A. SITE DESIGN

The Site Plans provide a good introduction to the scope of the Project and its various components. The proposed dwellings are accessed through a 19-foot-wide access roadway which terminates at a hammerhead configuration, each leg of the hammerhead is 17-feet wide and approximately 200 feet in length and run parallel to the abutters' rear property lines. Two dwellings are located on each of the hammerhead roadways. The following specific comments are offered to identify areas where additional information is required, or changes are requested to address questions or support further review.

A.1. A roadway profile and cross-section should be included in the Plans.

- Agreed and added to plan.

A.2. The main access roadway is proposed at 19 feet in width and approximately 500 feet in length without secondary access. Each hammerhead roadway is proposed at 17 feet in width and approximately 200 feet in length with no proposed turnaround area. We recommend the Applicant provide written confirmation from the Sherborn Fire & Rescue Department related to their review of the Project.

- Agreed and added to plan.

A.3. The Applicant has decreased the width of the proposed roadway to 19 feet. We recommend on-street parking be prohibited along each of the access roadways so site access and circulation is not impeded.

- Agreed.

A.4. The Applicant should detail areas for snow storage. Each leg of the hammerhead roadway is within five feet of the abutting property line and plowed snow shall be contained on the subject property.

- Agreed and added to plan.

A.5. A Landscape Plan has not been provided. The Applicant should confirm if landscaping is proposed for the Project to screen the Project from abutting residences.

- For discussion with ZBA.

A.6. A detail of the proposed retaining walls should be provided on the Plans. The proposed walls are greater than four feet in height which will require structural design and approval by the Building Department.

- Agree that the walls require engineered drawings which will be provided to the Building Inspector prior to permitting.

A.7. Project scope is proposed within jurisdiction of the Massachusetts Wetlands Protection Act (WPA). Permitting with the Sherborn Conservation Commission is expected.

- Agreed and an application will be submitted to the Conservation Commission once the Comprehensive Permit is issued.

B. STORMWATER

Modified Project scope includes development of four units of housing clustered on approximately 5.1 acres of land. Stormwater runoff generated by the Project is captured by traditional piped infrastructure and discharged via flared end section to the existing wooded area to remain on the north end of the subject property. Stormwater basins have been removed from the Project scope. As noted, the Project includes development of four single-family housing units and does not appear to discharge to a critical area which does not require compliance with the Massachusetts Department of Environmental Protection (MA DEP) Stormwater Management Standards (Standards) and Stormwater Handbook (Handbook).

The following comments are offered specific to the Project Stormwater design.

B.1 Although compliance with the MA DEP Standards and Handbook is not required, it is rare that a development Project not include peak runoff mitigation/water quality treatment particularly with the recognized challenges of climate change and effect of development on water quality. We recommend the Applicant consider providing stormwater mitigation measures and/or low impact development (LID) techniques in the Project scope. Additionally, we recommend a Long-Term Pollution Prevention Plan (LTPPP) and Long-Term Operation and Maintenance Plan (O&M Plan) be developed to identify and manage potential pollutant sources and provide guidance on inspection and maintenance of proposed stormwater infrastructure and roadway.

- As discussed at the meeting, we are willing to work with the ZBA on appropriate mitigation for a project of this scale.

B.2 The Project appears to meet the requirements for coverage under the US EPA NPDES General Permit for Discharges from Construction Activities (CGP). We recommend a Condition requiring the Applicant provide proof of coverage under the NPDES CGP and provide a copy of the approved Stormwater Pollution Prevention Plan (SWPPP) prior to construction.

- Agreed.

B.3 We recommend catch basins be proposed in the main site roadway immediately upgradient of the hammerhead intersection (at approx. roadway elev. 225) to capture runoff prior to flowing through the intersection.

- See answer to B.1 above.

