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MEMO TO: Township of Franklin
Planning Board

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

DATE: February 23, 2022

RE: **Franklin Storage, LLC**
Preliminary & Final Major Site Plan
Report #1
Engineering
Block 502.01, Lots 45.01 & 46.01
297 & 305 Davidson Avenue
Franklin, New Jersey
Our File: PFRP0502.06/600.01
Application # PLN-21-00018

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 The Reynolds Group, Inc., dated August 31, 2021, with a latest revision date of January 17, 2022;
- Boundary and Topographic Survey, as prepared by The Reynolds Group, Inc., dated March 25, 2021, with a latest revision date of September 1, 2021;
- Architectural Plan, as prepared by Mancini Duffy Architects, dated September 1, 2021, with no revisions;
- Stormwater Impact Report, as prepared by The Reynolds Group, Inc., dated August 2021, with a latest revision date of January 2022;
- Stormwater Management Facility Operations & Maintenance Manual, as prepared by The Reynolds Group, Inc., dated August 2021, with a latest revision date of January 2022;
- Environmental Assessment, as prepared by The Reynolds Group, Inc., dated August 2021, with no revisions;
- Traffic Impact Statement, as prepared by Dolan & Dean, dated August 24, 2021, with no revisions;
- Application Forms.

The following comments are offered with regard to same:

A. PROJECT OVERVIEW

The site is located along Davidson Avenue, approximately 300' southwest of its intersection with Pierce Street. The property is approximately 10.717 acres and is located in the B-I (Business and Industry) zone. The site currently contains the concrete pad for a previously removed 1-story masonry building, various concrete pads and asphalt driveways, and a previously removed 2 story dwelling. Two (2) segments of the Raritan River Tributary branch off in the rear of the property. The applicant is proposing to demolish all of the existing concrete pads and asphalt driveways and construct a 3-story Self Storage facility with a 40,250 sf footprint and a parking area for 6 parking spaces, 24 oversized parking spaces. The applicant is proposing the following site improvements including but not limited to one (1) bioretention basin with extended detention and grass swales to address NJDEP stormwater management rules, hot mix asphalt parking lots, concrete curb, sidewalk, utilities, grading, lighting and landscaping.



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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 address 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 Tax Maps and 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. In accordance with Ordinance §112-33.6.F, the applicant should provide safe interconnection of sidewalks between parking areas and building entrances within the site and extending to the street. Sidewalk should be provided along the site frontage and incorporate bicycle parking as well as electric vehicle charging stations. The applicant should either revise the site plan or request a design waiver for same.
6. Should the Board act favorably on the application, the applicant shall consolidate the lots as Block 502.01, Lot 45.02. Consolidation deeds, with metes & bounds descriptions, shall be provided for review and approval *prior* to filing with Somerset County Clerk's Office.
7. In accordance with Ordinance §112 – Schedule 4, 25 parking spaces are required for this proposed use; the applicant's engineer indicated that 6 parking spaces are proposed on sheet no. 1. A variance is required for the amount of parking. The applicant's engineer should provide testimony regarding the facilities parking needs. Please note, the ordinance allows the Board the ability to waive the improvement up to 50% of the required parking stalls as landbanked parking spaces provided an area equal to the amount of off-street parking waived is reserved and so delineated on the site plan as an off-street parking area.
8. Based on either 6 or 25 total parking spaces, respectively, one (1) barrier free parking van accessible stall is required. The applicant is proposing one (1) barrier free van accessible parking stall; therefore, the ADA parking demand is met.
9. This office defers to the Fire Prevention Officer as to the appropriate number of Fire Hydrants, Fire Department Connection, and their location. We defer to the Fire Prevention Officer regarding the need of 'No Parking' fire lane signage and striping.
10. The Applicant's Engineer should provide a site circulation plan showing the travel paths of the design vehicle to verify that the on-site circulation is adequate for service vehicles and the required emergency vehicle access (i.e. garbage trucks, delivery trucks, fire trucks, and rescue squad vehicles). The circulation plan should show the turning movement from the one-way exit to the site exit demonstrating adequate circulation. In addition, ingress/egress turning movements from the site entrance exit should be provided. The 5' curb return located along the southern driveway curblines appears to be inadequate for a truck to turn south onto Davidson Avenue.
11. The Applicant's Engineer should provide intersection sight distance triangles that conform to the latest AASHTO (American Association of State Highway and Transportation Officials) guidelines as published in the current edition of A Policy on Geometric Design of Highways and Streets.
12. The design and placement of all traffic signs and striping shall follow the requirements specified in the latest "Manual on Uniform Traffic Control Devices for Streets and Highways," (MUTCD) published by the U.S.



