

**ADDENDUM TO GREENBRIAR DEVELOPMENT PROJECT ENVIRONMENTAL
IMPACT REPORT (SCH #2005062144)**

An application for Northlake Phase 1 – Village 14 entitlements (P22-023) was submitted on April 19, 2022. Tier 1 entitlements (e.g., General Plan amendment) for the Greenbriar Development Project (now known as Northlake) were approved by the City on January 29, 2008 (P05-069), along with certification of the Greenbriar Development Project Final Environmental Impact Report (EIR) (SCH # 2005062144). Subsequent Tier 2 entitlements, including a Tentative Subdivision Map, were approved on May 30, 2017 (P11-093), concurrently with an Addendum to the Greenbriar Development Project Final EIR (2017 Addendum). The City approved a Minor Tentative Map Amendment (Z18-059) on June 28, 2018, concurrently with a second Addendum to the Final EIR (2018 Addendum). A third Addendum to the 2008 Final EIR evaluated Phase 2 entitlements (P18-050). This addendum to the 2008 Final EIR evaluates entitlements sought for the Northlake Phase 1 – Village 14 Project, which include a conditional use permit to allow detached single-family homes, a PUD schematic plan amendment, and a tentative map.

The City of Sacramento, Community Development Department, has reviewed the proposed Northlake Phase 1 – Village 14 entitlement application and, on the basis of the whole record before it, has determined that there is substantial evidence that the Northlake Phase 1 – Village 14 entitlement application would not have a significant effect on the environment beyond that which was evaluated in the Greenbriar EIR. The application requires only minor technical changes that do not warrant preparation of a subsequent EIR.

This Addendum to the certified EIR has been prepared pursuant to Title 14, Section 15164 of the California Code of Regulations; and the Sacramento Local Environmental Regulations (Resolution 91-892) adopted by the City of Sacramento. A copy of this document, the certified EIR and all supporting documentation may be reviewed on the Community Development Department environmental document website at www.cityofsacramento.org/Community-Development/Planning/Environmental/Impact-Reports and at the City of Sacramento, Community Development Department, Planning Division, 300 Richards Boulevard, Sacramento, California 95811.

Date: 11-03-2022

By: Scott Johnson

Project Location: The portion of the Northlake project to be developed as Village 14 encompasses approximately 27.2 acres located southwest of the intersection of State Route 70/99 (SR 70/99) and Elkhorn Boulevard, in the North Natomas area of the City of Sacramento. The Northlake project site is bordered by agricultural and rural residential land uses to the west and north, I-5 and agricultural lands to the south, and SR 70/99 and a new residential community currently under development within North Natomas to the east and south. Regional access to the project site is provided from SR 70/99 and I-5. Local access to the project site is provided by Elkhorn Boulevard.

Existing Plan Designation and Zoning: The 2035 General Plan designations for the Project site are Suburban Neighborhood Low Density (SNLD), Suburban Neighborhood Medium Density (SNMD), Suburban Neighborhood High Density (SNHD), Urban Neighborhood Low Density (UNLD), Parks and Recreation (PR), Waterways (W), Suburban Center (SC), and Regional Commercial Center (RCC). The zoning designations for the site are Single-Unit Dwelling (R-1-PUD), Single-Unit or Duplex Dwelling (R-1A-PUD), Multi-Unit Dwelling (R-2B-PUD), Multi-Unit Dwelling (R-3-PUD), Multi-Unit Dwelling (R-3A-PUD), Shopping Center (SC-PUD), Limited Commercial (C-1-PUD), and Agricultural-Open Space (A-OS-PUD).

Project Background: The Greenbriar Development Project was approved by the City Council in January 2008. In May 2017, the City approved modifications to the previously approved project, along with next stage entitlements, including a Development Agreement, Tentative Master Parcel Map, Tentative Subdivision Map for Phase 1, Tentative Map Design Deviations, and Site Plan and Design Review with deviations for the proposed tentative maps. As originally approved, the project included 3,473 low, medium, and high-density residential units and 48.4 acres of commercial development.

The Project as modified includes mixed-use residential and commercial development centered on a common lake/detention basin, as well as a conservation strategy for preservation of habitat and benefits to special-status wildlife in the Natomas Basin. In addition to the project's conservation goals, the purpose of the project is to create a mixed-use neighborhood through the development of retail and commercial uses, multifamily attached homes, and high-density single-family detached homes.

The project promotes the use of public transportation by incorporating a light rail station at the core of development along the planned Downtown-Natomas-Airport line, which would bisect the project site from east to west along the planned extension of Shore Vista Way.

In June, 2018, the City approved a minor modification to the approved Phase 1 Tentative Map to remove the alley-loaded villages on the north side of Shore Vista Way and re-align various lot lines to ensure the same housing product type would face both sides of most streets in Phase 1. This approval reduced the number of residential units in Phase 1 from 1,489 to 1,363. In 2019, the City approved a General Plan Amendment, Rezone, PUD Schematic Plan Amendment, Tentative Master Parcel Map, and Tentative Subdivision Map for Greenbriar Phase 2. The Phase 2 unit count included 1,369 dwelling units, for a combined total of 2,732 units.

Project Changes Subject to Addendum: The application currently before the City (P22-023) requests a Conditional Use Permit to allow detached single-family housing, a PUD Schematic

Plan Amendment, and a Tentative Map for Northlake Phase 1 – Village 14. While the land use plan for Northlake Phase 1 – Village 14 is similar to the previously approved PUD, the requested entitlements propose to reduce the size of a shopping center and propose additional housing units in its place.

The single-family lots would be approximately 41' x 90' consistent with Northlake Villages 8 and 9. Setback requirements are consistent with the approved PUD Design Guidelines - Exhibit 11 and shown on the tentative map. A portion of the Shopping Center would be retained on 7.5 net acres within a re-configured Lot D. This plan also includes an eastern extension to Eventide Avenue at the northwest corner of Lot B Community Park. As part of this project, Lot B has been reduced from 12.4 net acres to 12.2 net acres. A portion of the existing bike trail and a water line easement impacted by the proposed Eventide Avenue extension would be relocated as part of this project. See Figure 1. The application does not include a request for approval of house plans.

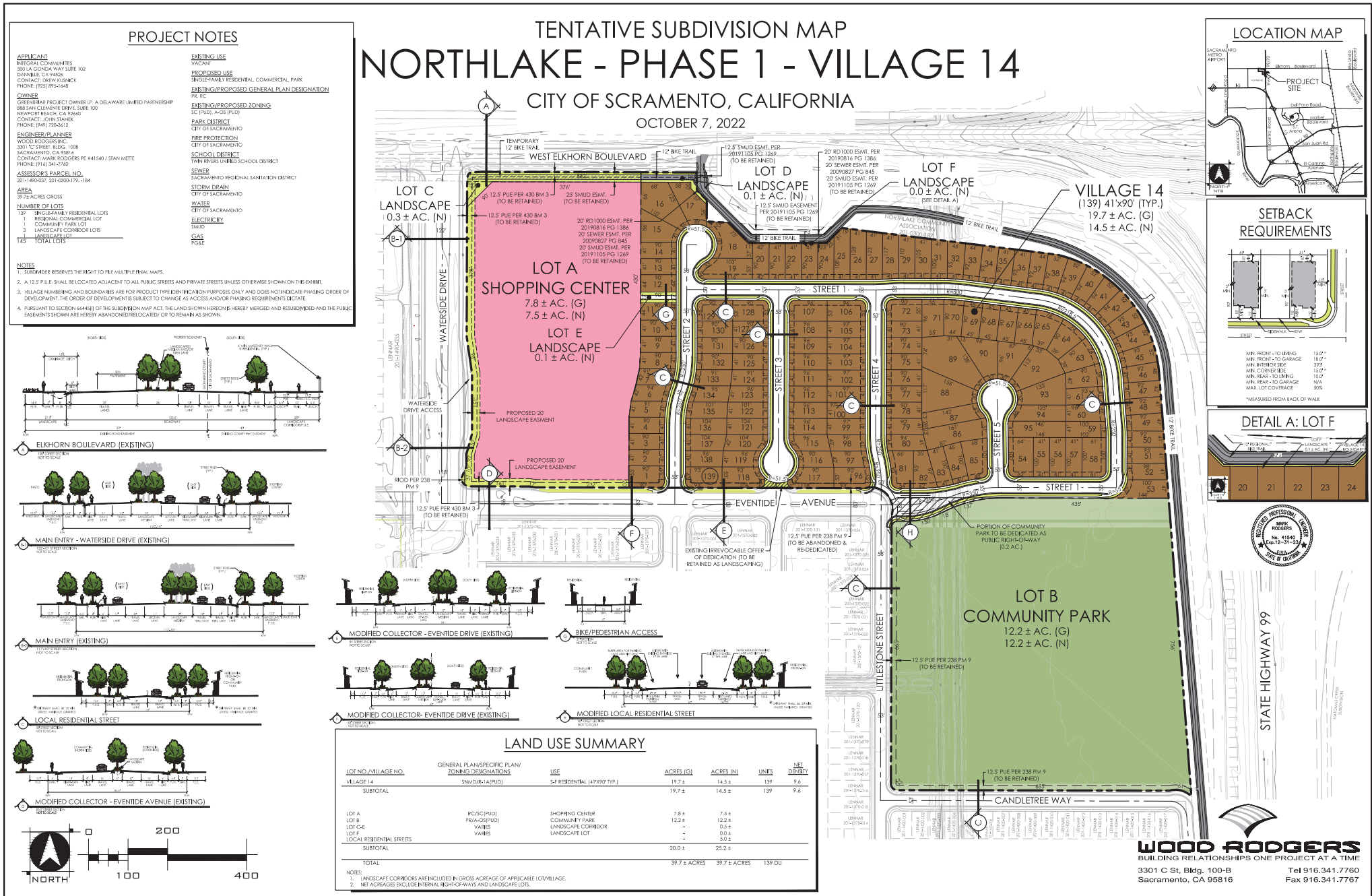
The 2035 General Plan Designation for the site is Regional Commercial (density is 32-80 du/ac) and is zoned SC-PUD (maximum density 30 du/ac). This application does not propose change in either designation. However, because of an inconsistency between the allowed general plan and zoning density ranges, the applicant is requesting approval of this project with an Interim Zoning Consistency finding that “approval of the project would not interfere with the long-term development of the area consistent with the General Plan,” per 2035 General Plan Land Use Policy LU 1.1.7.

DISCUSSION

Pursuant to CEQA Guidelines section 15164, subdivision (a), a lead agency shall prepare an addendum to a previously certified EIR if some changes or additions are necessary, but none of the circumstances identified in CEQA Guidelines Section 15162 calling for preparation of a subsequent EIR is present. An addendum need not be circulated for public review. (CEQA Guidelines, section 15164, subd. (c).) The standards set forth in CEQA Guidelines section 15162 as they relate to the project are as follows:

1. **No substantial changes are proposed in the project which would require major revisions of the EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects.**
2. **No substantial changes have occurred with respect to circumstances under which the project was undertaken that would require major revisions of the EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects.**
3. **No new information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the EIR was certified as complete, shows any of the following:**
 - a. **The project will have one or more significant effects not discussed in the EIR.**

Figure 1.



- b. **Significant effects previously examined will be substantially more severe than shown in the EIR.**
- c. **Mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative.**
- d. **Mitigation measures or alternatives which are considerably different from those analyzed in the EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measures or alternative.**

Section 15162 provides that the lead agency's role in the project approval is completed upon certification of the EIR and approval of the project, unless further discretionary action is required. The applicant's request includes discretionary entitlements, and review pursuant to Section 15162 is appropriate.

ANALYSIS:

The focus of review under Section 15162 is whether there has been a substantial change in the project that would result in major revisions to the previously certified EIR due to the involvement of new significant impacts, whether new significant effects have been identified as a result of a change in circumstances, and whether substantial new information shows that the project will have new or more severe impacts. The discussion below includes technical areas of review included in the 2008 EIR, with a focus on whether the City has identified any new significant effects as a result of proposed project changes.

The application at issue proposes to reduce the amount of commercial development and increase the amount of residential development, as compared to current entitlements approved to date for the Greenbriar/Northlake development. Prior approvals for the project reduced the number of residential units from 3,473 residential units as analyzed in the 2008 EIR down to 2,732 units. Thus, the analysis considers whether an increase of 139 units in addition to the 2,732 currently entitled units and reduction in commercial uses to 7.5 acres would result in new significant effects not previously analyzed in the EIR. While the current application would result in a change in the project, the changes are not substantial and, as demonstrated in the discussion below, would not result in either new significant effects or an increase in the severity of environmental effects already evaluated in the prior CEQA document for the project.

Aesthetics

Aesthetics is addressed in Section 6.7 of the Draft EIR. No substantial changes to the existing setting have occurred since certification of the EIR. The project site remains undeveloped except insofar as development of other areas of the project site has begun, consistent with what was evaluated in prior rounds of environmental review. Adjacent areas east of State Route 70/99 and

south of Interstate 5 have continued to develop with residential uses since 2008, while adjacent areas to the north and west of the site remain undeveloped. The Metro Air Park development to the west has continued to develop as planned.

The analysis in the Draft EIR under Impact 6.7-3 notes that the visual character of the Natomas Basin has been gradually changing from agricultural to suburban development, and because the project would convert a large area of land from visual open space to suburban development, the project would result in a significant impact to the visual character of the area. The Draft EIR concludes that, due to the scale and nature of the project, there is no feasible mitigation available to avoid conversion of the local viewshed from agricultural to suburban development, and therefore the impact is considered significant and unavoidable. The conclusions of the 2008 EIR regarding impacts of the proposed project due to degradation of the existing visual character or quality of the site and its surroundings remain valid and are unchanged, and there are no new circumstances that would result in substantially more severe impacts or new information that would require additional analysis with respect to degradation of visual character of the site and its surroundings.

The analysis in the Draft EIR also notes that lighting and reflective surfaces associated with the project could inadvertently cause light and glare for motorists on I-5 and SR 70/99 under day and nighttime conditions, and that the degree of nighttime darkness in the City of Sacramento would diminish, resulting in a significant impact. However, with implementation of Mitigation Measure 6.7-4, the impact would be reduced to less than significant. Mitigation Measure 6.7-4 would continue to remain applicable if the proposed Phase 2 entitlements are approved. The conclusions of the 2008 EIR regarding impacts of the proposed project due to light and glare remain valid and are unchanged, and there are no new circumstances that would result in substantially more severe impacts or new information that would require additional analysis with respect to degradation of visual character of the site and its surroundings.

Conclusion

No new circumstances have occurred nor has any substantially important new information been identified with respect to aesthetics and visual resources requiring new analysis or verification. Therefore, the conclusions of the 2008 EIR remain valid and approval of the proposed project would not result in new or substantially more severe significant impacts related to aesthetics or visual resources.

Agriculture

Agriculture is addressed in Section 6.11 of the Draft EIR. No substantial changes to the existing setting have occurred since certification of the EIR. The project site being developed by the applicant consistent with approved plans. Adjacent areas east of SR 70/99 and south of I-5 have continued to develop with residential uses, while adjacent areas to the north of the site remain undeveloped and are consistent with agricultural properties in the Natomas Basin that may be left fallowed, used for grazing activities, or cultivated with crops.

As described in the Draft EIR on p. 6.11-7, the project would result in the conversion of approximately 518 acres of Important Farmland to non-agricultural uses. The Draft EIR concluded that this impact would remain significant and unavoidable even after implementation of Mitigation Measure 6.11-1 and 6.6-2. Mitigation Measure 6.11-1 refers to implementation of Mitigation Measure 6.6-2, which calls for the project applicant to “coordinate with the City to identify appropriate lands to be set aside in permanent conservation easement at a ratio of one open space acre converted to urban land uses to one-half open space acre preserved and at a ratio of one habitat acre converted to urban land uses to one-half habitat acre preserved” in a manner consistent with the principles of the City/County Natomas Joint Vision Plan.

Mitigation Measure 6.6-2 was revised in 2017 as part of Greenbriar Phase 1 entitlements to reflect the fact that the County rescinded the 2008 Open Space Agreement/Memorandum of Understanding to allow Greenbriar to conserve open space and habitat land outside of Sacramento County. (Resolution No. 2015-0784) The 2017 Addendum concluded that the North Nestor Reserve, located near the Sacramento County line in Sutter County, along with the other off-site reserves within Sacramento County, provide equivalent benefits associated with preservation of agricultural land in the Natomas Basin, as contemplated in the 2008 EIR, because all reserve lands would be located within the Natomas Basin. There are no new circumstances resulting in new impacts or new information requiring additional analysis related to important farmlands. The conclusions regarding impacts to important farmland contained in the 2008 EIR and 2017 Addendum remain valid and no additional analysis is required.

The Draft EIR analysis on page 6.11-8 identifies potential conflicts with adjacent agricultural operations north of the project site as a significant impact. Mitigation Measure 6.11-3 requires the project applicant to notify all prospective residents and tenants within 500 feet of existing agricultural uses north of Elkhorn Boulevard with respect to the agricultural operations and potential conflicts that could occur. The Draft EIR concluded that even with implementation of this mitigation measure, the impact would remain significant and unavoidable.

While the Village 14 submittal proposes additional residential uses along Elkhorn Boulevard, these border an agricultural parcel which the project already proposed residential uses adjacent to, and existing Mitigation Measure 6.11-3 applies equally to the newly proposed residential uses. Thus, there are no changed circumstances resulting in new or substantially more severe impacts or new information requiring additional analysis related to agricultural buffers. The conclusions regarding impacts to agricultural preserves contained in the 2008 EIR remain valid and no further analysis is required.

Mitigation Measures 6.11-1 (as amended in the 2017 Addendum) and 6.11-3 would continue to remain applicable if the proposed project were adopted.

Conclusion

No new circumstances have occurred nor has any substantially important new information been found with respect to agriculture and forestry resources requiring further analysis or verification. Therefore, the conclusions of the 2008 EIR and 2017 Addendum remain valid and approval of the proposed project would not result in new or substantially more severe significant impacts to agriculture and forestry resources.

Air Quality

The November 2006 Recirculated Draft EIR analyzed air quality impacts of construction and operation of the proposed project. Changes in the regulatory setting since the prior environmental review was conducted would not result in new or increased severity of impacts, because the project site and proposed land uses would be essentially the same as those which were previously analyzed. The 2006 Recirculated Draft EIR provided air quality monitoring data from 2003-2005 for multiple monitoring locations near the plan area. The 2017 Addendum concluded that then-current air quality conditions in the plan area were similar to those at the time of the 2006 Recirculated Draft EIR, but provided updated monitoring and attainment designations (2017 Addendum, Table AQ-1, Table AQ-2.)

The proposed project would result in emissions of criteria air pollutants and precursors during construction and operation. Short-term construction emissions were evaluated in the 2006 Recirculated Draft EIR under Impact 6.2-1. Construction-generated emissions of NO_x and PM₁₀ and ozone would result in significant impacts. Mitigation Measure 6.2-1 identified several requirements that would result in a 20 percent reduction in NO_x and a 45 percent reduction in visible emissions from heavy duty diesel equipment, and reduction of fugitive dust emissions by up to 75 percent. However, daily construction emissions were projected to exceed the SMAQMD's significance criteria, even after application of all feasible measures, and the impact was considered significant and unavoidable.

Long-term operational emissions of ROG, NO_x, and PM₁₀ were evaluated under Impact 6.2-2 in the 2006 Recirculated Draft EIR. Operational emissions would exceed SMAQMD's significant threshold of 65 lb/day. The 2006 Recirculated Draft EIR found that operations of the project would also result in an increase in vehicle miles traveled (VMT) and associated mobile-source emissions that could conflict with SMAQMD's air quality planning efforts, and therefore result in a significant adverse incremental effect on the region's ability to attain and/or maintain the CAAQS. The impact was identified as significant. Mitigation Measure 6.2-2 requires the implementation of an Air Quality Mitigation Plan (AQMP) to reduce operational emissions by a minimum of 15 percent. The impact would remain significant and unavoidable, even with application of a 15 percent reduction.

As part of the 2018 approval of modifications to the Phase 1 Tentative Master Parcel Map and Tentative Subdivision Map, the original 2008 AQMP was updated to reflect changes in the project site plan. As a result of the revised density and other minor reorientation of some of the lots, some AQMP measures no longer applied to the project. To compensate for the loss of mitigation credits that would occur with removal of these measures, the AQMP analysis was updated to include an additional measure (Measure 28) that would require the applicant to implement onsite solar systems to provide 12.5 percent of the project's total electricity needs.

