part of the basin that goes above existing grade shall have a 10 foot minimum top width of the berm. The sides of the basin adjacent to the property line and River Road should be reviewed.
14. Test pits showing depth to the seasonal high groundwater table shall be provided within the 2 bioretention basins and the detention basin. The test pit shall be included in the stormwater report with the location of the test pit shown on the post-development drainage area map.
15. All soil testing should be done in accordance with Appendix “E” of the New Jersey Stormwater Best Management Practices Manual.
16. Since the project is a redevelopment the applicant only needs to provide a 50% removal rate of Total Suspended Solids (TSS) for the area of vehicle trafficked areas being reconstructed and 80% TSS removal for any areas of newly constructed vehicle trafficked areas. The applicant is achieving water quality through the use of the bioretention basins, which provide 90% TSS removal. Calculations have been provided that show that the 90% TSS removal provided in the bioretention basins meets the required TSS removal rate for the project.
17. Provide calculations to show that the bioretention and detention basins drain within 73 hours.
18. Emergency spillway calculations have been provided, which show spillways of 78ft, 67ft and 95ft respectively for the three basins. The Grading and Drainage Plans should show the locations of the spillways with widths and elevations. A minimum freeboard should also be accounted for.



19. The detention basin shall be provided with a low flow channel at a minimum slope of 0.5% and a basin bottom graded at 2.0% to the low flow channel.
20. The underdrain in the bioretention basin should be provided with cleanouts or inspection ports.
21. Label the 100-year water surface elevation of the basins on the Grading Plan.
22. Provide calculations to show that system OCS#601 has the capacity for the 100-year storm from the detention basin.
23. Provide information on the Drainage Plan for the existing drainage pipe out of the EX MH on River Road that the detention basin discharges into.
24. The detail for the outlet control structure should be revised to show ladder rungs.
25. Details shall be provided for the following:
 - a. Trash Rack,
 - b. Emergency Spillway,
 - c. Underdrain in the Bioretention Basins,
 - d. Low Flow Channel.
26. The soil bed in the bioretention basin should meet the specification for the soil bed in accordance with NJDEP's, Best Management Practices Manual, page 7.20 and page 9.1.7.
27. Filter fabric should be used in the bioretention bed to separate the planting mix, sand and gravel layers.
28. Notes should be added to the plans regarding the protection of the bioretention bed during construction to eliminate soil compaction and reduce the amount of sediment into it.
29. A note should be added to the plans that the bioretention bed should not be installed until all areas upstream of the basin are stabilized in accordance with the local SCD.
30. A maintenance plan for the proposed stormwater management system has been provided; a complete review will be done when the stormwater design has addressed all of the recommendations.
31. The Maintenance plan should also include any site specific stormwater details, such as details of the outlet control structure and bioretention basin.
32. Maintenance of the bioretention basins should be in accordance with Chapter 9 of the New Jersey BMP Manual.
33. The Stormwater Management Plan is subject to the review and approval from other agencies such as Middlesex County and the Freehold Soil Conservation District.



Their independent review may find additional items that need to be addressed, which may require additional plan revisions.

34. The Applicant shall show the access drive for the maintenance of the Basins.

Utility Plan (Sheet CU101)

1. The sanitary pipe between MH 204 and MH 205 Shall be labeled.
2. There are a number of manholes that have a ten (10) foot pipe drop which will require a special manhole detail. Please indicate this on the plan and provide a detail of said manhole.
3. The wall thickness of deep or drop manholes shall be called out on the detail.
4. Details shall be provided for the PVC internal drop.
5. All proposed fire hydrant locations shall be labeled.
6. The Applicant should consider placing a fire hydrant near the east end of the eastern truck paring area. We defer to the Fire Marshall for the final locations of all fire hydrants and additional concerns.
7. The location of all thrust blocks shall be shown on the Utility Plan.
8. All potential utility crossings shall be detailed with encasements as necessary.
9. There are a number of structures (vaults, manholes, lines, etc....) shown on the survey along the south side of the property that appear to be some sort of Utilities. Please identify these objects and provide a detailed map of all the objects and utilities. This is needed in order to determine the structures and utilities to be removed.
10. We defer to the Borough Sanitary Sewer Consultant, Jerome Sheehan, for further comments on the sanitary sewer.

Soil Erosion & Sediment Control Plan (Sheet CE101)

1. Construction vehicles should have a right in and right out only on River Road.
2. The silt fence along the southern property should call out a Heavy Duty Silt Fence with wire support. This will prevent the fence from collapsing during periods of heavy rain.
3. The Applicant shall show the filter fabric extending under the pipe and four (4) inches below the topsoil at the end of the Rip-Rap apron.



SESC Stormwater Diversion Plan (Sheet CE-102)

1. Maximum slopes shall be indicated on the temporary diversion swales plans and details.
2. The Applicant shall provide stormwater calculations to verify the flows and velocity for the swales to assure that they will remain stable during storm events.

Soil Erosion and Sediment Control Notes (Sheet CE-501)

1. TREE PROTECTION:
 - i. Tree Protection note number (2) indicates that tree protection “planking” shall be done in accordance with the detail on this sheet. There is no detail on this sheet.
 - ii. Tree protection Note 8.A.2 discusses the use of tree wells. A tree well detail shall be provided.
 - iii. Tree protection Note 8.C discusses the use of tree dry laid stone walls or other retaining structure for trees that are more than sixteen (16) inches above existing grade. A wall detail shall be provided.
2. SEQUENCE OF CONSTRUCTION:
 - i. The construction of the diversion swales shall be included in the Sequence of Construction.

Soil Erosion & Sediment Control Details (Sheet CE-502)

1. The filter fabric shall be shown extending under the pipe and four (4) inches the topsoil at the end of the Rip-Rap apron.
2. The temporary diversion swale shall show the location and the attachment of the erosion control blanket.
3. Detailed grading shall be provided for each Rip-Rap apron.
4. A heavy duty silt fence shall be used along the southern border of the property and shall have regular overlapped openings with stone and hay bale filters to prevent the silt the silt fence from failing during periods of heavy rains.
5. A tree well detail shall be provided.
6. For trees more than sixteen (16) inches above existing grade, a retaining wall detail shall be provided.

