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September 10, 2024

Nancy Tran
Land Use Board Secretary
Borough of Highlands Land Use Board
151 Navesink Avenue
Highlands, New Jersey 07732

Re: Completeness Review No. 5
Home & Land Development Corp.
14 & 32 North Peak Street
Block 35, Lots 8 & 9
Minor Subdivision and Variances
Borough of Highlands, Monmouth County, New Jersey
Our File No.: HLPB2022-10

Dear Ms. Tran:

As requested, we have reviewed the above referenced application in accordance with the Borough of Highlands Zoning and Land Use Regulations, section entitled, "Part 3, Subdivision and Site Plan Review, Article VI, Application Procedure", and "Article VIII, Plat and Plan Details, section 21-58.A – Minor Subdivision Plat".

Below is our Completeness Review along with comments for the above referenced project. This review was prepared based upon the following documents:

1. Architectural Plan for 14 North Peak Street prepared by Grasso Design Group dated 8/27/24.
2. Architectural Plan for 32 North Peak Street prepared by Grasso Design Group dated 8/27/24.
3. Drainage Report for 32 North Peak Street prepared by Grotto Engineering Associates dated 8/22/24.
4. Plan set entitled "Plot Plan For 32 North Peak Street, Block 35, Lots 8 & 9, situated in Borough of Highlands, Monmouth County, New Jersey", prepared by Grotto Engineering Associates, LLC., Clark New Jersey, dated April 5, 2024, and last revised August 22, 2024, consisting of 8 sheets.
5. Report entitled, "Report of Review the Stone Strong Systems Modular Retaining Wall System", prepared by ASCE GEO-INSTITUTE, dated January 2021, with various attachments and ancillary reports consisting of 853 sheets.
6. Plan set entitled "Stone Strong System – Gravity Retaining Wall" prepared for Home & Land Development North Peak Street Project" prepared by Garden State Precast, Inc., dated August 29, 2024.
7. Stone Strong Systems product brochure, undated, consisting of 20 sheets.
8. Letter to Home and Land Development from Tulmark, LLC. Geotechnical and Environmental Services dated July 19, 2024, regarding soil bearing capacities.
9. Environmental Impact Statement prepared by Tulmark, LLC. Geotechnical and Environmental Services dated July 17, 2024

It is understood that the application will be heard at the September 12th Planning Board meeting.

The Applicant has addressed some of the comments within the Fourth Completeness Review dated May 8, 2024, pursuant to Ordinance Section 21-58.A as a Minor Subdivision Plat, however, the following comments are offered for the Planning Board's consideration:

As determined in the Fourth Completeness Review, this application is deemed a Major Subdivision and Major Site Plan. As the applicant is now proposing septic systems in lieu of public sewerage to serve the proposed lots, a NJDEP Treatment Works Approval (TWA) for sewer extension is no longer required.

According to the *Municipal Land Use Law, Chapter 291*, a Minor Subdivision is defined under Section 40:55D-5 as:

"Minor subdivision" means a subdivision of land for the creation of a number of lots specifically permitted by ordinance as a minor subdivision; provided that such subdivision does not involve (1) a planned development, (2) any new street or (3) the extension of any off-tract improvement. Therefore, this is classified as a Major Subdivision due to the installation of the retaining wall in the right of way.

The revised application package submitted does not address the above comment regarding classification as a Major Subdivision and Major Site Plan. The applicant should re-submit the plans and applications with the appropriate fees as detailed in the Fourth Completeness Review. The revised submission should address the appropriate submission requirements for Major Subdivision and Major Site Plan per Section 21-58 of the Borough's land use ordinance.

The Applicant's Engineer resubmitted a plan set entitled "Plot Plan" as detailed above. A major subdivision plan has not been submitted for this project.

