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March 15, 2021

Board of Public Works
107 Franklin Avenue
Lewes, DE, 19958

Attn: Darrin Gordon
General Manager

Re: Virden Subdivision
Preliminary Consent Phase Review

- Conceptual Plat Plans – Revised January 18, 2021
- Beacon Engineering, LLC (Developer’s Engineer) Response Letter, dated March 1, 2021, to GMB Review Comment Letter dated January 18, 2021
- Developer’s Engineer’s Report – Revised March 1, 2021

Lewes, Delaware
GMB Project No. R200211.00

Dear Mr. Gordon:

GMB has completed its review of the resubmitted Conceptual Plat Plan drawing package with revision date January 18, 2021, the Developer’s Engineer’s response letter (dated March 1, 2021) to GMB comments as provided to the Developer on January 18, 2021, and the revised Developer’s Engineer’s Report dated March 1, 2021, as submitted by Beacon Engineering, LLC on behalf of Jerome W. R. Virden for the proposed Virden Subdivision major subdivision development. Please note that, in addition, the City’s Planning & Development Department is reviewing the Developer’s response to the City’s previous review comments.

The proposed subdivision is located approximately 1,700 feet north of the Kings Highway and Theodore C. Freeman Memorial Highway split. The resubmission was reviewed in adherence to the City Code Preliminary Consent procedure for a major subdivision – specifically, Section 170-19 Paragraph D, and generally accepted engineering principles. Specific comments were made regarding individual components of the resubmittal and are discussed below – **the Developer’s and GMB’s latest comments are shown in bold and in the same order as the Beacon Engineering, LLC response letter dated March 1, 2021. The series of comments and responses over time are all shown for clarity regarding each item. Several comments have been adequately addressed and will be removed from future correspondence as the project moves toward preliminary consent approval.** We understand these comments will continue to be addressed until the Board of Public Works, City of Lewes, and GMB, offer approval of the Subdivision Preliminary Consent documents.

1. Applicant’s Engineer’s Report and Revised Conceptual Plat Plans:

- a. GMB Original Comment: The requirements of City Code Section 170-19, Paragraph A-2 note that new streets shall “afford adequate light and air” – the Developer shall coordinate with the Board of Public

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Works regarding streetlight requirements on the proposed CeBB Lane and provide the design on the Council Approval phase final plans.

Developer Response dated January 7, 2021: Acknowledged. A waiver request will be provided, under separate cover, requesting relief from the installation of streetlights along CeBB Lane.

GMB Response dated January 18, 2021: In response to the Developer's waiver request letter, please note that it is the Planning Commission and City's decision as to whether the streetlights are required as described in Section 170-26(d), but the word "required" is included in that Section. Also, the existing streetlights must be shown on the plans since the existing lighting (on both highways) is referenced in the waiver request letter but cannot be confirmed since it is not shown on the drawings.

Latest Developer Response: Acknowledged

Latest GMB Response: No existing streetlights have been added to the plans. No proposed streetlights have been described on the plans pending the result of the Developer's waiver request.

- b. GMB Original Comment: The requirements of City Code Sections 170-19, Paragraph A-2 and 170-27, Paragraph E-1 note that residential streets be paved to a 32-foot minimum width and street right-of-way shall be 50-foot minimum width. In addition, curb is required by the Code Sections – CeBB Lane shall be widened from 24-feet to 32-feet and the right-of-way width increased from 40-feet to 50-feet. Curbing shall also be added to CeBB Lane. The Lewes Planning Commission may recommend to the Mayor and City Council, per Code Section 170-27, Paragraph E, Section 2, an exception to allow the developer-proposed 24-foot pavement width, and 40-foot right-of-way width, if the developer can show the site average daily traffic volume (ADT) to be less than 500.

Developer Response dated January 7, 2021: Acknowledged. The ADT for the site using the ITE Code 210 – Single Family Detached Housing is 47 using the average rate and 66 using the fitted curve. Given the short length of the proposed road segment and the environmental benefits of selecting open-section paving, a waiver from the requirement to install curb will be submitted under separate cover. As you can see from the enclosed exemption that was granted by the Sussex Conservation District, no stormwater management is required or "officially" proposed. That said, the Developer and this Engineer recognize and appreciate the importance of providing for stormwater management. Therefore, shallow depressions are proposed alongside the proposed roadway to provide storage of road runoff from the 10-year storm event with an infiltration rate that is 50% of the assigned infiltration rate of 30 MPI (2" per hour). The

shallow depressions would capture and store sediment and nutrients that are contained in the runoff, rather than channelizing it along a curb and directing it to inlets that would be connected to the City's stormwater system.

