

6 January 2023

Christopher P. Statile, P.A.
Professional Engineers and Planners
3 Fir Court
Oakland, NJ 07436

**Re: Engineering Review #1
The Villas at Wayne Hills
Block 2329, Lot No. 1 & 17
1361 Alps Road, Wayne, NJ
Langan Project No.: 100925301**

Dear Mr. Statile:

We are in receipt of your memorandum dated October 20, 2022 regarding the The Villas at Wayne Hills major site plan and subdivision application.

The following comments were offered, and Langan's response to each comment is provided:

Comment 1

The Major Subdivision Set shall be titles as Major Subdivision Plat and shall include survey monuments along Olga Street as required by the Map Filing Act.

Response 1

The major subdivision plan set has been renamed to "Major Subdivision Plat," refer to the updated major subdivision cover sheet Drawing GI100. Survey monuments along Olga Street have been added; refer to Drawing CB105.

Comment 2

Private access easements shall include all improvements i.e. sidewalks, parking areas, etc. Provide widths of easements. All easements shall be held by the association not the Township.

Response 2

The private access easement will be an easement granted by the future homeowner's association to the proposed fee simple Lots 1.2-1.7 at the northern end of Road K, as a means of traversing the property from Alps Road, thereby linking the right-of-way to the fee simple lots. The private access easement includes the travelled way of the proposed roads that traverse the development as a means of vehicular access. Proposed Lots 1.2-1.7 will be a part of the future homeowner's association and have common access to the development's amenities, sidewalks, and parking areas.

Comment 3

Townhouse parking in front of garages must be increased in length. Residents rarely park against their garage doors since they are often used for access. This results in vehicles overhanging the sidewalks. We undertook a survey of townhouse parking at several sites to guide Boards on

preferable lengths and determined that at least 24 ft. should be provided from garage front to sidewalk (see attached photo exhibit)

Response 3

During a meeting held on December 2, 2022 between Langan, representatives from AG-RW Wayne Owner LLC, and yourself, it was agreed that the sidewalks in front of the proposed townhouse units would be shifted 2 feet closer to the curb, resulting in a minimum driveway length of 22 feet between the back of the proposed sidewalk and the front of the townhouse garages. Refer to the revised site plans, Drawings CS100 through CS112. Over 50% of the driveways are 24 feet or longer due to the architectural layout of the townhouse units being staggered by 2 feet in an alternating fashion. It should be noted that according to RSIS Section 5:21-4.14.(d).(3.), in order for a two-car garage and driveway combination to count as 3.5 parking spaces, the minimum required length of the driveway shall be 18 feet and the minimum width shall be 20 feet. The proposed minimum driveway length of 22 feet exceeds the RSIS requirement of 18 feet.

Comment 4

Striped crosswalks and curb ramps with detectable warning mats must be provided at Old Homestead/Road G, Road G at Road C, Road A and at all pedestrian crossings i.e. guest parking lots.

Response 4

Additional crosswalks and accessible ramps have been provided throughout the site; refer to Drawings CS100 through CS112. Detectable warning surfaces shall be provided for the accessible ramps located within the Passaic County right-of-way of Alps Road. Detectable warning surfaces are not required on accessible ramps located within private developments.

Comment 5

Clarify what the road surface is composed of at the emergency driveway at the terminus of Old Homestead Road (i.e. grass pavers).

Response 5

Interlocking grass pavers shall comprise the surface of the emergency access driveway at the terminus of Old Homestead Road; refer to Drawing CS102.

Comment 6

Driveway aprons cannot be used as barrier-free curb ramps.

Response 6

Acknowledged. No driveway aprons are proposed to serve as accessible ramps.

Comment 7

We recommend removing centerline striping (Double Yellow Lines) from interior streets, except on horizontal curves. These are to signify "No Passing" zones, which is not an issue with the internal aisles.

Response 7

Centerline striping has been removed, except a length of 25 feet of centerline striping is proposed at stop bar locations at road intersections; refer to Drawings CS100 through CS112.

Comment 8

All guest parking areas should have R1-1 Stop Signs with striping and barrier-free curb ramps.

Response 8

All egress driveways from parking areas have been revised to provide a stop sign and stop bar striping. Sidewalks and accessible ramps have also been added for pedestrian connectivity to these guest parking areas. Refer to Drawings CS100 through CS112.

Comment 9

Carry a sidewalk to Old Homestead Road for pedestrian connectivity which the State is encouraging.

Response 9

During meetings held between Township of Wayne planning and engineering officials, Langan, and representatives from AG-RW Wayne Owner LLC on November 4 and November 7, 2022, it was determined that no sidewalk connection should be provided to Old Homestead Road as there are no existing sidewalks along Old Homestead Road.

Comment 10

Barrier-free parking should be dispersed to every parking area, and not bunched together, possibly using the one or two parking space locations or eliminating the islands for striped vehicle loading zones. The Federal Community Development Program has a presumption that handicapped accessibility is more needed for those in lower income areas. Since this is a low income housing area, those objectives should be considered.

