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Cape Cod Commission Staff Report Development Agreement Review

DATE:	June 6, 2022
PROJECT:	35 Scudder Residential Community (Emblem Hyannis) (Cape Cod Commission File No. 20065)
APPLICANT:	Lennar Multifamily Communities, LLC
PROPERTY:	35 Scudder Avenue, Barnstable, MA 02601
ASSESSOR'S ID:	Map 2819 Parcel 110
SUBCOMMITTEE:	Harold Mitchell (Chair), Fred Chirigotis, John D. Harris, Robert Mascali, David Weeden, and Elizabeth Taylor (Alternate)

This staff memorandum provides project information and Commission staff analysis relative to the Regional Policy Plan (RPP) issue areas of **Water Resources, Wetlands Resources, Coastal Resiliency, Wildlife and Plant Habitat, Open Space, and Climate Mitigation** and is intended to supplement staff memorandums on the project dated March 16, 2022, April 12, 2022, May 13, 2022, and May 27, 2022.

Introduction

- The RPP encourages Projects in all Placetypes to be designed to protect and/or preserve those areas with the highest natural resource value and to ensure that the most sensitive elements of a site are not impacted by development.
- The Redevelopment Site is within the Hyannis Community Activity Center and there are portions of the Property that are mapped within the Natural Area Placetype. The RPP generally encourages redevelopment and balanced growth in Activity Centers and discourages development in Natural Areas where it is necessary to protect the region's resources.

- The portions of the site that are in a Natural Area Placetype are so characterized due to the presence of the following sensitive environmental resources: wetlands and their 100-foot buffers and undeveloped areas subject to flooding. In general, impacts to these resources should be minimized or mitigated. For redevelopment projects, the RPP encourages removing existing development from these resource areas and improving or enhancing the functions of these natural resources.
- The Project is sited such that the majority of the Redevelopment will occur in the portion of the Property that is exclusively mapped as Community Activity Center, consistent with the RPP strategies and methods to protect the more sensitive areas of the Property.

Water Resources

The Water Resources Goal of the RPP is to maintain a sustainable supply of high-quality untreated drinking water and protect, preserve, or restore the ecological integrity of Cape Cod's fresh and marine surface water resources.

- The Property contributes to the Lewis Bay Marine Recharge Area (which is nitrogen impaired) and a small area of the northwest corner of the Property is mapped as a Wellhead Protection Area (Zone II). The Property is considered part of the Town of Barnstable's Aquifer Protection Overlay District (AP), with the northwest corner of the site also being part of the Town's Wellhead Protection Overlay District (WP).

Nitrogen Loading:

- The project is anticipated to result in a net decrease in on-site nitrogen loading compared to current conditions. This comes from a reduction in managed turf area from the existing use as a golf course, use of organic slow-release fertilizer, and connection of new buildings to the Barnstable municipal sewer system.

Marine Water Resources:

- The proposed development, while reducing on-site nitrogen loading, will contribute additional nitrogen to Lewis Bay compared to the current development, since the Barnstable Water Pollution Control Facility (WPCF) discharges treated wastewater effluent to the same watershed the project site is located within. This effectively transfers the obligation for removing the roughly 350 kg of additional nitrogen generated by the Project from the applicant to the Town and through its Comprehensive Wastewater Management Plan.
- LMC has confirmed available treatment capacity at the Barnstable WPCF with the Town, and have committed \$175,000 for the upgrade of an existing pump station to accommodate the

new wastewater flows from this Project as well as additional sewer expansion planned by the Town. Provided that the Town is ultimately satisfied with this proposal and any other agreements and contributions made by the applicant through the Development Agreement with the Cape Cod Commission or a Regulatory Agreement with the Town of Barnstable, staff recommends that the development is consistent with Objective WR3 of the RPP, which is to preserve, protect, and restore marine water resources.

