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MEMO TO: Township of Franklin
Planning Board

FROM: Robert J. Russo, PE, PP, CME
Township Engineer

DATE: May 26, 2020

RE: ***Ivy River Property, LLC
Preliminary and Final Site Plan
Report #2
Engineering
Block 517.03, Lot 3.03
1 Riverview Drive
Franklin, New Jersey
Our File: PFRP0517.14/600.01
Application # PLN-19-00015***

As per your request, this office has reviewed the following documents relative to the above referenced preliminary and final site plan application:

- Preliminary and Final Site Plan, as prepared by Dynamic Engineering, dated August 5, 2019, with a latest revision date of December 30, 2019;
- Boundary and Topographic Survey, as prepared by Dynamic Survey, LLC, dated April 12, 2019, with a latest revisions date of August 1, 2019;
- Architectural Plans, as prepared by Cerminara Architect, dated June 27, 2019, with latest revision date of December 17, 2019;
- Traffic Impact Study, as prepared by Dynamic Traffic, dated August 2, 2019, **with a latest revision date of May 7, 2020;**
- Environmental Assessment Report, as prepared by Dynamic Engineering, dated July 2019, with no revisions;
- Stormwater Management, Groundwater Recharge and Water Quality Analysis Report, dated August 2019, with a latest revision date of January 2020;
- Report of Geotechnical and Stormwater Basin Area Investigation, as prepared by Dynamic Earth, dated May 10, 2019, with no revisions;
- Application Forms.

The following comments are offered with regard to same:

A. PROJECT OVERVIEW

The site is located with frontage along the west side of Apgar Drive, south of its intersection with Riverview Drive. The site has existing access points from Riverview Drive, Apgar Drive and the neighboring property to the west. The property is approximately 11.146 acres and is located in the M-1 zone. The site currently contains an existing 84,236 sf warehouse, parking lot and existing detention basin. The applicant is proposing to construct a new 74,830 sf warehouse, including a 5,000 sf office, parking lot area for 50 new spaces (69 existing to remain) for a total of 119 parking spaces, and 11 land banked parking spaces. The applicant is also proposing site improvements including but not limited to, reconstruction of the Apgar Drive



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driveway, a hot mix parking lot to the west of the proposed building, modification of the existing stormwater management basin to address NJDEP stormwater management rules, concrete curb, sidewalk, pads, utilities, grading, lighting and landscaping.

We defer the review of the zoning related issues to the Board Planner except where they may pertain to engineering issues.

B. GENERAL SITE IMPROVEMENTS

1. Official street addresses shall be obtained from the Franklin Township 911 Coordinator.
2. An Engineering Cost Estimate will be required once final plans are signed-off on by the Board. Upon approval, applicant shall provide appropriate bonds and Engineering inspection fees and attend a pre-construction meeting, prior to any site work.
3. All fees shall be paid by the applicant at the time of adoption of a resolution of site plan approval for the cost of making upgrades and modifications to the geographic information system (GIS) (§112-329)
4. At the time the final plans are submitted for signature of the municipal officials, the applicant shall submit CAD-generated data files, prepared by a New Jersey licensed land surveyor, directly translatable into an identical image of the plan per the requirements of Ordinance §112-329.
5. Note: An As-Built Plan prepared by a licensed Land Surveyor is to be submitted to the Township prior to any Certificate of Occupancy inspection or the release of performance bonds. Same should be noted on the site plan.
6. Note: No soil can be imported to or removed from the site until a Soil Importation or Exportation Permit has been obtained from the Township as required by the Ordinance. Soil removal shall be in accordance with §206 of the Ordinance.
7. In accordance with Ordinance §112-192.A.3, the site plan shall be no greater than 24 inches by 36 inches in size. The applicant should request a waiver from the checklist requirement and has provided a larger plan sheet size. This office finds this request acceptable.
8. A variance is required for the proposed building height. A maximum building height of 50 ft. is required in the M-1 Zone; the applicant is proposing a 54.3 ft. height.
9. A variance is required for parking in the required front yard. A 50-foot front yard parking setback is required in the M-1 Zone, land banked parking is proposed within the setback.
10. Interior driveways shall be at least 26 feet wide for two-way traffic movements when ninety-degree angle parking is proposed in accordance with Ordinance §112-88. The applicant is proposing a 24-foot wide driveway aisle. The applicant should either revise the site plan or request a design waiver for same.
11. This office defers to the Fire Prevention Officer as to the appropriate number of Fire Hydrants and fire department connections and their location. In addition, we defer to the Fire Prevention Officer regarding the need of 'No Parking' fire lane signage and striping.
12. The applicant should revise the parking calculations listed on sheet no. 4 to indicate the parking required for each building prior to totaling. It appears the existing building will require 217 parking spaces, with only 69 proposed parking spaces provided (11 which are land banked). The proposed building will require 53 parking spaces with only 50 parking spaces proposed. It is unclear how many existing parking spaces are



