Initial Study

North State Grocery, Inc. – Holiday Market (Penn Valley) Project

Nevada County, California

To:

Supervisor Susan Hoek – District IV	Caltrans Highways
Commissioner John Foley – District IV	CA Department of Fish & Wildlife
Agricultural Commissioner – Chris de Nijs; Luci Wilson	Central Valley RWQCB
Assessor's Office – Rolf Kleinhans	Native American Heritage Commission
Building Dept. – Nick McBurney	North Central Information Center
Code and Cannabis Compliance Dept. - Jessica Rist	Nevada City Rancheria Nisenan Tribe
County Counsel – Doug Johnson; Sims Ely	Colfax-Todds Valley Consolidated Tribe
CDA Director – Trisha Tillotson	Shingle Springs Band of Miwok Indians
CEO – Alison Lehman	Tsi-Akim Maidu Tribal Council
Assistant CEO – Patrick Eidman	United Auburn Indian Community
COB	Wilton Rancheria of Wilton, CA
Environmental Health Dept. – Nicole Johnson	Nevada County Contractors' Association
Economic Development – Kimberly Parker	Nevada County Economic Resource Council
Fire Protection Planner – Dan Collins	PG&E
LAFCo – SR Jones	Penn Valley Chamber of Commerce
Nevada County Transportation Commission	Bear Yuba Land Trust
Public Works Dept. - Engineering	CNPS – Redbud Society
Public Works Dept. – Surveying	Community Environmental Advocates
Public Works Dept. – Sanitation	Federation of Neighborhoods Associations
Public Works Dept. – Transit Services	FREED
Penn Valley Municipal Advisory Council	General Plan Defense Fund
Penn Valley Fire Protection District	Gray Pine Vineyard & Winery – Guy & Karen Lauterbach
Nevada Irrigation District	Lake Wildwood HOA
Northern Sierra Air Quality Mgt. Dist.	Sierra Club – Sierra Nevada Group
Resource Conservation District	CAL EPA
Western Gateway Park District	U.S. Fish and Wildlife Service
Nevada County Association of Realtors	Chris Stiles – Remy Moose Manley, LLP
Chris Boyd, General Manager - Lake Wildwood Association	Neighboring parcels within 300 feet

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File Number: PLN24-0089; GPA24-0003; RZN24-0003; DVP24-2; MGT24-0001; EIS24-0007

Assessor Parcel Number: 051-240-014

Zoning Districts: C1-SP (Neighborhood Commercial/ Site Performance Combining District); M1-SP (Light Industrial/ Site Performance Combining District)

General Plan Designations: NC (Neighborhood Commercial); IND (Industrial)

Project Location: 18805 and 18807 Pine Shadows Lane, Penn Valley, CA 95946. Project parcel is located along the south side of Pine Shadows Lane and the east side of Pleasant Valley Road, approximately 0.25 mile north of the Pleasant Valley Road/State Highway 20 intersection (See Figure 1).

Project Site & Surrounding Land Uses:
The project site is within the central portion of a small Neighborhood Commercial (NC) and Industrial (IND) corridor that extends approximately 0.35 mile north of State Highway 20, located on the east side of Pleasant Valley Road, and within the Penn Valley Community Region. The site is located approximately 0.25 mile north of the Pleasant Valley Road/State Highway 20 intersection and approximately one mile south of the entrance to the Lake Wildwood residential subdivision. Access to the site is from Pine Shadows Lane, which extends east from Pleasant Valley Road along the northern boundary of the site. A secondary access is provided from Commercial Avenue which extends east from Pleasant Valley Road to the south and currently ends near the southern boundary of the site.

The project site is surrounded by a mini-storage light industrial use to the north, residential uses to the east, multiple commercial uses to the south including a fuel station, and a vacant parcel immediately to the west across Pleasant Valley Road with scattered residences located further west.

Figure 1. Project Zoning, Vicinity and Public Notice Map

Project Description

The project proposes an application for a General Plan Amendment and Zoning District Map Amendment (Rezone), Development Permit, and Management Plan to allow for the development and operation of a 30,711-square-foot grocery store including an approximate 750 square-foot interior area for a Starbucks Coffee restaurant and outdoor seating area on a 5.5 acre parcel. The proposed grocery store will employ a total of 75 employees, with 30-35 employees being onsite at one time. The grocery store will be open seven (7) days a week from 6:00 am to 11:00 pm.