Stormwater Management:

- Stormwater management is proposed via a combination of best management practices including bioretention islands, direct infiltration of roof runoff, use of landscaping features to provide stormwater treatment, and site design that reduces impervious surface where possible. The general approach to stormwater management utilizes several strategies recommended under Objective WR4 of the RPP, which is to manage and treat stormwater to protect and preserve water quality.
- While the Project will result in greater impervious coverage compared to current conditions, it will reduce fertilized turf area and will reduce the amount of impervious coverage within the areas of the site covered by the Wellhead Protection Overlay District.
- The Applicant is continuing to explore additional opportunities to incorporate bioretention into landscaping areas, which would improve the level of stormwater treatment provided across the Redevelopment Site. Combined with additional reductions to managed turf area, the proposed site plan revisions would further reduce on-site nitrogen loading while providing more opportunities for native plants to be utilized in stormwater and landscape areas.
- As a phased approach to construction is being contemplated, the sequence for construction of both the stormwater system and the surrounding site becomes extremely critical, as do the construction phase erosion and sediment control plans. Both elements will need to be examined carefully as more detail is available to ensure that adequate stormwater management is provided within a reasonable amount of time for each phase of the project while allowing flexibility to avoid negative impacts to the function of previously constructed stormwater controls from future construction activities. Commission staff recommend that Conditions be included in any draft Development Agreement that address stormwater management during phased construction.

Wetlands Resources

The Wetlands Resources Goal of the RPP is to protect, preserve, or restore the quality and natural values and functions of inland and coastal wetlands and their buffers.

- As noted in the Natural Resources Inventory (NRI), there are numerous and diverse wetlands resources present on the Property:
 - Freshwater perennial riverine wetlands of Stewart's Creek and Joshua's Brook form the site's eastern, southern, and western boundaries
 - Four freshwater ponds; one pond in the northeast corner of the site is present in historical imagery prior to golf course development and appears to have been associated with Stewart's Creek; according to the application materials and based on a review of historical imagery, the remaining three ponds appear to have been constructed with the golf course to serve as water hazards and/or stormwater management
 - Isolated Vegetated Wetlands
 - Land Under Water
 - Bordering Vegetated Wetland
 - Land Subject to Coastal Storm Flowage
 - Inland and Coastal Banks, and Riverfront Area, some of which are associated with Stewart's Creek and Joshua's Brook
- The proposed development is located on the existing Twin Brooks Golf Course, constructed in the 1960s on what appears to have been partially farmland and partially woodland. In places, developed and managed areas of the golf course extend to wetland edges, do not provide vegetated buffers, and buffers that do exist contain invasive plant species. In addition, one of the constructed ponds is lined with pavement. Furthermore, chemical inputs (e.g., fertilizers) from standard golf course management practices likely contaminate the wetlands. These existing adverse impacts likely limit the beneficial functions of onsite wetlands.
- Consistency with the RPP requires areas within the 100-foot buffer to wetlands be undisturbed; buffer widths greater than 100 feet are desirable to maximize overall wetland performance. The RPP also encourages using Best Management Practices to direct stormwater away from wetlands and their buffers, and the restoration of degraded wetland resource areas.

- To protect, preserve, or restore wetlands and their buffers, consistent with the RPP, the Applicant proposes:
 - locating and clustering the development on the northern and central portion of the site and limiting all new clearing and grading to those areas;
 - establishing proper erosion controls and implementing other construction best practices;
 - installing a stormwater management system that infiltrates site runoff with bioretention areas and infiltration/detention basins;
 - avoiding new stormwater discharges to wetlands;
 - reducing unmanaged stormwater runoff;
 - managing stormwater using current Massachusetts Department of Environmental Protection Stormwater Handbook Best Management Practices;
 - reducing nitrogen loading through decreasing managed and fertilized turf areas;
 - reducing on-site groundwater withdrawals for irrigation; and
 - restoring with native plantings and permanently protecting most of the 100-foot buffers associated with Stewart's Creek and Joshua's Brook.

- Per the Wetlands Resources Technical Bulletin, where new wetland or buffer alteration are proposed, mitigation should be provided at a 2:1 mitigation to impact ratio or greater. Staff notes that most of the proposed alteration will not be new, rather redevelopment in areas of existing alterations. Approximately 0.1 acres of new development will be within existing natural area outside the managed golf course area. Nevertheless, mitigation may include the permanent protection of wetlands and/or buffers. Given Stewart's Creek and Joshua's Brook and their buffers are the most sensitive natural resource features on the project site, permanent protection of these areas is appropriate, provided these areas are not serving as stormwater management and where invasive species can be managed. The applicant proposes to protect and restore approximately 20 acres of open space (see Open Space section), far exceeding the approximately 0.2 acre wetland mitigation requirement. Commission staff notes the applicant will need to submit a more detailed restoration plan, including grading, hydrology, and native plant species (types, quantities, sizes).

