



Stantec Consulting Services Inc.
482 Payne Road – Scarborough, ME 04074

November 2, 2018

Mr. Jonathan Cohen
Rawhide LLC
24 Carroll Street
Falmouth, ME 04105

Subject: Falmouth Plaza Master Plan – Noise

Dear Jonathan:

This letter is intended to support the proposal for development activity at the Falmouth Shopping Plaza. This is specifically related to potential noise issues and impacts, resulting from the expansion of the center for mixed use development consisting of indoor and outdoor athletic facilities, residential, office, and retail land use. We are aware that the Falmouth Town Council is interested in better understanding the potential for noise impact resulting from the proposed development as they consider zoning changes across the site. This is particularly tied to the concern on noise generation during sporting events at the proposed fields.

To better understand the Noise standards that apply we have reviewed both the local ordinance and State regulations pertaining to noise. The following regulatory standards apply:

Town of Falmouth

Chapter II-12 Nuisances Section 12-1 is the applicable provision in the code. That section does not contain any numerical standards for sound level measurement for maximum noise levels or related values at the property line or nearby protected sources i.e. residences.

State of Maine

The Control of Noise is covered within Chapter 375: No Adverse Environmental Effect Standards of the *Site Location of Development Act*. The proposed development will likely trigger Site Law review by the Maine Department of Environmental Protection as the proposed activity will involve greater than 3 acres of structure area (includes buildings, paved or impervious areas and athletic fields¹). The basic standards that will apply under State rules, as we understand, will be as follows²:

¹ See Chapter 500 Section 3 Part L for definition of Impervious Area, which includes underdrained artificial turf fields.

² See Chapter 375, Part 10 Control of Noise Section C Sound Level Limits



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DEP Sound Level Limits

- At any property line – 75 dba at any time of day
- At property line abutting a protected location such as residential – 60 dBA between 7:00 a.m. and 7:00 p.m. or 50 dBA between 7:00 p.m. and 7:00 a.m.

Chapter 375 Part 10 Section C (1)(a)(v) also discusses the ambient hourly sound level at a protected location and the determination as to whether it is equal to or less than 45 dBA (daytime) or 35 dBA (nighttime). The standards suggest that if the resident population is greater than 300 persons within a circle of 3,000 feet radius around the protected location or the hourly sound level from highway traffic at a protected location is predicted to be greater than 45 dBA (daytime) or 35 dBA (nighttime)³ then the developer may estimate that the ambient hourly sound level is greater than 45 dBA or 35 dBA. On this basis, we believe that the existing ambient sound levels are quite likely to exceed 45 dBA and 35 dBA for the day and nighttime periods respectively.

Overview

The development site is located within the Village Center 1 (VC1) and Business and Professional (BP) Commercial/Mixed Use Growth Districts. The site abuts the Residential Growth District RA to the east and the existing residential properties along Route 88 comprise the protected locations subject to future study and analysis for noise assessments that will be performed. Nearby land use is dominated by commercial development along the Route 1 corridor and the highway located west of the development site. The site is situated at the northerly end of the intensely developed Route 1 corridor in Falmouth. North of the site the commercial corridor is less intensely developed, although the VC1 and BP zoning districts and the Comprehensive Plan contemplate significantly more development opportunity to occur both within the Falmouth Plaza and adjoining land, as these areas are specifically identified within the Designated Commercial Growth Area⁴. To the east are the residential areas off Route 88.

The BP District allows various uses including, but not limited to, Business and Professional offices, light manufacturing, and outdoor eating areas. The VC1 District allows an even greater breadth of land use, highlighted by Auto dealerships, large day care centers, outdoor recreation facilities, large restaurants, grocery stores, and large service garages. We interpret any of these uses as possibly being sources of noise that could be equal to or greater than may be predicted for the proposed athletic fields.

³ Highway traffic noise can be predicted using the nomograph method of FHWA Highway Traffic Noise Prediction Model, FHWA-RD-77-108, December 1978

⁴ See Town of Falmouth Future Land Use Plan 2013 Comprehensive plan update map.