Additional comments are provided below:

I. ZONING

1. This property is located in the R-1.01 Residential District.
2. The Applicant requires six (6) variances based on the resubmission of the Plot Plan set.
3. The following revised bulk requirement summary is provided for the Board's reference:

R-1.01 Residential Zone	Required	Existing Lots 8 & 9 (Provided by Applicant)	Existing Lot 8 (Ref: Santry Minor Subdivision)	Existing Lot 9 (Ref: Santry Minor Subdivision)	Proposed Lot 8	Proposed Lot 9
Min. Lot Area (sf)	5,000	13,423	Not provided	Not provided	7,775.37	5,658.99
Lot Frontage/Width (ft)	50	130.26/127.62	91.76	38.40	79.23	50.93 (51.03)
Min. Lot Depth (ft)	100	105.26	(101.42)	(114.44)	108.08 (100.16)	118.28 (113.18)
Min. Front Yard Setback (ft)	35	60.6	-	-	35.3	*31.9
Min. Side Yard Setback (ft)	8/12	**4.7/92.2	-	-	8.3/12	8.2/12
Min. Rear Yard Setback (ft)	25	**8.6	-	-	25	25
Max. Building Height (ft)	30	-	-	-	<30	<30

Max Lot Coverage	70%	±41.9%	-	-	39.0%	34.2%
Max Building Coverage	30%	±8.0%	-	-	26.1%	22.5%
***Max Lot Coverage	33.4% (8) 45.8% (9)	**41.9%	-	-	*39.0%	34.2%
***Max Impervious Surface Area	15.8% (8) 21.2% (9)	**41.9%	-	-	*39.0%	*34.2%
***Max Lot Disturbance (sf)	1,597 (8) 1,560 (9)		-	-	*7,775	*5,649
On-Site Parking (spaces)	2.0 (8) 2.5 (9)	Not provided	-	-	2	2

- * VARIANCE REQUIRED
- ** EXISTING NON-CONFORMING CONDITION
- *** PER STEEP SLOPES ORDINANCE AND CALCULATIONS § 21-84-B

Note: Items in the Table above shown in () reflect REG calculations and are to be confirmed by the Applicant.

II. APPLICATION FEES (PART 6 FEE SCHEDULE ARTICLE XXIII, ORD. 21-107)

1. Variances			
Residential "c" (minimum front yard setback) x 1	1 EA	\$ 125.00	\$ 125.00
Steep slope maximum lot coverage x 1	1 EA	\$ 125.00	\$ 125.00
Steep slope maximum impervious coverage x 2	1 EA	\$ 125.00	\$ 250.00
Steep slope maximum lot disturbance x 2	1 EA	\$ 125.00	\$ 250.00
Subtotal			\$ 750.00
2. Subdivisions			
Major			
Preliminary Plat		\$500 plus \$50 per lot x2	\$ 600.00
Final approval		50% preliminary fee	\$ 300.00
Subtotal			\$ 900.00
3. Site Plans			
Major (approx. 6,220 sf total building floor area)			
Preliminary approval		\$1000 plus \$50 per acre or Part thereof and \$20 per 1,000 Square foot of building floor area or part thereof or \$20 per dwelling unit	\$ 1,190.00
Final approval		50% preliminary fee	\$ 595.00
Subtotal			\$ 1,785.00
Total			\$ 3,435.00

III. CHECKLIST ITEMS

1. All existing structures, wooded areas, and topographical features, such as slump blocks, within the portion to be subdivided and within seventy-five (75) feet thereof.

Partially satisfied. Features are not shown to seventy-five (75) feet.

2. Metes and bounds descriptions of all new lot and property lines.

The Applicant has provided metes and bounds for all proposed lot lines on the plan, but written descriptions remain outstanding.

3. The existence and location of any utility or other easement.

The Applicant has updated the plans to indicate utility poles (for electric) on the northerly side of North Peak Street, gas and water lines on North Peak Street and an additional water meter on Lot 9.

These features are not shown on the Plot Plan.

4. A wetlands statement provided by a qualified expert.

Provide a statement by a licensed engineer or other authority indicating that wetlands are or are not present on the property.

This item remains outstanding.