The subject parcel currently has a General Plan designation of both Neighborhood Commercial (NC) and Industrial (IND) and corresponding zoning of Neighborhood Commercial, Site Performance Combining (C1-SP) District and Light Industrial, Planned Development, Site Performance Combining (M1-PD-SP) District. The General Plan Amendment (GPA24-0003) proposes to change the land use designation for the project parcel by increasing the amount of

land designated Neighborhood Commercial (NC) from approximately 1.9 acres to approximately 4.3 acres and decreasing the amount of land designated Industrial (IND) from approximately 3.6 acres to approximately 1.2 acres. The project includes a corresponding Rezone (RZN24-0003) to amend Zoning District Map No. 16a for the approximate 4.3 acres to Neighborhood Commercial, Site Performance Combining District (C1-SP) and the approximate 1.2 acres to Light Industrial, Planned Development, Site Performance Combining (M1-PD-SP) District. The Development Permit (DVP24-2) is required for review and approval of the proposed 30,711 square foot grocery store building including an approximate 750 square foot interior area for a Starbucks Coffee restaurant and outdoor seating area, and other related site improvements. The Management Plan (MGT24-0011) is required due to the removal of 4.64 acres of Landmark Groves including 8 Landmark Oak Trees on the subject property.

Existing on-site improvements to be removed for the project include a residence and accessory building. Proposed project improvements include: a 30,711 square foot Holiday Market grocery store building including an approximate 750 square foot interior area and outdoor seating area for Starbucks Coffee; 158 paved parking spaces located both in front (west side) and behind (east side) of the proposed grocery store building; paved two-way accessways to the project site located along the north and south sides of the subject parcel; freestanding outdoor parking lot lighting; a loading dock, trash compactor, and recycling area with enclosure located on the rear (east) side of the proposed grocery store building; retaining walls; landscaping; and a monument sign located along the Pleasant Valley Road property frontage. Figure 2 shows the proposed site plan for the proposed project.