B.4 We recommend the Applicant provide pipe, grate sizing and spread calculations to ensure the stormwater system is able to effectively capture and convey runoff. Special care should be given to the entrance roadway and its 6% slope to ensure runoff is captured and does not bypass structures during heavier rain events which may cause flooding in the downgradient areas. Cascade grates are recommended along the entrance roadway. Additionally, the Applicant is proposing 10-inch HDPE drain pipe, minimum pipe diameter is commonly 12-inches for roadways.

- See answer to B.1 above.

C. EROSION AND SEDIMENTATION CONTROL

The Applicant has included provisions for erosion and sediment control as part of the Project scope. Additionally, the Project is covered under the NPDES CGP and we anticipate additional information related to erosion and sediment control will be available prior to construction. The following comments are offered specific to the Project and potential for off-site erosion during construction.

C.1 The Applicant should provide earthwork calculations on the Plans to assist reviewers and the public in understanding the size and scale of earthwork operations for the Project. Additionally, a Construction Management Plan is recommended to detail truck travel routes, project phasing, hours of operation, equipment laydown areas, stockpile locations, etc.

Agreed. Earthwork calculations are provided on the plan. CMP will be provided to Building Inspector at the application for a building permit.

C.2 The Applicant is not proposing any temporary sediment basins to mitigate runoff during construction. The existing site is consistently sloped at approximately 10% and mapped as a hydrologic soil group (HSG) C which have a moderate runoff potential.

Agreed and added to the plan.

D. WATER SUPPLY

The Plans indicate the Project will be served by two private water supply wells which will each serve two of the proposed units. The Project proposes a total of 12 bedrooms with a potential resident count of 24 people which is below the 25 person threshold for Public Water Supply designation. The following comments are offered specific to Project water supply and related analysis or lack thereof.

D.1 The Applicant should provide information related to the ownership of the private wells.

- Both wells will be owned by the condominium association.

E. SEWER/SEPTIC SYSTEM

The Plans indicate the Project will be served by a shared Soil Absorption System (SAS) receiving flow from a standard gravity system (Units #1 & #2) and force main system (Units #3 and #4) to collect and treat sewerage generated from the Project. The Septic System scope was reviewed against the Massachusetts Department of Environmental Protection (MA DEP) State Environmental Code, Title 5 (310 CMR 15) (Title 5). The Project was also reviewed for general sewer/septic system design elements and good engineering practice. The following comments are offered specific to Project septic design and related analysis or lack thereof.

E.1 The design of the Soil Absorption System (SAS) appears to meet the requirements of Title 5.

- Agreed.

E.2 Test pits generally indicate a substrate of firm sandy loam to depths of over ten feet. ESHGW was determined by soil mottles (the most accurate method) at a relatively consistent depth of between 31 and 38 inches below the surface. Soil conditions and infiltration rates (by percolation test) meet the requirements of Title 5.

- Agreed.

E.3 The site is located in a Title 5 nitrogen sensitive area due to the proposed on-site water supply. The MA DEP nitrogen loading limitations allow 440 gallons per day of standard septic discharge per acre. The Project Site is 5.57 Title 5 acres (40,000 square feet/acre). Therefore, the maximum allowable Title 5 nitrogen discharge for the site is 2,450 gallons per day. The proposed Title 5 discharge rate for the Project is 1,320 gallons per day (12 bedrooms) which is within the allowable Title 5 limit.

- Agreed.

E.4 Title 5 can require groundwater mounding analysis for SAS areas discharging over 2,000 gallons per day. However, mounding analysis is not required on this Project as the SAS discharges 1,320 gallons per day.

- Agreed.

E.5 The proposed soil absorption system (SAS) is located 10 feet from the foundation of Unit #1 and #2 which may include basements/foundation drains. Foundation drains may intercept effluent from the SAS (Trench #1 and #2) and convey to daylight. The Applicant shall confirm if basements are proposed in the units and if foundation drains will be required by code and if so, appropriate setbacks that meet Title V shall be provided.

- Agreed. Homes #1 and #2 are proposed as slab on grade (no basement).