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being removed for the proposed improvements; however, the applicant is eliminating a large parking area. The application forms indicate that the applicant owns 100 Randolph Road, which has excess parking. The applicant has indicated that if the application is approved a cross access parking agreement shall be executed to allow parking on 100 Randolph Road, if necessary. The applicant shall evaluate both properties for compliance with ordinance §112-96 for joint parking facilities. In addition, there are no pedestrian walkways or paths directly from 100 Randolph Road to the existing building that would need to be addressed if same is to be utilized to address the parking needs. It should be noted that 50 Randolph Road and available on-street parking along Riverview Drive and Apgar Drive are closer to the existing building than 100 Randolph Road. The applicant should provide testimony regarding how the parking needs for the existing building will be serviced by 100 Randolph Road and how parking for this building will avoid utilizing on-street parking and 50 Randolph Road.

13. The applicant is proposing to land bank eleven (11) parking spaces that are proposed within the fifty-foot setback along Riverview Drive. The site plan should be revised to delineate the proposed improvements, if the land banked parking is constructed including but not limited to striping and signage, drainage, grading, landscaping and lighting. In addition, the following note must be added to the plan, "The spaces identified as "prop. 11 banked parking spaces" shall not be constructed unless authorization for such improvement is provided from the Township Zoning Officer, or unless the Township Zoning Officer requires that such spaces be constructed should conditions warrant, or by the Township's approval through the change of tenant. In the event that the Zoning Officer determines that conditions require improvement of all or a portion of these spaces, such spaces shall be constructed within 6 months of the Zoning Officer's determination weather permitting. In such an event, the Zoning Officer may consult with the appropriate Township staff with respect to related plan amendments."
14. Proposed access to the parking lot servicing the proposed building will require cross access easements through Block 517.03 Lot 3.31, to both Randolph Road and Riverview Drive. Directional signage to the proposed building should be provided since direct access to the structure is not proposed. A cross access easement will be required through Block 517.03, Lot 3.32 for the proposed joint parking facility.
15. The applicant should provide testimony regarding how/where on-site deliveries will be made. Directional signage is recommended.
16. Temporary Access Easement, per File Map No. 2222, should be abandoned.
17. The applicant should provide architectural plans for the proposed construction for the existing building.
18. There are two (2) existing driveway accesses from Lot 3.32 to Lot 3.30. The southernmost driveway is being eliminated. Removal of this access should occur on both lots. The applicant may need to obtain a construction easement for same, if the Lot 3.32 is owned by a separate entity.

C. TRAFFIC IMPACT STUDY COMMENTS

1. In figure 2 of the appendix, the existing traffic volumes, there are discrepancies with a few of the traffic volumes shown. In the top left corner of the diagram, for the intersection of Weston Canal Road and Randolph Road, the following discrepancies were noted: Eastbound through traffic volumes are shown as 721 vehicles in the AM Peak Hour when the count data provided depicts 882 vehicles in the AM peak hour of 7:15am to 8:15am; Eastbound right turn traffic volumes are shown as 9 vehicles in the AM Peak Hour when the count data depicts 19 vehicles in the AM peak hour of 7:15am to 8:15am; and Northbound right turn traffic volumes depict 148 vehicles when the count data depicts 174 vehicles in the AM peak hour of 7:15am to 8:15am. As this discrepancy affects existing, no-build, and build traffic volumes, the Applicant's Engineer should address the discrepancies and revise any calculations/results/conclusions that are affected by the discrepancies.