GMB Response dated January 18, 2021: GMB recommends approval of the exception to the 32-foot pavement width with 50-foot right-of-way. The proposed 24-foot pavement width for the roadway and 40-foot right-of-way are adequate given the average daily traffic (ADT) for the site as described in the Developer's Engineer's response above. The Lewes Planning Commission shall review and make recommendations to Mayor and City Council.

City of Lewes Code Section 170-27E (1) requires curbing. The exception the Developer wishes to request in Section 170-27E (1) notes that it is "based on the merits of the particular case upon consideration of the following criteria: type of curbing, building heights, building density, building materials and other applicable factors." Curbing should be added, per City of Lewes Code, unless the Commission decides to grant the waiver. It is agreed that the lack of curbs would better suit the drainage intent accepted by the Sussex Conservation District (SCD) with the residential standard plan, however, Cebe Lane will be a City Street and the Planning Commission should consider setting a precedent that non-conformity to the City's curb requirements is acceptable.

Latest Developer Response: Acknowledged

Latest GMB Response: No curbing has been described on the plans pending the result of the Developer's waiver request. See Note "g" below regarding the use of a pervious asphalt paving system in lieu of the swales originally proposed.

- c. GMB Original Comment: The requirements of City Code Section 170-19, Paragraph A-2 note that new streets shall "facilitate access of firefighting equipment to buildings" – no width, length, or radii dimensions have been provided for the intended fire truck turnaround area. These dimensions shall be added to the plan.

Developer Response dated January 7, 2021: Acknowledged and addressed. Width, length, and radii for the fire truck turn around have been provided on Dwg SP1.1.

GMB Response dated January 18, 2021: Comment Addressed.

Latest Developer Response: Acknowledged

- d. GMB Original Comment: The requirements of City Code Section 170-19, Paragraph A-5 note that "the applicant shall notify, by certified mail with return receipt requested, the property owners certified by the applicant to be the property owners within 100 feet of

the boundaries of the property which is the subject of the major subdivision application, that such application is being filed with the City, and the applicant shall provide proof of the notification to the City with the initial application” – have adjacent property owners been notified? Please provide proof of notification in the Preliminary Submission package.

Developer Response dated January 7, 2021: Acknowledged and addressed. Verification of notifications, by certified mail of all neighbors within 100 feet, was included with the initial submission of the Preliminary Consent Report and Conceptual Plat Plan and confirmed by Janelle Cornwell.

GMB Response dated January 18, 2021: Comment Addressed.

Latest Developer Response: Acknowledged

- e. GMB Original Comment: The requirements of City Code Section 170-19, Paragraph A-6(h)[2] & (i)[1] note that the Applicant shall submit “the Latest City assessment of property, per the City records, as well as an estimate of the assessments to be made of the following after development/subdivision: land, buildings”, and “Estimates of off-site extensions of water mains, sewers, and paved streets for the following: the portion of the same to be recorded and the final future plan” – the building estimates and off-site extensions of water mains, sewers, and paved streets shall be included in the Engineer’s Report.

Developer Response dated January 7, 2021: Acknowledged and addressed. The Engineer’s Report now includes the estimate.

GMB Response dated January 18, 2021: Overall, based on recent projects undertaken by the City of Lewes and Lewes BPW, various items in the preliminary cost estimate appear low. Upon submission of Council Approval phase documents, an estimate from the Developer’s Contractor must be submitted, reviewed by the City and BPW, and utilized to establish the construction phase bond.

Latest Developer Response: Acknowledged.

- f. GMB Original Comment: Planning Commission shall take into consideration site screening per City Code Section 170-19, Paragraph E-7: “Screening of objectionable features from neighboring properties and roadways.”

Developer Response dated January 7, 2021: Acknowledged and addressed. A landscape buffer has been added within the open space of the subdivision per separate recommendation from the Parks & Recreation Committee. An existing fence, belonging to the Delaware River and Bay Authority, screens the subdivision from

Freeman Highway and is planned to remain. Existing vegetation along this fence is also planned to remain.