Response 10

Based on each individual affordable housing building's total provided parking, the required number of accessible parking spaces have been provided and evenly distributed amongst the affordable housing buildings; refer to the accessible parking table on Drawing GI006 and Drawings CS100 through CS112. The required number of accessible spaces based upon the total provided parking for the clubhouse and townhouse guest parking has been provided in the parking areas adjacent to the clubhouse; refer to the accessible parking table on Drawing GI006 and Drawings CS102 and CS106.

Comment 11

Sheet 30 provides details for the County ADA ramps, however, on the Site Plan Sheet 10, they are not designated as such.

Response 11

The accessible ramps located within the Passaic County right-of-way (Alps Road) shall be designed and constructed in accordance with the Passaic County standards and

specifications. These accessible ramps are also subject to Passaic County's review and approval.

Comment 12

Barrier-free curb ramps are required at Alps Road and integrated with the ramps on Miller Road.

Response 12

Accessible ramps have been provided at the intersection of Road A and Alps Road; refer to Drawing CS101. The integration of these ramps with the existing ramps on Miller Road via a crosswalk is subject to Passaic County's review and approval.

Comment 13

If granite block curbs are to be used, concrete or custom granite block curbs must be used at barrier-free ramps. Granite blocks are uneven and have a rough finish for crossing by the handicapped and can create a hazard.

Response 13

Flush concrete curb shall be utilized at accessible ramp locations; refer to the ADA Curb Ramp detail on Drawing CS504.

Comment 14

The doors on the dumpsters should not swing into the travel lanes. The developer should provide computations of refuse and recycling capacity needs but not less than 0.120 cubic yards per person each week (refuse). The dumpster enclosures do not appear to have sufficient capacity for two containers (refuse and recycling).

Response 14

The proposed trash enclosure areas have been increased to be 16 feet in width, which is wide enough to accommodate two standard size dumpsters, which are approximately 6 feet in width, side-by-side, with one being for trash and one being for recycling; refer to Drawings CS100 through CS107. Computations, such as 2.5 persons/unit times 18 units times 0.12 cubic yard per person per week equals 5.4 cubic yard of storage with two pickups a week, exceed the requested amount of refuse storage. The double-swing enclosure gates will only be open during collection times; smaller gates will be provided for residents to access the enclosure area; refer to the trash enclosure detail on Drawing CS506.

Comment 15

The dumpster enclosures should include bump bollards to protect the surrounding fencing.

Response 15

A trash enclosure detail has been provided detailing bollards to protect the enclosure; refer to Drawing CS506.

Comment 16

Provide depressed or sloping curbs at detention pond access points for maintenance vehicle crossing.

Response 16

Mountable concrete curbs have been provided at bioretention basin maintenance access locations; refer to Drawings CS100 through CS112.

Comment 17

All 24 ft. wide streets should prohibit parking to allow for emergency services access. If parking is permitted on both sides of the curbed roadways, this leaves only 8 ft. for apparatus access. Therefore, one side should be posted to prohibit parking. This excludes Olga Street.

Response 17

There shall be no on-street parking throughout the proposed development. No parking signs have been provided along each road; refer to Drawings CS100 through CS112.

Comment 18

Fire hydrants must be approved by the local Fire Code Official. The need and location of fire sprinkler building connections must also be identified by the Official. Thereafter, parking prohibitions may be necessary to emergency access vehicle connections.

Response 18

Acknowledged.

Comment 19

We suggest a 10 - 15 ft. level lawn platform behind all units for fire department ladders placement to the 2nd story. Fire walls should penetrate thru the rooflines of the multi-story buildings.

Response 19

A minimum 10-foot-deep, minimally-sloped area has been provided on the rear side of all buildings for fire department access and ladder placement; refer to Drawings CG100 through CG112.

Comment 20

If beam guide rail must be used, current NJDOT terminal ends must be provided as guide rail is a hazard.

Response 20

Timber guide rail is proposed; refer to the detail provided on Drawing CS502.

Comment 21

Dead-ended roadways must have reflective hazard markers to identify the pavement terminus (e.g. 0M4-3).

Response 21

Reflective marker signs have been provided; refer to Drawings CS100 through CS112 and the detail on drawing CS501.

Comment 22

The ends of the Road A traffic island at Alps Road must have "Keep Right" signs (e.g. R4-7) at their terminus.

Response 22

Keep Right signs (R4-7A) have been ended at both ends of the median within Road A; refer to Drawing CS101.

Comment 23

Maintenance access and a ramp must be provided to stormwater Basin 5B; there does not appear to be any access route from Road D. Access to Basin 4H (sheet 102), 4E (sheet 106), and 5D appears to be over the corner curb ramps which is impractical and must be changed.

Response 23

Site plan and grading design revisions have been made to accommodate a maintenance access path to Basin 5B; refer to Drawings CS107 and CG107. Access paths into Basins 4H, 4E, and 5D have been revised to avoid conflicts with accessible ramps; refer to Drawings CS102, CS106, and CS107.

Comment 24

Stormwater basins wherein a person can become trapped must have access ladders.

Response 24

The basins have been designed with a maintenance access path that allow for entering and exiting without the need of an access ladder.