The Applicant has stated, "This office has reviewed available state mapping, which does not depict wetlands being present on this site."

A review of the NJDEP GeoWeb does not definitively establish that there are no wetlands present on a property. Field observations are necessary to determine the presence or absence of wetland.

A signed letter by a qualified expert is required.

A letter stating, "We have reviewed the State's GeoWeb mapping and performed a site review to confirm that there are no regulated freshwater wetlands or buffers impacting the property," would suffice in completing this checklist item.

5. The Board reserves the right to require a feasible sketch plan layout of remaining land not being subdivided if it is deemed necessary.

The applicant has provided two house layouts that demonstrate the sizes of the proposed homes and the need for setback relief.

The proposed lots have many engineering issues that remain to be addressed by a licensed civil engineer. A licensed engineer is required to certify that the developed sites are designed and will be constructed under the appropriate standard of engineering practices and the safety of the homeowner and adjoining properties.

A Plot Plan set has been provided by the Applicant's engineer. However, a formal Major Site Plan application is required.

6. A lot grading plan, to be reviewed by the Borough Engineer, if required.

As a condition of approval, the Applicant must provide plot plans for review and approval at the time of obtaining building permits.

A grading plan is included with the Plot Plan set. A Major Site plan with additional checklist items is required as discussed above.

IV. COMPLETENESS

The application has been scheduled for the September 12th Planning Board meeting.

V. GENERAL COMMENTS

1. Please explain how all the zone requirements were calculated for “Existing Lots 8 & 9” as shown on the Cover sheet of the plan set and also shown in the bulk requirements summary.

There are some discrepancies in the zoning chart as noted above.

2. The Applicant provided a Plot Plan however they must provide a Major Site Plan. Based on comments above, the Applicant must provide a Major Site Plan submission.

A Major Site plan with additional checklist items is required as discussed above.

3. Confirm that all reference maps for topographic information are consistent and use the same datum.

To be confirmed.

4. The General notes reference to the “City Engineer”. Please revise.

To be revised.

5. The plans show adjustments to the existing gutter and roadway within North Peak Street, including installation of a retaining wall and storm drainage improvements within the existing cartway area.

- a. The Borough Council recently approved the construction of a retaining wall within North Peak Street right-of-way, The applicant is to provide testimony as to ownership and maintenance of the retaining wall.
- b. The proposed retaining wall is provided so that access to Lot 9 is possible. The retaining wall ranges from 6.0 feet high to 15.0 feet high and is used to extend North Peak Street so that Lot 9 can access the proposed driveway.

It is our understanding that the Borough Council has indicated that the proposed construction of the retaining wall and pavement extension is acceptable. We note that the roadway improvements proposed within the Borough R.O.W. do not meet municipal or Residential Site Improvement Standards (RSIS) for road width. A waiver is required.

It is further our understanding that the Borough Council found the installation of sanitary sewer in the 10-foot and 6-foot rights-of-way unacceptable.

- c. An existing inlet with 12” and 15” pipes was previously shown on the Minor Subdivision dated May 1, 2023, with the inlet noted to be removed. The proposed plans appear to have removed the 15-inch pipe and installed the proposed 15 ft high retaining wall over that area. The 12-inch pipe remaining is shown to be extended through the retaining wall. Explain how this will work and so as not to disrupt the drainage in the area.

Not addressed. Drainage calculations have been submitted, but they do not include calculation of discharge from this existing pipe, nor drainage from the upstream drainage area. From the information submitted, we are not able to determine if this modification of the existing piped drainage system will change drainage patterns to the site and beyond. Additional stormwater measures may be required.

- d. A proposed manhole and the 12-inch pipe are shown north of the proposed retaining wall and daylight at the wall. It appears this pipe begins in Middletown Township and discharges in Highlands. The applicant is proposing to extend the pipe through the retaining wall on North Peak Street but there is no information on where the water originates and how much will be discharged through the retaining wall and onto Lots 8 and 9.