GMB Response dated January 18, 2021: Please clarify what screening has been provided along the property line bordering Parcel 64.01. The City Engineer cannot verify whether screening has been provided. Sheet ES1.1 shows trees along the Parcel 64.01 property line, but those trees are not shown on the Landscape Plan.

Latest Developer Response: Acknowledged and addressed. The existing vegetation is now differentiated from proposed landscape, and plantings intended for screening are specified on the Landscape Plan, Sheet LP1.1.

Latest GMB Response: Comment Addressed.

- g. GMB Original Comment: Per the requirements of City Code Section 170-19, Paragraph E-10, the Planning Commission's review shall consider "prevention of pollution of surface water and groundwater" – no erosion and sediment control plans were submitted in the preliminary submission to determine if pollution is being prevented. This plan will be required for Sussex Conservation District (SCD) review. Please provide a letter from SCD stating this is not required if it is not intended to be in the plan set.

Developer Response dated January 7, 2021: Acknowledged and addressed. SCD has granted CeBB Lane an exemption and will review lot and driveway construction on an individual basis utilizing the Residential Standard Plan approval process. Documentation of the granted exemption is included with this submission.

GMB Response dated January 18, 2021: On Cover Sheet T1.0, the total area of streets is listed as 7,636 square feet, but the overall disturbance is listed as 5,000 square feet. From the submission, the new impervious area generated by CeBB Lane is less than 5,000 square feet, but the grading for the roadside depressions and additional impervious area for proposed driveways appears to increase the overall disturbance over 5,000 square feet. Please submit a CAD plan with the limit of disturbance and limit of proposed impervious areas such that this can be clearly determined.

Additionally, the 10-foot drainage easements noted on page 12 of the Declaration of Covenants, Conditions and Restrictions of Viriden Subdivision are not described on the plans. There is a note about the easements, but no easement lines.

Latest Developer Response: Acknowledged. From multiple discussions with the Sussex Conservation District (SCD), it is our understanding that the City is unwilling to permit SCD to exercise its authority and discretion as the Delegated

Agency for the Delaware Sediment and Stormwater Program in Sussex County. As a result, the project has been revised, at great expense to the developer, to implement porous paving to facilitate stormwater management. It is our understanding from our March 1st teleconference that on-lot stormwater management is not desirable to the City. The drainage easements will be detailed by a note on the Preliminary Boundary Plan and will be harmonious with the Covenants and Restrictions.

Latest GMB Response: No CAD files have been provided to verify impervious areas and limits of disturbance, as requested. The Developer's Engineer has decided upon a different stormwater management approach. Please note the following requirements associated with the proposed porous asphalt road system:

- **Add a note to the Road Pavement Section on Drawing CD1.1 stating "non-woven geotextile fabric wrapped up the sides of the proposed stone sections (No. 2 and No. 8 stone)".**
 - **Provide the results of one (1) borehole infiltration test, located at the midpoint of the proposed Cebb Lane, to determine the in-situ infiltration rate for the soils three (3) feet above the seasonal high-water table. The tests must be completed by a geotechnical firm and certified by a professional engineer.**
 - **Please provide SCD approval to the City once received.**
- h. GMB Original Comment: Per the requirements of City Code Section 170-27, Paragraph G-4 thru 8, provide the pavement section in the plan set.

Developer Response dated January 7, 2021: Acknowledged and addressed. The pavement section is now shown on Dwg. CD1.1, Construction Details.

GMB Response dated January 18, 2021: The road section is designed to a structural number of 3.04, which is greater than the City of Lewes requirement of 2.52 (for the ADT provided). Note that the City of Lewes required pavement section incorporates 8-inches of GABC, but the Developer's section incorporates 6-inches of GABC due to the additional 2-inches of Type B asphalt provided. This comment has been satisfactorily addressed.

Latest Developer Response: Acknowledged. Note that the road section has been replaced with a porous paving section.

Latest GMB Response: Per the requirements of City Code Section 170-27, Paragraph G-2 and G-3, please provide the results of the soil investigation program and one (1)

borehole infiltration test, located at the midpoint of the proposed CeBB Lane, to determine the in-situ infiltration rate for the soils three (3) feet above the seasonal high-water table. The testing must be completed by a geotechnical firm and certified by a professional engineer. Additionally, add to the Road Pavement Section on Drawing CD1.1 stating “non-woven geotextile fabric must be wrapped up the sides of the proposed stone sections (No. 2 and No. 8 stone)”.