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The Applicant's Engineer indicated that the morning peak hour is shifted with the inclusion of the traffic generated by the adjacent Amazon facility and that they assessed the worst-case scenario with the adjacent Amazon facility and the proposed site development generating peak hour traffic at the same time. The Applicant's Engineer indicated that they selected peak hour of 6:30am to 7:30am for the morning and 5pm to 6pm for the evening. However, the data for the intersection of Weston Canal Road and Randolph Road does not have data collected for the 6:30am and 6:45am 15-minute time intervals in either the original or the updated spot turning movement counts. The Applicant's Engineer should explain how they arrived at 721 vehicles in the AM Peak Hour for the Eastbound through volumes, 9 vehicles for the Eastbound right turn volumes, 148 vehicles for the northbound right turn volumes.

2. The Applicant's Engineer indicated in the traffic study that the right turn movement at the intersection of Weston Canal Road and Apgar Drive is anticipated to increase from 65 seconds in no-build conditions to 89 seconds in build conditions. The Applicant's Engineer should provide testimony on this expected increase in delays.

It should be noted that the delay increase is 65 seconds to 130 seconds in the revised TIS. The Applicant's Engineer indicated that the Apgar Drive northbound right turn movement will operate at better than the theoretically calculated PM peak hour results for three reasons. The Applicant's Engineer first indicated that as the capacity analyses are based on random traffic flow of Weston Canal Road where platooned traffic flow is present in each direction of Weston Canal Road due to the presence of traffic signals to the north and south of Apgar Drive and that the platooned traffic flow affords side road vehicles longer gaps in the main road traffic flow to perform their turning movement. The Applicant's Engineer then indicated that small increases in volume can result in disproportionately large increases in average vehicle delay as the proposed site adds 45 PM peak hour trips and a calculated queue length of four vehicles, yet the delay increases 24 seconds. The Applicant's Engineer then indicated that this movement is expected to have a maximum of 181 right turns during any peak hour and that the movement has a capacity of 206 right turns despite the LOS F result. It should be noted that the analyses in the appendix indicate a maximum capacity of 203 vehicles. Finally, the Applicant's Engineer indicated that with a cross-access easement, the vehicles will have access to the traffic signal at Weston Canal Road and Randolph Road. The Applicant's Engineer should address this in testimony.

3. The Applicant's Engineer proposes a total of 119 parking spaces for the site (58 existing, 11 existing land banked, 50 proposed). The Applicant's Engineer should provide testimony on the parking deficit proposed.

The Applicant's Engineer indicated that they will provide testimony on the proposed parking deficit. The Applicant's Engineer did indicate in the TIS that existing excess parking spaces on adjacent properties are available to meet the 148 parking space deficit. In addition, the Applicant's Engineer indicated that the ITE peak parking demand according to 5th edition of the Parking Generation Manual results in a peak parking demand of 168 parking spaces.

D. GRADING AND UTILITY COMMENTS

1. It appears the applicant will need to relocate the existing fire hydrant south of the existing building so that it is in conformance with the Standard Township Detail, specifically for offset to the proposed curb line. We defer final review and approval to the Township Fire Prevention Officer.
2. Provide proposed loading dock door elevations for the existing building.
3. The applicant is modifying the drainage path of the existing western driveway; the existing drainage path is from west to east. A minimum of 0.50% pitch is required; the area north and west of proposed inlet storm



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str. #8 is flat. In addition, the proposed driveway pitch is in excess of 7%. This office recommends the driveway slope be reduced to a maximum slope of 5%.

4. Proposed Reset Rim Elevation 71.84 south of the proposed building appears incorrect.
5. 'Storm c/o (typ.)' note is listed on sheet no. 6; however, a symbol is not delineated on the site plan. It is unclear where cleanouts are proposed; we recommend a cleanout be installed at all bends and tees.

The grading will be reviewed further when the above has been addressed.

E. LANDSCAPING AND LIGHTING COMMENTS

1. Applicant provided a tree removal and replacement plan to satisfy the requirements of Ordinance §222-Trees. This office defers to the Township Planner as to the adequacy of the tree replacement plan, as well as the adequacy of the proposed landscaping and buffering to adjacent properties, respectively.
2. The applicant shall revise the Landscaping Plan to include the following note: "All plant relocations/substitutions shall be submitted to the Township for review and approval prior to installation".
3. Provide a detail showing 36" of clearance between the face of the light pole foundation and full height (6") curb face. In the event this offset cannot be achieved, the light pole foundation base shall be at minimum 30" in height.