Tree Removal Plan (Sheet TR-101)

1. Per Section §395-15 (A). Street address of site should be provided (if assigned) and include a certification that the plan complies with the requirements of this article.



2. Per Section §395-15 (B). Please clarify where tree removal is to take place. Applicant should indicate/identify on the plan where the “Zone of Work” is and/or the Limit of Disturbance. The Applicant shall show the trees to be removed with an X on the tree.
3. Per Section §395-15 (E). Applicant notes that 112 trees with a DPM of 4” or greater to be removed. These trees should be identified on the plan and in the “Tree Survey” table.
4. Per Section §395-15 (G) 2. The Plan states that 670 trees are required to be planted at 2.5” caliper, but only 534 are proposed. Similarly, the plan indicates that 371 trees are required to be planted at 4” caliper, but none are proposed. Applicant should clarify if they are seeking relief from this requirement, planting these trees on public property per the Ordinance or contributing to the Borough Tree Replacement Fund.
5. Per Section §395-6 (D). Applicant should revise tree planting details to include tree wrap (on deciduous tree detail only) and anchoring measures. A note should be included which states that all tree wrap and anchoring shall be removed after one year from time of installation or after the first growing season, whichever is sooner. All straps/anchoring should allow the tree trunk to move 2”-3” before catching so proper trunk taper can be established.

Landscape Plan (Sheet LP-101)

1. The second note on the Ordinance Compliance Chart appears to be referenced incorrectly. Applicant should check the note with regards to Section 420-64 (B) and revise the chart accordingly.
2. The four (4) evergreen trees proposed on the Plant Schedule (Japanese Cedar, American Holly, Redcedar and White Pine) should be specified by height, not by caliper. The Applicant shall revise with the appropriate plant heights for these species.
3. The Applicant should revise the plant symbol for the Ilex opaca – American Holly (IO) to more accurately represent the size of this tree. American Holly matures to a medium to large tree, however the plant symbol used approximates a much smaller shrub-sized plant.
4. Once the Ilex opaca tree symbol is revised to a more appropriate size, the Applicant should examine the location and spacing of these trees wherever they are located on the plan. Especially along the foundation of the proposed building, these trees should be located/spaced so as to allow proper form to develop. Applicant should also consider lawn, planting bed and building maintenance in spacing and placement of the plant material.
5. The plant labels and leaders are unclear on some areas of the plan. The label leaders do not extend to all plant symbols in the grouping and in some cases, groupings of plants under one call out are separated by other species. This, combined with the small scale of the drawings and underlying linework, makes the plant call outs difficult to read. The Applicant should label plants whose symbols are contiguous as one grouping and use a separate leader/call out for them.



6. Plantings proposed near the entrances to the site are very large and should be revised with regards to site triangles, (if required). Using plant material that allows for clear sight lines from a height of three to six (3-6) feet would help to ensure safe vehicular circulation in these areas and on adjoining public roads.

Landscape Notes and Details (Sheet LP-501)

1. Applicant should add a Tree Protection Detail to this sheet to be installed around existing trees that are to remain.
2. Per Section §395-6 (D). Applicant should revise tree planting details to include tree wrap (on deciduous tree detail only) and anchoring measures. A note should be included which states that all tree wrap and anchoring shall be removed after one year from time of installation or after the first growing season, whichever is sooner. All straps/anchoring should allow the tree trunk to move 2"-3" before catching so proper trunk taper can be established. This note should be included on detail and in note number 23 of the General Landscape Planting Notes.
3. A note should be added to the Planting Soil Specifications and referenced in the Bioretention Basin Cross Section Detail for Bioretention Basin Soil Beds that reads: The soil bed material must consist of the following mix, by weight: 85-95% sand, with no more than 25% of the sand as fine or very fine sands; no more than 15% silt and clay with 2% to 5% clay content. The entire mix must then be amended with 3 to 7% organics, by weight.

Lighting Plan (Sheet LL-101)

1. We ask that the Engineer please ensure that site be properly illuminated for internal circulation and minimize any external conflict from light spilling over onto the adjacent roadway(s) or properties. The Applicant should provide lighting on the site which meets the requirements for a facility of this type; we note the Applicant's reference to the Borough Ordinance.
2. Please provide a lighting plan sheet which details calculations areas, lighting statistics, and proposed luminaire details (quantity, mounting height, angle, orientation, etc.).
3. The Lighting Plan presented shows one, continuous calculation zone for the entire site; while the statistical table highlights different calculation zones. We recommend that the Applicant show multiple calculation zones for areas of interest; such as parking areas, loading areas, intersections (*both internal and external*), and driveways.
4. Please provide a table which details your Luminaire Locations. This table should identify the following information for each luminaire: location (x, y, z), mounting height, angle of orientation, angle of tilt, and aim (x, y, z).



5. Per IESNA Lighting guidelines, please provide lighting calculations for horizontal illuminance and vertical illuminance for parking/loading areas, and calculations for horizontal illuminance for all other areas (*building perimeter, driveways, intersections, drive aisles, etc.*).
6. We observe that the Applicant utilizes a Light Loss Factor (*LLF*) of 0.90 in their calculation. Please provide some justification for this figure, through either brief testimony or calculations. Does this account for environmental factors?
7. The intensities for any all existing and proposed street lighting shall be shown on the plans.
8. The lighting intensities are too low at the proposed driveways. Please revise accordingly.
9. Please ensure that the provided lighting design complies with the guidelines set forth within Sections §248-17.B(12), §420-60.F, and any other applicable standards within the Borough Ordinance and/ or referenced standard.
10. The Applicant shall revise Ordinance Compliance Chart note referencing §248-17 B. 12 (b) to 1.0 fc min at River Rd Drive to match the Statistics table on this sheet.
11. Applicant shall revise the fourth note in the Ordinance Compliance Chart to read 2.5% (not 25%) at an angle of 90 degrees above nadir. Also revise the section referenced to be §420-60 F (2) g.
12. Although the Borough Ordinance does not specify a mounting height requirement for building-mounted fixtures, it is recommended that the 25-foot mounting height required for pole-mounted fixtures be used (30' is proposed). This is preferred for uniformity on the site unless there are features on the building (such as doors or windows) that prevent it.
13. Please ensure that all luminaires are designed, installed and maintained to prevent light intrusion. Please ensure that glare from the proposed fixtures is minimized along the adjacent properties.