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Department of Transportation and adopted by the N.J. Department of Transportation. A note indicating same should be included on the site plan.

13. Supplement the proposed 'Do Not Enter' Sign with 'Do Not Enter' pavement marking.
14. One-way traffic signage should be added at the intersection of the one way exit and main parking lot access driveway.
15. A 'Stop' sign and pavement marking should be added at the intersection of the one way exit and main parking lot access driveway.
16. Person access doors are shown along the eastern and western building lines, respectively, on the architectural plans. Access doors are not shown on the civil plans. Coordination between the two documents is required.

C. GRADING AND UTILITY COMMENTS

1. One tap will be permitted on the water main located in Davidson Avenue. A 10" service should be connected to the existing water main and feed through the meter pit. All piping through the meter pit should be ductile iron pipe. A tee should be installed downstream of the meter pit, splitting the domestic and water line, including a valve right after the tee for each water service.
2. Revise the meter pit detail to comply with Township Standards.
3. The applicant is proposing to demolish an existing septic disposal system. We defer review to the Somerset County Health Department.
4. The applicant should address the following general grading comments:
 - Provide additional spot elevations at all corners of the ADA accessible parking and van spaces. Spot elevations should delineate the proposed running and cross slopes, respectively (maximum cross and running slopes of 2%, respectively);
 - The applicant should provide the existing curb and pavement tie-in elevations at the driveway intersection with Davidson Avenue;
 - Provide additional spot elevations at the driveway entrance demonstrating a minimum slope of 0.50% has been provided between the improvements and the existing roadway along Davidson Avenue. It is unclear if a valley gutter is proposed;
 - According to the grading plan curb is proposed between the access doors along the southern building line. The applicant's engineer should confirm that is the design intent. If so, addition spot elevations should be provided demonstrating the curb transition to flush at all doorways;

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

5. The applicant should add the following notes to the plans:
 - All construction shall comply with the current rules and regulations/ or ordinances of Franklin Township, NJDEP, AWWA and all applicable regulatory agencies having jurisdiction.
 - 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.

E. LANDSCAPING AND LIGHTING COMMENTS

1. Applicant provided a tree replacement calculations on sheet no. 3 to satisfy the requirements of Ordinance §222-Trees. The applicant has indicated that 75 replacement trees, plus an additional 25 trees to comply with §112-33.6.B, resulting in 100 total trees being required. 40 Trees are proposed by the applicant with the remaining 60



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tree deficient by satisfied with a contribution to the Township Tree Fund. This office defers to the Township Planner as to the adequacy of the tree replacement plan.

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. In accordance with Ordinance §112-33.6.B, there should be an emphasis on providing a portion of the required landing required in Schedule 6 (i.e., 1 tree/ 2,000 square feet of pavement) within the interior of the site plan in the form of landscape islands – i.e., this requirement should not be met solely by placing trees around the perimeter of the site. We recommend the applicant's engineer revise the plan to attempt to meet this requirement to the maximum extent feasible.