- i. GMB Original Comment: The requirements of City Code Section 170-27, Paragraph H-3 note that “where the installation of a cul-de-sac would cause undue hardship in land use, a T-shaped background may be approved. Such paved space shall extend the entire width of the street right-of-way and shall be at least 12-feet wide, with the flared portions rounded by at least a curve with a twenty-five-foot radius. Any T-shaped design must receive approval from the City Engineer” – the proposed T-shaped design warrants several questions. Are the lot driveways intended to be located off the T-shaped design? If the T-shaped design is to be used for fire truck turnaround, it is the City Engineer’s recommendation that driveways are not located as extensions of the T-shaped design, as parked cars could impact emergency use. Please provide dimensions of the T-shaped design, including radii. Please note that a standard barricade may be required, per the State Fire Marshal Code Figure 5-4, should the T-shaped design be utilized for fire truck turnaround.

Developer Response dated January 7, 2021: Acknowledged and addressed. The turnaround has been designed to meet City Code requirements and the Delaware State Fire Prevention Regulations. Additionally, “No on street parking anytime” signs have been specified along CeBB Lane and located on the site plan. Parking restrictions have also been included on the Preliminary Boundary Plan and incorporated into the HOA covenants and restrictions.

GMB Response dated January 18, 2021: Please provide metes and bounds for the easement areas where parking will not be allowed on Lots C & D on Sheets SP1.1 and the Preliminary Boundary Plan. Note that per Paragraph 19 – Easements for Emergency Vehicles, Maintenance Vehicles in the Declaration of Covenants, Conditions and Restrictions of Virden Subdivision, “these easement areas shall at all times be kept free and clear of any and all temporary or permanent obstructions of any kind whatsoever such that these areas may be used for the aforementioned purpose.” Please forward approval from State Fire Marshal upon receipt.

Latest Developer Response: Acknowledged and addressed. In addition to signs designating that no on street parking is permitted, metes, and bounds for the easements are now included on the Boundary Plan.

Latest GMB Response: Comment Addressed. Please forward approval from State Fire Marshal upon receipt.

- j. GMB Original Comment: The requirements of City Code Section 170-27, Paragraph H-5 note that “the maximum length of a permanent dead-end street is 200 feet” – the road centerline appears to be longer than the 196-foot dimension shown. Please confirm this dead-end street is indeed 200-feet or less in length. Note that the paved surface extends roughly 15-feet beyond the proposed right-of-way line.

Developer Response dated January 7, 2021: Acknowledged and addressed. The length of Cebb Lane from the entrance intersection of Kings Highway, along the centerline, to the end of the pavement (not including the designated turnaround, is 197 feet. The turnaround will be for driveway access for Lots C, D, and E, as well as for emergency and delivery vehicles only.

GMB Response dated January 18, 2021: The City of Lewes must determine if this is acceptable. The City Engineer finds this comment to be adequately addressed. Technically the additional length above 200-feet is outside of the City’s right-of-way but is within an easement for City access. The HOA documents and plans require no parking in these areas to prevent obstructions during maintenance and emergency use.

Latest Developer Response: Acknowledged.

- k. GMB Original Comment: The requirements of City Code Section 170-27, Paragraph L, note that “the developer shall grade and pave streets, accessways and alleys, construct or install curbs, gutters, fire hydrants, water mains, sanitary sewers, storm sewers and related improvements and facilities, sidewalks, crosswalks and off-street parking paving, as shown on the approved subdivision plan” – no proposed driveways have been shown on the plans.

Developer Response dated January 7, 2021: Acknowledged and addressed. Proposed driveway locations are now shown on the plans.

GMB Response dated January 18, 2021: There appears to be an additional driveway area on Sheet ES1.1 for Lot C, which does not appear on the other plan sheets. Please make the plans consistent. If the driveway extends as shown on ES1.1, the no parking sign must be relocated. City Code Section 167-16(B) indicates access to City streets cannot be more than 20-feet in width; however, if the State Fire Marshal requires the turnaround width to be greater than 20-feet, the City may consider it.

Latest Developer Response: Acknowledged and addressed. The driveway for Lot C is now shown on all applicable plan

sheets, and the no parking sign has been relocated. The turnaround was shown as 24-feet in width per the City of Lewes Code stating public roads should be no less than 24 feet wide. Our preference would be to provide a 20-foot width per the Fire Protection Regulations, shown currently.