Lighting Notes and Details (Sheet LL-501)

1. The height of the wall mounted fixtures shall be indicated on the notes and details.
2. A scale for the photogrammetric lighting template shall be provided.
3. The Applicant shall add the mounting height and pole base height to the Light Fixture and Pole detail for clarity.
4. The Applicant shall add the Manufacturer and Model number information to the Light Fixture and Pole detail for clarity.
5. Per section §420-60 (F) 2. h, Applicant should add a note stating all light fixtures shall be equipped with automatic timing devices and shall use shielded light fixtures.



6. Per section §420-60 (F) 2. J [1] Applicant should add a note stating that during non-operating hours of the business on site all outdoor lighting not necessary for safety and security purposes she be reduced, activated by motion-sensor devices or turned off.
7. Note three (3) shall indicate “current standards”.
8. Note six (6) discusses an “Electrification Plan” which is not part of the plan set. The Applicant shall either modify the note or provide the plan.
9. Note thirteen (13) is not applicable and should be removed.
10. Only shielded fixtures may be utilized, per the Borough Ordinance. Unshielded spotlight or floodlight fixtures attached to buildings are prohibited. Please add a note to the plans stating such.

Construction Details I (Sheet CS-501)

1. The “Guiderail” detail shall indicate that it is the current NJDOT Detail including all Baseline Document Changes. A note shall be added to the Guide Rail Detail indicating when rub rail shall be used.
2. The rear exposure of the “12-Inch High Concrete Curb” shall be indicated.
3. A note shall be added to the plans indicating that all traffic signs shall be in accordance with current MUTCD standards.
4. The “Concrete Pavement Section” detail shall be noted for all aprons, not just for truck aprons.
5. All HC sidewalk ramps shall include warning surfaces. NJDOT details shall be provided for each type of ramp and warning surface. The ramp types shall be called out on the site plan.

Construction Details II (Sheet CS-502)

1. We have no comments at this time.

Construction Details III (Sheet CS-503)

1. The “Drop Sanitary Manhole” detail shall indicate the type and size of the internal drop pipe.
2. The wall thickness shall be specified for manholes over ten (10) feet deep.
3. The “Trench Detail for Gas, Electric, Cable, and Telephone” shall call the ASTM or NJDOT equivalent for the processed sand around the utility pipes.



Construction Details IV (Sheet CS-504)

1. We defer to the Fire Marshal for the fire protection stand pipes and hydrants review.

Truck Circulation Plan (Sheet CS201)

1. Turning area four and five (4 & 5) shows the trucks having to drive into oncoming traffic in order to ingress and egress the driveways. This is not acceptable. The plans calls for 56 Loading docks and 52 Trailer parking spaces with 341 car parking spaces. This will be a very busy facility and will experience many opportunities for regular vehicle conflicts if the site remains as designed. This layout shall be redesigned to avoid any and all potential vehicle conflicts.
2. Truck turning templates shall be provided for the truck loading spaces at the southeast and southwest loading docks.

Utility Removal and Easement Modification Exhibit (Sheet CD101)

1. This plan only shows the removal of PSE&G easements, pipe lines, stormwater and sanitary lines, however there appears to be numerous other structures (pipes, manholes, vaults, etc....) that are not labeled and may be associated with utilities. Please show and label all utilities and their structures.

E. TRAFFIC IMPACT STATEMENT REVIEW (Dated September 26, 2019, Revised September 30, 2019)

BACKGROUND

Based upon the provided Traffic Impact Study and Site Plan provided, the proposed project seeks to develop a single-building warehouse facility along the southeast corner at the intersection of River Road & Baekeland Ave in Middlesex Borough. The proposed development intensity is for 400,000 SF of warehouse space. The existing site is a vacant lot. The project site would have access via (3) three stop-controlled driveways along Baekeland Avenue and (1) one stop-controlled driveway along River Road.

TRAFFIC ANALYSIS COMMENTS

1. We have reviewed the Traffic Impact Study provided by the Applicant's Engineer for the proposed development. The Applicant indicates that traffic volume data was collected through manual traffic counts on Thursday, June 20, 2019, from 6:00AM – 9:00AM and 3:00PM – 6:00PM. Traffic data was collected at two (2) locations, the intersection of River Rd & Ridge Rd and the intersection of River Rd & Baekeland Ave/ Raritan Ave. Based upon this data the Applicant established peak hours of 7:30AM – 8:30AM for the AM Peak Hour and 4:45PM – 5:45PM for the PM Peak Hour.

We have reviewed the traffic volume data provided in Figure 2 and Appendix B within the provided report. Please indicate if the site intends to route its traffic north through the intersection of Lincoln Blvd (CR 607) & River Rd (CR 622); if so, we ask that they provide additional data collection and capacity analysis for this signalized intersection.

2. The Applicant indicates that they performed a capacity analysis for the following locations:



- River Road (CR 622) and Ridge Road
- River Road (CR 622) and Raritan Avenue
- River Road (CR 622) and Baekeland Avenue
- River Road (CR 622) and Site Driveway 1
- Baekeland Avenue and Site Driveway 2
- Baekeland Avenue and Site Driveway 3
- Baekeland Avenue and Site Driveway 4

We have reviewed the provided Synchro reports. Please note that there are some minor discrepancies between the provided Synchro reports and Figure 7; particularly with the labeling of volumes for Driveway #3 and Driveway #4. We kindly request that the Applicant provide copies of their Synchro files for our review.

We note from the provided Synchro reports and Table 3 within the report that the WB approach of Baekeland Ave at its intersection with River Rd experiences a decline in level of service in the PM Peak Hour going from a LOS/Delay of D/26.6 in the No-Build to an E/36.8 in the Full Build. Does the Applicant propose any form of traffic improvements at this intersection in order to mitigate their traffic impact(s)?