Comment 25

Postal mailboxes must be barrier-free and in locations that are barrier-free i.e. there must be a resting sidewalk platform to access the boxes with no more than a 2% cross slope in any direction. These must be checked against the roadway/sidewalk profile grades and may require warping the sidewalks.

Response 25

Notes specifying that a minimum 4'x4' landing area in front of the mailboxes shall be graded to be ADA compliant with less than a 2% maximum slope have been added to the grading plans; refer to Drawings CG100 through CG112. A detail noting the same requirement has also been added to Drawing CS501.

Comment 26

Transition areas around wetlands must be protected with construction fencing during construction and called for on the plans.

Response 26

Silt fence is proposed where the limit of disturbance abuts wetland and riparian buffers. A note has been added to the silt fence detail on Drawing CE501 specifying that orange silt

fence shall be utilized in areas abutting wetland and riparian buffers (in lieu of additional orange construction fencing) and black silt fence shall be utilized in all other areas.

Comment 27

Also, signage should be provided on the permanent fencing or on posts indicating the areas are environmentally sensitive. After the passage of time, changing maintenance personnel and the townhouse association may forget that the lands are protected and cannot be used.

Response 27

Wetland buffer signage has been added; refer to Drawings CS100 through CS112 for locations and the detail on Drawing CS501.

Comment 28

Guest parking spaces must be posted as such.

Response 28

As per our prior discussions, rather than posting signs for the guest parking areas, signs have been added in the parking areas designated for the affordable housing building residents as resident parking; refer to Drawings CS100 through CS112 for locations and the detail on Drawing CS501.

Comment 29

Street lighting at the Alps/Miller Road intersection must be replaced. Currently it is located on poles to be relocated. This intersection will see an increase in traffic volume and turning movements.

Response 29

Lighting has been added to this intersection; refer to Drawing LL101.

Comment 30

We assume the site has been cleared by the developer's LSRP for contaminated soils. A report on those findings and/or any proposed mitigation should be provided to the Township.

Response 30

A report titled "Remedial Investigation Report / Remedial Action Report," dated March 16, 2020, and prepared by Roux Associates, Inc. has been provided in electronic format as part of the submission, given the nearly 7,000 page length of the report.

Comment 31

Cul-de-sac should be increased to a 40 ft. diameter (RSIS 5:21-4.2). Provide road classification of Olga Street.

Response 31

The diameter of the proposed Olga Street cul-de-sac is 100 feet. The road classification of Olga Street and all other proposed roads has been provided on Drawing GI006.

Comment 32

Access gates and access ways must be provided to the wetland transition areas for maintenance and emergency personnel access. Fire Department personnel may have to enter these areas during a fire event or for search and rescue. Accommodations along the retaining walls should be provided.

Response 32

Additional access gates have been provided to allow for access from the proposed stormwater basins located on the downhill portions of the site to the wetland transition areas. Refer to Drawings, CS107 and CS108-CS110.

Comment 33

Provide emergency access gate break-a-way feature details.

Response 33

An emergency gate detail has been provided on Drawing CS502.

Comment 34

Local fire apparatus vehicle turning stencils were checked at all intersections within the development. However, in discussions with fire fighters, the ability to turn within cul-de-sac bulbs absent backing is not possible, except for very specialized equipment with articulating rear wheels in urban settings. We therefore ask that the other turning stencils shown at general intersections be confirmed with the local fire fighters by actual field testing of their equipment.

Response 34

The fire truck circulation plans have been updated using the truck dimensions and turning templates provided by the Township of Wayne fire department; refer to Drawings CP101 through CP104.

Comment 35

Placement of fire hydrants and light fixtures should consider possible over-run of curbs by apparatus in emergencies. We recommend that all interior corner curb radii be increased to 30 ft.

Response 35

Fire hydrants and light poles have been located away from roadway intersection curb radii. The curb radii shown on the plans were designed in accordance with RSIS Section 5:21-4.19 Table 4.6, which specifies that the minimum curb radius shall be 25 feet for residential access roads. The minimum curb radii specified by RSIS take into account the turning maneuvers of emergency vehicles. Larger curb radii have been provided at the Road A and Alps Road intersection, where Road A is classified as a minor collector according to RSIS.

Comment 36

Barrier-free parking spaces are required to be 20 ft. long. If signage posting is located in front of the spaces, this may prevent assumed 2 ft. bumper overhangs. Some adjustment in configuration with the sidewalks may be required or the parking signs repositioned.

Response 36

Bollard-mounted ADA signage is proposed in front of ADA parking stalls in order to prevent vehicles from driving up onto adjacent accessible ramps. The proposed width of the accessible parking spaces meets Federal and State ADA requirements; these guidelines do not provide a required accessible parking space length. Parking space length for this project is governed by RSIS, which requires parking spaces to be a minimum 18 feet in length in accordance with Section 5:21-4.15. We are not aware of any State or Federal ADA guidelines requiring ADA spaces to be 20 feet in length.

Comment 37

Other sidewalk widths should be increased where there is vehicle overhangs such as Sheet 15, 16, and 19.