- The Applicant drafted a conceptual alternative design that entails filling in the man-made, asphalt-lined pond to allow for reconfiguration of other buildings and parking to remove almost all development (except a portion of the access drive) from the 200-foot wetland buffer to Stewart's Creek and Joshua's Brook. Whether the proposed alternative design can

be pursued depends on a determination from the Massachusetts Department of Environmental Protection pursuant to the Wetlands Protection Act. In general, Natural Resources staff considers the alternative design preferable as it would replace a constructed pond with improved stormwater management, remove more development from the most sensitive wetland resource areas, and result in the permanent protection of more of these areas. Therefore, Commission staff recommend that any Development Agreement include language allowing for this alternative design should the Applicant be permitted to pursue it under the Wetlands Protection Act.

- If the Applicant is permitted to pursue the alternative design, the Applicant will supplement their NRI in coordination with Commission staff.

Coastal Resiliency

The Coastal Resiliency Goal of the RPP is to prevent or minimize human suffering and loss of life and property or environmental damage resulting from storms, flooding, erosion, and relative sea level rise, including but not limited to that associated with climate change.

- Commission staff reviewed the Project for consistency with the Coastal Resiliency Goal given the connections of the streams and floodplain to coastal influences. The Redevelopment Site, however, is greater than 2,000 feet from the coast.
- The Project proposes to increase vegetated wetland buffers as compared to the existing edge of the golf course; however, there is still some limited redevelopment proposed within the floodplain. The main access to the residential development will be via a new driveway from Scudder Avenue in the northwest corner of the Redevelopment Site. A secondary emergency access drive is proposed on the northeast side of the site. Both accesses and associated portions of Scudder Avenue are vulnerable to storm surge from hurricanes.

Wildlife and Plant Habitat

The Wildlife and Plant Habitat Goal of the RPP is to protect, preserve, or restore wildlife and plant habitat to maintain the region's natural diversity.

- In addition to the wetlands resources areas described above, the site also contains both managed and unmanaged woodland areas. These wetland and woodland areas provide habitat for common plant and wildlife species as documented in the NRI; however, the managed areas provide limited habitat value. Invasive species were also documented on the Redevelopment Site further limiting its already limited habitat value. Although there will likely be temporary disturbance to and displacement of plant and wildlife species present during construction of the Redevelopment Project, the remaining and restored wetland and

woodland areas should continue to provide habitat for these species during and after construction.

- The proposed Redevelopment Project is not within an Area of Critical Environmental Concern, Natural Heritage and Endangered Species Program (NHESP) rare species habitat, or BioMap2 Core Habitat or Critical Natural Landscape. Portions of Stewart's Creek and Joshua's Brook to the south and outside the redevelopment footprint are within BioMap2 Critical Natural Landscape.
- As noted in the NRI, there are no NHESP-certified or potential vernal pools on the site and the NRI consultant considers none of the small permanent ponds on the site to be vernal pools. Professional wetland scientists visited the site on numerous occasions in 2016, 2020, and 2021 to perform various wetland delineations and assessments. Based on their site inspections and field notes, there are no vernal pools located at the site as the wetlands either contained fish or did not hold enough water to support amphibian breeding activity in the spring.
- The managed treed areas on the existing golf course serve as boundaries between golf course fairways and are of various widths. These managed treed areas consist primarily of mature native hardwood and coniferous species that range in height from 60-75 feet and diameter from 8-22 inches. Other than mowed grass, there is no understory in these managed treed areas. According to the NRI, most of the hardwoods and many of the conifers in the managed treed areas are specimen trees as defined in the Commission's Wildlife and Plant Habitat Technical Bulletin. The applicant's NRI consultant estimates there are approximately five hundred (500) trees in the managed treed areas in the Redevelopment Site and approximately 75% (375) are estimated to be specimen trees.
 - The Applicant proposes to plant a total of approximately 350 trees including a mixture of shade trees, evergreen, and ornamental trees. The landscaping plans show replacement tree sizes of 3-3.5-inch diameter and 6-12 feet height.
 - It appears most of the proposed replacement trees will be planted in the interior of the redevelopment footprint and around the edges of the proposed buildings, whereas a native meadow flowering seed mix and fewer, sparser trees and shrubs are proposed in the proposed open space area. As the restoration plan develops for the open space area, Commission staff recommends including more native tree and shrub plantings to help establish a more diverse, layered, native plant community faster. These plantings should be consistent with the native pitch pine-mixed oak woodland and wetland communities present on site.