Impact 6.2-3 in the 2006 Recirculated Draft EIR addressed potential effects from carbon monoxide (CO) emissions. Based on modeling conducted, per SMAQMD's screening procedures, the predicted local mobile-source CO concentrations would not exceed the 1-hour or 8-hour CAAQS, and the impact was therefore considered less than significant. The 2018

Addendum concluded that, with this revision to the AQMP, the project as revised would achieve a 16.27% reduction in operational air quality emissions, exceeding the required 15% reduction. (See Attachment A, Ascent Memo.) The 2018 Addendum further found that the changes to mitigation measure 6.2-2 to reflect the updated AQMP would not result in new significant environmental effects or a substantial increase in the severity of previously identified significant effects.

The City has reviewed the proposed Village 14 entitlements and concluded that the reduction in commercial acreage compared to what was originally contemplated in the 2018 AQMP would mean that AQMP measures that apply to commercial land uses only (i.e., Measures 1 and 13) would not be as effective as previously calculated. Notwithstanding this reduction in effectiveness, the AQMP requirement of a 15% reduction in emissions would still be achieved.

Referencing the 2018 AQMP, Measure 1 achieved 0.34 reduction credits and Measure 13 achieved 0.27 reduction credits for a combined total of 0.61 reduction credits. Although commercial land would not be eliminated, and presumably reduction credits associated with Measures 1 and 13 would still apply to some degree, eliminating them from the overall calculation of reduction credits would result in a revised total AQMP reduction credit of 15.66 (i.e., 2018 AQMP total credit of 16.27 – 0.61 = 15.66). Thus, even with the re-designation of 19.7 acres of commercial land to residential land, the AQMP measures outlined in the 2018 AQMP would continue to achieve the required 15 reduction credits. Further, these and all measures in the 2018 AQMP would continue to be required of the project and enforced through Mitigation Measure 6.2-2, and the City's conditions of approval. (See Attachment A, Ascent Memo.)

The proposed project would consist of similar land uses and intensity levels compared to the previously-approved project, with an overall reduction in residential and commercial uses between 2008 and current entitlements. Further, due to declining emissions factors in the statewide vehicle fleet mix, emissions of criteria pollutants and CO estimated for the proposed project would likely be less than the previously-estimated emissions and would not result in new or substantially more severe impacts. In addition, air quality significance criteria in the latest guidance from SMAQMD have not changed substantially since the EIR was certified. Therefore, the conclusions in the 2006 Recirculated Draft EIR remain valid and no further analysis is required.

Exposure of sensitive receptors to toxic air contaminant (TAC) emissions was addressed in the 2006 Recirculated Draft EIR under Impact 6.2-4. A health risk assessment of exposure to TACs for future residents along the margins of the project closest to freeways demonstrated that the project would not result in a substantially increased health risk, and the operational exposure was considered less than significant. The 2006 Recirculated Draft EIR concluded, however, that given that proposed on-site commercial land uses were not yet identified, and given the potential proximity of nearby sensitive receptors, exposure of nearby on-site receptors to mobile-source TACs associated with commercial and other activities on the site would be considered potentially significant. Mitigation Measure 6.2-4 required the implementation of a site-specific plan to reduce TAC emissions from diesel equipment and heavy trucks. The impact was

determined to be significant and unavoidable, based on the uncertainty associated with on-site commercial land use activities and proximity of sensitive receptors to such uses.

The proposed project would consist of nearly identical (but slightly less intense) land uses compared to the previously-approved project, including a reduction in the on-site commercial acreage. Due to declining emissions factors in the statewide vehicle fleet mix, emissions of TACs would likely be reduced, and therefore estimated incremental exposure levels would likely be equal to or less than what was previously analyzed. In addition, air quality significance criteria in the latest guidance from SMAQMD have not changed substantially since the EIR was certified. No new or substantially more severe impacts are expected. Therefore, the conclusions in the 2006 Recirculated Draft EIR remain valid and no further analysis is required.

Exposure to odor emissions was addressed under Impact 6.2-5 in the 2006 Recirculated Draft EIR. The 2006 Recirculated Draft EIR found that certain aspects of project operations could result in the frequent exposure of on-site receptors to substantial objectionable odor emissions from on-site land uses. Implementation of Mitigation Measure 6.2-5, which calls for specific site design and review procedures during the permitting stages of the project to be implemented by the City reduce odor effects to a less-than-significant level. No new information or changes are known that would affect this conclusion. Therefore, the conclusions in the 2006 Recirculated Draft EIR remain valid and no further analysis is required.

Mitigation Measures 6.2-1, 6.2-2 (as revised in the 2018 Addendum), 6.2-4, and 6.2-5 were referenced in the 2006 Recirculated Draft EIR and 2018 Addendum and would continue to remain applicable if the proposed project is approved.

Conclusion

No new circumstances have occurred nor has any substantially important new information been found with respect to air quality requiring new analysis or verification. Therefore, the conclusions of the 2008 EIR remain valid and approval of the proposed project would not result in new or substantially more severe significant impacts to air quality.

Biological Resources

Biological Resources were addressed in Section 6.12 of the Draft EIR, and in the 2017 Addendum. Following coordination with the City and resource agencies, including the US Fish and Wildlife Service, (USFWS), California Department of Fish and Wildlife (CDFW), and the US Army Corps of Engineers (USACE), the City approved the Greenbriar Conservation Strategy (HELIX 2017) in 2018, as identified in the certified 2008 Final EIR. The project applicant also prepared a Biological Resources Evaluation in June 2013 (HELIX 2013a), and an updated Analysis of the Effects of the Greenbriar Development Project on the Natomas Basin Habitat Conservation Plan (HELIX 2016). Through that process, the project applicant refined the project's multi-species conservation strategy, as identified in the 2017 Addendum.

The analysis contained in the Draft EIR under Impacts 6.12-1, 6.12-2, 6.12-4, 6.12-5, 6.12-6, and 6.12-8 found that impacts to giant garter snake (GGS), Swainson's hawk, special-status plants, burrowing owl habitat, northwestern pond turtle, and loggerhead shrike nests were potentially significant. Potential impacts remain as described in the Draft EIR because no substantial changes in the site conditions have occurred since the Final EIR was prepared, other than development activities. The project would not result in any new significant impacts or in a substantial increase in the severity of impacts due to new information or changes in the project or in the circumstances in which the project would be implemented. Therefore, the conclusions in the Draft EIR remain valid and no further analysis is required.

As discussed in the 2017 Addendum, updated surveys and habitat evaluation since certification of the EIR revealed potential impacts to valley elderberry longhorn beetle, general nesting raptors, Aleutian Canada Goose, and tricolored blackbird, and the 2014 verified delineation revealed a slightly greater amount of jurisdictional waters of the U.S. in the development area. These were addressed in the 2017 Addendum, which concluded that, with the revised and enhanced Conservation Strategy and additional mitigation measures included in the 2017 Addendum that were equally as effective or more effective, any impacts of the project would be reduced to a less-than-significant level.

Mitigation Measures 6.12-1, 6.12-2, 6.12-3, 6.12-5, 6.12-5, 6.12-6, and 6.12-8 referenced in the Draft EIR and as revised in the 2017 Addendum, as well as Mitigation Measures 6.12-10, 6.12-11, 6.12-12, and 6.12-13 added in the 2017 Addendum would remain applicable if the proposed project were adopted. These measures are also integrated into the Greenbriar Conservation Strategy, and thus fully enforceable both as project components and mitigation measures.

Conclusion

The project would not result in any new significant impacts to biological resources that would require additional CEQA analysis. While additional information regarding the conservation measures for giant garter snake, burrowing owl, Swainson's Hawk, special-status plants, and western pond turtle, and habitat mitigation has been developed and incorporated into the Project description since certification of the 2008 EIR as part of the 2017 approvals, the 2017 Addendum concluded that the revised conservation measures would not result in new significant impacts or in a substantial increase in the severity of the previously identified impacts. No new circumstances have occurred nor has any substantially important new information been found with respect to biological resources requiring new analysis or verification. Therefore, the conclusions of the 2008 EIR and 2017 Addendum remain valid, and approval of the proposed project would not result in new or substantially more severe significant impacts to biological resources.

Cultural Resources

The Draft EIR addresses Cultural Resources in Section 6.13. Regional and local conditions remain the same as stated in the existing setting discussion of the 2008 Draft EIR.

The Draft EIR analysis addressed damage or destruction of significant documented cultural resources (Impact 6.13-1), as well as potential impacts to undocumented cultural resources (Impact 6.13-2). The Draft EIR concluded that no impacts would occur with respect to documented cultural resources. Potentially significant impacts to undocumented cultural resources that could be discovered during project construction were mitigated to a less-than-significant level by the implementation of Mitigation Measure 6.13-2. The Draft EIR addressed discovery of human remains in Impact 6.13-3. Implementation of Mitigation Measure 6.13-3 reduced this impact to a less-than-significant level. There are no new circumstances resulting in new impacts or new information requiring new analysis related to the disturbance of cultural resources or human remains. The conclusions regarding impacts to cultural resources contained in the 2008 EIR remain valid and no additional analysis is required.

Mitigation Measures 6.13-2 and 6.13-3 referenced in the Draft EIR would continue to remain applicable if the proposed project were adopted.

Conclusion

No new circumstances have occurred nor has any substantially important new information been found requiring new analysis or verification with respect to cultural resources. Therefore, the conclusions of the 2008 EIR remain valid and implementation of the proposed project would not result in any new significant impacts to cultural resources.

Geology and Soils

Geology and soils were addressed in Section 6.9 of the Draft EIR. Regional and local conditions remain the same as stated in the existing setting discussion in the Draft EIR.

The Draft EIR addressed the potential for ground shaking and liquefaction to occur, which could damage structures during strong earthquakes generated along faults in the region (Impact 6.9-1). The impact was considered potentially significant due to the project site's location in an area with moderate ground-shaking potential and alluvial soil types. Mitigation Measure 6.9-1 reduced the impact to a less-than-significant level. There are no new circumstances resulting in new impacts or new information requiring additional analyses related to seismic hazards. The conclusions regarding impacts due to exposure to seismic hazards contained in the 2008 EIR remain valid and no further analysis is required.

The Draft EIR analysis also addressed the potential for construction activities such as excavation, grading, and dewatering to result in localized erosion (Impact 6.9-2). The impact was found to be potentially significant during wind and rain events. Implementation of Mitigation Measure 6.9-2 reduced this impact to a level that is less than significant. The conclusions of the Draft EIR remain valid because the same types, quantities, and durations of construction activities would occur as previously evaluated. Therefore, no further analysis is required.

The Draft EIR addressed the potential for unstable soil conditions that could lead to subsidence or compression, due to project construction on soils with low strength, high shrink-swell

potential (Impact 6.9-3). This impact was considered potentially significant, due primarily to the presence of alluvial soils and high groundwater levels in the area, and potential dewatering activities that could occur during construction on the Greenbriar Project Site. These conditions have not changed. Implementation of Mitigation Measure 6.9-3 (referencing Mitigation Measure 6.9-1) reduced these impacts to a level that is less than significant. There are no new circumstances resulting in new impacts or new information requiring additional analyses related to unstable soil conditions or subsidence. The conclusions regarding this impact contained in the 2008 EIR remain valid and no further analysis is required.

The Draft EIR addressed the potential for damage associated with expansive soils (Impact 6.9-4). The impact was considered potentially significant due to soil types found on the project site. These conditions have not changed. Implementation of Mitigation Measure 6.9-4 (referencing Mitigation Measure 6.9-1) reduced this impact to less than significant. There are no new circumstances resulting in new impacts or new information requiring new analyses related to expansive soils. The conclusions regarding this impact contained in the 2008 EIR remain valid and no further analysis is required.

Mitigation measures 6.9-1, 6.9-2, 6.9-3, and 6.9-4 referenced in the Draft EIR would continue to remain applicable.

Conclusion

No new circumstances have occurred nor has any substantially important new information been found with respect to geology and soils requiring new analysis or verification. Therefore, the conclusions of the 2008 EIR remain valid and implementation of the proposed project would not result in any new significant impacts associated with geology or soils.

Greenhouse Gas

The regulatory setting has changed considerably since 2008 with respect to how climate change and GHG emissions are addressed in CEQA documents. The CEQA Guidelines were amended in 2010 to incorporate revisions to Appendix G and related text amendments to integrate analysis and mitigation of GHG emissions and climate change into the CEQA review process. In addition, the City of Sacramento adopted the 2035 General Plan and certified the 2035 General Plan Master EIR in 2015, which addressed GHG emissions that would result from build-out of the General Plan. The 2035 General Plan included various policies and programs to address climate change and reduce GHG emissions, which were consistent with the City's adopted Climate Action Plan (CAP). The City adopted the CAP in 2012, which sets a communitywide GHG reduction target for the year 2020, and establishes GHG emission reduction measures that are applicable to both existing development and new development projects. The CEQA Guidelines Amendments published in 2010 included provisions for tiering and streamlining the analysis of GHG emissions for projects that were determined to be consistent with a "plan for the reduction of GHG emissions" (CEQA Guidelines 15183.5). The City's CAP met the criteria for such a plan as specified in 15183.5(b) and, accordingly, City staff issued a guidance checklist on determining project consistency with the City's CAP.

Therefore, the 2017 Addendum included an evaluation of the project's GHG emissions during construction and operation. The 2017 Addendum concluded that the project under review would be consistent with the City's CAP Checklist, with incorporation of Mitigation Measure GHG-1. GHG emissions from the proposed project would not be considered cumulatively considerable, and any potential impacts related to global climate change would be less than significant.

The current project proposes only minor alterations to the land uses evaluated in the 2017 Addendum. These changes do not affect the conclusions regarding greenhouse gas emissions. The proposed project remains consistent with the applicable land use goals and FAR/density standards under the 2035 General Plan, and would continue to achieve the standards related to traffic calming, pedestrian/public transportation facilities, bicycle facilities, on-site renewable generation, and water efficiency outlined in Appendix B of the 2017 Addendum for the reasons stated therein. There are no new circumstances resulting in new impacts or new information requiring new analyses related to greenhouse gas emissions. Therefore, the conclusions regarding this impact contained in the 2017 Addendum remain valid and no further analysis is required.

Mitigation Measure GHG-1 referenced in the 2017 Addendum would continue to remain applicable.

Conclusion

No new circumstances have occurred nor has any substantially important new information been found with respect to greenhouse gas emission requiring new analysis or verification. Therefore, the conclusions of the 2017 Addendum remain valid and implementation of the proposed project would not result in any new significant impacts associated with greenhouse gas emissions.

Hazards and Hazardous Materials

Hazards and hazardous materials impacts are addressed in Section 6.8 of the Draft EIR. The description of the environmental setting has not changed substantially since the 2008 EIR was prepared.

The Draft EIR addressed the potential for health hazards caused by contaminated soil (Impact 6.8-1), as well as from soils contaminated by previously unknown underground storage tanks (USTs) or by other sources at the former Two Jakes Park Site (Impact 6.8-2). Impact 6.8-1 was found to be less than significant. Impact 6.8-2 was determined to be potentially significant; however, Mitigation Measure 6.8-2 reduced the impact to less than significant. Site conditions have not changed since preparation of the 2008 EIR. There are no new circumstances resulting in new impacts or new information requiring additional analyses related to hazardous materials. The conclusions regarding these impacts contained in the 2008 EIR remain valid and no further analysis is required.

The Draft EIR addressed potential safety hazards from proximity of Sacramento International Airport to the proposed project's land uses in Impact 6.8-3, which found that the project's

residential land uses would be compatible with safety standards outlined in the 1994 Sacramento International Airport Comprehensive Land Use Plan (CLUP). However, the Draft EIR concluded that the proposed parks and light rail station located within the overflight zone (a safety zone of the Sacramento International Airport) could result in densities that exceed 50 persons per acre at any one time, which would exceed density standards allowed by the CLUP and result in a significant impact absent mitigation. Implementation of Mitigation Measure 6.8-3 called for the City to request a consistency determination from the Sacramento County ALUC (SACOG) and to provide notice to override the CLUP prior to approving any CLUP override. The Draft EIR determined that this measure would not fully reduce this impact, and the impact would, therefore, remain significant and unavoidable. In 2008, the City certified the EIR and adopted Resolution 2008-600, which approved a CLUP override for the Greenbriar project, in compliance with Mitigation Measure 6.8-3 (City of Sacramento, 2008).

The 2017 Addendum considered the update to the CLUP; the December 2013 Airport Land Use Compatibility Plan (ALUCP) (the new term for what was previously referred to as a CLUP). The ALUCP contains similar overflight, safety and noise policies as the prior CLUP, and therefore the 2017 Addendum found that the conclusions of the Draft EIR are largely unchanged with respect to the provisions of the ALUCP if it were applicable to the proposed project site. Similarly, off-site mitigation activities would not result in a significant change in use from existing and historical agricultural uses, and therefore, would not be subject to ALUC review. Therefore, the 2017 Addendum determined that the conclusions regarding this impact contained in the 2008 EIR remain valid and no further analysis was required.

The Draft EIR also addressed the potential for airspace safety hazards associated with the project's water feature in Impact 6.8-4, which finds that the project's water feature, a 39-acre lake/detention basin, could attract large numbers of birds, thereby potentially creating a flyway between the site and the Sacramento River and interfering with existing aircraft flight routes, which would be a significant impact. Mitigation Measure 6.8-4, which called for development of a specific management plan for the 39-acre lake/detention basin in consultation with the Sacramento County Airport System and SACOG, reduced the impact to a less-than-significant level. Since certification of the Draft EIR, a Wildlife Hazards Mitigation Plan has been prepared and approved in consultation with the airport.

Mitigation Measures 6.8-2, 6.8-3, 6.8-4, and 6.8-6 were referenced in the Draft EIR, and would remain applicable if the proposed project were adopted.

Conclusion

No new circumstances since certification of the 2008 EIR, 2017 Addendum, and 2019 Addendum involving new significant impacts have occurred. Therefore, the conclusions of the 2008 EIR and 2017 Addendum remain valid and approval of the proposed project would not result in any new significant impacts related to hazards and hazardous materials.

Hydrology and Water Quality

Hydrology and Water Quality are addressed in Section 6.10 of the 2006 Recirculated Draft EIR. The environmental setting remains generally the same as stated in the 2006 Recirculated Draft EIR. Specific updates to the setting with respect to flooding were provided in the 2017 Addendum, as discussed below. No additional updates have occurred since 2017.

The 2006 Recirculated Draft EIR addressed water quality and erosion impacts related to construction and operation of the proposed project under Impact 6.10-1, and concluded that operation of the project would not result in any water quality or erosion impacts, whereas construction activities could result in sediment, erosion, and other nonpoint source pollutants in on-site stormwater, which would result a potentially significant impact. Implementation of Mitigation Measure 6.10-1 reduced impacts to a less-than-significant level. There are no new circumstances resulting in new impacts or new information requiring additional analyses related to water quality. The conclusions regarding these impacts contained in the 2008 EIR remain valid and no further analysis is required.

Potential exceedance of the drainage system capacity was analyzed under Impact 6.10-2 in the 2006 Recirculated Draft EIR, which concluded that the inclusion of a lake/detention basin component that is sized to meet the stormwater drainage needs of the project, along with improvements to Reclamation District 1000's pumping capacity as required under Mitigation Measure 6.5-5 (Public Services), would ensure this impact is less than significant. There are no new circumstances resulting in new impacts or new information requiring additional analyses related to drainage system capacity. The conclusions contained in the 2008 EIR remain valid and no further analysis is required.

Potential impacts due to on-site flooding hazards were addressed under Impact 6.10-4 in the 2006 Recirculated Draft EIR. The stormwater runoff collection system design as part of the proposed project would be adequate to protect the project site during major storms and flood events. Stormwater flows from off-site could cause localized flooding on-site, but the 2006 Recirculated Draft EIR explained that implementation of Mitigation Measure 6.10-4 would reduce this potential effect to less than significant. There are no new circumstances resulting in new impacts or new information requiring additional analyses related to on-site flooding. The conclusions contained in the 2008 EIR remain valid and no further analysis is required.

The 2006 Recirculated Draft EIR addressed on-site flooding risk from potential levee and dam failure under Impact 6.10-3, concluding that a short-term, significant unavoidable impact could occur due to the fact the U.S. Army Corps of Engineers (Corps) could no longer support its certification that the Natomas Basin levee system met criteria for 100-year flood protection. Mitigation Measure 6.10-3 required compliance with applicable Federal Emergency Management Agency (FEMA) and City building, design, and flood insurance regulations, as well as participation in a funding mechanism established by the Sacramento Area Flood Control Authority (SAFCA) or the City for the purpose of implementing levee improvements to provide 100-year flood protection or greater for the project site.

In December 2008, the Flood Insurance Rate Maps (FIRMs) for the Natomas Basin were remapped by FEMA. The area, which was previously understood to offer between 100-year and

500-year protection (Shaded X Zone) was reclassified as within the 100-year floodplain (AE Zone) after the Corps decertified the levee system protecting the Basin. This reclassification resulted in a de facto building moratorium in the Natomas Basin.