Response 37

Sidewalk widths have been designed in accordance with RSIS Section 5:21-4.16.(d) which requires than an additional two feet of sidewalk width (for a total width of 6 feet) be provided where vehicles may park and potentially overhang onto the sidewalk. Refer to Drawings CS100 through CS112.

Comment 38

Some guest parking spaces should be barrier-free.

Response 38

Accessible guest parking spaces have been added to the plans; refer to Drawings CS100 through CS112 for locations and the accessible parking summary table on Drawing GI006.

Comment 39

The plans must address the Wayne Township MAD/TADA calculations although an Environmental Protection Waiver is not required on the first phase.

Response 39

During meetings held between Township of Wayne planning and engineering officials, Langan, and representatives from AG-RW Wayne Owner LLC on November 4 and November 7, 2022, it was determined that MAD/TADA calculations did not have to be provided, as the total number of residential units is governed by the affordable housing settlement agreement.

Comment 40

There are up to 24" elevation differences between some townhouse driveways mostly in the units that run east-west due to the site's topography. An 8" differential can be made up with a curb. Anything greater will require a retaining wall. This may have practical difficulties where a low wall can be a fall hazard. Some method of protection must be provided.

Response 40

Townhouse units with driveways that abut each other have generally been set to be at the same elevation. Otherwise, the majority of the townhouse units have landscape islands

that separate the driveways. The elevation difference between driveways can be accommodated within these landscape islands, without the need of a curb or retaining wall. Refer to the grading plans, Drawings CG100 through CG112.

Comment 41

The two retaining wall details shown on Sheet 32 but must indicate where the walls are required on the Site Plans.

Response 41

The type of retaining wall being utilized will be determined during preparation of construction documents. Retaining wall designs, signed and sealed by a professional engineer licensed in the state of New Jersey, shall be submitted prior to construction.

Comment 42

The Section R401.3 of the NJ International Residential Code requires that the grade shall fall a minimum of 6" within the first 10 ft. of the foundation walls to prevent surface water latency against the buildings. Some units appear to have runoff coursing against the building walls and must be corrected.

Response 42

The grading design has been revised to divert runoff from coursing against building walls; refer to Drawings CG100 through CG112.

Comment 43

Provide street signs, and a list of proposed street names for the Township's consideration and approval.

Response 43

Street signs have been added at road intersections; refer to Drawings CS100 through CS112. A list of proposed street names will be provided by the applicant for Township approval.

Comment 44

On Sheet 9, eliminate "Court" designation for Olga Street.

Response 44

The plans have been revised to correctly show Olga Street; refer to Drawing CS100.

Comment 45

Although the NJ default Statutory speed limit for residential streets is 25MPH, signs indicating this should be provided within the development, especially at the entrances.

Response 45

The proposed speed limit for the development is 15 mph; speed limit signs have been added to the plans, refer to Drawings CS100 through CS112 for locations and Drawing CS501 for details.

Comment 46

All proposed curbs shall be granite block except barrier-free ramp depressed curbs. Correct the roadway section on Sheet 27 to be consistent.

Response 46

The typical road cross sections have been revised to show granite curbs and the exception for ADA ramps; refer to Drawing CS301.

Comment 47

Provide the trash enclosure details. Ensure the trash enclosures are sufficiently sized to accommodate anticipated refuse and recyclables.

Response 47

A trash enclosure detail has been provided on Drawing CS506. Also, refer to Response 14.

Comment 48

All proposed easements shall include metes and bounds, beneficiary. All easements shall be held by the association, not the Township.

Response 48

Metes and bounds have been provided on the proposed private access easement; refer to Drawings CB100 through CB113 within the Subdivision plan set. There is a proposed drainage easement to the Township of Wayne which includes a bioretention basin that services the proposed Olga Street right-of-way; refer to Drawing CB108.

Comment 49

Provide all proposed lot numbers (i.e. Lot 1.1) on the Site Plans as they are shown on the subdivision plans.

Response 49

Proposed lot numbers have been added to the site plans; refer to Drawings CS100 through CS112.

Stormwater Management Reports dated April 29, 2022:

Comment 1

Stormwater runoff intensities and required reductions to show compliance with NJAC 7:8-5.6.(b)1 or 7:8-5.6.(b)3 have been provided. Eleven points of analysis were provided to show how the site meets these requirements. The calculations appear acceptable.

Response 1

Acknowledged.

Comment 2

Stormwater quality calculations to meet the requirements of NJAC 7:8-5.5.(b)1 have been provided. The calculations appear acceptable.

Response 2 Acknowledged.

Comment 3

Design Standards of 134-72.4.C(1) requires the minimum drainpipe size shall be 15 inches, inside diameter. The pipe between CB6-3 and CB6-8 is proposed at 12 inch and must be increased.

Response 3

A waiver is requested for this pipe run between CB6-3 and CB6-8 to be 12 inches in diameter. Pipe invert elevations are constrained by the existing invert elevations for the existing conveyance network within Alps Road, and inlet grate elevations are constrained by existing grades along Alps Road that Road A must tie into. A waiver is also requested for the pipe run from MH6-1 to CB6-2 to be a 14"x23" elliptical pipe for the same reasons. All other main line conveyance pipes are a minimum 15 inches in diameter.

