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May 4, 2016

Mr. Geoffrey Forner
Monahan Pacific Corporation
1101 Fifth Avenue, Ste. 300
San Rafael, CA 94901

VIA E-MAIL: gforner@monahanpacific.com

SUBJECT: **Townsend Capital Partners LLC Cotati, CA – Qualitative Evaluation of Noise Issues**

Dear Mr. Forner:

This letter summarizes our initial assessment of potential noise issues associated with the Sterling Senior Communities project proposed in Cotati, California. It is our understanding that the project is proposing the construction and operation of a 125-unit assisted living facility, as well as a 6,000 SF commercial building on site.

Noise-related Issues

Per the City of Cotati[1], "The project will need to be designed and constructed to comply with noise standards established under LUC Section 17.30.050 and shall ensure impacts are minimized on occupants of the proposed RCFE. In addition, the proposed project will need to be designed to minimize noise impacts on the neighboring residential development."

Section 17.30.050 of the Land Use Code establishes exterior and interior noise level limits for residential land uses. The maximum allowable exterior noise level at residential land uses is 65 dBA L_{dn}, and the maximum allowable interior noise level at residential land uses is 45 dBA L_{dn}.

The exterior and interior noise limits established in Section 17.30.050 of the Land Use Code are consistent with the Land use Compatibility for Community Noise Environment standards

[1] Letter to Mr. Robin Miller from the City of Cotati Community Development Department Planning Division, PA# 14/01-Assisted Care Facility; Northwest corner of Alder Avenue and Gravenstein Highway (Hwy 116); APNs 144-040-11 and -21, February 19, 2014.

identified in the Cotati General Plan. The General Plan also establishes the following relevant goals, objectives, policies, and actions:

GOAL N 1 Create a Pleasant Sound Environment by Minimizing Exposure to Harmful and Annoying Noise

Objective N 1A Minimize Noise Levels to Enhance the Quality of Existing and Future Land Uses

Policy N 1.1: Ensure the noise compatibility of existing and future uses when making land use planning decisions.

Policy N 1.2: Require development and infrastructure projects to be consistent with the Land Use Compatibility for Community Noise Environments standards indicated in Table N-1 to ensure acceptable noise levels at existing and future uses.

Policy N 1.3: Require development to mitigate excessive noise through best practices, including building location and orientation, building design features, placement of noise-generating equipment away from sensitive receptors, shielding of noise-generating equipment, placement of noise-tolerant features between noise sources and sensitive receptors, and use of noise-minimizing materials such as rubberized asphalt.

Policy N 1.4: Require mixed-use projects to minimize noise exposure within the indoor areas of nearby residential areas through the use of noise attenuating building materials, engineering techniques, and site design practices. Site design practices may include locating mechanical equipment, loading bays, parking lots, driveways, and trash enclosures away from residential uses and providing noise attenuating screening features onsite.

Policy N 1.5: Control non-transportation related noise from site specific noise sources.

Policy N 1.6: Support noise-compatible land uses along existing and future roadways, highways, and freeways.

Policy N 1.7: The following criteria shall be used to determine the significance, for projects required by the California Environmental Quality Act to analyze noise impacts, of noise impacts for development, transportation, and other projects that increase noise:

<u>Stationary and Non-Transportation Noise Sources</u>

- A significant impact will occur if the project results in an exceedance of the noise level standards contained in this Noise Element, or the project will result in an increase in ambient noise levels by more than 3 dB.

Transportation Noise Sources

- Where existing traffic noise levels are less than 60 dB Ldn at the outdoor activity areas of noise-sensitive uses, a +5 dB Ldn increase in roadway noise levels will be considered significant; and
- Where existing traffic noise levels range between 60 and 65 dB Ldn at the outdoor activity areas of noise-sensitive uses, a +3 dB Ldn increase in roadway noise levels will be considered significant; and
- Where existing traffic noise levels are greater than 65 dB Ldn at the outdoor activity areas of noise-sensitive uses, a + 1.5 dB Ldn increase in roadway noise levels will be considered significant.