Latest GMB Response: Comment Addressed. GMB concurs with the Developer's request for the turnaround to be 20-foot wide.

- I. GMB Original Comment: The requirements of City Code Section 170-27, Paragraph N note that "Sidewalks shall be provided on both sides of all streets. Sidewalk requirements shall be at the discretion of the Planning Commission. Construction and details of sidewalks are governed by the appropriate sections of the latest edition of the Specifications of the Department of Transportation of the State of Delaware and the Americans with Disabilities Handbook. Developers shall construct sidewalks using either concrete or brick or concrete pavers" – no sidewalks have been proposed on either side of Cebb Lane.

Developer Response dated January 7, 2021: Acknowledged. A waiver request will be provided, under separate cover, requesting relief from the construction of curb and sidewalks along Cebb Lane.

GMB Response dated January 18, 2021: The waiver request has been received. The Lewes Planning Commission shall review the request and make its recommendation to City Council. Note that the waiver request refers to several other locations/developments around the City that do not include sidewalks most, if not all, were developed prior to the current City Code requirements were developed. Also, it states that "two of the five lots already have access to sidewalks on King's Highway since they border on the sidewalk there..." – it is questionable whether Lot B borders the Kings Highway sidewalk per its current layout.

Latest Developer Response: Acknowledged. While Lot B does not border the Kings Highway sidewalk directly, it is less than 4 feet from the sidewalk at the entrance to the subdivision and is immediately adjacent to the Junction Breakwater Trail.

Latest GMB Response: As previously noted, the sidewalk waiver request has been received. The Lewes Planning Commission shall review the request and make its recommendation to City Council.

- m. GMB Comment: The requirements of City Code Section 197-76, Paragraph B-1 note that "all developments, lots, and properties shall be provided with a drainage system that is adequate to prevent the

undue retention of surface water on the site” – no storm drainpipes, or stormwater outfall have been shown on the plans. Two (2) proposed swales are shown with no outfall. The City Engineer questions whether the site runoff will affect adjacent parcels. Additional grading may need to be shown to prevent stormwater runoff impacts to adjacent lots.

Developer Response dated January 7, 2021: Acknowledged. The proposed swales are intended to provide storage of road runoff. Infiltration will occur in these areas. Based on the initial soil reconnaissance, the soil will support an assigned permeability for the most restricted soil layer of 30 MPI (2"/hour).

GMB Response dated January 18, 2021: The proposed grading shown is not enough to provide adequate drainage for the site nor does it show how the adjacent properties will not be adversely affected due to the on-coming drainage from the proposed development.

Note that the proposed infiltration swales would not be feasible unless the waiver request from the City's curb requirements is granted. Also, if sidewalks are required, the impervious area would be increased also affecting the infiltration swale system design. If the infiltration system is feasible after consideration of the waiver requests, the City Engineer recommends soil borings and infiltration testing be completed to ensure the infiltration rate of 2-inches per hour as described by the Developer. Otherwise, it appears the drainage has no outfall, and the roadside depressions may hold water potentially creating ponding and associated problems.

Latest Developer Response: Acknowledged. The project has been revised to include porous paving for the access road in addition to the swales to mitigate runoff from proposed impervious areas. Subsequent testing will be completed after decisions have been made regarding the submitted waiver requests.

Latest GMB Response: The roadside drainage swales still have no outfall, and they may hold water potentially creating ponding and associated problems – this may be addressed if the required infiltration tests indicate adequate permeability via the proposed porous pavement system as approved by the City Engineer. The proposed grading still does not show how the adjacent properties will not be adversely affected by the drainage directed toward them from the proposed development.

- n. GMB Original Comment: The addition of the lots, streets, and open space areas in the area calculations do not equal the total area within boundaries calculation provided on Sheet T1.0. It appears that the open space and street areas may be incorrectly listed. The open

space area listed in the plan view on sheet CP1.1 varies from that listed on the Cover Sheet – please revise accordingly.

Developer Response dated January 7, 2021: Acknowledged and addressed. The total areas of lots, street (ROW), and open space now equal the total area within the property boundary. This information has also been updated in the Engineer's Report.

GMB Response dated January 18, 2021: The sum of the lot area, street areas, and open areas equals 63,107 square feet, but the total shown is 63,109 square feet. Perhaps there was a rounding error somewhere. Please correct. The report and the plan numbers match, so the revision should occur to both.