Comment 4

Design Standards of 134-72.4.C(2) requires all drainpipes shall be reinforced concrete pipe, Class III, Wall B and shall comply with current ASTM specifications. Most pipes appear to be HDPE. We find this acceptable and a design waiver will be required.

Response 4

A design waiver will be requested to utilize HDPE instead of reinforced concrete pipe. Reinforced concrete pipe will be utilized in vehicular areas where there is less than 3 feet of cover to the top of pipe.

Comment 5

Design Standards of 134-72.4.C(5) requires headwalls or flared ends with riprap to be constructed at the inlet and outlet of all drains. FES1-3, 4-3, 4-4, 5-3, 5-4, 5-6, 5-7 and HW2-1 all require riprap. All flared end sections and headwalls must be checked to ensure the required size (length) of riprap is provided.

Response 5

Riprap aprons were designed in accordance with The Standards for Soil Erosion and Sediment Control in New Jersey design manual for the 25-year design storm event discharge velocities. These outlets have 25-year design storm exit velocities that are less than the required threshold for riprap to be provided. Calculations for all outlets are provided in Appendix D of the stormwater management report. A design waiver is requested.

Comment 6

Design Standards of 134-72.4.C(7) require runoff area to inlets to be limited to 5,000 SF of impervious coverage. Many proposed inlets receive well in excess of 5,000 SF of impervious area. For example, CB2-1 receives 26,048 SF, CB2-7 receives 18,764 SF, CB-11 receives 23,994 SF,

etc. Please provide a detailed list of all inlets throughout all 6 "networks" which exceed this threshold. Design computations showing that the inlets have sufficient capacity must be provided for the design waiver request are required if the standard cannot be met. The inlet capacity should be checked if it can reasonable accommodate flow at 50% obstruction (particularly a potential with the Type N Eco Curb Pieces).

Response 6

A design waiver is requested for the inlets with a contributing runoff area of greater than 5,000 square feet of impervious area. Calculations have been provided in Appendix D of the stormwater management report demonstrating which inlets have greater than 5,000 square feet of surface inflow impervious area (discounting building roof areas that are a direct piped connection), and demonstrating that all inlets have sufficient capacity. Capacity calculations and obstruction assumptions are based on the regulations and guidelines set forth in Chapter 10 of the New Jersey Department of Transportation (NJDOT) Roadway Design Manual.

Comment 7

Design Standards of 134-72.4.C(8) requires pipes to have a minimum cover of 3 feet. Many of the storm drain pipes do not have the required 3 ft. of cover. The physical impracticality must be provided as to why the new pipes cannot be lowered to comply. In most cases it is a small amount of additional depth is needed. A design waiver will be required if the pipes cannot be lowered due to bedrock, slope incompatibility, or other obstructions/conflicts.

Response 7

All drainage pipes located in areas that are subject to vehicular traffic have been lowered to accommodate the 3 feet of cover requirement, with the exception of pipes that cannot be lowered due to existing invert elevation constraints. The pipes subject to vehicular traffic with less than 3 feet of cover are proposed to be class V reinforced concrete pipe. Drainage pipes located within landscaped areas have a minimum of 2 feet of cover. All drainage pipes meet or exceed the minimum cover requirements as specified by the manufacturers. A design waiver is requested.

Comment 8

Design Standards of 134-72.4.C(10) require all detention basins to be fenced with a fence that is not less than four feet in height nor greater than six feet in height. In addition, the fence shall be provided with a locking gate of such width so as to permit access of maintenance equipment. Locations and details must be provided.

Response 8

All stormwater basins shall have a 4-ft-high black vinyl coated chain link fence with 1" non-climbable mesh, and shall have a 10-ft-wide double-swing access gate; refer to Drawings CS100 through CS112 for fence and gate locations, and Drawing CS506 for details.

Comment 9

For all detention ponds with emergency overflow outfalls, please provide an approximation of the volume of rain required for the ponds to completely fill. (For example, Pond X will overflow between the 10 and 25- year storm, which equates to approximately X" of rain in a 24 hour period).

Response 9

The table below has been provided. It should be noted that this table summarizes what range of storm events would produce enough volume of rainfall to cause the emergency spillway to be put into use if the outlet control structure were to completely fail and allow for zero discharge. It should be noted that each basin has been appropriately sized to allow for a minimum of 1 foot of freeboard between the emergency spillway crest elevation and the 100-year design storm water surface elevation through the use of the outlet control structure. The emergency spillways would only be in use for storm events in excess of the 100-year design storm.

