a. Expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less than Significant Impact with Mitigation Incorporated. Impacts related to construction and operation of the proposed Project are discussed separately below.

Construction

Construction activities related to development of the Project would occur over several months. Construction activities would cause short-term elevated noise levels at the surrounding residences. Construction related noise would occur with the inclusion of construction equipment such as concrete mixers, bulldozers, backhoes, and heavy trucks. Table J below reflects noise levels for construction equipment that would be representative of equipment utilized for this proposed Project.

Table J: Construction Noise Levels at Noise Sensitive Uses

Equipment	Noise Level Based on Distance from Activity (L_{eq} dBA)			
	50 feet	100 feet	500 feet	1000 feet
Ground Clearing/Demolition	84	78	64	58
Excavation	88	82	68	62
Roadway Base Construction	88	82	68	62
Paving and Site Cleanup	84	78	64	58

Source: Federal Transit Agency (FTA), Transit Noise and Vibration Impact Assessment (2006) and EPA.

Based on the types of construction activities and equipment required for the proposed Project, noise levels at 50 feet from the center of construction activities would generally range from 84 to 88 dBA during peak periods. Because not all of the equipment would be operating at the same time or for the entire day, the noise level from project construction would be substantially lower. In addition, any increase in the background noise level due to project construction would be temporary. Significant noise impacts would be avoided by the limiting noise-generating construction activity to within the hours permitted by City's Municipal Code (i.e., not permitted between 10:00 PM to 7:00 AM on weekdays or between 5:00 PM and 8:00 AM on Saturday or anytime on Sunday or federal holidays). In addition, measure **NOI-1** is proposed to reduce temporary construction-related noise impacts to less than significant levels.

NOI-1 Construction noise would be temporary and limited to the duration of the planned roadway construction activities. The following noise control measures will also be incorporated into the Project contract specifications in order to minimize construction noise effects:

- All noise-producing project equipment and vehicles using internal combustion engines will be equipped with mufflers, air-inlet silencers where appropriate, and any other shrouds, shields, or other noise-reducing features in good operating condition that meet or exceed original factory specifications. Mobile or fixed "package" equipment (e.g., arc-welders, air compressors) will be equipped with shrouds and noise control features that are readily available for that type of equipment.

- All mobile or fixed noise-producing equipment used on the Project that is regulated for noise output by a local, state, or federal agency will comply with such regulations while in the course of project activity.
- Electrically powered equipment will be used instead of pneumatic or internal combustion powered equipment where feasible.
- Material stockpiles and mobile equipment staging, parking, and maintenance areas will be located as far as practicable from noise-sensitive receptors (i.e., residences on the north side of Limonite Avenue near the eastern and western boundaries of the Project area).
- Construction site access road speed limits will be established and enforced during the construction period.
- The hours of construction, including maintenance activities and soil or material transport, will be restricted to the periods and days permitted by the City noise ordinance. Noise-producing project activity will comply with local noise control regulations affecting construction activity or obtain exemptions there from.
- The use of noise-producing signals, including horns, whistles, alarms, and bells will be for safety warning purposes only.
- The onsite construction supervisor will have the responsibility and authority to receive and resolve noise complaints. Prior to the start of construction, the City shall develop and advertise a clear appeal process for property owners and occupants that will allow for the timely resolution of noise problems that cannot be immediately solved by the site supervisor.

Operation

Figure 7-5 in the Noise Element of the General Plan shows the 60 CNEL contour approximately 800 feet from the centerline of Limonite Avenue (both north and south of the roadway) which encompasses the residential uses in the northeastern and northwestern portions of the Project area. Figure 7-6 of the Noise Element indicates the 60 dBA CNEL contour will expand to approximately 1,100 feet from the centerline of Limonite Avenue at buildout (year 2035) conditions analyzed as part of the General Plan. These conditions assumed widening Limonite Avenue to 6 lanes sometime before buildout. Under these conditions the 70 dBA CNEL contour would expand to approximately 250 feet from the centerline of Limonite Avenue both north and south of the roadway.

The noise assessment concluded the noise impacts of the proposed Project were no greater than those identified in General Plan EIR and as addressed in City Noise Element and Noise Ordinance. The existing “worst case” sensitive receptor locations are at the eastern end of Project area where single family homes are immediately adjacent to the road ROW. Table K shows that ambient noise levels already exceed City standards, as discussed in the 2017 General Plan EIR. The EIR also concluded that future noise impacts along major roadways like Limonite Avenue would continue to be significant and that mitigation along the entire roadway was considered infeasible due to physical limitations. It should be noted that the “worst case” General Plan assumption was the eventual expansion of

Limonite Avenue to 6 lanes whereas current project is expansion to 4 lanes, therefore noise impacts of the Project would be less than those shown in Table K.

Table K: Estimated Long-Term Noise Level Changes along Limonite Avenue

Timeframe	ADT	Centerline to 70 CNEL (feet)	Centerline to 65 CNEL (feet)	Centerline to 60 CNEL (feet)	CNEL 50 feet from centerline of outermost lane
Existing (2015)	20,765	176	379	817	77.5
Buildout (2035)	33,503 (+61%)	245	527	1,135	78.6 (+1.1)

Source: Tables 12.D and 12.G, 2017 General Plan EIR, Section 4.12, *Noise*. Limonite Avenue between Bain St. and Collins Street.

It should also be noted that future residential land uses on currently vacant land can be mitigated on a case by case basis by requiring site specific mitigation. For example, the EIR for the Paradise Knolls Specific Plan that will eventually construct hundreds of new homes on the Paradise Knolls Golf Course property proposed a number of mitigation measures (i.e., walls, setbacks) for units along Limonite Avenue to reduce noise impacts from roadway traffic to less than significant levels.

The Project noise assessment indicates that implementation of the proposed Project would increase noise level at sensitive receivers by about 1 dB CNEL over the existing and opening year CNEL. While the existing and opening year without project noise levels currently exceed the City's 60 dBA CNEL land use compatibility standard for single family residences, the relative increase associated with implementation of the proposed Project would not result in a significant impact since the anticipated change over ambient levels would be on the order of 1 to 2 dB which is generally not perceptible. Therefore, traffic noise impacts associated with implementation of the proposed Project would be less than significant.