Policy N 1.8: Ensure that new development does not expose indoor sleeping areas to indoor noise levels in excess of 45 dBA Ldn.

Policy N 1.9: Develop and enforce a City of Cotati Noise Ordinance that addresses, at a minimum, excessive noise from commercial, industrial, and other noise generating land uses, and vehicle noise to the extent allowed by State law.

Policy N 1.10: Actively enforce the sections of the California Vehicle Code relating to vehicle noise, including adequate vehicle mufflers and modified exhaust systems.

Policy N 1.11: Require acoustical studies and mitigation measures, where necessary, for new developments and transportation improvements that affect noise sensitive uses such as schools, hospitals, libraries, group care facilities, convalescent homes, and residential areas.

Policy N 1.12: Require construction activities to comply with standard "best practices". (See Action N 1h)

Policy N 1.13: Local truck traffic, including loading and unloading, shall be limited to specific routes, times and speeds appropriate to each zoning district.

Policy N 1.14: Work with Caltrans to ensure that adequate noise studies are prepared and alternative noise mitigation measures are considered in State transportation projects.

Policy N 1.15: Require new development to minimize vibration impacts to adjacent uses during demolition and construction. For sensitive historic structures, a vibration limit of 0.08 in/sec PPV (peak particle velocity) will be used to minimize the potential for cosmetic damage to the building. A vibration limit of 0.30 in/sec PPV will be used to minimize the potential for cosmetic damage at buildings of normal conventional construction.

Action N 1a: Update the Land Use Code to ensure that the noise standards are consistent with this Noise Element, including Tables N-1 and N2, and

to require new residential, mixed-use with a residential component and other noise-sensitive development to be designed to minimize noise exposure to noise sensitive users through incorporation of site planning and architectural techniques such as:
• Locating dwellings as far from noise generators as possible.
• Locating noise sensitive interior spaces, such as bedrooms, away from noise generators.
• Orienting buildings to shield noise sensitive outdoor spaces from noise generators.
• Use of sound walls should be avoided or minimized, through alternative measures such as berms, setbacks, or other measures, to the maximum extent feasible and appropriate.

Action N 1b: Review land use and development proposals, including use permits, for compliance with the noise requirements established in this element, including the standards established in Tables N-1 and N-2.
For uses along the SMART corridor, the Federal Transit Administration vibration impact criteria shall be used to evaluate the compatibility of sensitive uses using the best available information (e.g., 2005 SMART DEIR) or site-specific measurements and analyses (assuming active operations). Where necessary, require mitigation measures to achieve the noise standards identified in Tables N-1 and N-2 and, where applicable to minimize exposure of sensitive uses to existing or potential vibration levels to the maximum feasible extent.

Action N 1c: Require an acoustical study for all new discretionary projects, including development and transportation, with potential noise impacts. The study shall include mitigation measures necessary to ensure compliance with this Noise Element and relevant noise standards in the Land Use Code.

Action N 1d: The Police Department shall continue to implement the truck ordinance which limits truck traffic routes and weights, thereby effectively reducing noise pollution.

Action N 1e: Work with the California Highway Patrol to actively enforce the California Vehicle Code as it relates to adequate vehicle mufflers, modified exhaust systems, and car stereos.

Action N 1f: Develop a consistent method to enforce Vehicle Code provisions contained in the California Vehicle Code, Division 12, Chapter 5, Article 2.5, Sections 27159 - 27207 related to vehicle noise and, to the extent allowed by State law, develop additional standards to regulate vehicle noise.

Action N 1g: Coordinate with Caltrans, the City of Rohnert Park, and Sonoma County, when necessary, to ensure that these outside agencies obtain City concurrence prior to initiating any noise mitigation or other project in, or affecting, Cotati.