BIORETENTION / INFILTRATION BASIN	EMERGENCY SPILLWAY CREST EL.	BASIN STORAGE VOLUME AT EMERGENCY SPILLWAY CREST EL.	STORM EVENT RANGE WITH RUNOFF VOLUME TO FILL THE BASIN
POA-2			
SSBB-2A	328.30	57,586	25yr - 100yr
SSBB-2B	247.00	39,914	25yr - 100yr
POA-3			
SSBB-3A	254.10	31,765	10yr - 25yr
SSBB-3B	274.60	35,795	5yr - 10yr
SSBB-3C	308.60	52,993	25yr - 100yr
SSBB-3D	342.10	32,425	5yr - 10yr
SSBB-3E	372.50	20,610	10yr - 25yr
POA-4			
SSIB-4A	304.70	38,643	5yr - 10yr
SSBB-4B	282.60	37,364	10yr - 25yr
SSBB-4C	272.10	43,514	10yr - 25yr
SSBB-4D	318.70	33,476	5yr - 10yr
SSBB-4E	363.10	35,088	10yr - 25yr
SSBB-4F	369.10	18,547	25yr - 100yr
SSBB-4G	367.20	12,943	25yr - 100yr
SSBB-4H	392.00	48,764	25yr - 100yr
SSBB-4I	381.60	38,155	5yr - 10yr
SSBB-4J	383.90	40,823	25yr - 100yr
SSBB-4K	349.70	40,873	10yr - 25yr
POA-5			
SSBB-5A	326.70	13,262	5yr - 10yr

SSBB-5B	326.60	43,526	10yr - 25yr
SSBB-5C	360.10	28,788	5yr - 10yr
SSBB-5D	364.60	29,251	5yr - 10yr
SSBB-5E	380.10	49,605	25yr - 100yr
SSBB-5F	396.50	27,008	25yr - 100yr

Comment 10

The emergency outfalls should include riprap channel protection or computations showing that scour will not occur.

Response 10

Riprap aprons were designed in accordance with The Standards for Soil Erosion and Sediment Control in New Jersey design manual for the 25-year design storm event discharge velocities. These outlets have 25-year design storm exit velocities that are less than the required threshold for riprap to be provided. Calculations for all outlets are provided in Appendix D of the stormwater management report.

Comment 11

The flow in the open channel behind Lot 1.8 may require erosion control to prevent scour during high runoff conditions.

Response 11

A permanent turf reinforcement matting with appropriate maximum velocity and shear stress ratings is proposed along the entire length of this swale; refer to Drawing CG118, refer to Drawing CG502 for details, and refer to Appendix D of the stormwater report for design calculations.

Comment 12

MH6-1 appears to tie into existing drainage on Alps Road. The applicant intends to tie additional drainage from the site interior into the municipal system at this point.

Response 12

Only areas that discharge to the county conveyance system in the existing pre-construction condition are proposed to be conveyed to this point in the post-construction condition, which includes offsite area that flows onto the subject property, undisturbed wooded areas, and the area of Road A immediately adjacent to Alps Road. Peak runoff rates in the post-construction condition are less than the pre-construction peak runoff rates for all design storm events; refer to the hydrology calculations and watershed maps provided in the stormwater management report.

Comment 13

A double inlet should be used at the Olga and Road K cul-de-sac low points, and any other low points within the development. With the new ECO inlet heads, these tend to get clogged very easily during heavy rainstorms with debris and may flood adjacent driveways or lawns.

Response 13

Double inlets have been provided at low points within the proposed roadways; refer to Drawings CG113 through CG125.

Comment 14

Flow separators/diverters are needed in the bio-retention basins to ensure runoff is evenly distributed within the basins for percolation.

Response 14

The small-scale bioretention basins have been designed in accordance with the standards and specifications set forth in the BMP Manual, and have received NJDEP permit approval for their design. Flow diverters are not required per applicable NJDEP guidelines.

Comment 15

Manholes should be provided at the terminal ends of all drains for maintenance access.

Response 15

Nyloplast yard drains are proposed at the upstream end of roof drain header pipes for maintenance access; refer to Drawings CG113 through CG125.

Comment 16

Move the inlets and manholes out of the walking path in the guest parking areas. Inlet heads freeze in the winter and become hazardous.

Response 16

Low points occur in parking areas, and thus inlets, are required in order to provide adequate drainage. This is an acceptable practice and commonplace in parking areas across the State. Inlets and manholes that could be shifted have been relocated; where roadway design and grading constraints occur, inlets and manholes must remain in parking areas.

Comment 17

All flared end sections inlets should have trash racks to prevent illicit entry. All HDPE flared end sections should have concrete strip footings connected with anchor bolts to prevent the flared end from displacing.

Response 17

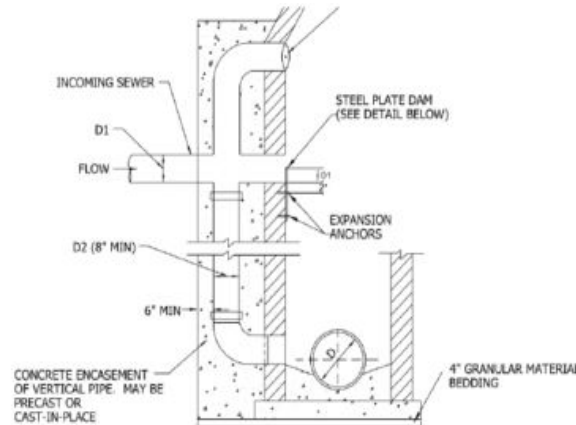
Notes have been added to the plans requiring trash racks be installed on flared end section inlets; refer to Drawings CG121 and CG124. The flared end section detail has been revised to include a concrete ballast block with anchor bolts, refer to Drawing CG503.