F. ENVIRONMENTAL IMPACT COMMENTS

1. Wetlands are shown on the property. The Applicant's engineer must provide the original letter of interpretation, and the NJDEP stamped approved wetland plans to verify the wetlands and buffers.
2. The Applicant proposes disturbance of wetlands and wetlands transition area; therefore, an NJDEP Freshwater Wetlands permit must be obtained for the proposed disturbance. A copy of the permit must be provided to this office.
3. A tributary to the Raritan river crosses the site. FEMA maps show the flood hazard area around this stream as Zone A. Plans note that a flood hazard area verification was obtained from NJDEP. The notes on Plan sheet 2 should indicate the information of the flood hazard verification permit and flood hazard elevations. The Applicant's engineer should provide the Flood Hazard Area (FHA) verification and the NJDEP approved plans to verify the limits of the FHA.
4. The Applicant is proposing work in a regulated FHA, and an FHA disturbance permit must be obtained from NJDEP. A copy of the permit must be provided.
5. The limits of the Township Stream Corridor (TSC) as per the Township Ordinance Section 112-227.D must be shown on all plans. Limits of critical slopes as per township ordinance section 112-227.C must be added to the existing conditions plan.
6. The township ordinance section 112-228 prohibits any disturbance in the TSC. A proposed manhole, an outfall pipe, and a riprap apron are within the township stream corridor and require a waiver/variance from the township ordinance. Depending on the township stream corridor location, parts of the Bioretention basin may also be in the TSC and require waiver/variance.
7. A Conservation/Preservation Area shall be created in accordance with Ordinance §112-147 of the Franklin Township Land Development regulations. The Township preservation area boundary line shall be established using the most restrictive of the Stream Preservation Corridor and Wetlands Buffer. A map shall be supplied delineating the limits of the Conservation/Preservation Area with bearings and distances and proposed Preservation Area Marker locations.
8. Provide a Conservation/Preservation Area Easement Deed, with a metes and bounds description, of the Township preservation area boundary line. The deed shall be submitted for review and approval prior to filing with the Somerset County Clerk's Office.
9. Preservation Area Markers shall either be set or bonded for prior to application sign-off.
10. Proposed development information in Environmental Impact Statement (EIS) Section I.B should be coordinated and updated with other documents submitted with this application.
11. EIS Section II.A.3: update to include Franklin Township Stream corridors buffers per ordinance section 112-226.



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12. EIS Section II.A.4 Page 6 Paragraph 3: information provided in this Section says the site is well suited for recharge. This contradicts the information in the drainage report that contends there is no recharge from the site in the existing condition. Clarification is required.
13. EIS Section II.B.4: All references to a detention basin should be updated. There is no detention basin proposed for the site.
14. EIS should be updated to include the following documents in the appendix.
 - a. A copy of the existing conditions plan;
 - b. A copy of the overall proposed conditions plan;
 - c. A copy of wetlands LOI and approved plan;
 - d. A copy of Flood Hazard Area Verifications Permit and approved plan.

G. STORM WATER MANAGEMENT

1. The Applicant proposes to construct one (1) Bioretention structure to address stormwater quantity management and water quality.
2. The reference project has been reviewed in accordance with the Stormwater Management Rules NJAC 7:8 as amended March 2, 2020.
3. The property in question is located within the Delaware and Raritan Canal Commission Review zone and is subject to DRCC regulations. A copy of the DRCC approval, or letter of no interest, must be provided to this office.
4. The proposed development 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. 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.
6. Provide a Stormwater Maintenance Agreement for the stormwater system to ensure future maintenance. A sample agreement is available from the Engineering Department.
7. While this office defers to the FTSA regarding sanitary sewer improvements, the existing sanitary sewer lateral and cleanout should be removed since they are within the stormwater bioretention basin footprint.
8. Stormwater calculations must be updated to use the current NOAA rainfall depths for the design storms (<http://hdsc.nws.noaa.gov/hdsc/pfds/index.html>) that correctly reflect the project location. The stormwater calculations use a rainfall depth of 8.21 inches for the 100-year event. Current NOAA charts show a depth of 8.36 inches for this event.
9. Some of the drainage calculation in the report use a minimum time of concentration (Tc). According to the NJDEP BMP manual, there is no longer a minimum or default value that may be used for the time of concentration (Tc). Tc for pre-and post-construction conditions must be calculated based on guidance provided in NJDEP BMP Manual Chapter 5 (updated April 2021) Section 8. The calculations in the drainage report must be updated using calculated Tc's.
10. The existing drainage area map must be updated to clearly indicate subareas 1a (undeveloped area to be disturbed), 1b (previously developed area) & 1c (undeveloped area to remain) used in the existing peak flow calculations. Tc paths for each sub-area must be shown on this map.
11. The calculation of allowable flows from the site is incorrect. The regulatory reduction factor must be applied to all disturbed areas in the project boundary, irrespective of whether it was previously developed or not.