Latest Developer Response: Acknowledged and addressed. The plan and report have been updated to account for rounding.

Latest GMB Response: Comment Addressed.

- o. GMB Original Comment: It appears that CeBB Lane is crowned with 6.65% cross-slopes on both sides of the crown – road slopes from crown shall be 2.00%.

Developer Response dated January 7, 2021: Acknowledged. The original road design is based upon a 2.00% cross slope.

GMB Response dated January 18, 2021: Comment Addressed.

Latest Developer Response: Acknowledged.

- p. GMB Original Comment: On Sheet UT1.1, it appears the proposed water is connecting into the existing 4-inch water main on Kings Highway – please revise to connect into the existing 12-inch main on Kings Highway. In addition, on Sheet UT1.1, note the following:
 - i. Water main shall be minimum 6-inch diameter.
 - ii. The proposed blow-off shall be replaced with a fire hydrant.
 - iii. The proposed sanitary sewer pipe inverts and slopes do not match. Sanitary sewer main pipe shall be 8-inch with a minimum slope of 0.0028 and a minimum depth of 42-inches. Sanitary sewer service pipes to homes must be 6-inch with a minimum slope of 0.02. Please provide utility profiles upon submission of Final Plans.

Developer Response dated January 7, 2021 : Acknowledged and addressed. The connection to existing main has been relocated to the 12-inch main; the blow-off has been replaced with a fire hydrant; the on-site water main has been increased to a 6-inch main; and sanitary sewer slopes have been coordinated with the

proposed inverts. Profiles for both water main and sanitary sewer will be provided on the Final Plans.

GMB Response dated January 18, 2021: "MH1" has 3.27-feet of cover and does not meet the 3.5-feet cover requirement. The "EX MH", with proposed rim elevation as described, provides 3.36-feet of cover, which does not meet the 3.5-feet cover requirement.

Latest Developer Response: Acknowledged and addressed. The proposed connection to EX MH will be 0.10 feet above the existing invert, and the flow channel will be reconstructed. Lowering the proposed sewer main also addresses the depth at MH1. Therefore, the road elevations will not require adjustment as discussed in our teleconference of March 1st.

Latest GMB Response: Comment Addressed.

- q. GMB Original Comment: Sheet UT3.1 shows title for water crossing profiles, but no profiles have been shown.

Developer Response dated January 7, 2021: Acknowledged. Profiles for the water main will be provided on the Final Plans.

GMB Response dated January 18, 2021: Comment to be addressed on Final Plans.

Latest Developer Response: Acknowledged.

- r. GMB Original Comment: In the Introduction of the Engineer's Report, there appears to be a typographical error in the total open space area listing – please revise.

Developer Response dated January 7, 2021: Acknowledged and addressed. The open space acreage has been corrected.

GMB Response dated January 18, 2021: Comment Addressed.

Latest Developer Response: Acknowledged.

- s. GMB Original Comment: On Sheet T1.0, the Net Development Area has been left blank – please fill in accordingly.

Developer Response dated January 7, 2021: Acknowledged and addressed. The net development area is now shown in the Site Data Column on Sheet T1.0.

GMB Response dated January 18, 2021: Comment Addressed.

Latest Developer Response: Acknowledged.

- t. GMB Original Comment: Please revise the Standard Board of Public Works details shown on Sheet UT3.1. The following details have been updated since May 2004: 106, 200, 201, 300, & 304. The updated Standard Utility Details can be found here:
<https://lewesbpw.delaware.gov/files/2019/01/Lewes-BPW-Std-Utility-Specs-and-Details-for-Water-Sewer-and-Storm-Drain-2018.pdf>

Developer Response dated January 7, 2021: Acknowledged and addressed. The noted details have been updated to the October 2018 revisions.

GMB Response dated January 18, 2021: Comment Addressed.

Latest Developer Response: Acknowledged.

2. A statement regarding through streets and connections thereof with existing or probable future streets of adjoining properties:

- a. GMB Original Comment: The one (1) proposed street – Cebb Lane – providing entry and access to the subdivision is a dead-end street. The City Engineer would not recommend connection to adjoining properties, nor would connection to the existing Freeman Highway be recommended assuming that the T-shaped turnaround and firefighting equipment concerns noted herein are adequately addressed.