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Within the site, we understand that the proposed athletic fields will be positioned along a topographic crest running generally east-west in direction and bounded by drainage swales to the north and south. East of the ballfield site is a drainage ravine containing an unnamed tributary (per USGS mapping) that connects to Mill Creek which drains into Mussel Cove and Casco Bay. Further east the topography rises up again into the residential properties and Route 88. The field locations are characterized by mature tree cover and clearing will be required to construct the fields. The most easterly edge of the proposed fields will be approximately 450 feet distance from the residences and the end of Meadow Creek Lane off Route 88. The fields may be as close as 75 feet from the easterly property line running through the gully and forming the border between the proposed land use and the residential land uses.

Stantec has conducted noise assessment studies for developments across the country and thus I've garnered some basic information from this work within our organization. Further, regionally we've completed numerous Site Location of Development Permits for large scale development throughout Maine and we found that commercial projects, like the Falmouth Plaza site, are compliant with the DEP's noise standards. For example, the development of schools and their related athletic facilities often involve potential impacts to adjacent residential land uses and the discussion of noise impacts often requires evaluation to understand how noise may be an annoyance and at worst a negative impact to property owners and property values. We have not experienced a school site or athletic field facility that generated or resulted in noise levels exceeding the State noise level thresholds at the property line. For example, our most recent school project in Caribou, Maine⁵ involves the construction of athletic fields within 75 feet of neighboring residential properties. The DEP found there would be no significant impact and that the project would comply with the noise standards.

We know that noise sources generated by the project may include the following:

- Cars and buses maneuvering on the site;
- Sporting events at the outdoor fields including whistles, crowd noise including cheering and clapping, and individual voices. We understand that a PA system is not currently proposed for the Falmouth project, thus addressing and eliminating another possible source of measurable noise. However, spectator noise, yelling, whistle blowing, and related activity noise will need to be evaluated and possibly mitigated to avoid disruption to resident's privacy and overall well-being.
- Building mechanical noise (fans, compressors, boilers etc). Typically, equipment noise can often be successfully attenuated to minimize noise impacts and maintain regulatory compliance.

⁵ See DEP Permit order L-27112-22-A-N



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At this time a preliminary sound study has not been performed as it would be premature to conduct such a study at this phase of the project. A sound assessment for the Falmouth site is expected to consist of the following:

- A review of the applicable noise standards as cited above;
- A review of the existing land use and the range of sound levels associated with the planned development uses and existing uses. This would include some sound level measurements for the existing ambient conditions as well as possibly measurements at similar facilities;
- A general assessment of expected sound levels based on existing and proposed site conditions, with emphasis on the residential property off Route 88. The assessment will include preliminary sound level calculations and an evaluation of compliance feasibility with the noise standards.
- Development of a work plan for a more detailed sound level assessment that would be made part of future permitting and design efforts.

Initial Considerations

We offer the following initial considerations on noise for the Falmouth Plaza site:

- We might anticipate ambient noise levels to be in a range of 38-50 dBA. Although this is certainly subject to sound level measurement. There will be several site conditions influencing noise from the site; this includes both distance and topographical attenuation and the location of existing and proposed vegetation (to a limited extent).
- The athletic field use is expected to consist of mostly scheduled practice time and a lesser amount of actual game play. Practice period noise will be associated with normal voice (some yelling and cheering from coaches and participants) and whistle use. Game time noise will include the same along with a limited amount of spectator noise, since the fields will not have bleacher seating or PA systems.
- Activity periods are expected to be primarily weekday afternoons to possibly 10:00 pm and weekends from 8:00 am to 10:00 pm, although this is all subject to refinement and possible some local Town controls, similarly related to lighting, etc.
- We know that noise assessments associated with schools and athletic fields are not uncommon due to neighborhood concerns. However, the typical findings point to compliance with local and State noise regulations. Beyond that there are mitigation techniques that can also be considered. The range of noise attenuation techniques may include sound barrier walls or berms, time of use restrictions and even specialty equipment.



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We look forward to assisting you and discussing the development's technical needs with Town officials as the need demands. Feel free to pass this information along to Town staff so they and the Town Council may review and consider in their deliberations on the requested zoning action for the site.

Sincerely,

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