F. POTABLE WATER DISTRIBUTION SYSTEM

1. This office defers review and approval of the water system improvements to the Township Water Department.
2. The applicant should identify the size and material type of the proposed water mains/services. All ductile iron water main pipe shall be cement lined.
3. The applicant should add the following notes to the plans:
 - All constructions shall comply with the current rules and regulations/ or ordinances of Franklin Township, NJDEP, AWWA and all applicable regulatory agencies having jurisdiction.
 - The minimum clearances between water mains and sanitary sewers shall be in accordance with the State standards, i.e. Minimum horizontal clearance between water main and sanitary sewer in parallel shall be ten ft. (10'), Minimum vertical clearance between pipe crossing shall be eighteen inches (18") with the sanitary sewer below the water line. If such minimum vertical clearance cannot be provided, the sanitary sewer shall be encased in concrete ten ft. (10') from each side of the crossing or a total of twenty ft. (20').
 - Water mains crossing storm sewers or drains where the clearance between the pipes is less than eighteen (18") inches, pier supports for the storm line shall be provided in order to prevent the load transfer to the affected utility.

G. ENVIRONMENTAL IMPACT COMMENTS

1. The Environmental Assessment for this project indicates on page 6 that "the subject parcel does not contain areas delineated as freshwater wetlands". The Applicant's engineer should provide a letter of interpretation (presence/absence) or a letter certifying that a qualified soil scientist has inspected the site and in his/her professional opinion there is not freshwater wetlands, or transition areas within the site.



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H. STORM WATER MANAGEMENT:

1. The property in question, Lot 3.30 Block 517.03, consists of approximately 11.15 acres. The property is currently developed and consists of an office/warehouse building with associated parking, detention basin, etc. Runoff from the site is controlled by an existing above ground detention basin and outflow its conveyed to Randolph Brook.
2. Development of the proposed warehouse facility will disturb approximately 4.91 acres of land and will create more than 0.25 acres of new impervious surface. The project exceeds the threshold of 1 acre of disturbance and creation of more than ¼ acre of impervious surface; therefore, it is classified as a major development for stormwater management purposes. In accordance with Township Ordinance, major projects must comply with water quantity control, water quality and groundwater recharge standards.
3. The project site is located within the review zone of the Delaware and Raritan Canal Commission and the Applicant should obtain approval from the Commission. A copy of the permit should be provided to this office.
4. The project in question proposes more than 1 acre of land disturbance and must obtain a General Permit for Construction Activities from the NJDEP. A copy of the permit must be provided to this office.
5. The Applicant must obtain a Soil Erosion and Sediment Control Plan Certification from the Somerset-Union Soil Conservation District. A copy of the certification must be provided to this office.
6. The existing and proposed drainage area map included in the drainage report should be revised to show the flow path used to calculate the time of concentration. If the resulting time of concentration is less than 6 minutes, the minimum time of concentration recommended in the TR-55 (6 minutes) should be used to generate runoff hydrographs. Revise calculations accordingly.
7. The existing drainage area map included in the drainage report identifies 0.66 acres of pervious surface to be paved; however, no existing impervious surface is identified to be converted to pervious surface. It appears that there is a net increase of 0.66 acres of impervious surface but the project description (page 1 of the drainage report) states "The proposed development will result in an increase of only 10,888 sf (0.249 ac)". Applicant's engineer should clarify this issue.
8. The existing detention basin provides stormwater management to this property and other adjacent properties and a conservation easement was previously provided. According to the existing topography, it appears that the detention basin was partially constructed outside the easement. The Applicant's engineer should determine the maximum water surface elevation for the 100-yr storm in the existing basin to demonstrate that the proposed improvements will not encroach into the usable area of the basin.
9. The "drainage and detention basin easement" for the existing detention basin shown on the site plan should be modified to include the entire usable area covered by the 100-yr storm event.
10. The Applicant proposes eleven (11) land-banked parking spaces adjacent to Riverview Drive; however, this area has not been included in the proposed disturbed area. The proposed impervious surface should be accounted for in the stormwater management analysis. Review the drainage report accordingly.
11. Section VII (page 6) of the drainage report states that "the proposed improvements do not result in the increase of impervious coverage by ¼ of an acre and water quality standards would not be applicable to this project". It appears that the increase in impervious coverage is approximately 0.32 acres and the project is subject to water quality standards. Revise drainage report accordingly.