As discussed in the 2017 Addendum, the City passed an ordinance amending Chapter 15.104 of the Sacramento City Code relating to floodplain management regulations in 2015. The ordinance limited residential growth by calendar year. Rollover unit counts from unused allowance in a calendar year could be added to the allowed number for the following calendar year. In addition, projects that meet certain findings may exceed the cap established by the ordinance subject to City Council approval. The ordinance became effective in June 2015, after FEMA redesignated the Natomas Basin to A99.

The proposed project would be subject to the building permit limitations set forth by Chapter 15.104 of the Sacramento City Code. Moreover, Mitigation Measure 6.10-3 would still be applicable as the project area has been remapped to the A99 Zone. Participation in a funding mechanism established by SAFCA would still be feasible under the A99 Zone. SAFCA's Capital Consolidated Assessment District, established in April 2007, is expected to fund the local share of the NLIP project costs that are not funded by State or Federal funds. The conclusions contained in the 2008 EIR, therefore, remain valid, and no further analysis is required.

Mitigation Measures 6.10-1, 6.10-3, and 6.10-4 were referenced in the 2006 Recirculated Draft EIR analysis of the proposed project and would remain valid if the project were adopted.

Conclusion

No new circumstances involving new significant impacts have occurred. While there is new information available with respect to flood control, no new analysis or verification is required with respect to any associated impacts or mitigation measures. Therefore, the conclusions of the 2008 EIR remain valid and approval of the proposed project would not result in any new significant impacts related to hydrology or water quality.

Noise

Noise impacts were analyzed in Section 6.3 of the Draft EIR and cumulative noise impacts were addressed in the April 2007 Second Recirculated Draft EIR, Section 7.2.3. The analyses include noise impacts from project-generated construction, traffic-source noise from area roadways, and airport activities. Environmental conditions in the project area have not changed appreciably since the Draft EIR analysis was completed.

Short-term construction noise impacts were evaluated in Impact 6.3-1. The discussion noted that short-term construction-generated noise levels could exceed City of Sacramento Noise Code standards or result in a noticeable increase in ambient noise levels at existing nearby off-site sensitive land uses as well as on-site residences that are constructed and inhabited before other portions of the project are complete. This impact was considered potentially significant. Mitigation Measure 6.3-1 requires that construction operations be limited to the hours between 7

a.m. to 6 p.m. Monday through Saturday, and 9 a.m. to 6 p.m. on Sunday. With the implementation of this measure potential impacts would be a less than significant. The project as revised would remain substantially the same in terms of the land use types, street pattern, and on-site infrastructure requirements, and therefore impacts associated with short-term construction noise would be similar to those described in the Draft EIR. Mitigation Measure 6.3-1 would continue to apply.

Impact 6.3-2 described how sensitive receptors located in unincorporated Sacramento County would experience traffic generated noise levels in excess of the County's 60 dBA Ldn/CNEL standard along three of the five road segments and five of the receptors would experience an increase in traffic noise levels that is greater than 4 dBA. For these reasons, exterior noise levels produced by project-generated traffic noise would result in a significant impact at five existing residences in unincorporated Sacramento County. Implementation of mitigation measure 6.3-2 would reduce these noise levels, but a substantial increase could still result along Elkhorn Boulevard, where project implementation would result in an approximate 13.5 dB increase. As a result, the Draft EIR concluded that this impact would remain significant and unavoidable. The project as revised would remain substantially the same in terms of the land use types and patterns, street pattern, and on-site infrastructure requirements, although the increase in residential uses and reduction in commercial would result in less traffic noise due to a reduction in trips, as discussed below in the Transportation section. Therefore, it is anticipated that impacts related to noise would be similar to or less than those described in the Draft EIR and 2007 Second Recirculated Draft EIR.

Long-term stationary and area-source noise levels were evaluated in Impact 6.3-3. The proposed project would introduce new noise sources (public parks, retail, office, and commercial land uses) to the site that would alter noise levels on the site and surrounding area. The EIR concluded that impacts of these new noise sources on nearby receptors would be less than significant, given their distance and buffering from the project site. The project as revised would remain substantially the same in terms of the land use types and patterns, street pattern, and on-site infrastructure requirements, although with a reduction in the number of units. Therefore, it is anticipated that impacts related to area-source noise would be similar to those described in the Draft EIR and 2007 Second Recirculated Draft EIR.

Impact 6.3-4 addressed the compatibility of proposed residential and school uses with future on-site daily and hourly average noise levels. The Draft EIR concluded that with implementation of the proposed project, residential land uses (sensitive receptors) proposed on the project site would be exposed to future noise levels generated by area automobile traffic, and light rail trains and crossing signals that exceed applicable local exterior noise standards. Also, the interiors of residential land uses located along transportation routes would be exposed to interior noise levels that exceed applicable maximum interior noise level standards established by the City of Sacramento General Plan. Therefore, exposure of proposed residential land uses to noise generated by traffic would be a significant impact. The Draft EIR found that implementation of Mitigation Measure 6.3-4, which requires installation of noise barriers, would reduce interior and exterior noise to a less than significant level.

Because the Northlake – Village 14 proposal would include additional residential uses in proximity to existing roadways, a supplemental noise analysis was conducted by Bollard Acoustical Consultants (BAC) to analyze noise levels at the new residences, included here as Attachment B (2022 BAC Analysis). As indicated in Table 3 of the 2022 BAC Analysis, future traffic noise levels at the proposed community park would range from approximately 61 to 70 dB DNL, depending on proximity to Highway 99. This range of levels would comply with the City’s 70 dB DNL standard applicable to park uses. As a result, no additional noise mitigation measures would be warranted for the proposed park site.

As indicated in Table 3 of the 2022 BAC Analysis, future traffic noise levels at the exterior areas of the residences proposed within Village 14 would range from approximately 65 to 73 dB DNL. This range of levels would exceed the City of Sacramento 60 dB DNL noise standard applicable at the outdoor activity areas (backyards in this case) of new residential developments. This is consistent with the impact at residential uses previously identified in the 2008 EIR Impact 6.3-4.

Mitigation Measure 6.3-4i included in the Draft EIR requires site-specific acoustical analysis prior to issuance of building permits for residential development to ensure satisfaction of the City’s noise level standards. These analyses must include site-specific design requirements to reduce noise exposure of proposed on-site receptors to ensure noise levels meet the City’s standards. BAC utilized the methodology contained within the FHWA Model to predict the traffic noise attenuation that would result from the construction of solid noise barriers at the project site, consistent with Draft EIR Mitigation Measure 6.3-4i. The results of that review indicate that traffic noise barriers ranging from 6 to 10 feet in height, relative to backyard elevation, would reduce future traffic noise levels to comply with the City’s 60 dB DNL standard within backyards. Table 4 of the 2022 BAC Analysis shows the noise barrier heights required to reduce future traffic noise exposure to 60 dB DNL or less at residential backyard areas within this development. Figure 2 of the 2022 BAC Analysis shows the barrier locations.

Further, standard residential construction (e.g., stucco siding, STC 27 windows, door weatherstripping, exterior wall insulation, composition plywood roof), results in an exterior to interior noise reduction of at least 25 dB with windows closed and approximately 15 dB with windows open. Therefore, the BAC analysis concludes that, provided future traffic noise levels do not exceed 70 dB DNL at exterior building façades, standard construction would be adequate to ensure compliance with the City of Sacramento General Plan 45 dB DNL interior noise level standard.

Because the first-floor facades of the residences proposed nearest to Highway 99 and Elkhorn Boulevard would be shielded by the required noise barriers, future traffic noise exposure at all first-floor facades is predicted to be approximately 60 dB DNL. As a result, no construction upgrades would be required to achieve compliance with the City of Sacramento 45 dB DNL interior noise level standard within first-floor rooms of residences constructed within this development.

Second-floor facades would not be shielded by the required noise barriers. In addition, due to reduced ground attenuation at elevated second-floor positions, noise levels at those elevated facades tend to be approximately 3 dB DNL higher than levels at first-floor facades. Table 5 in

the 2022 BAC Analysis shows the predicted second-floor noise exposure and window/glass door upgrade requirements to achieve satisfaction with the City's 45 dB DNL interior noise standard. The BAC analysis recommends window and glass door assembly upgrades at the second-floor facades at the residences shown in Table 5 to reduce interior noise levels, consistent with City standards and Mitigation Measure 6.3-4i.

Impact 6.3-5 evaluates exposure of residential areas and schools to aircraft noise generated by aircraft overflights of the project site. The Draft EIR analysis concludes that sleep disruption would be infrequent, and an overflight easement disclosing that the project would be subject to sleep and speech disruption from aircraft overflights would be provided for residential areas within the overflight zone. The Draft EIR concluded that this is a less-than-significant impact. However, students at the elementary school could be exposed to noise generated by aircraft overflights that would result in speech and classroom disruption; this would be a significant impact. Following application of Draft EIR Mitigation Measure 6.3-5, however, the impact would be less than significant. The project as revised would remain substantially the same in terms of land use patterns, and therefore impacts associated with noise generated by aircraft overflight would be similar to those described in the Draft EIR.

Exposure of sensitive receptors or generation of excessive vibration levels is addressed in Draft EIR Impact 6.3-6. The Draft EIR concludes that short-term construction-generated vibration levels would exceed Caltrans recommended standard with respect to the prevention of structural damage for normal buildings and could exceed the federal transit administration's (FTA) maximum acceptable vibration standard with respect to human response for residential uses (i.e., annoyance) at on-site residential dwellings that are developed and inhabited before nearby construction is completed. This would be a potentially significant impact. Application of Mitigation Measure 6.3-6, however, would reduce the impact to a less than significant level. The project as revised would remain substantially the same in terms of types of construction equipment and construction activities, and therefore impacts associated with construction-generated vibration levels would be similar to those described in the Draft EIR.

Mitigation Measure 6.3-1, 6.3-2, 6.3-4, and 6.3-5 were referenced in the Draft EIR analysis of the proposed project and would remain valid if the project were adopted. Consistent with identified mitigation, the recommendations of the noise analysis would be implemented in project construction.

Conclusion

No new circumstances involving new significant impacts have occurred. While highway noise may result in exposure of certain proposed residences to noise levels that exceed City standards, this impact was previously identified in the 2008 EIR and existing Mitigation Measure 6.3-4i applied to the proposed residences would ensure that noise levels would be reduced to achieve City standards. Therefore, the conclusions contained in the Draft EIR would be unaffected by the proposed project changes, as confirmed by the analysis prepared by BAC (Attachment B). No new analyses or verifications are required with respect to any associated impacts or mitigation measures. Therefore, the conclusions contained in the noise analysis in the Draft EIR and

cumulative noise analysis in the 2007 Second Recirculated Draft EIR remain valid and no further analysis is required.

Public Services

The project site is served by the City of Sacramento Fire Department (SFD). Since the approval of the project, Station 43 has been put into service south of the project site at 4201 El Centro Road. Station 43 is approximately two miles south of the project site and the closest station to the project site. The next nearest fire station to the project site is Fire Station 30, located at the northeast corner of Regency Park Circle and Club Center Drive approximately 3 miles east of the project site and Fire Station 3, located at 7208 West Elkhorn Boulevard is approximately four miles west of the project site, on the opposite side of Sacramento International Airport from the project site.

The Draft EIR addresses impacts associated with fire and emergency services in Impact 6.5-1. The Draft EIR analysis of the project notes that, at the time of the Draft EIR preparation (2006), the City was planning to construct a new fire station to serve the project site and surrounding area, but the timing of construction and exact location of the fire station were unknown. Previously the response time to the site from the nearest fire station was estimated to be seven minutes, which was in excess of the optimal response time of 4.5 minutes noted in the Draft EIR. Because it was unknown whether adequate fire protection facilities would be in place at the time the first occupancy permit would be issued, the project could have resulted in residents living in an area where inadequate fire and emergency response services are provided. The Draft EIR determined that this would be a potentially significant impact. The Draft EIR included mitigation measures that would provide for financing and construction of a fire station to serve the project site. However, because of the uncertainties about location and timing of the opening of the fire station, the impact was considered to be significant and unavoidable.

As noted above, Station 43 has been constructed and placed in service since the approval of the original project. According to the Sacramento City Fire Department, Station 43 would be the most likely station to respond to the project site because of its easy access to the site from I-5. The 2017 Addendum concluded that the response time from Station 43 would not be at the optimal time, but would be within an acceptable range according to fire personnel (Lee, pers. comm. 2013). However, as reflected in the Findings of Fact approved with the Phase 1 entitlements, following publication of the Addendum, the Fire Department re-calculated its response times and determined that an additional fire station was no longer needed on the project site because fire unit travel times from Stations 30 and 43 via Shore Vista Way would be well within the 5:50 minute standard at 3:54 and 4:26 respectively. Therefore, the construction of a new fire station at 50% buildout is no longer a condition of approval and a funding mechanism is not included in the updated Greenbriar Financing Plan. Because the response times are even faster than the optimal response time of 5:50 minutes (and below the 4.5 minutes assumed in the prior EIR), the impact to fire services remains less than significant. No further analysis is required because the level of significance of impacts associated with fire and emergency services

described in the Draft EIR would be reduced to a less-than-significant level. Overall, impacts would be less than that described in the Draft EIR.

The Draft EIR addressed impacts associated with demand for police services in Impact 6.5-2. The Draft EIR notes that because the City would add personnel to the police department on an as-needed basis to meet service goals, the project would not result in the need to construct any new police facilities to serve the project (the construction of which could result in significant physical environmental impacts). The applicant's finance plan would ensure adequate funding is paid into a fee program that would ensure basic police services as development occurs; the project would not result in any substantial adverse impacts to police facilities and services. Therefore, the Draft EIR concluded that this impact would be considered less than significant. The proposed amendment to the project would result in additional residents on the site; however, the overall number of residences would still be well below the number assumed in the Draft EIR. Therefore, demand for law enforcement services would not be substantially different than the approved project. The conclusions in Draft EIR remain valid and no further analysis is required.

The Draft EIR addressed Impact 6.5-4 associated with schools on pages 6.5-8 to 6.5-9. The Draft EIR notes that school facilities currently serving the Natomas area, including the proposed elementary school site at the project site, would provide adequate school services to the project site. No additional facilities would be required. In addition, the project applicant would be required to pay development impact fees to the Twin Rivers Union School District. Payment of the development impact fees would provide the legally maximum required level of funding under State law, and would fully mitigate project-related school impacts. The Draft EIR analysis concludes that the project would result in less-than-significant impacts to school services. While the amended project would increase the number of residential units, the overall number of housing units would still be fewer than analyzed in the Draft EIR. As a consequence, fewer students would be generated by the amended project than were anticipated in the Draft EIR analysis. The conclusions in Draft EIR remain valid and no further analysis is required.

Conclusion

No new circumstances have occurred nor has any substantially important new information been found with respect to public services requiring new analysis or verification. Therefore, the conclusions of the 2008 EIR remain valid and implementation of the proposed project would not result in any new significant impacts associated with public services.

Recreation

The Draft EIR addressed impacts associated with parks and recreation in Impact 6.6-1. The Draft EIR concluded that residential development under the project would require 48.2 net acres of parks under the City's Quimby Act standards. As approved in 2008, the project would provide approximately 48.4 net acres of neighborhood and community parks. Therefore, the Draft EIR concluded that the project would provide sufficient parkland to meet the City's standards for parkland dedication, and thus would provide sufficient park facilities to meet demand. This impact was considered to be less than significant.

The project as amended and evaluated in the 2019 Addendum had fewer housing units and a different mix of densities than the approved project. Using the standards contained in Chapter 17.512 of the City Code to calculate the required parkland dedication, the amended project was then found to require 24.94 acres of neighborhood and community parkland. The parkland acreage dedicated under the amended project totaled approximately 25.79 acres (including 5 percent acreage credit per recreational amenity in Phase 1). The 2019 Addendum found that the impact conclusion contained in the Draft EIR remained valid, because the Project is satisfying its dedication requirements under the City's Quimby Act ordinance. The project relies on a combination of direct parkland dedication and an anticipated future request for partial parkland dedication credit. The approved Development Agreement grants Quimby credit for amenities planned within the Phase 1 Community Center pursuant to City Code. (City Code Title 17, Chapter 17.512).

No pertinent changes have occurred since the 2019 Addendum. While the number of residential units on the Village 14 site has increased by 139 units, the overall unit count on the Project site is less than originally analyzed in the Draft EIR and the Project would continue to satisfy its dedication requirements under the City's Quimby Act ordinance. Therefore, the impact would remain less than significant.

The Draft EIR also noted in Impact 6.6-2 that the project site is within a portion of the county that historically has been devoted to agriculture, but rapid urban development is replacing much of this open space. The proposed project would result in the conversion of approximately 577 acres of agricultural land to nonagricultural use in an area that already is experiencing substantial development and loss of open space. While the project would retain some areas of open space as habitat corridors, lake/detention basins, the conversion of agricultural land to urban development would result in the permanent loss of open space resources. The Draft EIR determined that this impact would be significant.

Mitigation measure 6.6-2 would require the project applicant to identify appropriate lands for set-aside as permanent conservation easements at a 0.5:1 acre ratio for open space and habitat. However, the Draft EIR determined that the partial offset of the open space conversion would not fully mitigate the impact, and the impact would remain significant and unavoidable. The Sacramento County Board of Supervisors voted on October 6, 2015, to rescind the 2008 Open Space Agreement/Memorandum of Understanding, to allow Greenbriar to conserve open space and habitat land outside of Sacramento County. (Resolution No. 2015-0784.) Mitigation Measure 6.6-2 has been revised accordingly, as described in the 2017 Addendum.

The North Nestor Reserve, located near the Sacramento County line in Sutter County, along with the other off-site reserves within Sacramento County, provide equivalent benefits associated with preservation of agricultural land in the Natomas Basin as contemplated in the 2008 EIR because all reserve lands would still be located within the Natomas Basin. The project as revised would remain substantially the same in terms of land use patterns, and therefore impacts associated with conversion of open space would be the same as described in the Draft EIR. Therefore, the conclusions regarding loss of open space contained in the Draft EIR remain valid and no further analysis is required.

Mitigation Measures 6.5-1 and 6.6-2 (as revised in the 2017 Addendum) were referenced in the Draft EIR analysis of the proposed project and would remain valid if the project were adopted.

Conclusion

No changes in circumstances would result in new or substantially more severe impacts on recreation and open space. The conclusions of the 2008 EIR remain valid and no further analysis is required for these topics. While the project as revised would remain substantially the same in terms of land use patterns and types, and would generate slightly less population than would the approved project, the project meets the parkland dedication requirements of the City under Chapter 17.512 of the City Code.

Transportation and Circulation

The 2007 Second Recirculated Draft EIR addressed impacts related to transportation and circulation, and revisions were made to portions of this analysis in the Final EIR. The 2007 Second Recirculated Draft EIR concluded that the project would result in significant impacts to study area intersections and roadway segments (Impacts 6.1-1 and 6.1-2). Mitigation measures described in the 2007 Second Recirculated Draft EIR and revised in the 2008 Final EIR would reduce the identified impacts to less-than-significant levels. The 2007 Second Recirculated Draft EIR also identified significant impacts to freeway ramps (Impact 6.1-3) and freeway mainline segments (Impact 6.1-4). Mitigation measures provided in the 2007 Second Recirculated Draft EIR and as revised in the Final EIR would reduce these impacts, but are beyond the control of the City to implement or are infeasible, and therefore impacts would remain significant and unavoidable.

Cumulative impacts to study area intersections and roadway segments (Impact 6.1-5 and Impact 6.1-6), as well as cumulative impacts to study area freeway ramps and freeway mainline segments (Impact 6.1-7 and Impact 6.1-8) are considered significant. Mitigation measures provided in the 2007 Second Recirculated Draft EIR and as revised in the Final EIR would reduce these impacts but are beyond the control of the City to implement, and therefore impacts would remain significant and unavoidable.

The 2007 Second Recirculated Draft EIR concluded that impacts to pedestrian and bicycle circulation would be potentially significant (Impact 6.1-9). Implementation of mitigation measures, including the revisions noted in the 2017 Addendum, would reduce these impacts to less-than-significant levels. Impacts to demand for public transportation are considered significant (Impact 6.1-10). Implementation of mitigation measures would reduce these impacts to less-than-significant levels.

The 2007 Second Recirculated Draft EIR concluded that construction-related transportation and circulation impacts would be potentially significant (Impact 6.1-11). Implementation of a construction traffic management plan, as revised in the 2019 Addendum, would reduce these impacts to a less-than-significant level. Mitigation Measure 6.1-11 requires that the required traffic management plan be subject to review by Caltrans, Sacramento County, and local

emergency services providers, with ultimate approval authority resting with the City of Sacramento Department of Public Works. With this mitigation, construction-related transportation and circulation impacts would be reduced to a less-than-significant level.