Action N 1h: During the environmental review process, determine if proposed construction will constitute a significant impact on nearby residents and require mitigation measures in addition to the standard "best practice" controls. Suggested "best practices" for control of construction noise:

- Construction period shall be less than twelve months.
- Noise-generating construction activities, including truck traffic coming to and from the construction site for any purpose, shall be limited to between the hours of 7:00 am and 7:00 pm on weekdays and 9:00 am and 5:00 pm on Saturdays (if allowed through specific project conditions of approval). No construction shall occur on Sundays or holidays.
- All equipment driven by internal combustion engines shall be equipped with mufflers, which are in good condition and appropriate for the equipment.
- The construction contractor shall utilize "quiet" models of air compressors and other stationary noise sources where technology exists.
- At all times during project grading and construction, stationary noise-generating equipment shall be located as far as practicable from sensitive receptors and placed so that emitted noise is directed away from residences.
- Unnecessary idling of internal combustion engines shall be prohibited.
- Construction staging areas shall be established at locations that will create the greatest distance between the construction related noise sources and noise-sensitive receptors nearest the project site during all project construction.
- The required construction-related noise mitigation plan shall also specify that haul truck deliveries are subject to the same hours specified for construction equipment. • Neighbors located adjacent to the construction site shall be notified of the construction schedule in writing. The construction contractor shall designate a "noise disturbance coordinator" who will be responsible for responding to any local complaints about construction noise. The disturbance coordinator would determine the cause of the noise complaint (e.g., starting too early, bad muffler, etc.) and institute reasonable measures as warranted to correct the problem. A telephone number for the disturbance coordinator shall be conspicuously posted at the construction site.

Noise and Land Use Compatibility of Proposed Noise-Sensitive Uses. The primary noise-related issue associated with the project would be the compatibility of the proposed noise-sensitive land uses with the on-site noise environment. The project site is located north of State Route 116 (Gravenstein Highway), which is the primary noise source in the area. Illingworth & Rodkin, Inc. assisted the City of Cotati with an update to the General Plan in 2014. This update included calculations of future traffic noise levels along Gravenstein Highway assuming the build out of the General Plan. Traffic noise levels were calculated to range from 70 dBA L_{dn} at a distance of 140 feet from the centerline of the roadway to 60 dBA L_{dn} at a distance of 640 feet from the centerline of the roadway. Based on these data, exterior noise levels at the southernmost facades of the proposed residential buildings are calculated to range from 65 to 67 dBA L_{dn}.

The maximum allowable exterior noise level at residential land uses is 65 dBA L_{dn}, and the maximum allowable interior noise level at residential land uses is 45 dBA L_{dn}. The exterior noise standard is normally applied to common outdoor use areas in multi-family residential projects, which in this case, would be fully shielded courtyards. The acoustical shielding provided by the residential building would be expected to provide at least 10 dBA of noise reduction, yielding exterior noise levels below the maximum allowable exterior noise level standard of 65 dBA L_{dn} at residential land uses.

Interior noise levels would vary depending on the final design of the buildings (relative window area to wall area) and construction materials and methods. Standard residential construction provides approximately 15 dBA of exterior to interior noise reduction assuming the windows are partially open for ventilation. Standard construction with the windows closed provides approximately 20 to 25 dBA of noise reduction in interior spaces.

In exterior noise environments ranging from 60 dBA L_{dn} to 65 dBA L_{dn}, interior noise levels can typically be maintained below City standards with the incorporation of an adequate forced air mechanical ventilation system in each residential unit. Preliminary calculations indicate that this measure would be applicable to residential units located on the west, north, and east façades of the residential buildings. Standard dual-pane thermal insulating windows/doors with a minimum rating of STC 28, and the incorporation of the an adequate forced air mechanical ventilation system, would likely be sufficient to reduce interior noise levels to 45 dBA L_{dn} or less at residential units located on the south façades of the residential buildings.

The following available measures should be considered during final design to reduce interior noise levels to acceptable levels:

- Provide a suitable form of forced-air mechanical ventilation, as determined by the local building official, for units throughout the site, so that windows can be kept closed at the occupant's discretion to control interior noise and achieve the interior noise standards.