3. The Applicant utilized the collected data to project their traffic figures forward to a 2021 Full-Build year and provide an analysis for a three (3) year build-out period.

We agree with Applicant's chosen methodology as it typically yields a more conservative analysis from the standpoint of potential traffic impacts.

4. The Applicant has provided trip generation figures based upon the ITE Trip Generation Manual, 10th Edition. Trip generation for this type of facility greatly varies depending on the user. The trip generation provided is for the "fitted curve" of the traffic generator.

If the Applicant is unable to define an end user at this time, it is our recommendation that as a condition of approval the Applicant be required to perform a follow-up study one year's time from the project being completed and the site being occupied. This will allow the Board and its professionals to see if the impacts from the site are in line with that presented within the Applicant's analysis.

5. The Applicant indicates that only approximately 20% of the traffic to the site will be comprised of heavy vehicle traffic based upon demographic data and travel patterns observed for the area.

Please provide some testimony in support of this conclusion. Typically, it is our experience that facilities of this type experience higher heavy vehicle volume based upon the shipping patterns of the tenant (please see comment #4 above).

6. We note that the Applicant's Engineer utilized the NJDOT Background Traffic Growth Rates Table. We agree with the use of the Department's background growth rate data for the roadway network.
7. Please provide information regarding pedestrian access and circulation throughout the site. Please ensure that ADA compliant facilities are provided throughout the property and its surrounding frontage, as dictated by current accessibility guidelines.



8. We agree with the use of the Borough's code for the proposed parking at the site (*Borough Ordinance Section §247-17 "Off-Street Parking and Loading"*).

Please ensure that the site meet's the Borough's requirements for loading berth size and spacing. The site would provide 55 loading docks, 141 trailer spaces, and 341 regular parking spaces meeting the Borough requirement of 80 parking spaces (*1 space for every 5,000 SF of warehouse*).

9. Please note that the traffic impact study was based on the Land Use Code 150 (Warehouse) for the purpose of trip and parking generation. We agree with the conclusions of the report and the use of this data. HOWEVER, it is very important to note that the range of trip generation and parking demand greatly varies depending on the user of this space. Also, the ratio of any other alternative use space on site compared to warehouse space will significantly alter the peak hour trip generation and passenger vehicle parking demand.
10. Below is the ITE Parking Generation Manual time of day distribution for parking demand. This can give us some indication of the intensity of site use by time of day for an average facility of this type. From this we can reasonably expect that this site will be utilized at its highest intensity between 2PM and 4PM clearly outside the traffic peak hour.

Time of Day Distribution for Parking Demand

The following table presents a time-of-day distribution of parking demand on a weekday at 11 general urban/suburban study sites.

Hour Beginning	Percent of Weekday Peak Parking Demand
12:00-4:00 a.m.	1
5:00 a.m.	3
6:00 a.m.	8
7:00 a.m.	27
8:00 a.m.	57
9:00 a.m.	79
10:00 a.m.	83
11:00 a.m.	87
12:00 p.m.	91
1:00 p.m.	91
2:00 p.m.	97
3:00 p.m.	100
4:00 p.m.	91
5:00 p.m.	74
6:00 p.m.	47
7:00 p.m.	26
8:00 p.m.	20
9:00 p.m.	17
10:00 p.m.	1
11:00 p.m.	1

11. Please provide information regarding site distance for each of the proposed access points.



SITE PLAN & CIRCULATION COMMENTS

1. Based upon the provided Site Plans, we observe that the site proposes for three (3) access points along Baekeland Ave and one (1) access point along River Rd. All access points are governed by a STOP Sign control and would permit full movements. Internally, the site would permit for a minimum 24' wide drive aisle and bi-directional circulation. Loading areas are located along the south side of the proposed structure. The parking areas along the north and south sides of the structure are separated by an emergency service road on the west side and concrete curb on the east side. Each of the proposed sections would have access via two (2) driveways, with the south side parking/loading area accessible from both Baekeland Ave and River Rd, and the north side parking area accessible only from Baekeland Ave.

We agree with the Applicant's choice of placing both driveways which will service heavy vehicle traffic as far back from the intersection as possible.

2. We ask that the Applicant provide pedestrian/ADA accessible sidewalks throughout the site and adjoining public sidewalk. This will provide access for both pedestrian pass-by trips along the front of the building. Please provide information to ensure the site is conducive to safe and efficient pedestrian circulation.
3. We recommend that the Applicant's Engineer consider implementing signage and striping throughout the site to ensure proper internal and external circulation of traffic. Please review the regulatory signage and provide new signs at appropriate locations. Please ensure that the appropriate signs and pavement markings are in place in order to minimize any conflicts from the drive-through lane, adjacent loading areas, and parking aisles.

Please provide a signing and striping plan which details the proposed traffic controls on site.

4. Please ensure that the AutoTURN templates utilized are for vehicles anticipated to be on-site, which may include:
 - a. WB-50 or largest wheelbase vehicle expected;
 - b. Ambulance;
 - c. Refuse Truck; and
 - d. Fire Truck

Please provide testimony regarding the refuse pickup, loading zone, parking stalls, and drive aisles.

5. The appropriate design standards and permitting should be met for any roadway construction along adjacent to the site, which may include but isn't limited to:
 - a. County/Municipal Design Standards;
 - b. MUTCD Standards;
 - c. American Association of State Highway and Transportation Officials (AASHTO) *A Policy on Geometric Design of Highways and Streets*;
 - d. ADA and/or *Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way (PROWAG)*; and
 - e. *Motor Vehicle and Traffic Laws – Title 39.*



6. The Site Plan does not indicate sight distance or exhibit sight lines in either direction from the access driveways. Please provide information to ensure that the unsignalized access points meet AASHTO's *A Policy on Geometric Design of Highways and Streets* Sight Distance Requirements since this is not specified on the plans.