The 2007 Second Recirculated Draft EIR concluded that impacts associated with conformity with city parking requirements would be potentially significant (Impact 6.1-12). Implementation of a measure requiring a detailed parking plan would reduce these impacts to a less-than-significant level.

The 2007 Second Recirculated Draft EIR concluded that impacts associated the project site access would be potentially significant (Impact 6.1-13). Implementation of a measure requiring improved access along Shore Vista Way would reduce these impacts to a less-than-significant level.

The 2007 Second Recirculated Draft EIR concluded that safety impacts associated the internal circulation would be potentially significant (Impact 6.1-14). Implementation of a mitigation measure requiring traffic calming measures would reduce these impacts to a less-than-significant level.

The 2007 Second Recirculated Draft EIR concluded that impacts to emergency vehicle access could occur during construction and would be potentially significant (Impact 6.1-15). Implementation of a measure requiring coordination with City Development Services Department and emergency services departments would reduce these impacts to a less-than-significant level.

The project as revised would remain substantially the same as the approved project in terms of land use patterns. However, overall, trip generation would be reduced from that of the project as evaluated in the 2007 Second Recirculated Draft EIR and Final EIR because the revised project would have fewer housing units overall and less commercial area than the project examined in the 2007 Second Recirculated Draft EIR and 2008 Final EIR. As shown in the Trip Generation Summary prepared by Wood Rodgers (attached hereto as Attachment C), total average daily trips analyzed in the 2007 Second Recirculated Draft EIR were 39,947. Those trips were reduced as a result of project changes approved through 2019 down to 33,433 average daily trips. With the proposed Village 14 project, the reduction in commercial use will further reduce trips from the assumptions in the 2007 Second Recirculated Draft EIR down to 25,575 average daily trips. With these reduced trip volumes, there would be no new circumstances resulting in new impacts or new information requiring additional analyses related to transportation impacts. The conclusions regarding these impacts contained in the 2008 EIR remain valid and no further analysis is required.

Mitigation Measures 6.1-1a- 6.1-1i, 6.1-2a-6.1-2c, 6.1-3a-6.1-3c, 6.1-4a – 6.1-4e, 6.1-5a–6.1-5j, 6.1-6a – 6.1-6b, 6.1-7a – 6.1-7c, 6.1-8a – 6.1-8c, 6.1-9a-b, d-f, 6.1-10, 6.1-11 (as revised in the 2019 Addendum), 6.1-12, 6.1-13, 6.1-14, 6.1-15, and 6.1-9c (as revised in the 2017 Addendum) were referenced in the Draft EIR analysis of the proposed project and would remain valid if the project were adopted to the extent they apply to the Village 14 site.

The 2007 Second Recirculated Draft EIR evaluated transportation impacts using LOS, and not VMT. CEQA now requires evaluation of transportation impacts using a VMT methodology. (CEQA Guidelines, § 15064.3.) However, a regulatory change requiring a new or differing analysis does not require a subsequent or supplemental EIR under Public Resources Code Section 21166. This precise issue arose when CEQA began requiring an analysis of greenhouse gas emissions. (See Pub. Resources Code, § 21083.5.) Those cases held that the updated regulatory requirement did not mandate a subsequent or supplemental EIR under Section 21166, as climate change was not new information within the meaning of that provision. (See *Citizens for Responsible Equitable Environmental Development v. City of San Diego* (2011) 196 Cal.App.4th 515, 530-532 (*CREED*); *Concerned Dublin Citizens v. City of Dublin* (2013) 214 Cal.App.4th 1301, 1318-1320.) The Governor’s Office of Planning and Research, an agency that drafts the CEQA Guidelines, has confirmed that this is true of VMT as well. (OPR SB 743 FAQs¹ [“A CEQA analysis prepared after July 1 may be able to rely on a previously certified EIR that analyzed traffic impacts using the LOS metric.... In reviewing the applicability of [Section 21166], an agency may use its discretion to determine that a VMT analysis is not required for later-prepared documents.”].) The pertinent question is whether any of the conditions in Section 21166, or in CEQA Guidelines Section 15162, has occurred. As with climate change, the impacts of VMT are not new. While not mandated, at least some EIRs have addressed VMT since at least 1982. (*Village Laguna of Laguna Beach, Inc. v. Board of Supervisors* (1982) 134 Cal.App.3d 1022, 1029, fn. 4.) Because the impacts of VMT were knowable and known at the time the 2008 EIR was certified, this is not considered to be new information within the meaning of Section 21166. (*CREED, supra*, 196 Cal.App.4th at p. 531 [“information on the effect of greenhouse gas emissions on climate was known long before the City approved the 1994 FEIR”].)

Conclusion

No new circumstances have occurred nor has any substantially important new information been identified that would require additional analysis or verification. The project as revised would remain substantially the same in terms of land use patterns and traffic generation. Therefore, circulation impacts are anticipated to be similar to those described in the analyses provided in the 2007 Second Recirculated Draft EIR and Final EIR. The conclusions of the Final EIR remain valid and approval of the amendment to the approved project would not result in any new significant impacts associated with transportation and circulation.

Utilities

The Draft EIR addressed impacts related to wastewater conveyance infrastructure and treatment capacity in Impacts 6.4-3, which addressed increased demand for wastewater collection and conveyance, and Impact 6.4-4, which addressed SRWTP expansion. With approval of the project in 2008, the project site was annexed to the City, and SOI’s for SRCSD and CSD-1 were

¹ OPR SB 743 FAQs available at: <https://opr.ca.gov/ceqa/sb-743/faq.html>

amended to include the project site. Wastewater collection services would be provided by CSD-1 and the SRCSD. The Draft EIR concluded that because sufficient capacity within the CSD-1's and SRCSD's conveyance facilities would be available to serve the project, the project would result in less-than-significant impacts to wastewater collection services. As compared to the project analyzed in the Draft EIR, the revised project would have less residential and commercial use overall than originally proposed. Further, CSD-1, now named Sacramento Area Sewer District (SASD), and SRCSD have reviewed the proposed changes and proposed conditions to ensure that wastewater impacts from increased demand remain less-than-significant. The Project will incorporate these conditions of approval, and thus the impact will remain less-than-significant.

The 2008 EIR identified significant and unavoidable impacts related to the need for construction of expanded SRWTP facilities. Permitted treatment capacity at the SRWTP remains unchanged since the project was approved. As described in the 2017 Addendum, however, wastewater flows are slightly reduced from 2008 and SRCSD is no longer pursuing the expansion of the SRWTP based on revised population and influent projections. Therefore, impacts associated with expansion of the SRWTP and the project's contribution to these impacts would not occur and this significant and unavoidable impact would be eliminated. Because the project as revised would remain substantially the same in terms of land use patterns and the increase in residential units would still remain below levels analyzed in the 2008 EIR, wastewater generation would be similar to or less than that described in the Draft EIR. Therefore, the conclusions regarding wastewater treatment capacity remain valid and no further analysis is required.

The Draft EIR addressed stormwater drainage in Impact 6.4-5. The Draft EIR noted that the project would increase the volume of stormwater generated at the project site that would result in a significant impact related to storm drainage capacity. Mitigation Measure 6.4-5 would require the project proponents to fully fund and install a new pump that would increase pumping capacity to reduce the impact to a less-than-significant level. The project as revised would decrease impermeable areas by proposing residential uses in areas previously planned for commercial uses, which contain large parking lots. Therefore, impacts associated with stormwater drainage would be expected to be reduced compared to those identified in the Draft EIR. Therefore, the conclusions contained in the Draft EIR remain valid and no further analysis is required.

The Draft EIR addressed water demand and delivery infrastructure in Impacts 6.4-1 and 6.4-2. The Draft EIR noted that the City has sufficient water supplies to meet their existing and projected future demands in addition to the proposed project through 2030 under all water year types (e.g., normal, single-dry, and multiple-dry years). Further, other than construction of the necessary infrastructure to connect the project site to the City's existing water system, no additional water supply facilities would be needed to serve the project. Infrastructure built to serve the proposed residential uses would be the same as is proposed or has been constructed to serve the other residential areas of the Project. Therefore, this would remain a less-than-significant impact related to water supply.

The Draft EIR addressed demand for solid waste disposal services and capacity in Impact 6.5-3. The Draft EIR concluded that because existing solid waste facilities would have adequate

capacity to serve the project into the foreseeable future, additional solid waste facilities would not be required. Therefore, the project would have a less-than-significant impact on solid waste services. The project as revised would remain substantially the same in terms of land use types, however the revised project would have fewer low density residential units, more high-density units, and fewer residential units overall than would the approved project. The acreage of commercial land uses would also be less than the approved project. Therefore, solid waste generation would be expected to be similar or slightly less than with the approved project. Therefore, the conclusions contained in the Draft EIR remain valid and no further analysis is required.

The Draft EIR addressed demand for electricity and natural gas services in Impact 6.4-6. The Draft EIR concluded that the provision of energy services to the project site would result in less-than-significant impacts. Since certification of the EIR, the City has adopted an ordinance requiring all-electric buildings, starting January 1, 2023 for buildings three stories or less, with limited exceptions. As such, natural gas use will be significantly lower, if not entirely eliminated, than was evaluated in the Draft EIR. The project as revised would remain substantially the same in terms of land use types and land use patterns; however, the revised project would have fewer residential units overall and less acreage of commercial land, and energy demand would be expected to be similar or slightly less than with the approved project. Therefore, the conclusions contained in the Draft EIR remain valid and no further analysis is required.

Conclusion

No changes in circumstances would result in new or substantially more severe significant environmental impacts related to water supply, or wastewater collection, conveyance or treatment services, compared to the analysis presented in the Draft EIR. No new significant impacts would occur related to solid waste disposal or storm drainage. Therefore, the conclusions of the Draft EIR remain valid and approval of the revised project would not result in any new significant impacts related to impacts to utilities and service systems.

ANALYSIS CONCLUSION

As established in the discussions above regarding the potential effects of the proposed project, substantial changes are not proposed to the project, nor have any substantial changes occurred that would require major revisions to the 2008 EIR. Substantial evidence supports use of the EIR and the subsequent review provisions of CEQA Guidelines section 15162.

Overall, the proposed modifications to the project would not result in any new information of substantial importance that would have new, more severe impacts, new mitigation measures, or new or revised alternatives from what was identified for the original project in the 2008 EIR. Therefore, the Community Development Department concludes that the analyses conducted, and the conclusions reached in the EIR certified in 2008 remain relevant and valid and this Addendum was properly prepared. The proposed project would not result in any conditions identified in CEQA Guidelines section 15162, and neither a subsequent nor supplemental EIR is

required for the proposed project modifications. The proposed project would remain subject to all applicable previously identified mitigation measures from the 2008 EIR.

Based on the above analysis, this Addendum to the EIR has been prepared and adopted by the City of Sacramento.

Attachments:

- A) Supplemental air quality analysis prepared by Ascent Environmental
- B) Supplemental noise analysis prepared by Bollard Acoustical Consultants
- C) Supplemental traffic generation study prepared by Wood Rodgers

Memo



455 Capitol Mall, Suite 300
Sacramento, CA 95814
916.444.7301

Date: October 14, 2022
To: Nick Avdis and Amy Higuera
From: Dimitri Antoniou, Ascent
Subject: **Response to Sacramento Metropolitan Air Quality Management District's Comments on the Proposed Amendments to the Northlake Phase 1 Village 14 Tentative Subdivision Map**

Introduction and Purpose

On May 30, 2017, the Tentative Master Parcel Map and Phase 1 Tentative Subdivision Map (TSM) for the project known as Tentative Map Revision Greenbriar P11-093 was approved by the City. Subsequently, the applicant submitted a Minor Tentative Map Amendment for Phase 1 of the project to reduce the number of single-family homes and slightly increase the number of multi-family homes. As a result of that amendment, the Air Quality Mitigation Plan (AQMP) originally prepared for the project was updated to reflect the proposed changes and it incorporated new emissions reduction measures to ensure the reduction target established in the original AQMP was still achieved. On June 12, 2018, SMAQMD approved the updated 2018 AQMP.

Currently, the applicant is seeking to amend the previously approved Northlake Phase 1- Village 14 Tentative Map Plan to reduce the total regional shopping center land use acreage from 27.2 to 5.2 acres and add 152 single-family dwelling units. On June 3, 2022, SMAQMD submitted comments on these proposed revisions to the Tentative Map Plan. The comments pertain to the applicability of previously approved AQMP measures in consideration of the proposed amendments to the Tentative Map Plan.

The purpose of this memorandum is to respond to SMAQMD comments and demonstrate how the previously approved AQMP measures and emissions reduction target achieved by the 2018 AQMP would continue to be met with the proposed changes to the TSM. The most current TSM is dated October 7, 2022.

Response to Comments

This memorandum includes a copy of the June 3, 2022, SMAQMD comment letter that was received by the City of Sacramento. Each comment was bracketed based on the subject matter of the comment, using a unique identification number, then each comment was responded to separately using the identification number as a reference.



Letter
1



June 3, 2022

Jose Quintanilla, Associate Planner
City of Sacramento Community Development Department
300 Richards Boulevard, 3rd Floor, Sacramento, CA 95811

Subject: Northlake Phase 1 Village 14 (P22-023) (SAC202202981)

Dear Jose Quintanilla:

Thank you for providing the Sacramento Metropolitan Air Quality Management District (Sac Metro Air District) with the opportunity to review the Northlake Phase 1 Village 14 project, a request for an amendment to the Greenbriar Planned Unit Development (PUD) to re-designate 22 acres from commercial to residential, a Conditional Use Permit to allow Single-Unit Residential in the Shopping Center zone, and a Tentative Subdivision Map (TSM) for the creation of 152 residential parcels. We offer the comments below on project site improvements and other considerations to benefit air quality and public health, and reduce greenhouse gas emissions.

1-1

Greenbriar Development Project Air Quality Mitigation Plan

Because this project is within the Greenbriar PUD area, it is subject to the Greenbriar Development Project Operational Air Quality Mitigation Plan (AQMP) that resulted from the PUD environmental review process. The full AQMP is attached for your reference and it contains detail on the operational mitigation measures listed in the [Greenbriar Development Project Environmental Impact Report \(EIR\)](#).

1-2

This project re-designates 22 acres from commercial to residential, which would affect point values assigned to AQMP measures. With this change, the project could no longer take full air quality mitigation credit for AQMP point values for measures that apply to commercial uses only (Measures 1 and 13).

1-3

- Sac Metro Air District recommends that no further reductions in commercial land designation in the area occur, so that the Northlake / Greenbriar project can continue to take air quality mitigation credit for AQMP Measure #23 "Suburban mixed-use design." This measure provides 3 points towards project air quality mitigation credit. If this credit is removed, less than 15 total points of AQMP air quality mitigation credit could be applicable to the project. Consistent with [City General Plan Policy 6.1.3](#), this would necessitate supplementing the AQMP with additional mitigation to reach 15 points of air quality mitigation credit.

1-3

Following are AQMP measures that are applicable to the current stage of project development, for which project consistency is not already accommodated by current regulations and plans, or project features that are already proposed. Please ensure that the final project incorporates these measures.

1-4



- AQMP Measure #5 “Pedestrian network.” This measure stipulates five foot (5’) minimum separated sidewalks, a fifteen foot (15’) wide pedestrian paseo designed to surround the project’s water feature that would serve as a connector to the different uses within the project, and a 200 foot buffer from the freeway and the project property line to make possible a future twelve foot (12’) off-street bikeway there. Project plans do not explicitly show the 200 foot buffer for the bikeway, and this must be accommodated upon build-out of the TSM area. Further, the project’s amended PUD schematic plan does not show the entire paseo, and this must also be accommodated as the overall Northlake / Greenbriar project builds out.

1-4
cont.

All street cross sections on the project’s TSM appear to have separated sidewalks with minimum 5’ widths except one cross section for “existing” conditions on Eventide Drive / Avenue. However, from a survey of existing conditions at the project site, it appears that all built sidewalks meet the criteria of separated with a minimum 5’ width. Please note that this standard must be met as the project builds out.

- AQMP Measure #7 “Bus shelter for existing transit service.” This measure stipulates essential transit stop improvements to support frequent transit service (including the shuttle service of North Natomas Jibe referenced below) in the project area. To help fulfill this measure, the project proponent must coordinate with Sacramento Regional Transit (SacRT) staff to ensure appropriate transit stop improvements as the project builds out, enabling SacRT transit provision to the area. Please contact SacRT staff member Kevin Schroder at kschroder@sacrt.com to coordinate.

1-5

- AQMP Measure #28 “Onsite renewable energy system.” This measure stipulates that the project “...install onsite solar systems throughout the project site that in total generate a minimum of 3,777 MWh/year of electricity, equivalent to 12.5% of the estimated project’s total building-related electricity demands. If, at the time of final map approval and building design, the applicant can demonstrate to the City that total project annual electricity demand would be different, this value can be recalculated based on 12.5% of the anticipated annual electricity demand.”

1-6

We understand from June 2020 project proponent correspondence that the proponent intends to fulfill this measure through offsets and building all homes with photovoltaic solar panels (PV solar). *Sac Metro Air will continue to work with the City and the project proponent to help fulfill this measure, and we recommend that PV solar be incorporated into all residential construction as a condition of approval.*

- AQMP Measure #33 “Transportation Management Association membership.” This measure stipulates that the project include permanent Transportation Management Association (TMA) membership and funding requirement. In addition to the funding requirement, which the City is working to ensure to fulfill this measure, the City and project proponent must also work to ensure that all commercial uses are members of the area’s TMA, [North Natomas Jibe](#). The project proponent must continue to support Jibe’s efforts to provide transportation demand management services to project residents. Please contact Jibe through their website jibe.org or

1-7

at 916-419-9955, to ensure that mechanisms are in place to fulfill this measure as the project proceeds.

1-7
cont.

Toxic Air Contaminants

The Sac Metro Air District’s [Mobile Source Air Toxics Protocol mapping tool](#) shows a cancer risk of approximately 37 in a million at the project site, resulting from exposure to motor vehicle [Toxic Air Contaminant \(TAC\)](#) emissions. This project is located near Highway 99, and as slated development in the area builds out, motor vehicle traffic in the area would increase which would in turn increase risk. Note that the modeling tool does not consider building requirements that reduce pollution concentrations, such as the [2019 California Building Energy Efficiency Standards](#) requirement for [MERV 13](#) filtration in new residential construction. For more information, please visit the Sac Metro Air District’s [Mobile Source Air Toxics Protocol](#), available on our website.

1-8

- To help reduce health risk for future project residents, Sac Metro Air District recommends planting trees and shrubs along the north and west perimeter of the project’s residential area, that are selected from Sac Metro Air District’s [Landscaping Guidance for Improving Air Quality Near Roadways](#) (Landscaping Guidance), as tightly spaced as the species will allow.

Construction

All projects are subject to Sac Metro Air District rules and regulations in effect at the time of construction. Please visit our website to [find a list of the most common rules that apply at the construction phase of projects](#). Because this project is located within the Greenbriar PUD area, it is subject to mitigation measures for construction-related air quality impacts in the [Mitigation Monitoring Program in the Greenbriar Development Project Environmental Impact Report](#), which includes measures from Sac Metro Air District’s [Basic Construction Emission Control Practices](#), measures to ensure construction equipment efficiency and further control construction emissions and fugitive dust, and mitigation fees.

1-9

Conclusion

Thank you for your attention to our comments. If you have questions about them, please contact me at mwright@airquality.org or 279-207-1157.