See c. above.

- e. There is a wall-like feature at the end of the paved portion of North Peak Street. This must be shown on the plans and included in the proposed roadway and drainage improvements.

Feature not shown or addressed on Plot Plan.

- f. The proposed retaining wall elevations are not consistent with the existing grades and more information is needed. All retaining walls are large and insufficient information is provided to evaluate these.

Items 5, 6 & 7 in the document list above present additional data for the retaining walls. These walls are very large and will result in major changes to the topography and drainage patterns on these lots.

- g. Proposed grading is not shown on the north side of the proposed retaining wall on North Peak Street.

Top of wall elevations have been adjusted to match existing grades behind the wall, but no top of wall elevation is shown for the southwesterly end of the wall.

- h. Off-street parking is determined by the number of bedrooms. Please provide.

The architectural plans provided indicate that Lot 8 will have a 3-bedroom dwelling and Lot 9 will have a 4-bedroom dwelling. We note, however, that the dwelling proposed on Lot 8 has a "loft" with convenient access to both a closet and a bathroom and should be considered an additional bedroom. The Residential Site Improvement Standards call for 2½ parking spaces per 4-bedroom dwelling unit but indicate that this requirement can be rounded down to 2.

- 6. The applicant previously demolished structures on both lots and performed clearing and some grading. The limit of grading/disturbance for the proposed improvements appears to comprise the entire property limits, including some off-tract elements.

The Applicant states, "The limit of disturbance was no greater than is being proposed and shown on the Soil Erosion and Sediment Control Plan. Proposed disturbance to adjoining property owners has been eliminated. Disturbance shall only occur on Lots 8 & 9 and within the Borough's right-of-way."

It appears the proposed limit of disturbance is no greater than the actual clearing line of what was previously removed. The sanitary sewer extension previously proposed has been removed from the plans in favor of proposed individual on-lot septic systems, eliminating disturbance within the 10-foot wide Borough R.O.W., except as may be required for construction of the adjacent retaining wall.

It is noted that the amount of disturbance proposed for each of these lots, although already disturbed, is significantly greater than permitted under the steep slope provisions of the ordinance. Referring to the chart on Page 3 above, allowable disturbances for Lots 8 & 9 are 1,597 sf and 1,560 sf, respectively, where 7,775 sf and 5,649 sf are proposed.

- 7. The prior dwelling utilized a septic system. The location and disposition of this should be shown on the plans. The septic tank is shown on the Minor Subdivision Plan prepared by Thomas P. Santry, PLS. The Applicant must provide documentation from the Health Department that the system has been or will be properly removed.

This item has not been addressed by the applicant.

- 8. An Existing Conditions Plan is requested to provide clarity for the site. Existing features are missing on the plans and the proposed plans are complex and difficult to differentiate the proposed and existing features.

This plan has not been provided.