ENVIRONMENTAL ISSUES

Due to the nature and size of the project and the potential for environmental contamination, freshwater wetlands and flood plain and floodway impacts, the Applicant shall provide a full Environmental Impact Statement for the project.

a. Hazardous Materials

1. The NJDEP Geo-Web Site indicates that the entire site is impacted by ground water contamination.
2. During a site visit on September 26, 2019 the following was observed;
 - i. There is an emergency shut-off switch for a "Propylene and Hexane Facility" near the center of the site. Typically emergency shut-off switches are in close proximity to the facility. The Applicant shall provide written documentation about this facility and its function and status.
 - ii. An existing steam manhole is in close proximity to the previously demolished buildings. Typically, for industrial facilities of that era there was a single heating plant to heat all the buildings in the area with a large oil tank to fuel the plant. The Applicant shall provide documentation discussing this issue.
3. Based on NJDEP information, the former Union Carbide Corporation plant was located in both Piscataway Township and Middlesex Borough. Site operations resulted in soil and groundwater contamination. The most impacted areas appear to be located on the portions of the site located in Piscataway Township, and capping has been employed to address the soil contamination on these lots. Groundwater contamination appears to extend beneath the Middlesex Borough lots, while it does not appear the soil on the Middlesex Borough lots is contaminated. The Applicant shall provide documentation on the pump and treat system for the groundwater contamination that is/was in operation.
4. The report that that was provided is the Remedial Action Protectiveness Biennial Certification – Prepared by the LSRP for Union Carbide. The report documents the capping in the contaminated areas of the property, and discusses the site redevelopment operations, where the new buildings constructed in contaminated areas will serve as the cap. The Middlesex Borough lots are not specifically discussed in this report.
5. The report provided documents the investigation performed in Piscataway and discusses the soils contamination. The Applicant shall provide all information available on the soil/groundwater contamination, the contaminants of concern, and contaminant concentrations for just the lots located in Middlesex Borough.



6. The Applicant shall provide a figure depicting delineation of the soil and groundwater contamination. The Applicant shall also provide an overlay of the proposed project on the delineation figure.
7. The Applicant shall provide documentation that they will not interfere with the remediation actions of the Union Carbide Corporation, and that Union Carbide Corporation is aware of the proposed work.

b. Flooding

1. The floodway line does not reflect the Effective FEMA Map. The Applicant shall indicate what method was used to determine the FHA and floodway. The Effective FEMA Map shows the floodway significantly encroaching into the site and impacts the proposed detention basins.
2. The Applicant shall provide documentation that they have submitted to NJDEP for a FHA Permit.

c. Wetlands and Water

1. The NJ Geo-Web site indicated that there are wetlands in close proximity to the project site.
2. The Applicant has submitted the following:
 - o A Letter of Interpretation (LOI) and map for the property, but not for the area outside of the property boundary that may result in a buffer on the site.
 - o An LOI from NJDEP dated November 20, 2018 is provided for lots in Block 363. The map associated with this includes a portion of Lot 3, which is across River Road from the site in question. This map appears to be the area within 150 feet of Lot 2 and does not appear to include the southern portion of this lot or Lot 3A, which are across from the site. The extent of the delineation should be clarified and the remainder of Lot 3 and Lot 3A delineated or no work shall be proposed within 150 feet of the property line.
 - o Flood Hazard area permit for lots in Block 363 but not for the project site. The plans show an FHA line, but no FHA verification was provided. Note that the FEMA maps show the floodway extending onto the site. The method used to map the FHA line for the site and the approval from NJDEP shall be provided.
 - o Freshwater General Permit (GP) 6 and GP 6A for Block 363The above permits are for lots on Block 363 and the project under review involves lots in Block 353. If the project proposes any impacts to wetlands or wetland buffer, the Applicant would be required to obtain Freshwater Wetlands and Flood Hazard area permits for the subject property in Block 353.

F. ARCHITECTURAL PLANS

1. The Applicant shall provide building heights on the Elevations sheet.
2. The Applicant shall show all proposed mezzanines.



3. The Applicant shall show all building entrances and indicate the entrances which are handicap accessible.
4. The Applicant shall indicate the percent building coverage and the total percent lot coverage on the plans.

G. PERMITS AND APPROVALS

Approvals or letters of service or no interest should be obtained from the following:

- Middlesex County Planning Board
- Middlesex County Fire Marshal
- Freehold Soil Conservation District
- NJDEP Freshwater wetlands
- NJDEP Flood Hazard Area
- NJDEP Hazardous Materials
- Middlesex Borough Traffic Safety Officer
- Middlesex Borough Construction Official
- Middlesex Borough Sanitary Sewer Consultant
- American Water
- New Jersey Natural Gas
- All other agencies having jurisdiction

We reserve the opportunity to further review and comment on this application and all pertinent documentation, pursuant to subsequent submissions and future testimony presented at the public hearing.

Should you have any questions or require any additional information relative to the above-referenced matter, please do not hesitate to contact our office.

Very truly yours,
T.O. NAJARIAN ASSOCIATES, INC

Robert W. Bucco, Jr., PE, CME, CPWM
Middlesex Borough Planning Board Engineer

cc: Kelly M. Carey, Esq. – Board Attorney (via email)
Paul Ricci, PP, AICP – Board Planner (via email)
Barrie Palumbo – Borough Zoning Officer (via email)
Jerome Sheehan – Borough Sanitary Sewer Consultant (via email)
Richard Goldman – Applicant's Attorney (via email)
Richard Burrow, PE – Applicant's Engineer (via email)
Mark Hugeback, AIA – Applicant's Architect (via email)

October 4, 2019

VIA Email & 1st Class Mail

Middlesex Borough Planning Board
1200 Mountain Avenue
Middlesex, NJ 08846

ATTN: Karen Wick – Planning Board Clerk

**RE: Preliminary and Final Major Site Plan
RG Middlesex, LLC
River Road and Backland Road
Block 353, Lot 1.01 & 1.02
Borough of Middlesex, Middlesex County, NJ
2nd Completeness Review
Application No.: P2019-05
NA Project No.: 6947.M46**

Dear Board Members:

Our office has received the following information in support of a Preliminary and Final Minor Site Plan in the above-referenced application:

- Plan entitled “Middlesex Borough Warehouse Project, Preliminary and Final Site Plan Application, Block No. 353, Lots No. 1.01 and 1.02, Borough of Middlesex, Middlesex County, New Jersey”, prepared by Richard Burrow, PE of Langan Engineering and Environmental Services, Inc., dated July 8, 2019, revised September 4, 2019, consisting of twenty-one (21) sheet.
- Plan entitled “ALTA/NSPS Land Title Survey 171 River Road”, prepared by David Avery, PLS of Langan Engineering and Environmental Services, Inc., dated January 9, 2019, consisting of two (2) sheets.
- Plans entitled “New Speculative Distributions Center, Middlesex Borough Warehouse Project, Borough of Middlesex, Borough of Middlesex, New Jersey”, prepared by Lawrence Valenza, AIA of Mitchell and Hugeback Architects, Inc., dated September 4, 2019, consisting of two (2) sheets.
- Borough of Middlesex – Site Plan/Subdivision Application package
- Borough of Middlesex – Application Checklist
- Property Owner’s Certification
- Judith M. Hansen, 9/6/19
- Borough of Middlesex – Tax Certification, 9/9/19
- Borough of Middlesex Application Form for Waiver Request – Application Checklist Item 13, Survey Which Has Been Performed Within the Last Six (6) Months

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- Borough of Middlesex Application Form for Waiver Request – §Ordinance 248-17B(8), Driveway Width
- Escrow Agreement by the Borough of Middlesex, dated July 11, 2019, consisting of four (4) pages.
- Ownership Disclosure List & Deed, book 17556, page 572, recorded July 16, 2019, consisting of fourteen (14) pages.
- Borough of Middlesex Title Exceptions for Block 353, Lots 1.01 and 1.02
- Submission Letter by Matthew Welch, PE, PP, and PTOE of Langan Engineering and Environmental Services, Inc., dated September 6, 2019, consisting of two (2) pages.
- “Stormwater Management Report for Middlesex borough Warehouse Project, Block No. 353, Lot No. 1.01 & 1.02, Borough of Middlesex, Middlesex County, New Jersey”, prepared by Richard Burro, PE of Langan Engineering and Environmental Services, Inc., dated July 8, 2019, revised September 4, 2019.
- “Stormwater Management Facilities Operation and Maintenance Manual for Middlesex borough Warehouse Project, Block No. 353, Lot No. 1.01 & 1.02, Borough of Middlesex, Middlesex County, New Jersey”, prepared by Richard Burro, PE of Langan Engineering and Environmental Services, Inc., dated July 8, 2019, revised September 4, 2019.
- *Plan entitled “NJDEP Freshwater Wetlands Letter of Interpretation: Line Verification. Block No. 363, Lots No. 1 & Block No. 363, Lots No. 2” Division of Land Use Regulation, dated November 20, 2018, consisting of four (4) sheets*
- *Plan entitled “NJDEP Division of Land Use Regulation” Permit, dated November 21, 2018, consisting of six (6) sheets.*
- *Plan entitled “NJDEP Remedial Action Protectiveness Biennial Certification Form – Soil,” prepared by Lisa La Fortune, Site/Senior Project Manager of Jacobs, dated May 13, 2019, consisting of four (4) sheets.*
- *Plan entitled “NJDEP Remedial Action Protectiveness Biennial Certification Form – Soil,” prepared by Lisa La Fortune, Site/Senior Project Manager of Jacobs, dated May 13, 2019, consisting of three (3) sheets.*
- *Plan entitled “NJDEP Remedial Action Protectiveness Biennial Certification Form – Soil,” prepared by James P. Mack LLC, Licensed Site Remediation Professional (LSRP), dated May 10, 2019, consisting of fifty-three (53) sheets.*
- *Plan entitled “Flood Hazard Area & Floodway Verification Plan, Boucher & James, Inc.,” prepared by Robert Anastasia, PE of Stormwater Management Engineering, LLC, dated March 28, 2019, revised August 27, 2018, consisting of one (1) sheet.*
- *Plan entitled “Fresh Water Wetlands Plan, Boucher & James, Inc.,” prepared by Bruce R. Blair, P.L.S of BRB Forensics, LLC, dated March 28, 2018, consisting of one (1) sheet.*
- *Plan entitled “Soil Erosion and Sediment Control Plan,” prepared by David Puchalski, PE of NewFields, dated April 2, 2018, consisting of one (1) sheet.*
- *Plan entitled “Existing and Proposed Grading Plan,” prepared by David Puchalski, PE of NewFields, dated April 2, 2018, consisting of one (1) sheet.*



- *Plan entitled “Remedial Action Detail (Protective Soil Capping System),” prepared by David Puchalski, PE of NewFields, dated April 2, 2018, consisting of one (1) sheet.*
- *Plan entitled “Freshwater Wetlands general Permit Plan,” prepared by David Puchalski, PE of NewFields, dated April 2, 2018, consisting of one (1) sheet.*
- *Plan entitled “Riparian Zone Disturbance Plan” prepared by David Puchalski, PE of NewFields, dated April 2, 2018, consisting of one (1) sheet.*
- *Plan entitled “Middlesex Borough Warehouse Project, Traffic Impact Study, Block No. 353, Lots No. 1.01 & 1.02, Borough of Middlesex, Middlesex County, New Jersey,” prepared by Langan Engineering and Environmental Services, Inc., dated September 26, 2019, revised September 30, 2019, consisting of sixty-eight (68) sheets.*
- *Plan entitled “Overall Wetland Delineation Plan, Piscataway Township Block No. 3502, Lots No. 1.03, 1.04 & 6.03, Borough of Middlesex Block No. 353, Lots No. 1.01 & 1.02, Block No. 356, Lots. No. 1” prepared by Gary A Veenstra, Professional Land Surveyor of Langan, dated May 22, 2014, revised September 30, 2019, consisting of five (5) sheets.*

A. Project Description

This Preliminary and Final Major Site Plan is located on Block 353, Lots 1.01 and 1.02 in the Borough of Middlesex, Middlesex County, New Jersey. It is fronted by Baekeland Road to the north, River Road to the southwest, and New Market Road to the southeast, and consists of 30.3 acres. The property is under a redevelopment plan which was recently adopted by the Borough of Middlesex.