Sincerely,



Molly Wright, AICP
Air Quality Planner / Analyst

- cc: Paul Philley, AICP, Program Supervisor, Sac Metro Air District
Becky Heieck, Executive Director, North Natomas Jibe
Kevin Schroder, Senior Planner, SacRT

Enclosure: Greenbriar Development Project Operational Air Quality Mitigation Plan



- Response 1-1** The comment is introductory and summarizes the intent of the letter to provide comments on the proposed changes to the TSM, which are responded to here. No further response is necessary.
- Response 1-2** The comment states that because the project is located within the Greenbriar Planned Unit Development (PUD) area, it is subject to the adopted 2018 updated AQMP, and a copy of the AQMP is linked.
- The City acknowledges and understands that Mitigation Measure 6.2-2 from the 2006 Draft Environmental Impact Report (DEIR) incorporates the requirements of the original AQMP and because that was updated in 2018, the measures in the 2018 AQMP would supersede those in the original AQMP. All measures from the 2018 AQMP would be required for the proposed TSM and would be enforced through the Mitigation Monitoring and Reporting Program (MMRP) for the project, and the City's conditions of approval.
- Response 1-3** The comment explains that because the current proposal to re-designate 22 acres of commercial land to residential, that AQMP Measures 1 and 13, which apply to commercial land only, would not achieve the full amount of reduction credits previously calculated for the project. In addition, the comment explains that if further reductions in commercial land occur, other AQMP Measures (specifically Measure 23) would no longer apply, and additional mitigation would be required.
- Since June 3, 2022, when SMAQMD submitted this comment, in response to comments received at a neighborhood meeting held on September 28, 2022, the applicant has revised the TSM to include 7.5 acres of commercial; thus, rather than re-designating 22 acres of commercial land with 152 residential units as the comment references, 19.7 acres of commercial land would be re-designated with 139 residential lots. Nonetheless, although more commercial land would be developed, the TSM is still reducing commercial land by 19.7 acres compared to what was originally contemplated in the 2018 AQMP; therefore, AQMP measures that apply to commercial land uses only (i.e., Measure 1 and 13) would not be as effective as previously calculated. Referencing the 2018 AQMP, Measure 1 achieved 0.34 reduction credits and Measure 13 achieved 0.27 reduction credits for a combined total of 0.61 reduction credits. Although commercial land would not be eliminated, and presumably reduction credits associated with Measure 1 and 13 would still apply to some degree, conservatively eliminating them from the overall calculation of reduction credits would result in a revised total AQMP reduction credit of 15.66 (i.e., 2018 AQMP total credit of 16.27 – 0.61 = 15.66). Thus, even with the re-designation of 19.7 acres of commercial land to residential land, the AQMP measures outlined in the 2018 AQMP would continue to achieve the required reduction credits. Further, these and all measures in the 2018 AQMP would continue to be required of the project and enforced through Mitigation Measure 6.2-2, and the City's conditions of approval.
- Response 1-4** The comment pertains to AQMP Measure 5 "Pedestrian Network," which stipulates five-foot minimum separated sidewalks, a fifteen-foot-wide pedestrian paseo designed to surround the project's water feature, and a 200-foot buffer from the freeway to make it possible for a 12-foot off-street bikeway. The comment states that the buffer is not shown on the project plans and that the PUD Guidelines do not show the entire paseo. The comment states that all these features must be accommodated for the entire project site, including the current TSM for Village 14 under review. In addition, the comment notes that one street cross section on Eventide / Avenue, for the existing conditions, does not meet the five-foot separated requirement.
- Since June 3, 2022 when SMAQMD submitted this comment, the project plans, including the PUD schematic and TSM have been updated and the most recent versions are dated October 7, 2022. Regarding the bikeway and the sidewalks, the October 7, 2022 TSM for the Northlake – Phase 1 – Village 14 portion of the project do indicate that all street cross sections meet the five foot sidewalk

separation requirement. In addition, this TSM does show the 12-foot bike trail along the eastern and northern edge of the site. The buffer is located on a property adjacent to Village 14 (APN 201-0300-187). The buffer varies in width (119 to 145 feet) adjacent to Village 14 and is not included in the area to be subdivided by this application. However, the buffer is recorded as Parcel D on the Master Parcel Map of Greenbriar Phase 1 and depicted on the October 7, 2022 PUD Schematic Plan. The paseo is also shown in the October 7, 2022 PUD Schematic Plan; thus, subsequent TSMs that are submitted for approval will include the paseo's as applicable for the specific area, based on the PUD Schematic. The only paseo included in the Village 14 TSM is depicted on the October 7, 2022 TSM, between residential lots 11 and 12.

Response 1-5 The comment pertains to AQMP Measure 7 which requires that essential transit stop improvements be included in the project and suggests that the project proponent coordinate with Sacramento Regional Transit (SacRT). The contact information for SacRT staff is also provided.

In accordance with AQMP Measure 7, the project site has entered a permanent funding agreement with Jibe, the Transportation Management Association (TMA) for the North Natomas Community Facility District (CFD), where the project site is within. In addition, the light rail station that will connect the project site has reserved the right-of-way within the project area but has not been completely designed yet. The Village 14 portion of the project does not have an existing transit stop for improvements to be made on. However, as the project builds out, this measure will continue to be implemented, as required by the 2018 AQMP and MMRP for the project, and transit improvements will be made in coordination with Jibe and the City, through the agreements that have been secured.

Response 1-6 The comment pertains to AQMP Measure 28 that requires the project to generate 12.5 percent of the project's building energy demand with onsite solar systems and requests that this commitment be enforced through project conditions of approval.

The project applicant has committed to installing onsite solar on all residential buildings within the project site, which is consistent with current California Building Energy Efficiency Standards-Title 24. The City will ensure this measure is complied with through the project's conditions of approval.

Response 1-7 The comment pertains to AQMP Measure 33 that requires permanent membership into a TMA. In addition, the comment states that all commercial uses must also be part of the TMA. As discussed above in the response to comment 1-5, the project site is part of the North Natomas CFD and a permanent member of Jibe, the TMA for the project area.

Response 1-8 The comment describes estimated health risk levels near the project site based on results from SMAQMD's Mobile Source Air Toxics Protocol Mapping Tool but acknowledges that the tool does not account for building code requirements that would reduce risk exposure. The comment also recommends that a vegetative barrier be installed along the north and the west perimeter of the project's residential area, in accordance with SMAQMD's Landscaping Guidance for Improving Air Quality Near Roadways.

It should first be noted that the tool SMAQMD is referencing was developed in 2019 and was not available when project planning first began. The tool presents modeled excess cancer risk and fine particulate matter (PM_{2.5}) concentrations, based on average daily traffic volumes on nearby roads. However, as stated in SMAQMD's Guidance Document for Mobile Sources Air Toxics Protocol (2020), risk values in the mapping tool are conservative and lean in the direction of overstating risk. Further, and as acknowledged by the comment, current California Building Energy Efficiency Standards-Title 24 would require all new residential heating ventilation and air conditioning (HVAC)

units to meet a Minimum efficiency Reporting Value (MERV) of 13, which is used to protect occupants from exposure to PM_{2.5} (California Energy Commission 2019). More than 90 percent of diesel particulate matter is less than 1 micron in diameter, and thus is a subset of PM_{2.5} (CARB 2022). Therefore, the use of MERV 13 rated indoor filtration systems is an effective way to reduce exposure to diesel particulate matter and associated risk levels, as the SMAQMD comment acknowledges. In fact, MERV 13 filters can remove up to 75 percent of particulates from 0.3 to 1.0 microns in size (CARB 2017). The risk reduction measure of using a MERV 13 filtration system is also a recommended risk reduction measure in SMAQMD's Mobile Sources Air Toxics Protocol (2020).

In addition to the indoor filtration systems discussed above, the project would include ground cover, shrubs, and trees within the buffer area. The specific landscape design and plant schedule is included in the Improvement Plans for Greenbriar Phase 1 – Open Space Parcel D. Last, as depicted on the Overall Fence Plan and Details for Northlake Phase 1 (October 7, 2022), solid masonry sound walls will be constructed along the northern and eastern edges of the site, between residences and adjacent roadways (i.e., Elkhorn Boulevard and Highway 99). Based on available research on the topic, a solid barrier in combination with vegetative layer provides substantial reductions in pollution concentrations on the opposite side of the barrier from the source, but a solid barrier creates an upward deflection of incoming airflow and deceleration of the approaching flow, which increases the on-road particle number concentration but results in a large concentration drop across it (Tong 2016).

Considering that estimated risk values from the SMAQMD Mobile Source Air Toxics Protocol Mapping Tool are conservatively high, all indoor air filtration systems will meet a minimum MERV 13 rating which can substantially reduce indoor pollution exposure, and considering that the site would be enclosed by vegetation in the buffer area and solid barriers between the roadways and the residences, exposure to PM_{2.5} and diesel particulate matter at the project site would be reduced to the extent feasible.

Response 1-9 The comment states that all projects within SMAQMD's jurisdiction are subject to adopted rules and regulations and provides a website link to SMAQD's website. The comment also explains that all construction-related mitigation measures contained within the MMRP for the project would be required.

The applicant and the City understand that all adopted rules and regulations pertain to all projects within the jurisdiction of SMAQMD and will be adhered to. Further, the construction mitigation measures, which include dust suppression and emissions controls, including mitigation fees, have been implemented thus far in accordance with the MMRP and the City's conditions of approval and will continue to be implemented for subsequent TSMs, as the project builds out.

References

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- California Air Resources Board. 2022. Overview: Diesel Exhaust & Health. Available: <https://ww2.arb.ca.gov/resources/overview-diesel-exhaust-and-health>. Accessed: October 14, 2022.
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- Sacramento Metropolitan Air Quality Management District. 2020. (September). Mobile Sources Air Toxics Protocol Guidance Document. Version 1.3.
- Tong, Z., Baldus, R. W., Isakov, V., Deshmukh, P., & Zhang, M. (2016). Roadside vegetation barrier designs to mitigate near-road air pollution impacts. *Science of the Total Environment*, 541, 920–927.

Environmental Noise Assessment

Northlake - Phase 1 - Village 14 Residential Development

Sacramento, California

BAC Job # 2022-124

Prepared For:

Thomas Law Group

Attn: Amy Higuera
455 Capitol Mall, Suite 801
Sacramento, CA 95814

Prepared By:

Bollard Acoustical Consultants, Inc.



Paul Bollard, President

September 14, 2022



Introduction

The Northlake - Phase 1 - Village 14 Development (project) is located at the southwest quadrant of the Highway 99 / Elkhorn Boulevard Interchange within the northeast corner of the Greenbriar Development in Sacramento, California. The project proposes single-family residential uses, a shopping center, a landscape corridor, and a community park within the approximately 40-acre site. The project area and site plan are shown on Figures 1 and 2, respectively.

Due to the proximity of the proposed residences to Highway 99 and Elkhorn Boulevard, and the proximity of the proposed community park to Highway 99, Bollard Acoustical Consultants, Inc. (BAC) was retained to prepare this noise assessment. Specifically, the purposes of this assessment are to quantify noise generated by traffic on those roadways and to ensure the project includes sufficient noise mitigation measures to achieve compliance with the applicable City of Sacramento noise standards within the noise-sensitive areas of the project site.

Noise Fundamentals and Terminology

Noise is often described as unwanted sound. Sound is defined as any pressure variation in air that the human ear can detect. If the pressure variations occur frequently enough (at least 20 times per second), they can be heard, and thus are called sound. Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel scale was devised. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB. Another useful aspect of the decibel scale is that changes in levels (dB) correspond closely to human perception of relative loudness. Appendix A contains definitions of Acoustical Terminology. Figure 3 shows common noise levels associated with various sources.

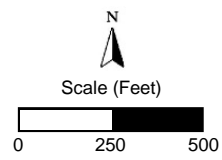
The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable, and can be approximated by weighing the frequency response of a sound level meter by means of the standardized A-weighting network. There is a strong correlation between A-weighted sound levels (expressed as dBA) and community response to noise. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment. All noise levels reported in this section are in terms of A-weighted levels in decibels.

Community noise is commonly described in terms of the “ambient” noise level, which is defined as the all-encompassing noise level associated with a given noise environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level (L_{eq}) over a given time period (usually one hour). The L_{eq} is the foundation of the Day-Night Average Level noise descriptor, DNL, and shows very good correlation with community response to noise generated by transportation noise sources.



Legend

- - - Project Boundary (Approximate)
- ▲ Long-Term Noise Measurement Locations

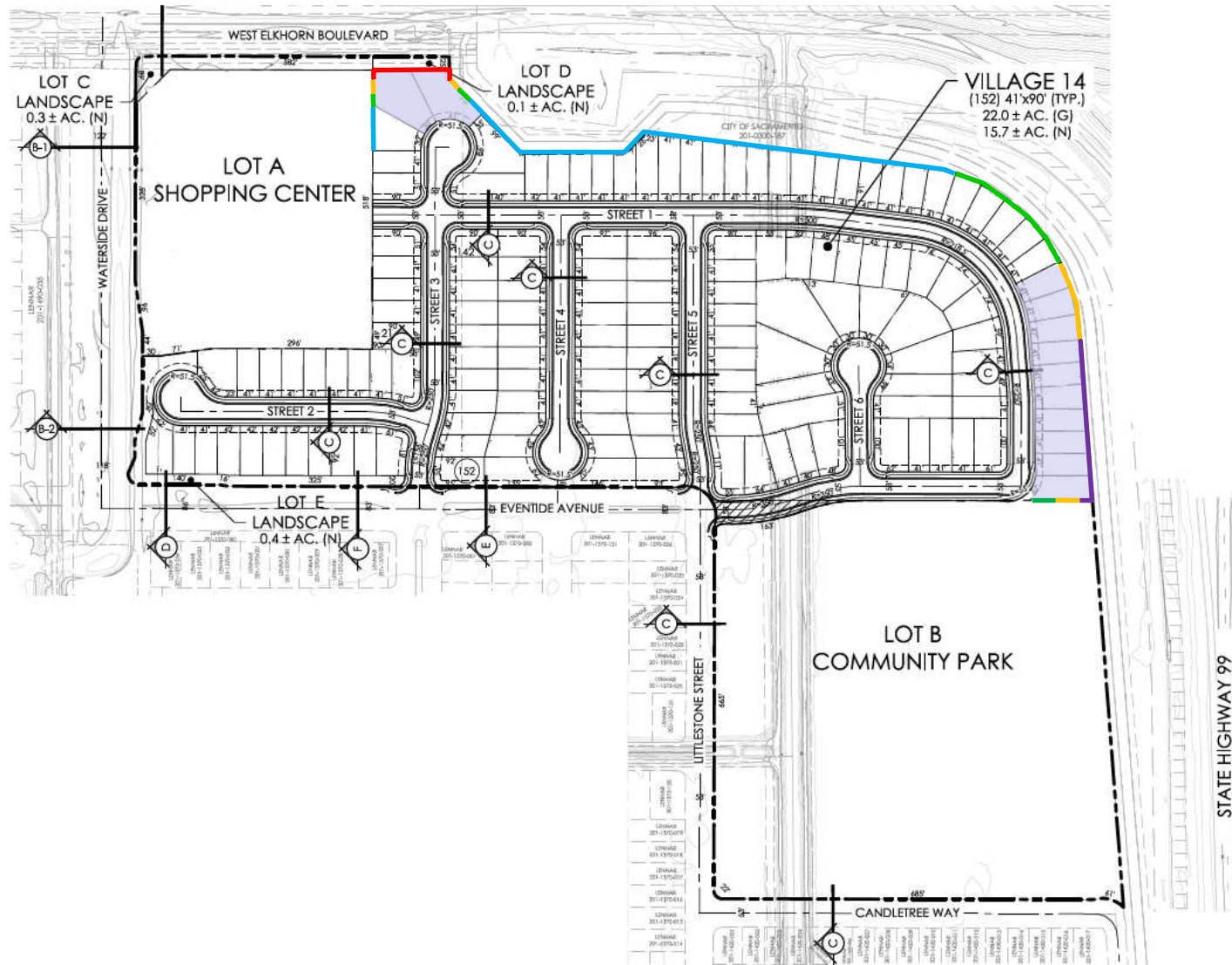


Northlake - Phase 1 – Village 14
Sacramento, California







Project Area

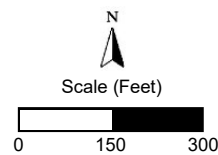
Figure 1





Legend

-  Recommended Window Assembly Upgrades: STC 32 (Upper-Floors Only)
-  Required Traffic Noise Barrier – 6 ft
-  Required Traffic Noise Barrier – 7 ft
-  Required Traffic Noise Barrier – 8 ft
-  Required Traffic Noise Barrier – 9 ft
-  Required Traffic Noise Barrier – 10 ft



Northlake - Phase 1 – Village 14
Sacramento, California

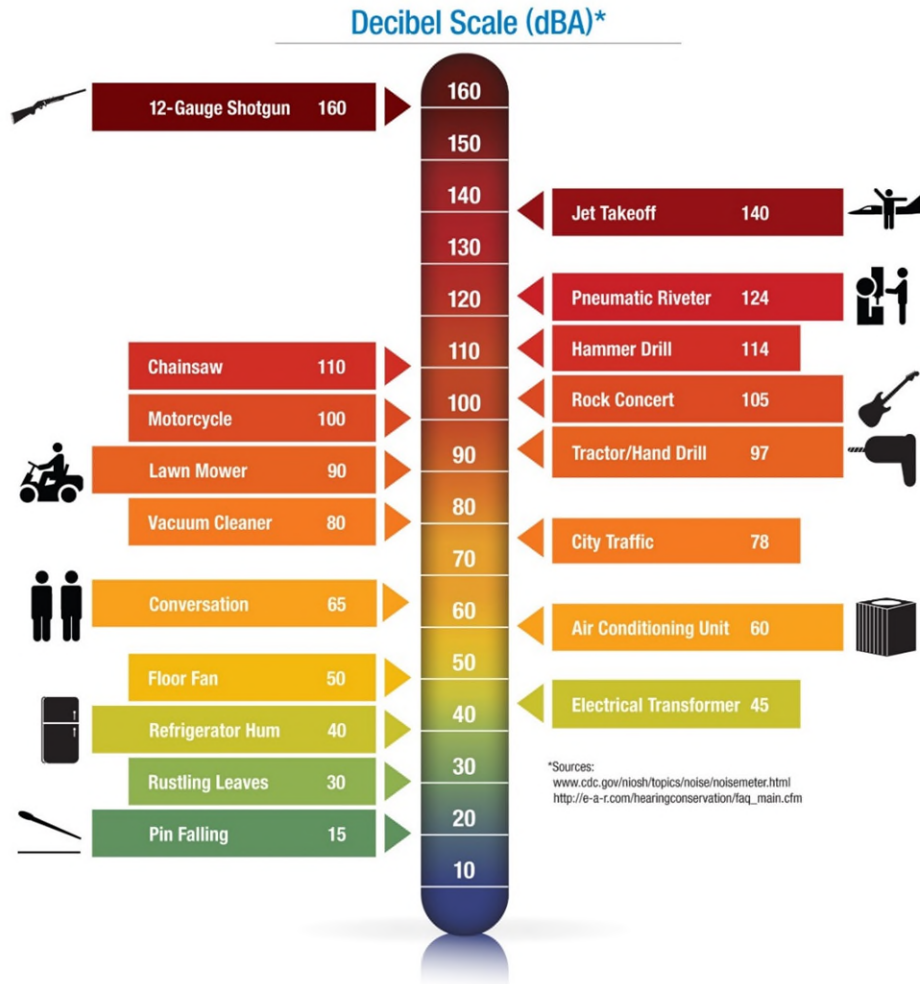
Site Plan

Figure 2



The Day-Night Average Level (DNL) is based upon the average noise level over a 24-hour day, with a +10 decibel weighing applied to noise occurring during nighttime (10 p.m. to 7 a.m.) hours. The nighttime penalty is based upon the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures. Because DNL represents a 24-hour average, it tends to disguise short-term variations in the noise environment. DNL-based noise standards are commonly used to assess noise impacts associated with traffic, railroad and aircraft noise sources.

**Figure 3
Noise Levels Associated with Common Noise Sources**



Criteria for Acceptable Noise Exposure

City of Sacramento 2035 General Plan

The City of Sacramento 2035 General Plan, Environmental Constraints Chapter (EC-3) establishes exterior and interior noise standards for noise-sensitive uses. The policies applicable to the project are included below.

EC 3.1.1 Exterior Noise Standards. The City shall require noise mitigation for all development where the projected exterior noise levels exceed those shown in Table 1 (Table EC 1 of the General Plan), to the extent feasible.

EC 3.1.3 Interior Noise Standards. The City shall require new development to include noise mitigation to assure acceptable interior noise levels appropriate to the land use type: 45 dBA DNL for residential, transient lodgings, hospitals, nursing homes and other uses where people normally sleep; and 45 dBA Leq (peak hour) for office buildings and similar uses.

EC 3.1.11 Alternatives to Sound Walls. The City shall encourage the use of design strategies and other noise reduction methods along transportation corridors in lieu of sound walls to mitigate noise impacts and enhance aesthetics.