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12. Under NJAC 7:8-5.3.(b).4 drainage area for small scale Bioretention basin is limited to 2.5 acres. Drainage calculations show a tributary area of 2.9 acres. This bioretention basin does not qualify for small-scale Bioretention basin designation as stated on NJAC 7:8-5.2 Table 1.
13. The Applicant proposes a large-scale bioretention basin to meet the water quantity and quality standards. This will require a waiver or variance from N.J.A.C. 7:8-5.3, in accordance with N.J.A.C. 7:8-4.6, for the use of the proposed Bioretention basin for meeting water quality standards. It should be noted that receiving a waiver or variance will require the following:
 - a. The Applicant shall demonstrate that it is technically impracticable to meet any one or more of the design and performance standards on-site. For the purposes of this analysis, technical impracticability exists only when the design and performance standard cannot be met for engineering, environmental, or safety reasons. A municipality's approval of a variance shall apply to an individual drainage area and design and performance standard and shall not apply to an entire site or project unless an applicant provides the required analysis for each drainage area within the site and each design and performance standard.
 - b. The Applicant shall demonstrate that the proposed design achieves the maximum possible compliance with the design and performance standards on-site;
 - c. Mitigation of the project in accordance with N.J.A.C. 7:8-4.6.(a).3 shall be required.

This office does not recommend this application go before the Board until either the three (3) items noted above have been provided and satisfied to the maximum extent practicable, as noted by this office, or the project is redesigned to eliminate the required waiver/variances. Please note, the Township does not have any sites in the proximity of this project that can be utilized for mitigation.

14. The stormwater report should be updated to include design parameters for each bioretention basin such as inflow area, water quality volume, basin area, filtration rate of soil media, the flow capacity of underdrain system or infiltration rates, separation from seasonal high groundwater table, and drain time and demonstrate compliance with NJ BMP standards.
15. Plans should be updated to include inspection ports at the upstream and downstream end of the Bioretention Basin underdrain system as indicated in NJ BMP Manual.
16. In accordance with BMP Manual requirements, no standing water may remain at the surface of a bio-retention basin 72 hours after a rain event. The drainage report should include calculations for bio-retention basins, demonstrating compliance with this requirement.
17. The drainage report should be revised to include capacity calculations of the underdrain pipes.
18. The Grading and Utility Plan (sheets 5) should be revised to note the maximum water elevation for the water quality, 2-yr, 10-yr, 100-yr, and emergency spillway storm events for the proposed Bioretention Basin.
19. In accordance with BMP Manual requirements, post-construction testing must be performed on the as-built Bioretention basins to ensure that the installed BMP functions as designed. Where as-built testing shows a longer drain time than designed, corrective action must be taken, and the basin should be retested. Post-construction testing must include a determination of the permeability rates of the soil bed and the hydraulic capacity of the underdrain system. A note should be included in the site plan stating this requirement.
20. A construction detail for bioretention basins on sheet 11 should be revised to show the elevation of the bottom of the soil bed, the elevation of the bottom of the bio-retention basin, the elevation of the season-high groundwater table, underdrains, the maximum water elevation for the 2-yr, 10-yr, 100-yr, and emergency storm event, and top of berm elevation.
21. Landscaping for bioretention basin shall be in accordance with BMP Manual Chapter 7 Part 4. The Applicant's engineer should review the landscaping requirement in the BMP and revise the landscaping plan.