Sanitary Sewers:

Comment 18

Under the NJ Condominium Services Act, the Township is not responsible for the maintenance of sanitary sewers on site. We note that the proposed sewers have drop manholes of up to 10 ft.

which can be problematic for idea flow. An alternate construction detail can mitigate its effects of waste obstructing flow such as shown below:



The six dwellings around the Road K cul-de-sac have lift pumps to the street sewer. In the event of power outages, it is recommended that sewer holding tanks be provided to provide for limited capacity.

Response 18

A drop manhole detail has been added to Drawing CU502. The individual pre-packaged low-pressure lift station for each dwelling unit will be adequately sized based on anticipated demand and potential outages.

Comment 19

At MH72, there are opposing sewer pipes (3" pressure and 10" gravity) at the same invert elevation as the exiting pipe at a 0.5% slope. The 10" has considerable volume. This may be problematic and should be changed to a drop manhole.

Response 19

The invert of the low pressure force main has been raised to avoid a conflict; refer to Drawing CU111.

Comment 20

It appears that a hydrant is needed at the Olga Court cul-de-sac.

Response 20

A fire hydrant has been added to the end of Olga Street; refer to Drawing CU105.

Comment 21

Hydrants should be moved away from guest parking spaces a minimum of 15 ft. Fire fighters must have uninhibited access to all sides of the hydrants for hose connections and parked motor vehicles can interfere with this access. Also, it is possible that the vehicles can be damaged during a firefighting event.

Response 21

Proposed fire hydrants have been relocated to be a minimum 15 feet from parking spaces; refer to Drawings CU100 through CU112.

Comment 22

All pipe and manhole/appurtenances must be located within easements.

Response 22

There will be a blanket easement across the townhome development portion of the property (Lot 1.1) which includes all common area for all utilities.

Comment 23

Show the 15 ft. wide PSEG gas main easement on Sheets 14 & 15 from Sheet 11. The easement and gas main shall be shown as to be removed.

Response 23

The existing gas easement is shown on Drawings CS105 and CS106. Refer to the subdivision drawings, CB100 through CB113, for notes showing the extinguishing of this easement.

Comment 24

The barrier-free ramp details must be site/location specific so as there is no confusion on which ramp type is required.

Response 24

All ramp type details are provided on Drawings CS503 and CS504. Specific ramp types and ADA compliant grading design will be provided as part of construction documents and submitted prior to construction.

Comment 25

Provide maximum wall heights and specify where wall details apply on the site plans.

Response 25

Maximum wall heights have been labeled on Drawings CG100 through CG112. The type of retaining wall being utilized will be determined during preparation of construction documents. Retaining wall designs, signed and sealed by a professional engineer licensed in the state of New Jersey, shall be submitted prior to construction.

Comment 26

When the RSIS is exceeded, the applicant must specifically agree to same.

Response 26

An agreement shall be provided as set forth in RSIS Section 5:21-3.6.

Comment 27

Provide testimony why the Road K cul-de-sac is proposed with a 70 ft. radius which exceeds the RSIS.

Response 27

Testimony shall be provided.

Comment 28

The Tax Assessor shall approve all proposed lot numbers and unit addresses.

Response 28

The applicant will reach out to the Tax Assessor for lot number and unit address approval.

FINAL COMMENTS

Should the Board consider granting Preliminary and Final Major Site Plan and Subdivision, the following Engineering conditions should be attached:

Comment 1

Prior to issuance of a Building Permit or any work being done on the site, whichever comes first, the applicant shall:

A. Submit revised plans for Engineering Division review and approval addressing all review comments, including any other special conditions and/or notes imposed by the Board.

B. Receive all required State and County approvals and Township permits including, but not limited to:

- 1) HEPSCD Soil Erosion Control plan certification.
- 2) NJDEP Flood Hazard Area Verification.
- 3) NJDEP Flood Hazard Area Permit.
- 4) Wayne Township Special Flood Hazard Area Permit
- 5) County of Passaic Planning Board or Waiver letter.
- 6) NJDEP Wetlands Letter of Interpretation.
- 7) NJDEP Wetlands Permit(s).
- 8) NJDEP Treatment Works Approval (TWA-1)
- 9) Water Main Extension Permit

C. Must have filed the Subdivision Plat

D. Have remitted payment for all outstanding fees and contributions, including but not limited to

1) Township wide off-tract drainage assessment (Chapter 134-10.3 of the Township Code). Applicant shall provide calculations of both the "Pre-Development" and the "Post-Development" C-factors based upon the rational Method for the calculation of this fee.

2) Sewer Connection fee

3) Water Connection fee

- E. At least one (1) week prior to commencement of work, set up and attend a Pre-construction meeting between himself, his engineer, his contractor, representatives of the County, representatives of the NJDOT, affected utility companies, Township Engineer, Township Inspector, Township Planner, Zoning Officer, representatives of the Building Department and the Parks Department to discuss the requirements and regulations for on-site construction. Five (5) sets of construction drawings reflecting all conditions as approved by the Board and the Engineering Division shall be submitted at least one (1) week in advance of the pre-construction meeting for stamping and distribution.
- F. The applicant shall notify the HEPSCD at least forty-eight (48) hours prior to any land disturbance activity. Proof of notification shall be provided to the Engineering Division upon request.
- G. Prior to the issuance of a Building Permit, the applicant shall submit a certified copy of the deed of record showing that the Maintenance Plan for the Stormwater Management Measures have been recorded upon the Deed of Record for the property in question, as required under NJAC 7.8-5.8(d).