Table 1 Exterior Noise Compatibility Standards for Various Land Uses	
Land Use Type	Highest Level of Noise Exposure that is Regarded as “Normally Acceptable”^a (DNL^b or CNEL^c)
Residential–Low Density Single Family, Duplex, Mobile Homes	60 dBA ^{d,e}
Residential–Multi-family ^g	65 dBA
Urban Residential Infill ^h and Mixed-Use Projects ^{i,j}	70 dBA
Transient Lodging–Motels, Hotels	65 dBA
Schools, Libraries, Churches, Hospitals, Nursing Homes	70 dBA
Auditoriums, Concert Halls, Amphitheaters	Mitigation based on site–specific study
Sports Arena, Outdoor Spectator Sports	Mitigation based on site–specific study
Playgrounds, Neighborhood Parks	70 dBA
Golf Courses, Riding Stables, Water Recreation, Cemeteries	75 dBA
Office Buildings–Business, Commercial, and Professional	70 dBA
Industrial, Manufacturing, Utilities, Agriculture	75 dBA

SOURCE: Governor’s Office of Planning and Research, State of California General Plan Guidelines 2003, October 2003

- a. As defined in the Guidelines, “Normally Acceptable” means that the “specified land use is satisfactory, based upon the assumption that any building involved is of normal conventional construction, without any special noise insulation requirements.”
- b. DNL or Day Night Average Level is an average 24-hour noise measurement that factors in day and night noise levels.
- c. CNEL or Community Noise Equivalent Level measurements are a weighted average of sound levels gathered throughout a 24-hour period.
- d. Applies to the primary open space area of a detached single-family home, duplex, or mobile home, which is typically the backyard or fenced side yard, as measured from the center of the primary open space area (not the property line). This standard does not apply to secondary open space areas, such as front yards, balconies, stoops, and porches.
- e. dBA or A-weighted decibel scale is a measurement of noise levels.
- f. The exterior noise standard for the residential area west of McClellan Airport known as McClellan Heights/Parker Homes is 65 dBA.
- g. Applies to the primary open space areas of townhomes and multi-family apartments or condominiums (private rear yards for townhomes; common courtyards, roof gardens, or gathering spaces for multi-family developments). These standards shall not apply to balconies or small attached patios in multistoried multi-family structures.
- h. With land use designations of Central Business District, Urban Neighborhood (Low, Medium, or High) Urban Center (Low or High), Urban Corridor (Low or High).
- i. All mixed-use projects located anywhere in the City of Sacramento
- j. See notes d and g above for definition of primary open space areas for single-family and multi-family developments.

Summary of Noise Standards Applied to the Project

According to Table 1, the noise level standard applicable at noise-sensitive exterior spaces single-family residential land uses is 60 dB DNL. For parks, the exterior noise standard is 70 dB DNL. The City's General Plan also utilizes an interior noise level standard of 45 dB DNL or less within habitable spaces of residential uses.

Existing Ambient Noise Environment at the Project Site

The existing ambient noise level environment at the project site is defined by traffic on Highway 99 and, to a lesser extent, by traffic on Elkhorn Boulevard. Aircraft operations associated with Sacramento International Airport also contribute to the ambient noise environment at the project site but are not significant relative to local traffic noise.

In order to quantify the ambient noise environment at the nearest proposed residences to Highway 99 and Elkhorn Boulevard, long-term (48-hour) noise level measurements were conducted at the project site on August 23-24th, at the three locations identified on Figure 1. The purpose of the noise survey was to determine existing traffic noise exposure on the project site in terms of the day/night average level (DNL) and to provide data for use in calibrating the traffic noise prediction model.

Larson Davis Laboratories (LDL) precision (Type 1) sound level meters were used for the noise level surveys. The meters were calibrated before and after use with an LDL Model CAL200 acoustical calibrator to ensure the accuracy of the measurements. The equipment used meets all pertinent specifications of the American National Standards Institute for Type 1 sound level meters (ANSI S1.4). Photographs of the noise level measurement locations are provided in Appendix B. The results of the long-term measurements are summarized in Table 2 with the complete survey results provided numerically and graphically in Appendices C and D, respectively.

Site¹	Date	Roadway	Distance, ft²	DNL, dBA
1	August 23, 2022	Highway 99	265	68
	August 24, 2022			68
2	August 23, 2022	Highway 99 On-Ramp	125	63
	August 24, 2022			63
3	August 23, 2022	Elkhorn Blvd	85	66
	August 24, 2022			66

Notes:

¹ Long-term ambient noise monitoring sites identified on Figure 1. Photographs of the sites provided in Appendix B.

² Distance from centerline of Indicated roadway to noise measurement site.

³ A detailed summary of the noise monitoring results are provided in Appendices C and D.

Source: Bollard Acoustical Consultants, Inc. (2022)

The Table 2 data indicate that existing ambient noise exposure at the noise monitoring sites currently exceeds the City of Sacramento 60 dB DNL exterior noise exposure limit for new residential land uses. A detailed analysis of predicted future traffic noise exposure at the noise-sensitive locations on the project site follows in the next section of this report.

Evaluation of Future Traffic Noise Levels at the Project Site

Traffic Noise Prediction Model

The Federal Highway Administration Highway Traffic Noise Prediction Model (FHWA-RD-77-108) was used to predict traffic noise levels at the project site. The model is based upon the CALVENO noise emission factors for automobiles, medium trucks and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and the acoustical characteristics of the site. The FHWA Model was developed to predict hourly L_{eq} values for free flowing traffic conditions, and is considered to be accurate within 1.5 dB in most situations. The results of the ambient noise surveys contained in Table 2 were used to develop appropriate FHWA Model calibration offsets for the prediction of future traffic noise levels at the project site.

Predicted Future Exterior Traffic Noise Levels

The calibrated FHWA Model was used to predict future traffic noise levels at the proposed community park and nearest proposed residences to both Highway 99 and Elkhorn Boulevard. The FHWA Model inputs are provided in Appendix E. The predicted future traffic noise levels at the noise-sensitive exterior areas of the project are provided in Table 3.

Table 3			
Predicted Future Exterior Traffic Noise Levels¹			
Northlake – Phase 1 – Village 14 Development - Sacramento, California			
Roadway	Receptor Description	Distance to C/L (ft)	Exterior DNL, dBA
Highway 99	Community Park - East Side	250	70
Highway 99	Community Park - East Side	600	65
Highway 99	Community Park - East Side	1000	61
Highway 99	Lots 60-65	300	69
Highway 99	Lots 57-59	320	69
Highway 99	Lots 52-56	380	66
Elkhorn Blvd	Lots 48-51	290	60
Elkhorn Blvd	Lots 42-47	290	61
Elkhorn Blvd	Lots 33-41	290	61
Elkhorn Blvd	Lot 31	250	62
Elkhorn Blvd	Lots 29-30	125	69
Elkhorn Blvd	Lot 28	240	62

Source: BAC, 2022

Traffic Noise Compliance Evaluation for Proposed Community Park

As indicated in Table 3, future traffic noise levels at the proposed community park would range from approximately 61 to 70 dB DNL, depending on proximity to Highway 99. This range of levels would be satisfactory relative to the City's 70 dB DNL standard applicable to park uses. As a result, no additional noise mitigation measures would be warranted for the proposed park site.

Traffic Noise Compliance Evaluation for Exterior Areas of Proposed Residences

As indicated in Table 3, future traffic noise levels at the exterior areas of the residences proposed within this development would range from approximately 65 to 73 dB DNL. This range of levels would exceed the City of Sacramento 60 dB DNL noise standard applicable at the outdoor activity areas (backyards in this case) of new residential developments. As a result, additional noise mitigation measures would be required for the residential uses proposed within this development.

BAC utilized the methodology contained within the FHWA Model to predict the traffic noise attenuation which would result from the construction of solid noise barriers at the project site. The results of that exercise indicate that traffic noise barriers ranging from 6 to 10 feet in height, relative to backyard elevation, would be required to reduce future traffic noise levels to a state of compliance with the City's 60 dB DNL standard within backyards. Table 4 shows the noise barrier heights required to reduce future traffic noise exposure to 60 dB DNL or less at residential backyard areas within this development. Figure 2 shows the required barrier locations.

Location	Barrier Height (feet)	Resulting Exterior DNL, dBA
Lots 60-65	10	60
Lots 57-59	8	60
Lots 52-56	7	60
Lots 48-51	6	60
Lots 42-47	6	57
Lots 33-41	6	57
Lot 31	6	57
Lots 29-30	9	59
Lot 28	6	56

Source: BAC, 2022

Predicted Future Interior Traffic Noise Levels within Proposed Residences

Standard residential construction (stucco siding, STC 27 windows, door weather-stripping, exterior wall insulation, composition plywood roof), results in an exterior to interior noise reduction of at least 25 dB with windows closed and approximately 15 dB with windows open. Therefore, provided future traffic noise levels do not exceed 70 dB DNL at exterior building façades, standard construction would be adequate to ensure compliance with the City of Sacramento General Plan 45 dB DNL interior noise level standard.

Because the first-floor facades of the residences proposed nearest to Highway 99 and Elkhorn Boulevard would be shielded by the required noise barriers, future traffic noise exposure at all first-floor facades is predicted to be approximately 60 dB DNL. As a result, no construction upgrades would be required to achieve compliance with the City of Sacramento 45 dB DNL interior noise level standard within first-floor rooms of residences constructed within this development.

Second-floor facades would not be shielded by the required noise barriers. In addition, due to reduced ground attenuation at elevated second-floor positions, noise levels at those elevated facades tend to be approximately 3 dB DNL higher than levels at first-floor facades. As a result, a +3 dB offset is applied to the Table 3 values to predict future traffic noise exposure at the second-floor facades of the residences proposed nearest to the roadways. Table 5 shows the predicted second-floor noise exposure and window / glass door upgrade requirements to achieve satisfaction with the City's 45 dB DNL interior noise standard.

Table 5 Second-Floor Façade Noise Exposure and Window Upgrade Requirements Northlake – Phase 1 – Village 14 Development - Sacramento, California		
Location	2nd-Floor Façade DNL	Required Window & Glass Door STC Ratings
Lots 60-65	72	STC 32
Lots 57-59	72	STC 32
Lots 52-56	69	No upgrade required
Lots 48-51	63	No upgrade required
Lots 42-47	64	No upgrade required
Lots 33-42	64	No upgrade required
Lot 31	65	No upgrade required
Lots 29-30	72	STC 32
Lot 28	65	No upgrade required

Source: BAC, 2022

Conclusions and Recommendations

This analysis concludes that future Highway 99 and Elkhorn Boulevard traffic noise levels would result in exceedance of the City of Sacramento 60 dB DNL exterior noise level criteria and 45 dB DNL interior noise criteria at some residences within this development with the greatest exposure to those roadways. As a result, the following noise mitigation measures would be required for the project:

- 1) To achieve compliance with the City's 45 dB DNL interior noise standard with a margin of safety, windows and glass door assembly upgrades would be required at the second floor facades of some residences constructed nearest to Highway 99 and Elkhorn Boulevard. Table 5 shows the lots where such upgrades would be needed and the required STC ratings for windows and glass doors from which the indicated roadways would be visible. Such upgrades would not be required for facades which do not have either direct or sideline exposure to the roadways (i.e. facades facing away from the roadways).
- 2) To achieve compliance with the City's 60 dB DNL exterior noise standard within the backyard areas of the residences proposed nearest to Highway 99 and Elkhorn Boulevard, traffic noise barriers would be required. Table 4 shows the lots where barriers would be required and the heights necessary to reduce future traffic noise levels to 60 dB DNL or less. All barrier heights are specified relative to backyard elevation.
- 3) A suitable form of forced-air mechanical ventilation / air conditioning shall be provided so that windows can be kept closed as desired for additional acoustical isolation.

These conclusions are based on the measured traffic noise levels reported herein, on the project site plan shown on Figure 2, on the FHWA noise barrier methodology, and on noise reduction data for standard residential dwellings. Deviations from the project site plan shown in Figure 2 or the assumptions contained herein could cause future traffic noise levels to differ from those predicted in this analysis. In addition, Bollard Acoustical Consultants, Inc. is not responsible for degradation in acoustic performance of the residential construction due to poor construction practices, failure to comply with applicable building code requirements, or for failure to adhere to the recommendations cited in this report.

This concludes our environmental noise assessment for the proposed Northlake – Phase 1 – Village 14 Development in Sacramento, California. Please contact BAC at (530) 537-2328 or paulb@bacnoise.com with comments or questions regarding this evaluation.


Appendix A Acoustical Terminology

Acoustics	The science of sound.
Ambient Noise	The distinctive acoustical characteristics of a given space consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.
Attenuation	The reduction of an acoustic signal.
A-Weighting	A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response.
Decibel or dB	Fundamental unit of sound. A Bell is defined as the logarithm of the ratio of the sound pressure squared over the reference pressure squared. A Decibel is one-tenth of a Bell.
CNEL	Community Noise Equivalent Level. Defined as the 24-hour average noise level with noise occurring during evening hours (7 - 10 p.m.) weighted by a factor of three and nighttime hours weighted by a factor of 10 prior to averaging.
Frequency	The measure of the rapidity of alterations of a periodic signal, expressed in cycles per second or hertz.
IIC	Impact Insulation Class (IIC): A single-number representation of a floor/ceiling partition's impact generated noise insulation performance. The field-measured version of this number is the FIIC.
L_{dn}	Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.
Leq	Equivalent or energy-averaged sound level.
L_{max}	The highest root-mean-square (RMS) sound level measured over a given period of time.
Loudness	A subjective term for the sensation of the magnitude of sound.
Masking	The amount (or the process) by which the threshold of audibility is for one sound is raised by the presence of another (masking) sound.
Noise	Unwanted sound.
Peak Noise	The level corresponding to the highest (not RMS) sound pressure measured over a given period of time. This term is often confused with the "Maximum" level, which is the highest RMS level.
RT₆₀	The time it takes reverberant sound to decay by 60 dB once the source has been removed.
STC	Sound Transmission Class (STC): A single-number representation of a partition's noise insulation performance. This number is based on laboratory-measured, 16-band (1/3-octave) transmission loss (TL) data of the subject partition. The field-measured version of this number is the FSTC.



Legend

- A** Site 1 Facing East
- B** Site 2 Facing South
- C** Site 2 Facing North
- D** Site 3 Facing East

 Noise Measurement Equipment

Northlake – Phase 1 – Village 14
 Sacramento, California
 Photographs of Noise Survey Locations

Appendix B



Appendix C-1
Long-Term Ambient Noise Monitoring Results - Site 1
Northlake - Phase 1 - Village 14 - Sacramento, California
Tuesday, August 23, 2022

Hour	Leq	Lmax	L50	L90
12:00 AM	57	79	53	47
1:00 AM	54	70	51	45
2:00 AM	55	66	52	45
3:00 AM	59	71	57	49
4:00 AM	62	79	61	56
5:00 AM	65	82	64	61
6:00 AM	66	78	65	63
7:00 AM	66	81	66	62
8:00 AM	63	81	61	58
9:00 AM	63	77	63	58
10:00 AM	64	90	62	57
11:00 AM	62	72	61	56
12:00 PM	63	82	62	58
1:00 PM	63	77	61	56
2:00 PM	62	79	60	55
3:00 PM	61	80	59	54
4:00 PM	61	76	59	55
5:00 PM	62	78	61	56
6:00 PM	61	81	60	57
7:00 PM	61	79	60	56
8:00 PM	60	77	59	55
9:00 PM	59	78	58	54
10:00 PM	59	77	57	53
11:00 PM	58	76	56	49

Statistical Summary						
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	66	59	62	66	54	61
Lmax (Maximum)	90	72	79	82	66	75
L50 (Median)	66	58	61	65	51	57
L90 (Background)	62	54	56	63	45	52

Leq (Average)	66
Lmax (Maximum)	90
L50 (Median)	66
L90 (Background)	62
Computed DNL, dB	68
% Daytime Energy	69%
% Nighttime Energy	31%

GPS Coordinates	38°40'58.62"N
	121°32'27.95"W

Appendix C-2
Long-Term Ambient Noise Monitoring Results - Site 1
Northlake - Phase 1 - Village 14 - Sacramento, California
Wednesday, August 24, 2022

Hour	Leq	Lmax	L50	L90
12:00 AM	57	73	54	49
1:00 AM	57	70	54	48
2:00 AM	57	71	55	49
3:00 AM	59	71	57	51
4:00 AM	63	81	62	57
5:00 AM	65	76	64	61
6:00 AM	66	77	65	63
7:00 AM	65	78	65	62
8:00 AM	64	74	63	59
9:00 AM	63	81	62	59
10:00 AM	61	74	61	57
11:00 AM	61	74	59	56
12:00 PM	60	74	59	55
1:00 PM	61	74	60	56
2:00 PM	61	71	61	57
3:00 PM	63	81	61	58
4:00 PM	63	86	62	59
5:00 PM	63	86	62	59
6:00 PM	62	77	62	58
7:00 PM	61	74	60	57
8:00 PM	61	82	60	56
9:00 PM	60	80	58	54
10:00 PM	58	76	56	52
11:00 PM	57	67	55	49

	Statistical Summary					
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	65	60	62	66	57	61
Lmax (Maximum)	86	71	78	81	67	74
L50 (Median)	65	58	61	65	54	58
L90 (Background)	62	54	57	63	48	53

Computed DNL, dB	68
% Daytime Energy	68%
% Nighttime Energy	32%

GPS Coordinates	38°40'58.62"N
	121°32'27.95"W

Appendix C-3
Long-Term Ambient Noise Monitoring Results - Site 2
Northlake - Phase 1 - Village 14 - Sacramento, California
Tuesday, August 23, 2022

Hour	Leq	Lmax	L50	L90
12:00 AM	53	67	51	48
1:00 AM	52	74	50	47
2:00 AM	52	68	51	48
3:00 AM	55	66	54	51
4:00 AM	57	68	56	53
5:00 AM	60	74	59	56
6:00 AM	60	69	59	56
7:00 AM	61	72	59	56
8:00 AM	59	81	56	52
9:00 AM	58	76	54	49
10:00 AM	56	74	53	48
11:00 AM	57	74	53	48
12:00 PM	57	70	54	49
1:00 PM	58	80	53	48
2:00 PM	59	77	55	48
3:00 PM	57	69	54	47
4:00 PM	56	71	52	47
5:00 PM	57	72	53	48
6:00 PM	57	75	54	49
7:00 PM	56	69	54	51
8:00 PM	56	70	54	51
9:00 PM	55	71	53	50
10:00 PM	56	75	53	50
11:00 PM	54	72	51	48

Statistical Summary						
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	61	55	57	60	52	56
Lmax (Maximum)	81	69	73	75	66	70
L50 (Median)	59	52	54	59	50	54
L90 (Background)	56	47	49	56	47	51

Leq (Average)	61
Lmax (Maximum)	81
L50 (Median)	59
L90 (Background)	56
Computed DNL, dB	63
% Daytime Energy	68%
% Nighttime Energy	32%

GPS Coordinates	38°41'5.58"N
	121°32'30.96"W

Appendix C-4
Long-Term Ambient Noise Monitoring Results - Site 2
Northlake - Phase 1 - Village 14 - Sacramento, California
Wednesday, August 24, 2022

Hour	Leq	Lmax	L50	L90
12:00 AM	52	64	50	47
1:00 AM	52	66	51	48
2:00 AM	55	66	54	51
3:00 AM	55	66	54	53
4:00 AM	58	72	57	54
5:00 AM	60	68	59	57
6:00 AM	60	71	59	57
7:00 AM	60	71	59	56
8:00 AM	58	68	56	53
9:00 AM	58	77	54	50
10:00 AM	55	71	51	48
11:00 AM	55	70	51	47
12:00 PM	55	74	51	47
1:00 PM	55	76	51	47
2:00 PM	56	69	52	48
3:00 PM	58	80	52	48
4:00 PM	55	68	53	49
5:00 PM	57	73	54	51
6:00 PM	57	72	56	52
7:00 PM	56	71	55	52
8:00 PM	57	80	54	52
9:00 PM	57	73	55	52
10:00 PM	57	74	54	51
11:00 PM	55	67	52	49

Statistical Summary						
Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)			
High	Low	Average	High	Low	Average	
Leq (Average)	60	55	57	60	52	57
Lmax (Maximum)	80	68	73	74	64	68
L50 (Median)	59	51	54	59	50	54
L90 (Background)	56	47	50	57	47	52

Leq (Average)	60
Lmax (Maximum)	80
L50 (Median)	59
L90 (Background)	56
Computed DNL, dB	63
% Daytime Energy	62%
% Nighttime Energy	38%

GPS Coordinates	38°41'5.58"N
	121°32'30.96"W

Appendix C-5
Long-Term Ambient Noise Monitoring Results - Site 3
Northlake - Phase 1 - Village 14 - Sacramento, California
Tuesday, August 23, 2022

Hour	Leq	Lmax	L50	L90
12:00 AM	54	74	48	46
1:00 AM	59	89	47	45
2:00 AM	53	75	47	44
3:00 AM	55	74	49	47
4:00 AM	59	75	52	48
5:00 AM	62	83	57	52
6:00 AM	62	75	59	52
7:00 AM	64	81	61	54
8:00 AM	63	80	60	50
9:00 AM	63	86	54	45
10:00 AM	63	91	54	43
11:00 AM	63	85	57	45
12:00 PM	63	81	57	46
1:00 PM	67	95	58	45
2:00 PM	64	79	62	58
3:00 PM	63	78	60	48
4:00 PM	62	78	57	44
5:00 PM	66	95	58	46
6:00 PM	62	84	58	47
7:00 PM	58	74	53	46
8:00 PM	59	78	53	47
9:00 PM	59	84	52	48
10:00 PM	61	84	56	50
11:00 PM	57	75	50	47