Developer Response dated January 7, 2021: Acknowledged and addressed. The design intent is to comply with the City Code and the Delaware State Fire Prevention Regulations, and we will work within the guidelines provided by the Office of the State Fire Marshal, and the Board of Public Works to ensure the turn-around is adequate for fire trucks, emergency, and maintenance vehicles. Since Freeman Highway is a limited access highway, connection between Cebb Lane and Freeman Highway may not be possible.

GMB Response dated January 18, 2021: Comment Addressed.

Latest Developer Response: Acknowledged.

3. Endorsement or comment on suitability of land for proposed purpose:

- a. GMB Original Comment: The approximate 1.45-acre property is suitable for subdivision, however, the comments and questions contained herein indicate potential issues with the subdivision as proposed.

Developer Response dated January 7, 2021: Acknowledged. It is our opinion that the plan revisions and our responses to each comment address the potential issues that have been indicated.

GMB Response dated January 18, 2021: There are still outstanding comments which indicate potential issues with the subdivision as proposed.

Latest Developer Response: Acknowledged. We will continue to work with the City of Lewes and the other agencies that are interested in this project to develop an optimal plan that harmonizes conflicting and differing criteria.

4. Verification or adjustment of cost estimates of items, if any, to be borne in whole or in part by the Board of Public Works and the City during the construction process:

- a. GMB Original Comment: A construction cost estimate for all City (streets, curbs, sidewalks, ADA improvements, etc.) and Board of Public Works (water, sanitary sewer, catch basins and storm drain piping, electrical service, and streetlights, etc.) infrastructure must be reviewed during the Council Approval stage of the project such that a proper construction performance bond can be put in place.

Developer Response dated January 7, 2021: Acknowledged. A construction cost estimate will be provided, under separate cover.

GMB Response dated January 18, 2021: Comment to be addressed during Council approval stage of the project.

Latest Developer Response: Acknowledged.

5. Certification of the Plat Plan is complete and in full accordance with the subdivision regulations, as well as fits into a plan for orderly development of the City:

- a. GMB Original Comment: The comments listed in the above-listed notes 1 through 4 must be addressed prior to this certification. In addition, the following items must be addressed:
 - i. Utility trench restoration into Kings Highway must meet the City's trench restoration standards, and those of DelDOT.

Developer Response dated January 7, 2021: Acknowledged. Comments will be addressed so that the Plat Plan is in full accordance with subdivision regulations. Utility trench restoration will comply with the code of the City of Lewes, Article V, Section 167-14. Street Restoration Standards and DelDOT Utility Permit requirements.

GMB Response dated January 18, 2021: The trench restoration should be called out on Sheet UT1.1 and Sheet SP1.1, referencing the trench restoration detail which is applicable.

Latest Developer Response: Acknowledged and addressed. The DeIDOT standard trench restoration detail, the pipe bedding detail, and depressed curb have been added to Sheet UT3.1 and have been called out on Sheet UT1.1.

Latest GMB Response: Comment Addressed.

6. Additional comments received via email:

- a. GMB Original Comment: ADD the following Water System note between existing Notes 10 and 11: "Fire hydrants shall be a traffic model compression type with 5-1/4" main valve opening, one 4-1/2" pumper nozzle and two 2-1/2" hose nozzles and shall have a 6" side inlet mechanical joint shoe connection to accommodate the class of pipe hereinbefore specified. Depth of bury shall be suitable for a minimum trench of 3'-0". Hydrants shall conform with AWWA C 502, latest edition. Hydrant seat shall be provided with bronze threaded connection. The operating nut shall be pentagon shape measuring 1-1/2" National Standard point to flat. Non-kinking hose nozzle chains are required. Drain mechanisms shall be bronze to preclude galvanic corrosion of dissimilar metals and shall operate automatically with the opening and closing of the main valve. Hydrants shall receive prime and shop coats of paint at the factory. Submit coating specifications for approval. Final coating color to be Pennsbury paint (color as directed by the Board of Public Works). The Developer shall be responsible for field touch-up or repainting of hydrants as required. Hydrant barrel shall be provided with a reflective tape of a minimum of 2" in width around the barrel under the top flange. The entire hydrant assembly, including the valve seat and all moving parts, shall be removable from the top without the need to excavate and/or remove the hydrant. The design shall be that lubrication of the operating threads is possible without disassembly. A certificate of inspection and test shall be furnished including submission of a flow and friction loss curve. Provide one (1) hydrant wrench for every two (2) hydrants supplied. Fire hydrants shall be Model B-62-B as manufacturer by American Darling and shall open by turning to the right.