- Given the site's historical use as a golf course, soil chemistry may be altered, and soils may be compacted. Therefore, prior to any restoration, staff suggests the applicant test the soils for nutrient levels and acidity to help inform appropriate plantings and loosen or de-compact soils to help store water and assist seed establishment. Commission staff recommends that any Development Agreement include terms and conditions to this effect.
- The unmanaged woodland along the stream edges is a mature pitch pine-mixed oak woodland. This woodland has an understory of shrubs, briers, and herbaceous plants as is typical of natural woodlands. Trees in the unmanaged woodland range in height from 65-80 feet and diameter from 6-10 inches. The applicant's NRI consultant estimates 50% of the trees in the unmanaged woodland are specimen trees.
- The Redevelopment Project will be clustered in the central core and northern portions of the Redevelopment Site and will minimize site clearing and grading to these areas.
- The Redevelopment Project proposes to protect and restore much of the most sensitive wetland and unmanaged woodland areas along the perimeter of the Property, consulting with the Town of Barnstable Conservation Commission on a restoration plan for their proposed open space area.
- Several invasive species are present on the Property, mostly along the margins of the ponds and golf areas along the perimeter of the Redevelopment Site. In addition, invasive Phragmites is present within Stewart's Creek on the eastern edge of the Property. Staff recommends the applicant develop an invasive species management plan to manage invasive species throughout the site, including the development footprint and the open space area, to improve and enhance the open space area's wildlife and plant habitat value.
 - Commission staff note that Phragmites control within the Stewart's Creek watershed is a focus of a larger Town of Barnstable and U.S. Army Corps of Engineers (USACE) tidal restoration project. Any Phragmites control should be done in close coordination with the Town and USACE.

Open Space

The Open Space Goal of the RPP is to conserve, preserve, or enhance a network of open space that contributes to the region's natural and community resources and systems.

- Open space in all its forms provides a wide range of ecosystem services – direct and indirect contributions to human well-being – throughout Cape Cod. Staff notes the golf course is a form of recreational open space and appears as such in MassGIS' Protected and Recreational

Open Space datalayer. However, as documented in that datalayer, the site's ownership is private, it has limited public access, and its level of protection is "none" meaning it is totally unprotected by any legal or functional means and can be sold without restriction at any time for another use. While protecting recreational resources is recognized as an Open Space Objective, the character of the site's existing use, access, and level of protection limit its regional value as an open space resource in its current form.

- Consistent with the Open Space Goal of the RPP, the Applicant proposes to:
 - cluster the development and reduce the development footprint as compared to the existing golf course footprint;
 - provide a landscaped buffer that will maintain at least 350 feet of separation between the proposed buildings and the nearest abutting residential dwellings;
 - maintain and/or restore all portions of the Redevelopment Site that are not included within the area to be developed to allow these areas to return to a more natural state;
 - increase the natural buffer to Stewart's Creek and Joshua's Brook;
 - restrict a portion of the site as protected open space;
 - work with the Barnstable Conservation Commission to select native plantings for the restoration areas;
 - and provide recreational areas.
- Proposed recreational areas on the Redevelopment Site include a recreational clubhouse containing a fitness center, pool, sundeck, and other amenities, as well as sidewalks connecting residents to these amenities and sidewalk infrastructure on Scudder Avenue. Staff suggests, given the diverse population the Redevelopment Project is expected to serve, the Applicant could consider other recreational opportunities; however, any proposed walking path within the proposed open space area must be weighed against and balanced with wetlands and wildlife and plant habitat protection to prevent further degradation of these sensitive resources. Any path in this area should be designed, constructed, and maintained to prevent stormwater runoff, soil erosion, vegetation trampling, and encroachment into resource areas.
- The Applicant intends to work with the Barnstable Conservation Commission to develop a plan for the restoration of the existing site including planting native species of trees, shrubs, and groundcovers to help restore these areas, improve the vegetated buffers, and allow for a more natural appearance and environment. See the **Wetlands Resources** and **Wildlife and Plant Habitat** for more information on the details of the proposed restoration.