Statistical Summary						
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	67	58	63	62	53	59
Lmax (Maximum)	95	74	83	89	74	78
L50 (Median)	62	52	57	59	47	52
L90 (Background)	58	43	47	52	44	48

Leq (Average)	67
Lmax (Maximum)	95
L50 (Median)	62
L90 (Background)	58
Computed DNL, dB	66
% Daytime Energy	81%
% Nighttime Energy	19%

GPS Coordinates	38°41'6.91"N
	121°32'44.31"W

Appendix C-6
Long-Term Ambient Noise Monitoring Results - Site 3
Northlake - Phase 1 - Village 14 - Sacramento, California
Wednesday, August 24, 2022

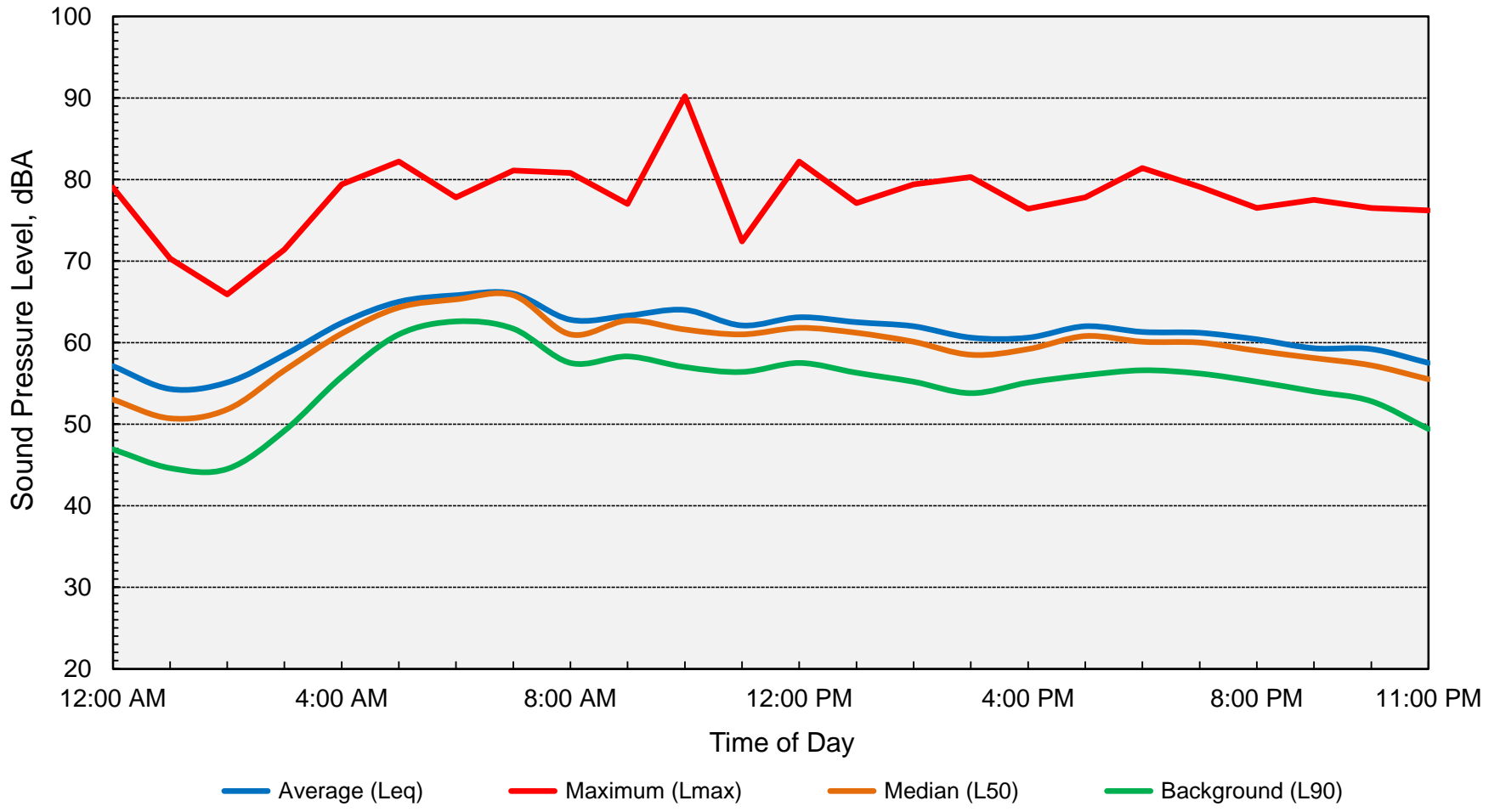
Hour	Leq	Lmax	L50	L90
12:00 AM	55	74	49	46
1:00 AM	55	74	48	45
2:00 AM	54	72	47	45
3:00 AM	57	76	49	47
4:00 AM	59	79	53	51
5:00 AM	61	76	57	53
6:00 AM	62	78	59	54
7:00 AM	63	81	59	54
8:00 AM	62	77	58	52
9:00 AM	62	82	55	50
10:00 AM	63	79	60	54
11:00 AM	63	78	59	49
12:00 PM	63	81	60	57
1:00 PM	67	97	56	48
2:00 PM	63	82	57	49
3:00 PM	63	80	59	49
4:00 PM	67	98	56	48
5:00 PM	62	79	58	50
6:00 PM	62	75	58	51
7:00 PM	60	81	55	50
8:00 PM	61	86	58	50
9:00 PM	59	78	56	51
10:00 PM	59	80	55	49
11:00 PM	59	75	54	48

	Statistical Summary					
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	67	59	63	62	54	58
Lmax (Maximum)	98	75	82	80	72	76
L50 (Median)	60	55	58	59	47	52
L90 (Background)	57	48	51	54	45	49

Computed DNL, dB	66
% Daytime Energy	83%
% Nighttime Energy	17%

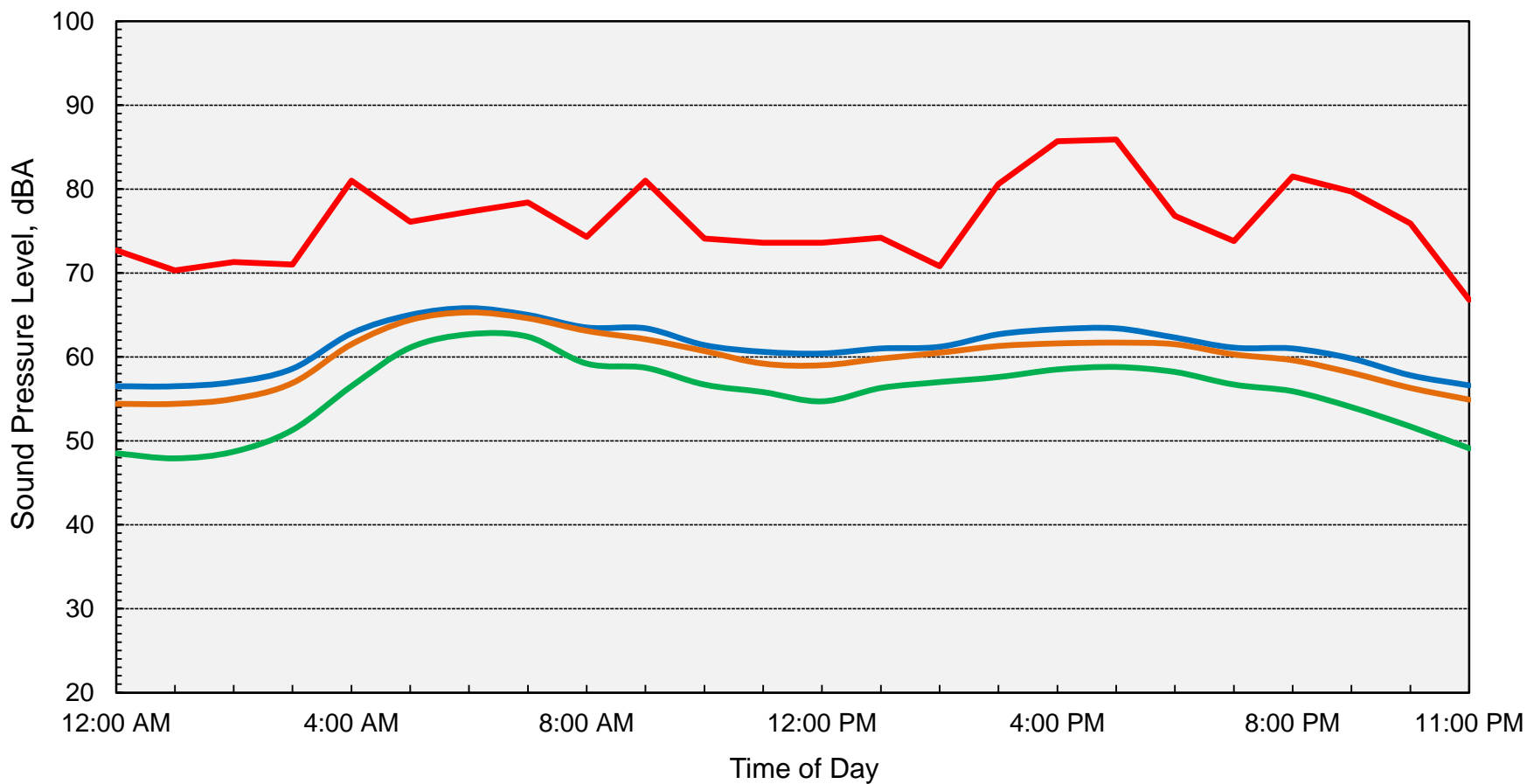
GPS Coordinates	38°41'6.91"N
	121°32'44.31"W

Appendix D-1
Long-Term Ambient Noise Monitoring Results - Site 1
Northlake - Phase 1 - Village 14 - Sacramento, California
Tuesday, August 23, 2022



Computed DNL = 68 dB

Appendix D-2
Long-Term Ambient Noise Monitoring Results - Site 1
Northlake - Phase 1 - Village 14 - Sacramento, California
Wednesday, August 24, 2022

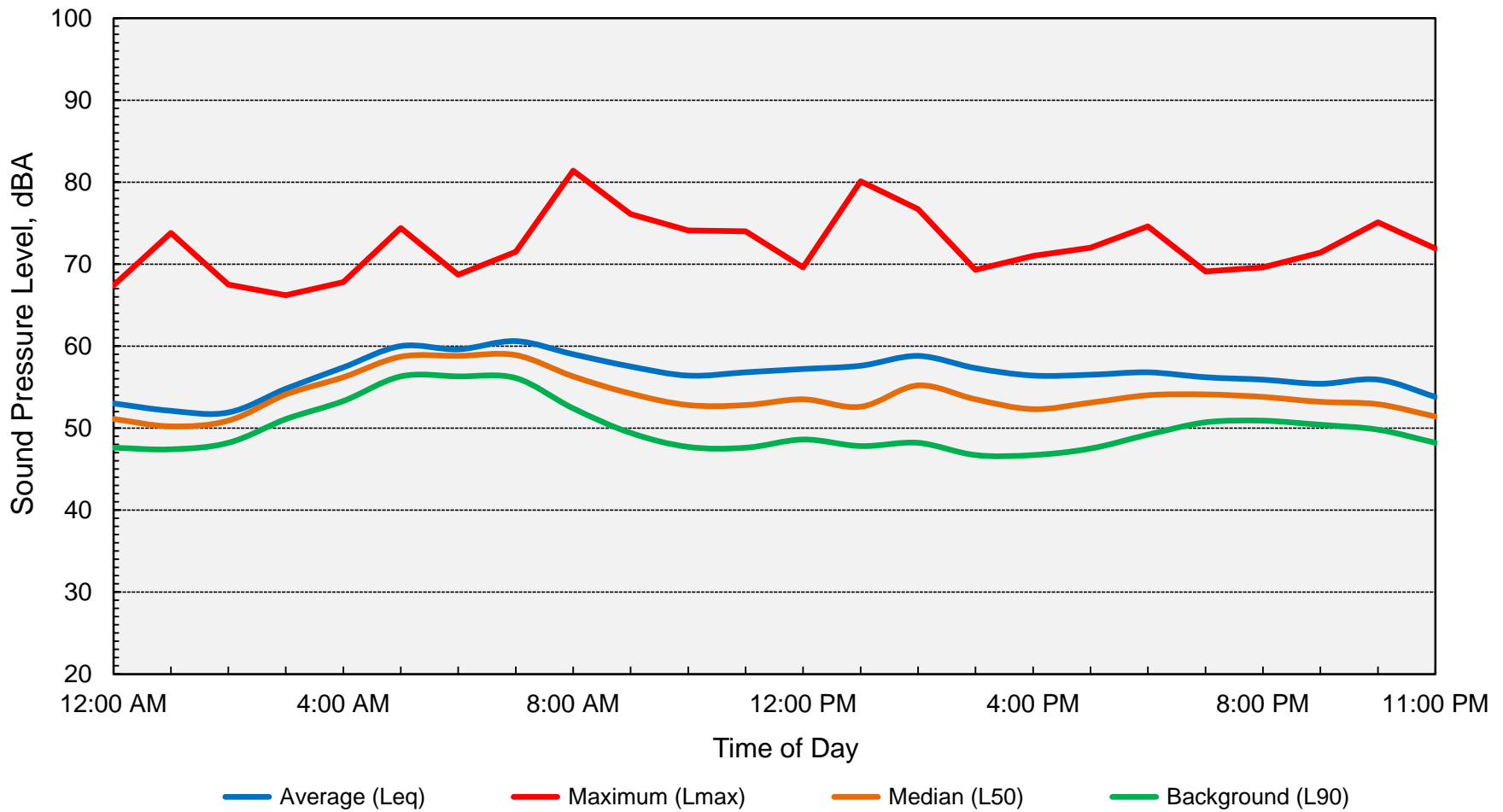


Average (Leq) Maximum (Lmax) Median (L50) Background (L90)

Computed DNL = 68 dB

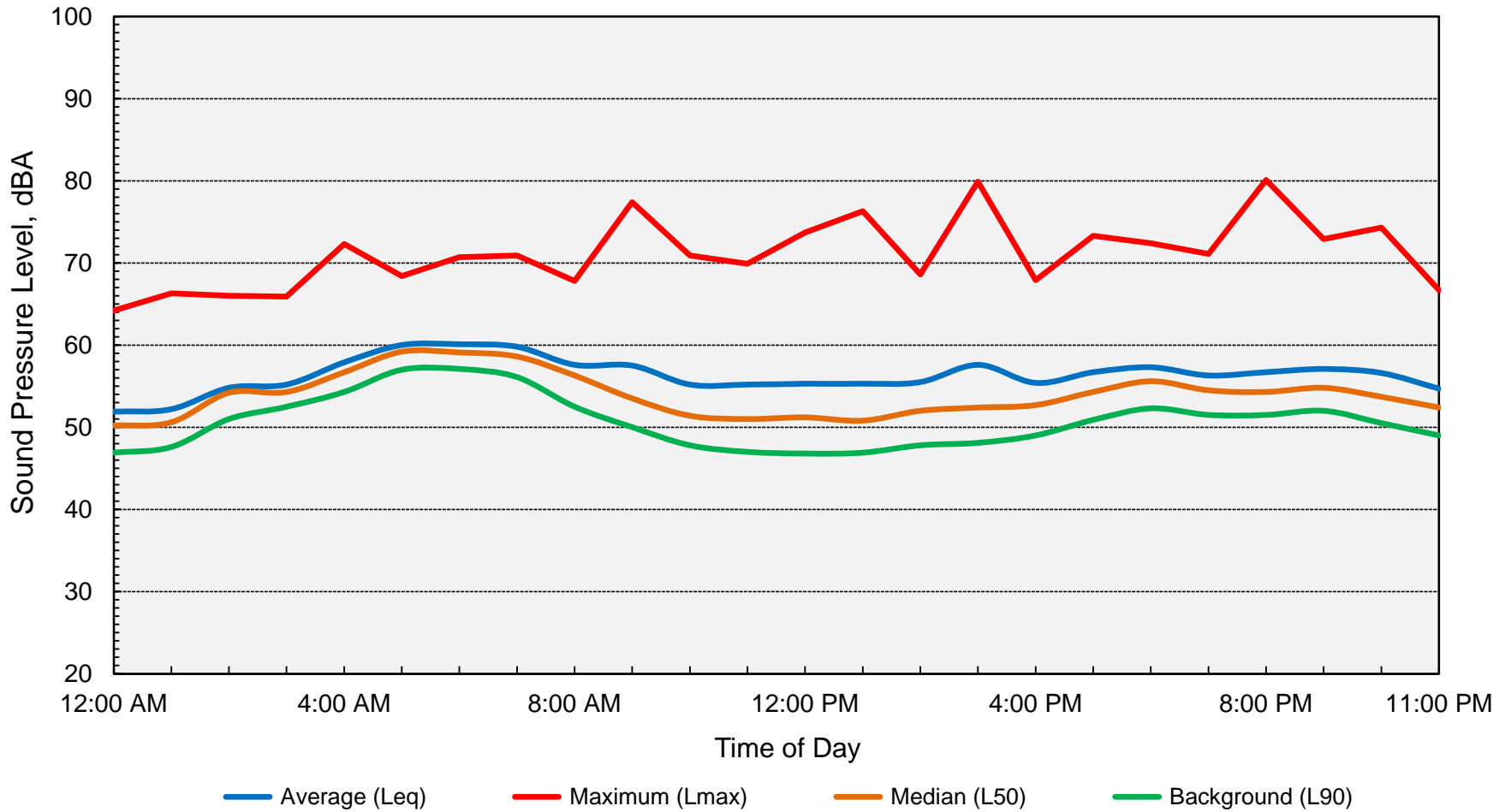


Appendix D-3
Long-Term Ambient Noise Monitoring Results - Site 2
Northlake - Phase 1 - Village 14 - Sacramento, California
Tuesday, August 23, 2022



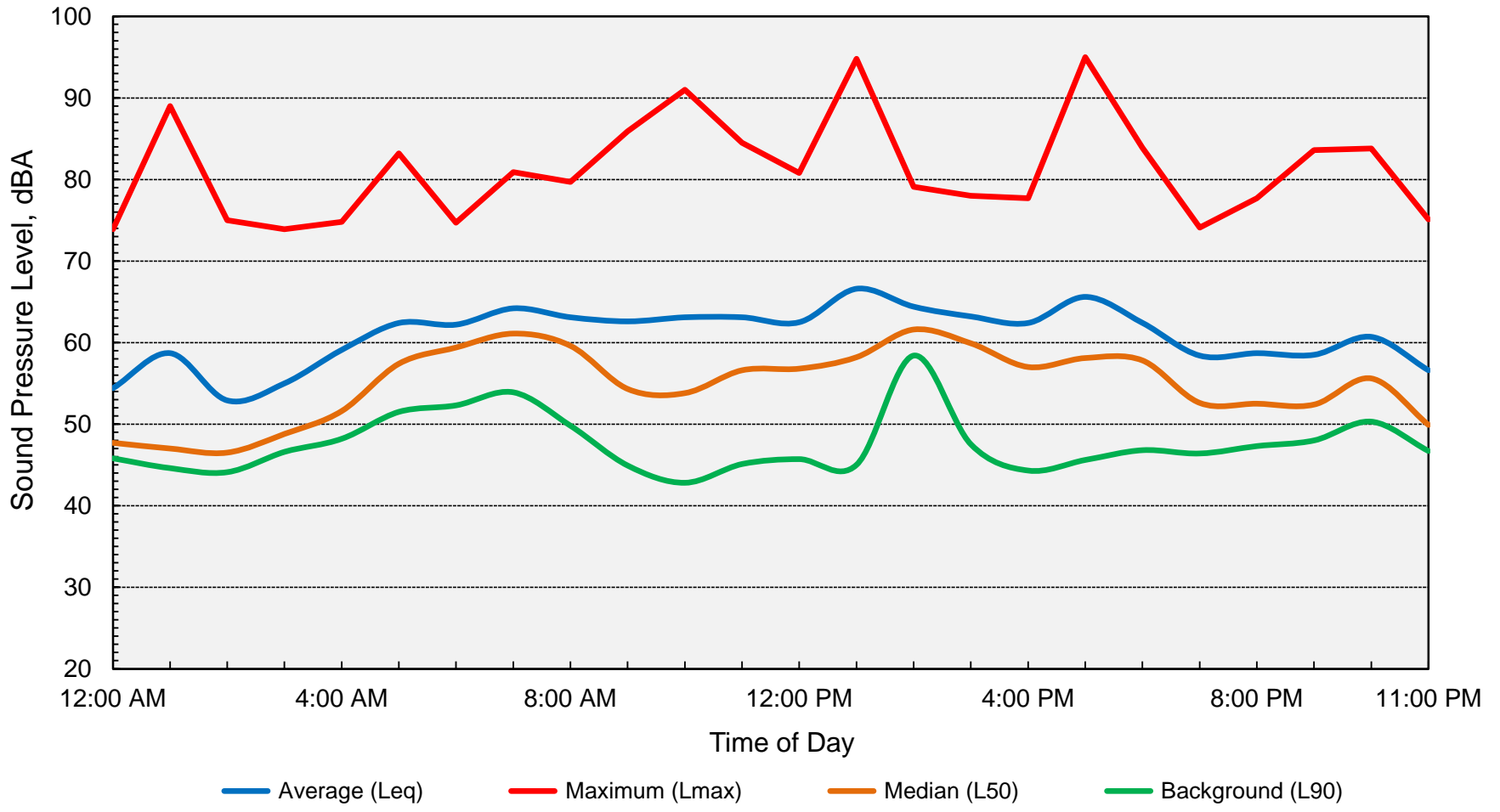
Computed DNL = 63 dB

Appendix D-4
Long-Term Ambient Noise Monitoring Results - Site 2
Northlake - Phase 1 - Village 14 - Sacramento, California
Wednesday, August 24, 2022