- Confirm the final specifications for noise insulation during final design of the project. In addition to sound-rated windows and doors, other treatments may include, but are not limited to; sound rated exterior wall construction methods, acoustical caulking, insulation, acoustical vents, etc. The results of the analysis, including a description of the

necessary noise control measures, should be submitted to the City along with the building plans and approved prior to issuance of a building permit.

Noise at Off-Site Receptors. Noise resulting from the construction and operation of the project may also impact nearby noise sensitive receivers, particularly residences north and northeast of the site. The construction of the project is expected to substantially increase noise levels over a temporary basis at nearby sensitive land uses. Construction activities can generate considerable amounts of noise, especially during earth-moving activities when heavy equipment is used. The typical range of maximum noise levels would be 80 to 90 dBA L_{max} at a distance of 50 feet (see Table 6). Hourly average noise levels generated by construction are about 81 to 88 dBA L_{eq} measured at a distance of 50 feet from the center of a busy construction site. Hourly average construction noise levels associated with the erection of the proposed senior assisted-living facility, such as hammer- and drilling-related noise, range from approximately 63 to 71 dBA at a distance of 50 feet. The noise levels associated with construction of the buildings would be substantially less than the noise levels associated with grading and pavement activities during project site preparation. Construction-generated noise levels drop off at a rate of about 6 dBA per doubling of distance between the source and receptor. Shielding provided by barriers or structures can provide an additional 5 to 10 dBA noise reduction at distant receptors.

Noise impacts resulting from construction depend on the noise levels generated by various pieces of construction equipment, the timing and duration of noise generating activities, and the distance between construction noise sources and noise sensitive receptors. Construction noise impacts primarily occur when construction activities occur during noise-sensitive times of the day (early morning, evening, or nighttime hours), the construction occurs in areas immediately adjoining noise sensitive land uses, or when construction durations last over extended periods of time. The highest noise levels would be generated during demolition, excavation, grading, and foundation construction. Noise generated during the construction of the proposed structures is generally lower as less heavy construction equipment is required to complete the task. Once construction moves indoors, minimal noise would be generated at off-site locations.

Reasonable regulation of the hours of construction, as well as regulation of the arrival and operation of heavy equipment and the delivery of construction material, are necessary to protect the health and safety of persons, promote the general welfare of the community, and maintain the quality of life. It is assumed that construction activities will be conducted in accordance with the provisions of the Cotati General Plan, which prohibits construction work between the hours of 7:00 am and 7:00 pm on weekdays and 9:00 am and 5:00 pm on Saturdays (if allowed through specific project conditions of approval). No construction shall occur on Sundays or holidays. Additionally, the "best practices" for control of construction noise, as described in Action N 1h should be implemented in order to reduce construction noise levels to maximum extent feasible.

Noise resulting from project-generated traffic would not be expected to substantially increase ambient noise levels in the area. Typically, such facilities generate a relatively low amount of vehicle trips, and when compared to the existing traffic volumes on the roadways serving the project site, existing traffic noise levels would not be expected to be substantially increased over a permanent basis. For reference, a doubling in traffic volumes would be required before there is 3 dBA increase in noise levels, which would be perceived as a just detectable increase in noise.

The proposed assisted-living facility may, on occasion, require emergency vehicle assistance, which may include the use of a siren. At a distance of approximately 50 feet, sirens could reach levels of 92 to 94 dBA L_{max}. While these levels could be considered to be excessive, they would be infrequent and would be in response to emergencies. Other less significant sources of noise resulting from the operation of the project could include mechanical equipment, such as heating, ventilation, and air conditioning systems, deliveries, and parking lot operations. The placement of mechanical equipment should be considered carefully in order to minimize noise at adjacent residential properties. It appears that the locations of the service courtyard and proposed parking areas have been thoughtfully selected in order to maximize the separation distance from these sources of noise from existing receptors in the project vicinity.

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This concludes our letter. Please feel free to contact me with any questions.

Sincerely,

Michael S. Thill
Principal Consultant
ILLINGWORTH & RODKIN, INC.

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