The property previously consisted of several buildings with a parking area to the east. Those buildings have since been demolished. The land along River Road is undeveloped besides a single right-in, right-out driveway near the southernmost property corner. There is street parking along Baekeland Avenue near the intersection of Baekeland Avenue and River Road; east of that is another driveway into the site.

The Applicant is proposing a 400,000 square foot warehouse with 3,845 square feet of office space. There is parking proposed to the north, east, and south of the building with loading docks on the southern end of the building. The Applicant proposes three (3) full movement driveways onto Baekeland Avenue, with the easternmost one for trucks, and one (1) full movement driveway onto River road. Three (3) detention basins for stormwater are proposed in addition to landscaping and lighting.

The Applicant and Owner is RG Middlesex, LLC, located at 92 Headquarters Plaza, 9th Floor, Morristown, New Jersey.



Based upon our review of the Preliminary and Final Minor Site Plan and application, we offer the following comments for the Board's consideration:

B. Completeness Review

Based upon the plans and supplemental documents submitted in support of this application, we consider the application **COMPLETE** from an engineering standpoint.

C. Variances

Our review of the information submitted has identified the following variances are or may be required:

1. The Applicant is requesting a waiver from Ordinance Section §248-17B(8), Size of Driveways:

The Applicant proposes a driveway width of 40 feet when only 24 feet is allowed. Testimony shall be provided in support of this request.

Continuing comment

2. The Applicant may need a waiver from Ordinance Section §248-17B(20), Parking in Required Setback:

The Applicant proposes off-street parking and maneuvering areas for said parking within the New Market Avenue public right-of-way and within the front yard setback of New Market Avenue. The Applicant shall either provide testimony in support of this request or work towards the vacation of New Market Avenue.

Continuing comment

3. The Applicant is requesting a waiver from Ordinance Section §420-60F(2)(p), Property Line Illumination:

The Applicant proposes lighting intensities as high as 1.5 footcandles at the property boundary when only and intensity of 0.1 footcandles is allowed. Testimony shall be provided in support of this request.

Continuing comment

D. Application Check List Requirements

1. *Items 2, 4, 5, 7-10, 12, 14, 15, and 18-23 haven been provided and are acceptable from an engineering standpoint for completeness only.*



Continuing comment

2. Item 1. Map drawn at a minimum of 1" = 30".

The Applicant has indicated that they have provided this item. We disagree with their assessment. The provided Site Plan is drawn at a 1" = 60" scale. However, based on our review and nature of this application, we have no objection from an engineering standpoint to the Board granting a waiver for completeness only.

Continuing comment

3. Item 3. Lot and block number and names of all owners of record for adjacent properties and properties across from any official street.

The Applicant has indicated that they have provided this item. We disagree with their assessment. The Municipal Land Use Law requires all property owners within 200 feet of the property in question be noticed. The Applicant shall provide this item.

Addressed – The Applicant has provided this item.

4. Item 6. Setbacks, street and lot lines, easements and areas dedicated to public use.

The Applicant has indicated that they have provided this item. We disagree with their assessment. New Market Avenue is not shown on the Site Plan. The Applicant shall revise their plans or work towards the vacation of New Market Avenue.

Addressed – The Applicant shall provide additional documentation of the vacation and will provide testimony regarding our findings. This is acceptable for completeness only.

5. Item 11. Location of existing outcrops, high points, water courses, depressions, ponds, marshes, trees, wooded areas and other significant features.

The Applicant has indicated that they have provided this item. We disagree with their assessment. A NJDEP GeoWeb search reveals that there are potentially wetlands west of the site on Block 363, Lot 3 and 3.02. A Letter of Interpretation by NJDEP shall be provided to ensure the proposed work does not fall within wetlands or wetland buffer zones prior to this application being deemed complete. These wetlands and wetland buffers shall be shown on the Site Plan.

Addressed – The Applicant has provided a Letter of Interpretation (LOI) dated July 1, 2014. This LOI is expired. However, based on our review and nature of this application, we have no objection from an engineering standpoint to the Board granting this waiver for completeness only.



6. Item 13. Survey which has been performed within the last six (6) months.

The Applicant has requested a waiver for this item. Based on our review and nature of this application, we have no objection from an engineering standpoint to the Board granting this waiver for completeness only.

Continuing comment

7. Item 16. Floor plans and elevation of all the buildings, existing and proposed.

The Applicant has indicated that they have provided this item. We disagree with their assessment. Floor plans and elevations have not been provided for the existing buildings. However, based on our review and nature of this application, we have no objection from an engineering standpoint to the Board granting a waiver for completeness only.

Continuing comment

8. Item 17. Plan of driveway for ingress, egress and traffic flow.

The Applicant has indicated that they have provided this item. We disagree with their assessment. A Traffic Impact Statement has not been provided. The Applicant shall provide this item.

Addressed – The Applicant has provided this item.

9. Item 24. Detailed plan of existing and proposed refuse areas.

The Applicant has indicated that they have provided this item. We disagree with their assessment. The Site Plan indicates the possibility of exterior refuse areas but has not provided details of said areas. The Applicant has not addressed the refuse plan for the proposed office space. The Applicant shall provide this item.

Addressed – The Applicant has indicated trash compactors will be used. This is acceptable, from an engineering standpoint, for completeness only.

Approvals or letters of service or no interest should be obtained from the following agencies having jurisdiction:

- Middlesex County Planning Board
- Middlesex County Fire Marshal
- Freehold Soil Conservation District
- NJDEP
- Middlesex Borough Traffic Safety Officer
- Middlesex Borough Construction Official



- Middlesex Borough Sanitary Sewer Consultant
- All other agencies having jurisdiction

We reserve the opportunity to further review and comment on this application and all pertinent documentation, pursuant to subsequent submissions and future testimony presented at the public hearing.

Should you have any questions or require any additional information relative to the above-referenced matter, please do not hesitate to contact our office.