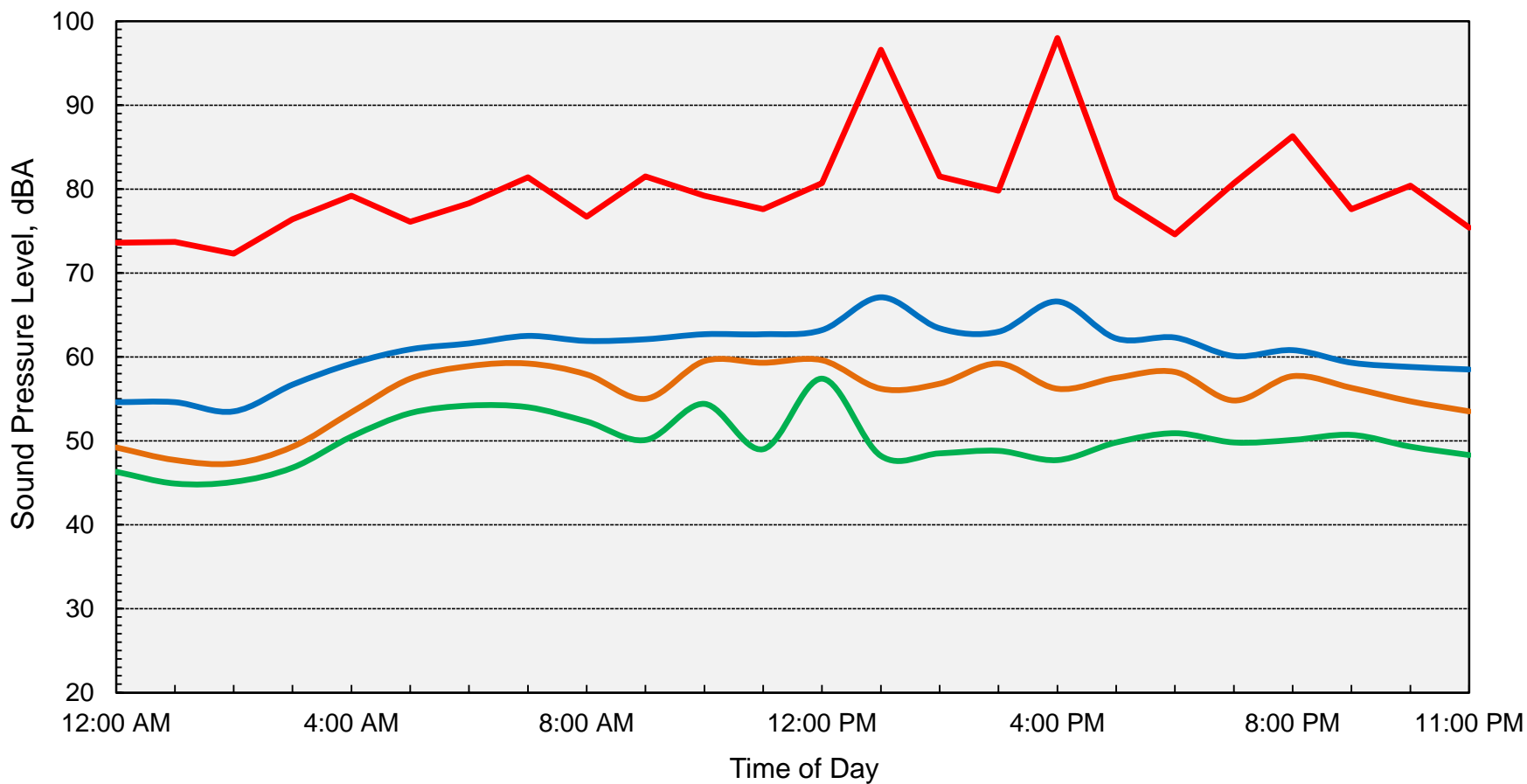
Computed DNL = 63 dB

Appendix D-3
Long-Term Ambient Noise Monitoring Results - Site 3
Northlake - Phase 1 - Village 14 - Sacramento, California
Tuesday, August 23, 2022



Computed DNL = 66 dB

Appendix D-6
Long-Term Ambient Noise Monitoring Results - Site 2
Northlake - Phase 1 - Village 14 - Sacramento, California
Wednesday, August 24, 2022



— Average (Leq) — Maximum (Lmax) — Median (L50) — Background (L90)

Computed DNL = 66 dB

Appendix E
FHWA-RD-77-108 Highway Traffic Noise Prediction Model
Data Input Sheet

Project #: 2022-124
 Description: Future Conditions
 Ldn/CNEL: Ldn
 Hard/Soft: Soft

Segment	Roadway Name	Receiver Description	ADT	Day %	Eve %	Night %	% Med. Trucks	% Hvy. Trucks	Speed	Distance	Offset (dB)
1	Highway 99	Community Park - East Side	95,600	75		25	3	8	60	250	-3
2	Highway 99	Community Park - East Side	95,600	75		25	3	8	60	600	-3
3	Highway 99	Community Park - East Side	95,600	75		25	3	8	60	1000	-3
4	Highway 99	Lots 60-65	95,600	75		25	3	8	60	300	-3
5	Highway 99	Lots 57-59	95,600	75		25	3	8	60	320	-3
6	Highway 99	Lots 52-56	95,600	75		25	3	8	60	380	-4
7	Elkhorn Blvd	Lots 48-51	55,840	80		20	2	2	40	290	-3
8	Elkhorn Blvd	Lots 42-47	55,840	80		20	2	2	40	290	-2
9	Elkhorn Blvd	Lots 33-42	55,840	80		20	2	2	40	290	-2
10	Elkhorn Blvd	Lot 31	55,840	80		20	2	2	40	250	-2
11	Elkhorn Blvd	Lots 29-30	55,840	80		20	2	2	40	125	0
12	Elkhorn Blvd	Lot 28	55,840	80		20	2	2	40	240	-3

Traffic Generation Summary**Greenbriar****11-Oct-22**

Total External Trips (Includes Travel and Internal Trip discounts)	Project ADT DEIR 2007	Project ADT Ph 1 & 2 TSM's 2019	Project ADT Village 14 TSM 2022
1. Residential (SF & MF)	17,859	17,103	19,206
2. Parks and Community Center	0	139	139
3. School	1,032	892	892
4. Total Commercial Retail Trips	<u>21,056</u>	<u>15,299</u>	<u>5,338</u>
5. Total External ADT	39,947	33,433	25,575
65% of Total ADT	25,965	21,731	16,624
6. Subtotal all Non-Commercial (1+2+3)	18,891	18,134	20,237
7. Percentage of total ADT for all Non Comm. (6/5)	47.3%	54.2%	79.1%

Notes:

1. 2007 DEIR Traffic Study prepared by TJKM (ITE, 7th edition)
2. 2019 Traffic Study prepared by Wood Rodgers for City approval of the Meister (Shore Vista) DCR (ITE, 10th Edition)
3. 2022 Traffic Study mods prepared by Wood Rodgers based on Village 14 ADT changes to 2021 values.(ITE, 10th Edition)

**Table 6.1-20
Proposed Project Trip Generation**

Land Use	Size	Daily Rate	Daily Trips	A.M. Peak Hour In	A.M. Peak Hour Out	A.M. Total	P.M. Peak Hour In	P.M. Peak Hour Out	P.M. Total
Single Family Residential (Low Density Housing)	671 DU ¹		5,991	174	496	670	381	214	595
Single Family Residential (Medium Density Housing)	2,215 DU		8,933	111	504	615	488	274	762
Multi Family Residential (High Density Housing)	587 DU		3,678	58	233	291	221	119	341
Total Residential Trips Generated			18,603	344	1,234	1,576	1,090	608	1,697
Elementary School	800 Students		1,032	163	133	296	92	112	204
Village and Community Commercial									
- Retail	263 Ksf		12,732	171	109	280	569	616	1,185
- Retail/Major Grocery	67 Ksf		5,877	151	157	308	360	319	680
Meister Retail	29.7 Ksf		3,085	46	29	75	135	146	281
Meister Retail/Restaurant	14 Ksf	127.15	1,780	98	91	189	145	118	263
Total Project Trips Generated			43,109	972	1,754	2,724	2,390	1,920	4,311
<i>Trip discount²</i>									
Residential Travel Mode Discount									
Transit (1%)			(186)	(3)	(12)	(15)	(11)	(6)	(17)
Walk (2%)			(372)	(7)	(26)	(32)	(22)	(12)	(34)
Bike (1%)			(186)	(3)	(12)	(15)	(11)	(6)	(17)
Other Travel Mode Discount									
Village and Community Commercial - Transit Ridership (0.3%)			(56)		Negligible			Negligible	
Meister Retail and Restaurant - Transit Ridership (0.3%)			(15)		Negligible			Negligible	
Sub Total			(815)	(13)	(49)	(62)	(44)	(24)	(68)
Residential Linked Trip by Purpose Discount									
Elementary School (8%) A.M. only				(27)	(99)	(126)			
Village and Community Commercial (10%)			(2,347)	(47)	(38)	(85)	(109)	(61)	(170)
Sub Total			(2,347)	(74)	(137)	(211)	(109)	(61)	(170)
Total Auto Trips			39,947	884	1,567	2,451	2,238	1,835	4,073

Notes:

¹ DU - Dwelling Unit, ² AC - Acre ³ Ksf - 1000 Square Feet.

² Mode split based on Pre-Census Behavior Report Analysis of the 2000 SACOG Household Travel Survey, SACOG 2001, Weighted Results for Tables A7,A26 and A27.

88% of Residential trips are by auto during the a.m. peak hour, 1% by Transit, 2% by Walk and 1% by Bike with 8% trips made to the Elementary School by other means besides auto.

96% of Residential trips are expected to be made by auto during the p.m. peak hour. 10% of the Residential auto trips are expected to be linked to Village and Community Commercial trips.

0.3 % of non residential trips are expected to be made to the Village and Community Commercial by transit.

Source: ITE Trip Generation, 7th Edition (trip calculation sheets included in Appendix B of this document)

Table 1. Project Full Buildout Trip Generation

Land Use	Quantity			Unit	ITE Code	Trip Rate ¹			Volumes						
	Phase 1	Phase 2	Total			Daily	AM Peak Hour	PM Peak Hour	Daily	AM Peak Hour			PM Peak Hour		
										In	Out	Total	In	Out	Total
1. Single-Family Residential	1,138	1,038	2,176	DU ²	210	8.13	0.71	0.90	17,684	387	1,163	1,550	1,231	723	1,954
2. Multi-Family Residential	189	331	520	DU ²	221	5.45	0.33	0.42	2,832	45	127	172	132	84	216
Residential Subtotal [1. + 2.]									20,516	432	1,290	1,722	1,363	807	2,170
Residential Trip Reductions for Transit, Walk, and Bike (4%) ⁵ [3. * (-0.04)]									-821	-17	-52	-69	-55	-32	-87
Residential Total Auto Trips [3. + 4.]									19,695	415	1,238	1,653	1,308	775	2,083
Residential/Retail Internal Capture ⁶ [15.]									-1,700	-21	-32	-53	-83	-80	-163
Residential/School Internal Capture ⁹ [20.]									-892	0	-285	-285	-79	0	-79
Residential External Auto Trips [5. + 6. + 7.]									17,103	394	921	1,315	1,146	695	1,841
9. Community/Neighborhood Parks	14.4	6.4	20.8	Acres	411	0.78	0.02	0.11	16	0	0	0	1	1	2
10. Community Center	4.128	0	4.128	KSF ³	495	29.80	7.99	5.33	123	22	11	33	10	12	22
Parks/Community Center Subtotal [9. + 10.]									139	22	11	33	11	13	24
12. Grocery Store ⁸	67	0	67	KSF ³	850	88.99	3.82	8.66	5,962	154	102	256	296	284	580
13. Regional Shopping Center/Community Commercial ^{4,8}	228	16.34	244.34	KSF ³	820	45.17	1.12	4.31	11,037	170	104	274	505	548	1,053
Retail Subtotal [12. + 13.]									16,999	324	206	530	801	832	1,633
Residential/Retail Internal Capture (10%) ⁶ [14. * (-0.1)]									-1,700	-32	-21	-53	-80	-83	-163
Retail External Auto Trips [14. + 15.]									15,299	292	185	477	721	749	1,470
17. Elementary School	0	924	924	Students	520	1.93	0.67	0.17	1,784	334	285	619	75	82	157
Residential-School Non-Auto Trips (8% AM only) ⁷ [17. * (-0.08)]									0	-27	-23	-50	0	0	0
School Total Auto Trips [17. + 18.]									1,784	307	262	569	75	82	157
Residential/School Internal Capture ⁹ [19. * (-0.5)]									-892	-285	0	-285	0	-79	-79
School External Auto Trips [19. + 20.]									892	22	262	284	75	3	78
Gross Trips [3. + 11. + 14. + 17.]									39,438	1,112	1,792	2,904	2,250	1,734	3,984
Total Non-Auto Trips [4. + 18.]									-821	-44	-75	-119	-55	-32	-87
Gross Auto Trips [22. + 23.]									38,617	1,068	1,717	2,785	2,195	1,702	3,897
Total Internal Capture [6. + 7. + 15. + 20.]									-5,184	-338	-338	-676	-242	-242	-484
Net External Auto Trips [24. + 25.]									33,433	730	1,379	2,109	1,953	1,460	3,413

Notes

¹ Trip generation rates are from the *ITE Trip Generation Manual, 10th Edition* (ITE, 2017). Fitted curve equation were used to estimate trips for residential and regional shopping center/community commercial uses to maintain consistency with the Greenbriar Second RDEIR. All other trip generate estimates were based on average trip rates. Note that the *ITE Trip Generation Manual, 10th Edition* rates, differ from the *ITE Trip Generation Manual, 7th Edition* rates used in the *Greenbriar Second RDEIR*.

² DU = dwelling units

³ KSF = thousand square feet gross floor area

⁴ Regional shopping centers/community commercial are based on a 0.25 floor-area-ratio (FAR) applied to the net acreage.

⁵ Based on Table 6.1-20 of the *Second RDEIR*.

⁶ Based on Table 6.1-20 of the *Second RDEIR*. Calculated as follows: 10% of grocery store, regional shopping centers, and community commercial (auto) trips assumed to be made by project residents. Numbers account for both ends of the internal trips.

⁷ Based on Table 6.1-20 of the *Second RDEIR*. Calculated as follows: 8% of AM peak hour elementary school trips made by non-auto mode.

⁸ Although the regional shopping center/community commercial and grocery store trips would typically have pass-by and/or diverted-link reductions applied, these types of reductions are not necessary in this case because the study area only includes internal Project intersections.

⁹ To account for tours between Home, School, and External Destinations, internal capture between School and Residential trips is assumed to be 50%. See Attachment B for source of 50% reduction.

1138+139=1,277 SF Res Trips

7.5 Ac Net Comm Site
=81,675 SF (0.25 FAR)

Exhibit D
Greenbriar MMRP Submittal 8B
Wood Rodgers Traffic Study
Modified for Village 14 Approval

Table 1. Project Full Buildout Trip Generation

Land Use	Quantity			Unit	ITE Code	Trip Rate ¹			Volumes						
	Phase 1	Phase 2	Total			Daily	AM Peak Hour	PM Peak Hour	Daily	AM Peak Hour			PM Peak Hour		
										In	Out	Total	In	Out	Total
1. Single-Family Residential	1,277	1,038	2,315	DU ²	210	8.09	0.71	0.90	18,721	412	1,236	1,648	1,307	767	2,074
2. Multi-Family Residential	189	331	520	DU ²	221	5.45	0.33	0.42	2,832	45	127	172	132	84	216
Residential Subtotal [1. + 2.]									21,553	457	1,363	1,820	1,439	851	2,290
Residential Trip Reductions for Transit, Walk, and Bike (4%) ⁵ [3. * (-0.04)]									-862	-18	-55	-73	-58	-34	-92
Residential Total Auto Trips [3. + 4.]									20,691	439	1,308	1,747	1,381	817	2,198
Residential/Retail Internal Capture ⁶ [14. * (-0.1)]									-593	-8	-13	-21	-28	-26	-54
Residential/School Internal Capture ⁹ [19. * (-0.5)]									-892	0	-285	-285	-79	0	-79
Residential External Auto Trips [5. + 6. + 7.]									19,206	431	1,010	1,441	1,274	791	2,065
9. Community/Neighborhood Parks	14.4	6.4	20.8	Acres	411	0.78	0.02	0.11	16	0	0	0	1	1	2
10. Community Center	4.128	0	4.128	KSF ³	495	29.80	7.99	5.33	123	22	11	33	10	12	22
Parks/Community Center Subtotal [9. + 10.]									139	22	11	33	11	13	24
12. Regional Shopping Center/Community Commercial ⁴	81.675	16.34	98.015	KSF ³	820	60.51	2.05	5.46	5,931	125	76	201	257	278	535
Retail Subtotal [12.]									5,931	125	76	201	257	278	535
Residential/Retail Internal Capture (10%) ⁶ [13. * (-0.1)]									-593	-13	-8	-20	-26	-28	-54
Retail External Auto Trips [13. + 14.]									5,338	112	68	181	231	250	481
16. Elementary School	0	924	924	Students	520	1.93	0.67	0.17	1,784	334	285	619	75	82	157
Residential-School Non-Auto Trips (8% AM only) ⁷ [16. * (-0.08)]									0	-27	-23	-50	0	0	0
School Total Auto Trips [16. + 17.]									1,784	307	262	569	75	82	157
Residential/School Internal Capture ⁹ [18. * (-0.5)]									-892	-285	0	-285	0	-79	-79
School External Auto Trips [18. + 19.]									892	22	262	284	75	3	78
Gross Trips [3. + 11. + 13. + 16.]									29,407	938	1,735	2,673	1,782	1,224	3,006
Total Non-Auto Trips [4. + 17.]									-862	-45	-78	-123	-58	-34	-92
Gross Auto Trips [21. + 22.]									28,545	893	1,657	2,550	1,724	1,190	2,914
Total Internal Capture [6. + 7. + 14. + 19.]									-2,970	-306	-306	-611	-133	-133	-266
Net External Auto Trips [23. + 24.]									25,575	587	1,351	1,939	1,591	1,057	2,648

Notes

¹ Trip generation rates are from the *ITE Trip Generation Manual, 10th Edition* (ITE, 2017). Fitted curve equation were used to estimate trips for residential and regional shopping center/community commercial uses to maintain consistency with the Greenbriar Second RDEIR. All other trip generate estimates were based on average trip rates. Note that the *ITE Trip Generation Manual, 10th Edition* rates, differ from the *ITE Trip Generation Manual, 7th Edition* rates used in the *Greenbriar Second RDEIR*.

² DU = dwelling units

³ KSF = thousand square feet gross floor area

⁴ Regional shopping centers/community commercial are based on a 0.25 floor-area-ratio (FAR) applied to the net acreage.

⁵ Based on Table 6.1-20 of the *Second RDEIR*.

⁶ Based on Table 6.1-20 of the *Second RDEIR*. Calculated as follows: 10% of regional shopping center and community commercial (auto) trips assumed to be made by project residents. Numbers account for both ends of the interal trips.

⁷ Based on Table 6.1-20 of the *Second RDEIR*. Calculated as follows: 8% of AM peak hour elementary school trips made by non-auto mode.

⁸ Although the regional shopping center/community commercial trips would typically have pass-by and/or diverted-link reductions applied, these types of reductions are not necessary in this case because the study area only includes internal Project intersections.

⁹ To account for tours between Home, School, and External destinaitons, internal capture between School and Residential trips is assumed to be 50%. See Attachment B for source of 50% reduction.