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22. As per BMP Manual requirements, a minimum of two (2) soil profile pits should be excavated for each area of the proposed BMP to determine soils suitability and establish seasonal high water in the area of the proposed basin. The Applicant should perform the required testing in accordance with Chapter 12 of the BMP Manual.
23. The drainage report should be updated to include a table listing the following for each BMP: area of BMP, depth of BMP; the number of test pits/boring/soils profiles performed for the BMP; seasonal high water table established; and the number of soil investigations required per Chapter 12 of BMP Manual.
24. According to Web Soil Survey, Site Soils are classified as Hydrologic Soil Group (HSG) C. The NJDEP Annual Recharge spreadsheet should be completed and included in the drainage report.
25. The Applicant has performed four (4) geotechnical investigations and infiltration tests. The geotechnical investigation concludes that site soils are similar to HSG D soils, and there is no recharge from this property. Applicant must document compliance of geotechnical investigations performed with Chapter 12 of the BMP manual "Section 1: Methods for Identifying HSG and Soil Series" in order to reclassify site soils from HSG C to HSG D.
26. All stormwater conveyance pipes must have adequate capacity to convey the 100-yr storm event unless the Applicant's engineer demonstrates that runoff from the 100-yr storm event will reach the Bioretention basins via an alternate path. Revise drainage report accordingly.
27. There are discrepancies between pipes conveyance calculations and inlet drainage maps. The drainage report should be updated with matching information.
28. Pipe calculations for Bioretention basin inflow pipes should account for tailwater equal to the depth of water quality storm.
29. The Applicant's engineer should identify the 12" roof leader drain and elevation entering Type 'B' Inlet #3 and 7, respectively. Capacity calculations for the 12" roof leader drain should be added to the drainage report.

Operation and Maintenance Manual

30. In accordance with NJAC 7:8-5.8(d), the maintenance plan and any future revisions shall be recorded upon the deed of record for the property. The O&M Manual should be revised to include Deed Book#, Page#, and the date the deed was filed with County Clerk.
31. In accordance with NJAC 7:8-5.8(h), a maintenance plan shall include a schedule of regular inspections and tasks and detailed logs of all preventative and corrective maintenance performed on the stormwater management measure, including all maintenance-related work orders. The person with maintenance responsibility must retain and, upon request, make available the maintenance plan and associated logs and other records for review by a public entity with administrative, health, environmental, or safety authority over the site. The O&M Manual should be revised to include this requirement.
32. A legible location plan should be added to the O&M manual showing locations with labels for each BMP described in the maintenance plan.
33. The O&MM should be revised to include a summary of design parameters for the bioretention basin. Please refer to NJDEP maintenance guidance document at the web address below:

<https://nj.gov/dep/stormwater/pdf/10-bioretention-system-main-field-manua-apri-2015.docx>
34. The O&MM should be updated to include a schedule of regular inspections for all BMPs in one place.
35. As per NJDEP BMP Manual Ch. 8, the maintenance plan should include approved disposal and recycling sites and procedures for sediment, trash, debris, and other material removed from stormwater management measures during maintenance operations. This information should be added to the plan.



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36. As per NJDEP BMP Manual Ch. 8, maintenance plans should include procedures and equipment required to protect the safety of inspection and maintenance personnel. This information should be added to the O&M plan.
37. A copy of the deed recording the maintenance plan on the property of record should be added to the appendix of the O&M maintenance plan as reference documents.

H. 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 the water meter pit to conform to the Township Standard Detail;
 - c. Revise the Preservation Area Plaques detail to show the Franklin Township Emblem;
 - d. Revise the Conservation Line Monument detail to provide all details and notes for the Survey Markers and Typical Marker Locations, that are shown on the Township Standard Detail;
 - e. Provide Concrete Footing detail for Light Pole;
 - f. All sanitary sewer details shall be submitted directly to the Franklin Township Sewerage Authority for review and approval – Comment Only

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
- Somerset-Union Soil Conservation District – Approved, 11/22/2021.
- New Jersey Department of Environmental Protection

Township Departments:

- Franklin Township Fire Department
- Franklin Township Police Department
- Franklin Township Water Department
- Franklin Township Sewerage Authority
- Somerset County Health Department – No objection, 01/01/2022.

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