Very truly yours,
T.O. NAJARIAN ASSOCIATES, INC

Robert W. Bucco, Jr., PE, CME, CPWM
Middlesex Borough Planning Board Engineer

cc: Kelly M. Carey, Esq. – Board Attorney (via email)
Paul Ricci, PP, AICP – Board Planner (via email)
Barrie Palumbo – Borough Zoning Officer (via email)
Jerome Sheehan – Borough Sanitary Sewer Consultant (via email)
Richard Goldman – Applicant's Attorney (via email)
Richard Burrow, PE – Applicant's Engineer (via email)
Mark Hugeback, AIA – Applicant's Architect (via email)
Jonathan Geraldo – RG Middlesex (via email)

September 20, 2019

VIA Email & 1st Class Mail

Middlesex Borough Planning Board
1200 Mountain Avenue
Middlesex, NJ 08846

ATTN: Karen Wick – Planning Board Clerk

**RE: Preliminary and Final Major Site Plan
RG Middlesex, LLC
River Road and Baekeland Road
Block 353, Lot 1.01 & 1.02
Borough of Middlesex, Middlesex County, NJ
1st Completeness Review
Application No.: P2019-05
NA Project No.: 6947.M46**

Dear Board Members:

Our office has received the following information in support of a Preliminary and Final Minor Site Plan in the above-referenced application:

- Plan entitled “Middlesex Borough Warehouse Project, Preliminary and Final Site Plan Application, Block No. 353, Lots No. 1.01 and 1.02, Borough of Middlesex, Middlesex County, New Jersey”, prepared by Richard Burrow, PE of Langan Engineering and Environmental Services, Inc., dated July 8, 2019, revised September 4, 2019, consisting of twenty-one (21) sheet.
- Plan entitled “ALTA/NSPS Land Title Survey 171 River Road”, prepared by David Avery, PLS of Langan Engineering and Environmental Services, Inc., dated January 9, 2019, consisting of two (2) sheets.
- Plans entitled “New Speculative Distributions Center, Middlesex Borough Warehouse Project, Borough of Middlesex, Borough of Middlesex, New Jersey”, prepared by Lawrence Valenza, AIA of Mitchell and Hugeback Architects, Inc., dated September 4, 2019, consisting of two (2) sheets.
- Borough of Middlesex – Site Plan/Subdivision Application package
- Borough of Middlesex –Application Checklist
- Property Owner’s Certification
- Judith M. Hansen, 9/6/19
- Borough of Middlesex – Tax Certification, 9/9/19
- Borough of Middlesex Application Form for Waiver Request – Application Checklist Item 13, Survey Which Has Been Performed Within the Last Six (6) Months

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- Borough of Middlesex Application Form for Waiver Request – §Ordinance 248-17B(8), Driveway Width
- Escrow Agreement by the Borough of Middlesex, dated July 11, 2019, consisting of four (4) pages.
- Ownership Disclosure List & Deed, book 17556, page 572, recorded July 16, 2019, consisting of fourteen (14) pages.
- Borough of Middlesex Title Exceptions for Block 353, Lots 1.01 and 1.02
- Submission Letter by Matthew Welch, PE, PP, and PTOE of Langan Engineering and Environmental Services, Inc., dated September 6, 2019, consisting of two (2) pages.
- “Stormwater Management Report for Middlesex borough Warehouse Project, Block No. 353, Lot No. 1.01 & 1.02, Borough of Middlesex, Middlesex County, New Jersey”, prepared by Richard Burro, PE of Langan Engineering and Environmental Services, Inc., dated July 8, 2019, revised September 4, 2019.
- “Stormwater Management Facilities Operation and Maintenance Manual for Middlesex borough Warehouse Project, Block No. 353, Lot No. 1.01 & 1.02, Borough of Middlesex, Middlesex County, New Jersey”, prepared by Richard Burro, PE of Langan Engineering and Environmental Services, Inc., dated July 8, 2019, revised September 4, 2019.

A. Project Description

This Preliminary and Final Major Site Plan is located on Block 353, Lots 1.01 and 1.02 in the Borough of Middlesex, Middlesex County, New Jersey. It is fronted by Baekeland Road to the north, River Road to the southwest, and New Market Road to the southeast, and consists of 30.3 acres. The property is under a redevelopment plan which was recently adopted by the Borough of Middlesex.

The property previously consisted of several buildings with a parking area to the east. Those buildings have since been demolished. The land along River Road is undeveloped besides a single right-in, right-out driveway near the southernmost property corner. There is street parking along Baekeland Avenue near the intersection of Baekeland Avenue and River Road; east of that is another driveway into the site.

The Applicant is proposing a 400,000 square foot warehouse with 3,845 square feet of office space. There is parking proposed to the north, east, and south of the building with loading docks on the southern end of the building. The Applicant proposes three (3) full movement driveways onto Baekeland Avenue, with the easternmost one for trucks, and one (1) full movement driveway onto River road. Three (3) detention basins for stormwater are proposed in addition to landscaping and lighting.

The Applicant and Owner is RG Middlesex, LLC, located at 92 Headquarters Plaza, 9th Floor, Morristown, New Jersey.



Based upon our review of the Preliminary and Final Minor Site Plan and application, we offer the following comments for the Board's consideration:

B. Completeness Review

Based upon the plans and supplemental documents submitted in support of this application, we consider the application **INCOMPLETE** from an engineering standpoint.

C. Variances

Our review of the information submitted has identified the following variances that may be required:

1. The Applicant is requesting a waiver from Ordinance Section §248-17B(8), Size of Driveways:

The Applicant proposes a driveway width of 40 feet when only 24 feet is allowed. Testimony shall be provided in support of this request.

2. The Applicant may need a waiver from Ordinance Section §248-17B(20), Parking in Required Setback:

The Applicant proposes off-street parking and maneuvering areas for said parking within the New Market Avenue public right-of-way and within the front yard setback of New Market Avenue. The Applicant shall either provide testimony in support of this request or work towards the vacation of New Market Avenue.

3. The Applicant is requesting a waiver from Ordinance Section §420-60F(2)(p), Property Line Illumination:

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Very truly yours,

T.O. NAJARIAN ASSOCIATES, INC

Robert W. Bucco, Jr., PE, CME, CPWM
Middlesex Borough Planning Board Engineer

cc: Kelly M. Carey, Esq. – Board Attorney (via email)
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