9. ***The applicant has removed the sanitary sewer extension from the plans and is now proposing individual on-lot sewage disposal systems. However, the proposed septic systems shown on the plans are schematic only and are severely undersized. Given the density of the proposed development and the steepness of the lots both before and after construction, we doubt that there is sufficient area on these lots for properly sized septic systems. It appears that there would be room for only one dwelling if a septic system is to be constructed. The applicant should show properly sized septic systems on the plans, or propose some other means of providing sewer service to these lots. The applicant may want to consider privately owned pumping systems for each lot with a connection to the nearest sanitary manhole in an adjacent roadway. We also note that it is our opinion that the septic system for Lot 8 should be designed for a 4-bedroom rather than 3-bedroom house, as noted above. .***
10. Although the public sewer has been removed from the plans, the applicant is proposing roadway improvements and a retaining wall within the North Peak Street public right-of-way. Resolution of the sewerage requirements may require additional public improvements.
 - a. The proposed sanitary sewer line is recommended to be an 8-inch diameter pipe, as we do not recommend that two dwellings share a 6-inch sewer line.
 - b. Existing and proposed (fill) grading, although shown on the profile is not completely shown on the plan view. The plan also lacks grading between Lot 7 and the proposed retaining wall. Additionally, the retaining wall for Lot 7 appears to be on lot 8.
11. Cross sections C-C and D-D on Plan Sheet 6 of 8, Cut/Fill Cross Sections and Calculations should include both retaining walls (rear yard and North Peak Street). All cross sections are to show property lines so that a clear evaluation may be made of the impact of the walls.
12. The rear retaining wall is set at elevation 131.5 and supports the new houses which have first floor elevations of 143 and 145.2.
13. The Applicant has indicated the existing and proposed water, gas, and electric service connections for Lots 8 & 9.
 - a. The proposed water and gas services for Lot 9 cross Lot 8. The water and gas services will need to be relocated or an easement placed on Lot 8.
 - b. The water service is proposed at 2 inches and is oversized for a single-family home. Why is the service line greater than 1 inch?
 - c. The electric service needs to be shown on the plans.
14. The Applicant is requested to document compliance with the Steep Slope Ordinance found at 21-84.B and provide calculations as required therein. In addition, means and methods for controlling velocity and rate of stormwater runoff shall be documented.

The Applicant has prepared a Steep Slope and Slump Block Permit Application report pursuant to Ordinance § 21-84.B.

- a. The report indicates that Lot 8 will require variances for the maximum lot coverage, maximum impervious surface area and maximum lot disturbance according to the steep slope requirements. Lot 9 will require variances for the maximum impervious surface area and maximum lot disturbance according to the steep slope requirements.

As noted above, the lot disturbances proposed by the applicant substantially exceed the "Maximum Lot Disturbance" allowance under the steep slope provisions of the ordinance. Proposed disturbance for Lot 8 is 7,775 sf where 1,597 sf is permitted, and proposed disturbance for Lot 9 is 5,649 sf where 1,560 sf is permitted. These disturbed areas are 4.87 and 3.62 times the size of allowable disturbances, respectively.

- b. The report refers to the 10-foot right-of-way as an easement. Please clarify or correct.

- c. Please indicate the project site on the Soil Map.
- d. The method for controlling velocity and rate of stormwater runoff is described by the Applicant's Engineer's statement:

"Stormtech (SC-740) Chamber Systems will be installed in the rear yards of each property. The chambers will temporarily store roof runoff during a storm event to control the stormwater runoff. The bottom of the chambers are open and are installed on clean stone which allows the stored water to percolate into the ground, Roof leaders will be hard piped directly to the chambers. Details, size, and specifications may be provided upon request.

While we support the applicant's efforts to reduce runoff from this site, the drainage design fails to account for runoff emanating from the drainage areas upstream of the proposed lots. This includes runoff flowing from the 12-inch CMP pipe near the northerly corner of proposed Lot 9 which will now discharge directly into the site. The plans are unclear as to where this runoff is being discharged at present.

- e. The stormtech chambers will infiltrate water into the ground in an area of fill which is adjacent to the retaining wall that is 10 to 13 feet high. It is possible that the water infiltrated into the ground will cause hydrostatic forces on the adjacent retaining wall and may even follow the soil line between in situ soils and the fill soil needed to raise the rear yards 10+ feet. It is recommended that soil testing be conducted to verify that the water will not travel along the old ground surface (under the fill) and undermine the retaining walls.

Although the applicant has submitted a soils report based upon 8 soil borings on the site and particularly located at the retaining walls, there has been no testing of soil permeability needed to properly evaluate infiltration and hydrostatic forces. There is concern that stormwater may drain along the soil boundary between the proposed fill and the existing ground and accumulate behind the retaining wall along the southerly side of the site creating hydrostatic pressure on the wall. A detailed geotechnical report is required.

- f. No storm analysis was provided for the stormtech chambers. There is no stormwater analysis or storm event size provided for the site. It is unknown what storm event can be handled by the chambers and what the extent of overflow will be. Any overflow will be toward the retaining wall at the rear.