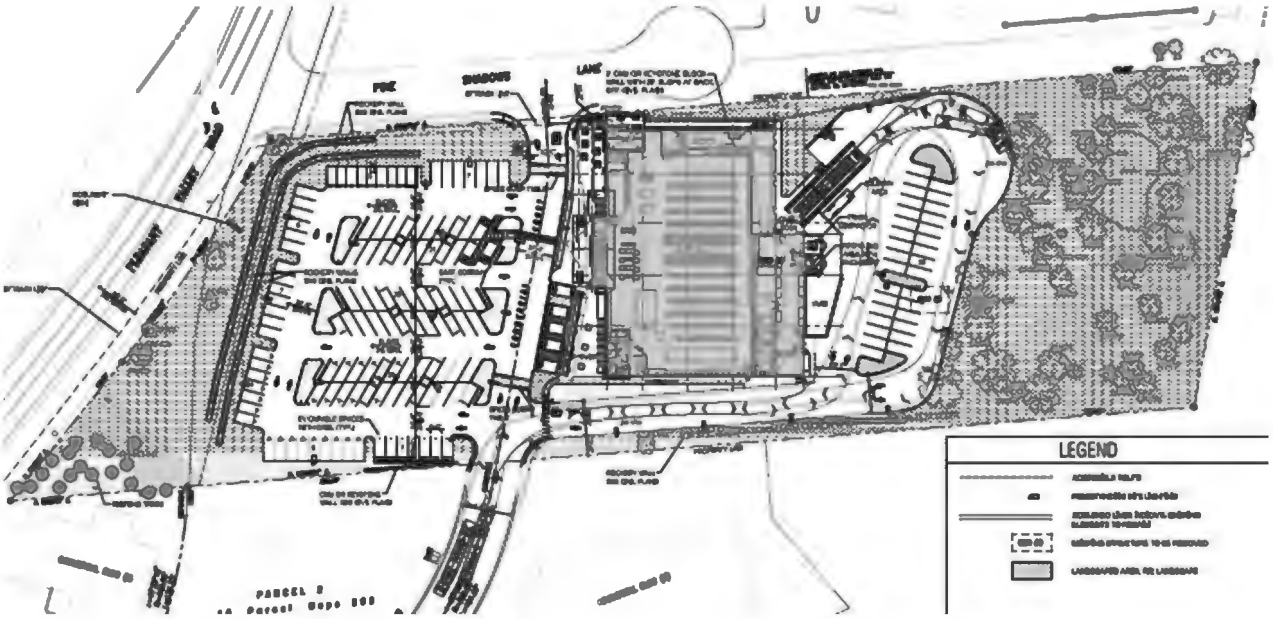


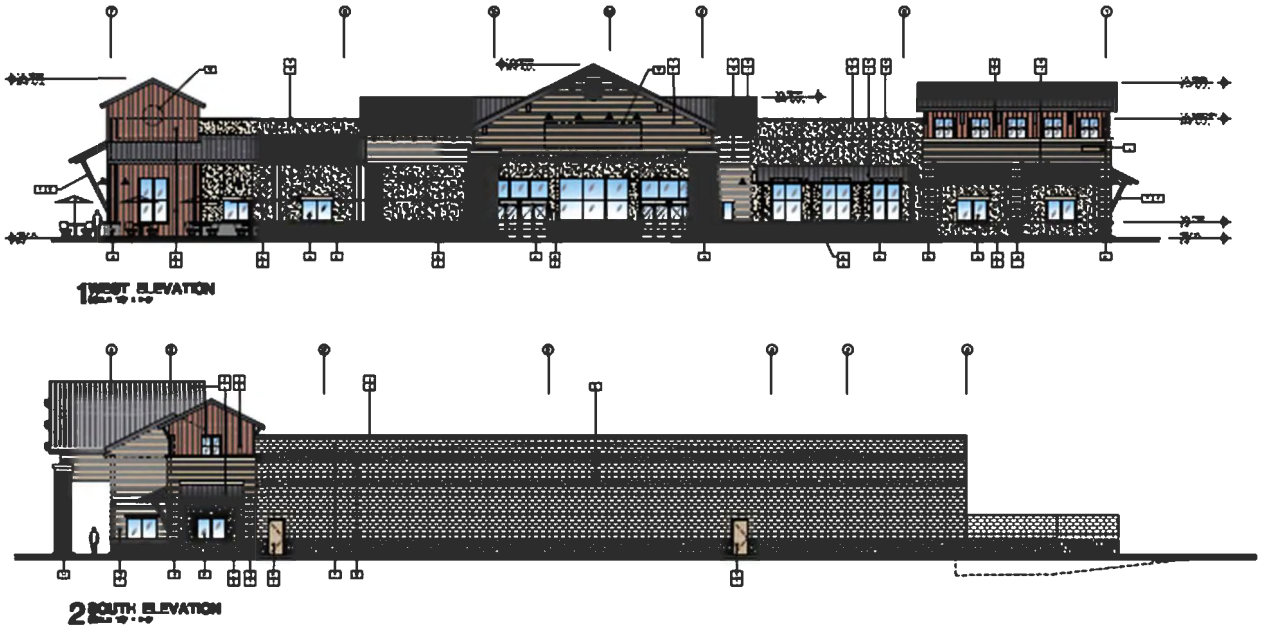
Figure 2. Proposed Site Plan

Proposed project signage will include a monument sign to be located along the Pleasant Valley Road frontage approximately 80 feet south of Pine Shadows Lane. Wall mounted signage on the building is proposed and additional on-site directional signage may also be proposed. Size and design details of the proposed project signage are currently being worked on and a

comprehensive sign program that is consistent with Nevada County Code requirements will be required to be submitted to the Planning Department for review and approval.
The project proposes to install twenty-five (25) parking lot pole lights with nineteen (19) of them being 20 feet in height and six (6) of them being 15 feet in height. In addition, wall mounted lighting is proposed on the building at locations ten to fifteen feet in height.