Response 1

Acknowledged. As it pertains to requirement D.1, further clarification on the fee shall be provided, as the project is a residential development in a residential zoning district, and the C-Factor method for the calculation of this fee is specified as being only for projects in non-residential zones according to Township of Wayne Code Chapter 134-10.3.A.(2).

Comment 2

Prior to the signing of the Subdivision Plat by the chairman, the applicant shall:

- A. Submit revised plans Subdivision Plat for Engineering Division approval addressing all review comments, including any other special conditions and/or notes imposed by the Board.
- B. Have installed the perimeter monuments, submitted a monument installation certification, and obtained the approval from the surveyor verifying the monuments to be complete and satisfactory
- C. Receive all required State and County approvals and Township approvals and permits including but not limited to:
 - i. Passaic County Planning Board or Waiver letter.
- D. Have remitted payment for all outstanding contributions and bonds, including but not limited to:
 - i. Township wide off-tract drainage assessment (Chapter 134-10.3 of the Township Code)
 - ii. Monument Installation bond (if required). Applicant is advised perimeter monuments cannot be bonded

Response 2
Acknowledged.

Comment 3

Upon commencement of and during construction of the project, the applicant shall:

- A. Delineate on site the limits of disturbance as approved by the Board with soil erosion silt fence, or in the absence of silt fence requirements, snow fence. No clearing, tree cutting, or construction work shall occur on the site until the limits of disturbance and soil erosion control measures are in place and have been approved in the field by the Township Engineer.
- B. Construct the soil erosion control measures and stormwater infiltration system as the first item of work. The stormwater infiltration system shall be made fully functional, and all runoff from the project while under construction shall be directed into it. In addition, temporary fencing or the permanent fence and gate shall be installed around the basin. Clearing and tree cutting shall not occur until erosion control measures are in place and approved in the field by the Engineering Inspector.
- C. Should any dirt spill or tract onto the Township, County and/or State roads attributed to this project, the applicant and/or his contractor shall clean up same prior to the end of the work day and shall implement corrective measures to prevent same from re-occurring.
- D. Should any soil and/or sediment deposition occur attributed to this project which adversely affects surrounding drainage courses and/or properties, the applicant and/or his contractor shall prior to the end of the work day abate same, clean up the sediment, and shall repair and/or reinforce the soil erosion control measures to eliminate such erosion.
- E. Cover each temporary inoperative fire hydrant with a suitable bag for easy identification so as to prevent problems during required emergency use, and notify the Fire Official of such hydrant locations.
- F. Request and obtain engineering inspection, as per Chapter 134-113 of the Township Code, of all improvements. Work shall not be covered until inspected and passed/approved. Installation of public improvements shall not be performed on Saturdays, Sundays and/or Township holidays unless authorized in advance by the Township Engineer.

Response 3
Acknowledged.

Comment 4

Prior to the issuance of any Certificate of Occupancy, the applicant shall:

- A. Have completed all on-site and off-site improvements, including but not limited to pavement, drainage, storm water detention/water quality system, curbing, sidewalks, striping, permanent stabilization and lighting

- B. Have submitted a professional engineer's certification that the stormwater infiltration system including outlet control structure(s) and the water quality/system(s) has been constructed to the required volume and orifice sizes/elevations in accordance with the approved design
- C. Request Title 39 for traffic enforcement approval from Town Council

**Response 4
Acknowledged.**

Comment 5

The applicant is advised of the following:

- A. Any blasting of rock shall require a Township Blasting Operations Permit and full compliance with all the provisions of the Wayne Township Blasting Regulations in Chapter 52 of the Township Code.
- B. Bonds may be returned upon satisfactory completion of the site work and/or issuance of Final Certificate of Occupancy. A letter requesting the return of same shall be filed with the Township Clerk, with a copy to the Township Engineer.
- C. Should the proposed lighting as shown on the site plan cause any glare or annoyance to adjoining neighbors, roads and/or other properties after its installation, the owner shall correct same at his expense and at the direction of the Township Engineer.

**Response 5
Acknowledged.**

We trust that these revisions meet your approval and we look forward to your expedited review. Please feel free to contact me directly at 973-560-4987 with any questions.

Sincerely,
Langan Engineering and Environmental Services, Inc.



John Coté, PE, LEED AP
Associate Principal/VP

JCC/kk

Enclosure(s): Preliminary & Final Site Plans, dated last revised 1/6/2023
Major Subdivision Plans, dated last revised 1/6/2023
Stormwater Management Report, dated last revised 1/6/2023
Stormwater Operation & Maintenance Manual, dated last revised 1/6/2023

CC:

NJ Certificate of Authorization No. 24GA27996400
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