Developer Response dated January 7, 2021: Acknowledged and addressed. This note has been added to Dwg T1.1 as City of Lewes Board of Public Works, B. Water System, Note 11.

GMB Response dated January 18, 2021: Comment Addressed.

Latest Developer Response: Acknowledged.

- b. GMB Original Comment: Sanitary Sewer Note No. 1 – ADD the degree symbol between “73” and “F”.

Developer Response dated January 7, 2021: Acknowledged and addressed. The degree symbol has been added to Sanitary Sewer Note No. 1 where requested.

GMB Response dated January 18, 2021: Comment Addressed.

Latest Developer Response: Acknowledged.

- c. GMB Original Comment: ADD the following Sanitary Sewer note between existing Notes 8 and 9: “Pipe restraint at bends or other special fittings shall be with retainer glands system approved by the City/BPW Engineer manufactured by Tyler, U.S. Pipe, EBAA, or UniFlange, or with concrete buttresses as shown in the City of Lewes Board of Public Works Standard Details.”

Developer Response dated January 7, 2021: Acknowledged and addressed. This note has been added to Dwg T1.1 as City of Lewes Board of Public Works, B. Sanitary Sewer System, Note 9.

GMB Response dated January 18, 2021: Comment Addressed.

Latest Developer Response: Acknowledged.

- d. GMB Original Comment: GMB’s review comment 1-p-i on page 4 of the letter dated 11/24/2020 should read “Water main shall be minimum 6-inch diameter.”

Developer Response dated January 7, 2021: Acknowledged and addressed.

GMB Response dated January 18, 2021: Comment Addressed.

Latest Developer Response: Acknowledged.

- e. GMB Original Comment: Regarding the proposed roadside swales, if the Lewes Planning Commission and City Council approve a waiver for curb and gutter, it is likely that an infiltration test completed by a certified geotechnical engineer will be required per the current design intent to allow those swales to store and infiltration runoff.

Developer Response dated January 7, 2021: Acknowledged.

GMB Response dated January 18, 2021: See GMB comment within 1(m).

Latest Developer Response: Acknowledged.

GMB Response: See GMB comments within Notes 1(g), 1(h), and 1(m).

7. On Sheet T1.1, the numbering should be fixed under Section B. Water System, after 21 the numbers should continue 22-32 instead of 13-23.

Developer Response: Acknowledged and addressed. Section B. Water System Notes have been renumbered.

GMB Response: Comment Addressed.

8. On Sheet UT1.1, the label for the fire hydrant should be updated to point to the fire hydrant.

Developer Response: Acknowledged and addressed. The label has been corrected.

GMB Response: Comment Addressed.

9. On Sheet UT1.1, the sanitary sewer lateral for Lot B seems to conflict with the proposed tree. Please relocate to avoid conflict.

GMB Response: Comment Addressed.

10. The proposed Limit of Disturbance listed on Sheet T1.0 appears to be the same from the last submission, but the limit of disturbance appears to be greater than 5,000 square feet. It has increased from what was shown on the previous plan submission. Please confirm the total limit of disturbance.

11. Existing Conditions Plan EX1.1 appears to be missing from the plan set, but two (2) Site Plans have been included instead.

12. Existing utilities on Kings Highway are difficult to see on Sheet UT1.1. Please remove existing pavement hatch within Kings Highway on this sheet.

13. On Sheet UT1.1, the invert for Lot D's sanitary sewer lateral cleanout has been revised from the previous submission and no longer provides the 3.5' cover. Please revise accordingly.

14. Please note on the Site Plan or Sheet UT3.1 where the DeIDOT standard curb and gutter type 1-6 are to be used on the plan.

15. Please note on the Site Plan or Sheet UT3.1 where the DeIDOT details D-8 and P-4 are to be used on the plan.

16. On Sheet SW2.2, a geotextile dewatering bag detail is shown.

Please clarify where its intended use onsite would be, to ensure positive outfall for the runoff.

If there are any questions, please contact me at chochstedler@gmbnet.com or 302.628.1421. Thank you.

Sincerely,



Cheri Hochstedler
Designer

CH/jad

cc: City of Lewes
Attn: Janelle Cornwell
Planning & Development Officer
Beacon Engineering, LLC
Attn: Robert J. Palmer, P.E.
GMB
Attn: Charles M. O'Donnell, P.E.