- The provision of open space is a requirement of projects where new development is proposed. While the Project is a redevelopment, staff suggests that the following areas of development impact be considered:
 - there will be approximately 0.1 acres of new development within the portion of the site mapped within the Natural Area Placetype
 - approximately 5 acres of managed treed areas on the golf course, most of which will be cleared as part of the Redevelopment Project.
 - ~4 acres within the Community Activity Center
 - ~1 acre in mapped Natural Area.
- The Open Space RPP Goal requires the open space mitigation in the following ratios for new development:
 - in Natural Areas at a ratio of 3:1 (3 acres of open space for every 1 acre developed)
 - in Community Activity Centers at a ratio of 1:2 (1 acre of open space for every 2 acres developed)
- While the clearing of the managed treed areas on the existing golf course could still be considered redevelopment by the subcommittee, the calculations below include the managed treed areas in the area of development impact for purposes of calculating open space.

	Natural Area 3:1	Community Activity Center 1:2
Undeveloped	0.1 acre	
Managed Treed Area (Golf Course)	1 acre	4 acres
<i>Placetype Ratio Applied</i>	<i>3.3 acres</i>	<i>2 acres</i>
TOTAL	5.3 acres	

- Based on the ratios above, staff suggests that the Applicant would be required to provide approximately 5.3 acres of open space.
- The Applicant proposes to provide approximately 20 acres of open space with a Conservation Restriction (CR), exceeding the maximum possible amount of open space that would be required even if this was considered new development on undeveloped land, which would be approximately 17 acres.
 - Staff recommends that the Applicant indicate if a potential Conservation Partner has been identified. Staff notes that the Town of Barnstable and its Conservation

Commission own and manage protected open space abutting the site and should be consulted. A local or regional land trust may accept a donation of land and hold a CR.

- As noted in the **Wetlands Resources** section, if the alternative site design is permissible and pursued, additional 200-foot wetland buffer area may be protected as open space which would be even more beneficial for wetlands resources and coastal resiliency.

Climate Mitigation

The Climate Mitigation Goal of the RPP is to support, advance and contribute as a region to the Commonwealth's interim and long-term greenhouse gas reduction goals and initiatives, including a state-wide net zero carbon target by 2050.

- The Applicant proposes a site design that incorporates appropriate bicycle and pedestrian accommodation including an internal sidewalk network. Additionally, the applicant proposes a number of off-site multimodal improvements that will support connectivity to the site and improve overall bicycle and pedestrian accommodations in the area as detailed with the **Transportation** issue area. The Project's location is proximate Cape Cod Regional Transit Authority service as detailed with the **Transportation** issue area.
- The Applicant is proposing 26 electric vehicle (EV) charging stations (corresponding to 26 EV parking spaces) with two located in preferential parking spaces at each of the thirteen residential buildings. This represents approximately 5% of the total parking spaces or a charger for approximately 8% of the residential units. Given the anticipated increased future demand for EV charging, Commission staff suggests the applicant also plan for electrical panel capacity and install conduit to additional EV-capable spaces. While there are no specific standards for the total number of spaces (EV spaces + EV-capable spaces) to plan for, Commission staff have found community standards in the 15-80% range with some as high as 100%.
- The Project will incorporate a variety of energy efficiency measures as detailed within the staff report dated May 13, 2022 within the **Energy** issue area. The Applicant is proposing solar ready roofs that will have the ability to accommodate rooftop solar photovoltaic systems when they are economically feasible for the development. In the meantime, the applicant is reviewing options for "green power" purchase agreements; the applicant should provide an update on this review. The applicant has further stated that the buildings will be electric, with no fossil fuels for heating.