The submitted drainage report provides stormwater routings for the Stormtech Chambers for the 2-, 10- and 100-year storms. However, as noted above, there has been no permeability testing to verify the infiltration rates used in the calculations, and the report fails to consider the effects of drainage from the upstream drainage area and modified 12" CMP storm drain.

- g. The applicant must provide soil testing and a geotechnical analysis and design of the retaining walls and the stormtech chambers and determine how all these improvements impact each other and the surrounding area.

A soil bearing capacity report for the retaining walls has been submitted. No additional geotechnical information has been submitted to date and there has been no analysis as to how the various improvements will impact each other and the surrounding area.

- h. There is an elevation change of 50 feet between the first-floor elevation of Lot 8 and the bottom of the sanitary lateral in the right of way. The slopes and elevations and proposed conditions on this site are of concern and the applicant must provide specialized engineering and analysis to assure proper stability.

No additional stability analysis or geotechnical data has been provided.

- i. The grading at the front of the lots is toward the houses. Of particular concern is the existing pipe discharging from Middletown Township and through the proposed 10 ft. high retaining

wall in the North Peak Street right-of-way. The water from the pipe flows toward the houses and the proposed grading is also toward the houses. It then is diverted to a swale between the two houses and flows toward and over the 13.5 ft high retaining wall at the rear of the site.

The applicant is proposing low points approximately eight (8) feet in front of the garage for each house. Runoff from these low points will flow off the driveway on each side to the adjacent lawn areas and adjacent properties. Each of these low points is less than four (4) inches below the proposed garage floor elevation. The applicant should provide a drainage analysis of these areas to insure that stormwater will not pool in these low points to depths greater than the four (4) inch depths proposed.

- j. In regard to the retaining walls, we note that walls provided by Garden State Precast are proposed. Generally, these walls are masses of weight which use a wide base to provide the needed stability. Therefore, these walls are very wide and will use a lot of area underground.
- k. The above concerns, although directed at the two proposed lots, are also of concern to the surrounding lots. The applicant must analyze the impact of uncontrolled surface runoff from this site on to all surrounding and downstream properties.

No additional data or analysis has been provided.

- 15. The Applicant is seeking a waiver for an Environmental Impact Report as required in §21-84B Steep Slope and Slump Block. We do not recommend a waiver based on our many concerns commented upon above.

An Environmental Impact Statement has been submitted but is generic in nature and fails to address the significant environmental sensitivity of the property, particularly with respect to the steep slopes and massive retaining walls. The report is unaware that the site has had nearly all trees removed and requires retaining walls. It is recommended that a more detailed study and report be prepared to deal with these site specific environmental issues.

- 16. We also note that the proposed retaining wall is very close to the existing retaining walls for Lot 7. The proposed height of the retaining wall in the south corner of Lot 8 is 7.7 ft higher than that of the existing retaining wall on Lot 7.

More information is required to determine the impact the new retaining walls will have on the existing dwellings and walls.

No additional data or analysis has been provided.

- 17. Should this application be approved, a performance guarantee will be required for all improvements in the right of way. Additionally, detailed engineering designs are required, and fully designed and detailed plot plans are required prior to issuance of any building permits.
- 18. Additional construction details are required. Construction details should be placed together for easier reference.
- 19. It is understood that the site was cleared. Tree permits were approved in September 2021. Tree replacement may be required according to § 22.1.8 Tree Replacement Requirements, Ordinance O-24-04
- 20. Approval of this application will be conditioned upon the Applicant obtaining approved documents from the Freehold Soil Conservation District.

VI. CONCLUSION

The Applicant requires a Major Subdivision Plan, and Major Site Plan and revised plans and reports must be submitted.

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Should you have any questions, please do not hesitate to contact me.

Very truly yours,



Carmela Roberts, P.E., C.M.E., C.P.W.M.
Land Use Board Engineer

cc: Michael Muscillo, Borough Administrator, (mmuscillo@highlandsborough.org)
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