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12. The proposed project consists of redevelopment of existing impervious surface that includes more than 0.25 ac of new impervious surface; therefore, the required quality for the project is the greater of the TSS removal rate of the existing stormwater treatment system or 50% TSS removal rate. For new impervious surface 80% TSS removal rate is required. The drainage report should include an analysis of required versus provided TSS removal rate to demonstrate compliance with water quality standards.
13. The drainage report should be revised to include sizing calculation for the proposed manufactured treatment device (STR# 10 Stormfilter). In addition, a copy of the NJDEP certification for the proposed MTD should be included in the drainage report.
14. The construction detail "Proposed Contech MTD" should be revised to note the impervious drainage area draining to the treatment unit. In addition, a note should be included in the construction detail requiring that shop drawings of the manufactured treatment device be submitted for review and approval by the Township Engineer prior to construction.
15. The drainage report should be revised to include buoyancy calculations for the proposed manufactured treatment device.
16. Trash rack details should be provided for all outlet devices (orifices, weirs, overflow grates, etc.) shown on the proposed outlet structures for Basin A and B. The trash rack should be in accordance with N.J.A.C. 7:8-5.7 and 7:8-6.2.
17. The grading plan should be revised to show the limit of the 100-yr water surface in the existing detention basin to demonstrate there is no adverse impact on the existing basin by the proposed building.
18. In accordance with Township ordinance, to the maximum extent practicable, stormwater management standards shall be met by incorporating nonstructural stormwater management strategies at N.J.A.C. 7:8-5.3 into the design. The drainage report should be revised to include an analysis of the nonstructural stormwater management strategies incorporated into the site design to document compliance with this requirement.
19. Pipe calculations included in the drainage report should be revised to document the following pipe reaches STR 5 – MTD, MTD- STR 3, STR 3 – STR 2, Basin A OCS – STR 2, and STR 2 – STR 1 have been designed for the 100-yr storm event.
20. The scour hole design calculations included in the drainage report should be revised to size the outlet protection for the 100-yr storm event.
21. In accordance with stormwater management regulations, the design engineer shall prepare a maintenance plan for the stormwater management measures incorporated into the design of a major development. The maintenance shall be prepared in accordance with N.J.A.C. 7:8-5.8 and a copy should be submitted to this office for review.
22. The applicant should clarify how the existing detention basin will be accessed for future maintenance.
23. The applicant should evaluate replacing the existing concrete low flow channel with a grass swale, per the Township's request.
24. An executed Major Development Stormwater Summary (Attachment D of the Tier A MS4 NJPDES Permit) shall be submitted to this office for review and approval.



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25. Provide a Stormwater Maintenance Agreement for the stormwater system to insure future maintenance. A sample agreement is available from the Engineering Department.

I. MISCELLANEOUS

1. Revise/Add the following details based on Franklin Township standard details:
 - a. Add the following note on all of the detail sheets, "In case of discrepancy, Township Standard Details shall hold";
 - b. Revise Concrete Sidewalk detail to indicate 4,500 psi concrete is required;
 - c. Water meter pit detail is delineated on the plan set; however, a pit is not delineated on the Utility Plan. Clarification is required;
 - d. Revise the Area Light Fixture Detail for the proposed mounting height between 26' and 32';
 - e. All sanitary sewer details shall be submitted directly to the Franklin Township Sewerage Authority for review and approval – Comment Only
2. Revise the "Paving Detail" increasing the hot mix asphalt surface course thickness from 1.5" to 2", and increase the DGA subbase thickness from 4" to 6" thick on sheet no. 13.
3. Revise the "Heavy Duty Pavement Section" increasing the hot mix asphalt surface course thickness from 1.5" to 2" on sheet no. 13.

The Applicant is required to obtain either approvals or letter of no interest from the following agencies:

Outside Agencies:

- Delaware Raritan Canal Commission
- Somerset County Planning Board – Approved, 12/19/2019;
- Somerset-Union Soil Conservation District
- New Jersey Department of Environmental Protection

Township Departments:

- Franklin Township Fire Department
- Franklin Township Police Department
- Franklin Township Water Department
- Somerset County Health Department
- Franklin Township Sewerage Authority

The Engineering Department reserves the right to make additional comments based upon the submission of revised plans or testimony presented to the Board.

Should you have any questions regarding this matter, please do not hesitate to contact this office.

RJR/DM
cc: Planning Board Secretary