The proposed building frontage is orientated to the west, facing Pleasant Valley Road with the north side of the building facing toward Pine Shadows Lane. The proposed building will utilize a variety of neutral, earth tone colors including Nomadic Desert (light brown), Panda White, Reddened Earth (red/brown), and Cloak Gray. The building will also have varying materials including metal roofing, cement plaster siding, cement fiber siding, both smooth and split face CMU block, and river stone siding.

Several architectural treatments are provided including but not limited to: wall variations with different colors and materials, varying roof lines and heights along the west elevation, metal roof overhangs located above windows, and decorative wall light fixtures primarily along the west elevation. In addition to these building materials, rock retaining walls are proposed along the Pleasant Valley Road frontage (west side), along the northwest corner of the site, and along the southeast boundary of the site. See Figure 3 below for building exterior elevations.



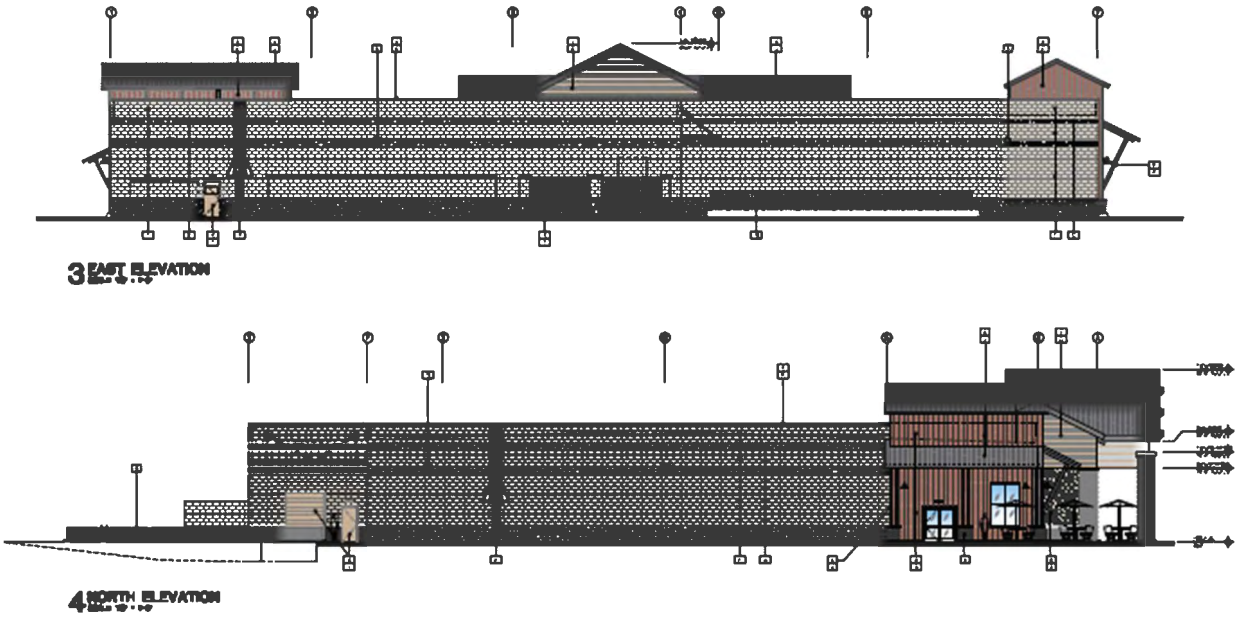


Figure 3. Building Elevations

The project proposes approximately 55% of the site as impervious surface, including asphalt for circulation and parking lot areas and buildings. A total of 39% of the site located in the eastern portion of the subject parcel will be retained as open space area, and 6% of the site will be required landscape area. The landscape design plan submitted by the applicant shows a total of thirty-six (36), 24-inch box trees consisting of two separate species and forty-five (45), 15-gallon trees consisting of four separate species. Ten different species of 5-gallon shrubs are proposed along with a species of one-gallon groundcover. The landscape plan details the site's shade trees will provide 43.7% parking lot coverage within 15-years of building permit issuance, meeting the Nevada County Code requirement of 40%. The project provides street front landscaping consisting of 17 new trees planted and 19 existing trees to remain. See Figure 4. Landscape Design Plan.

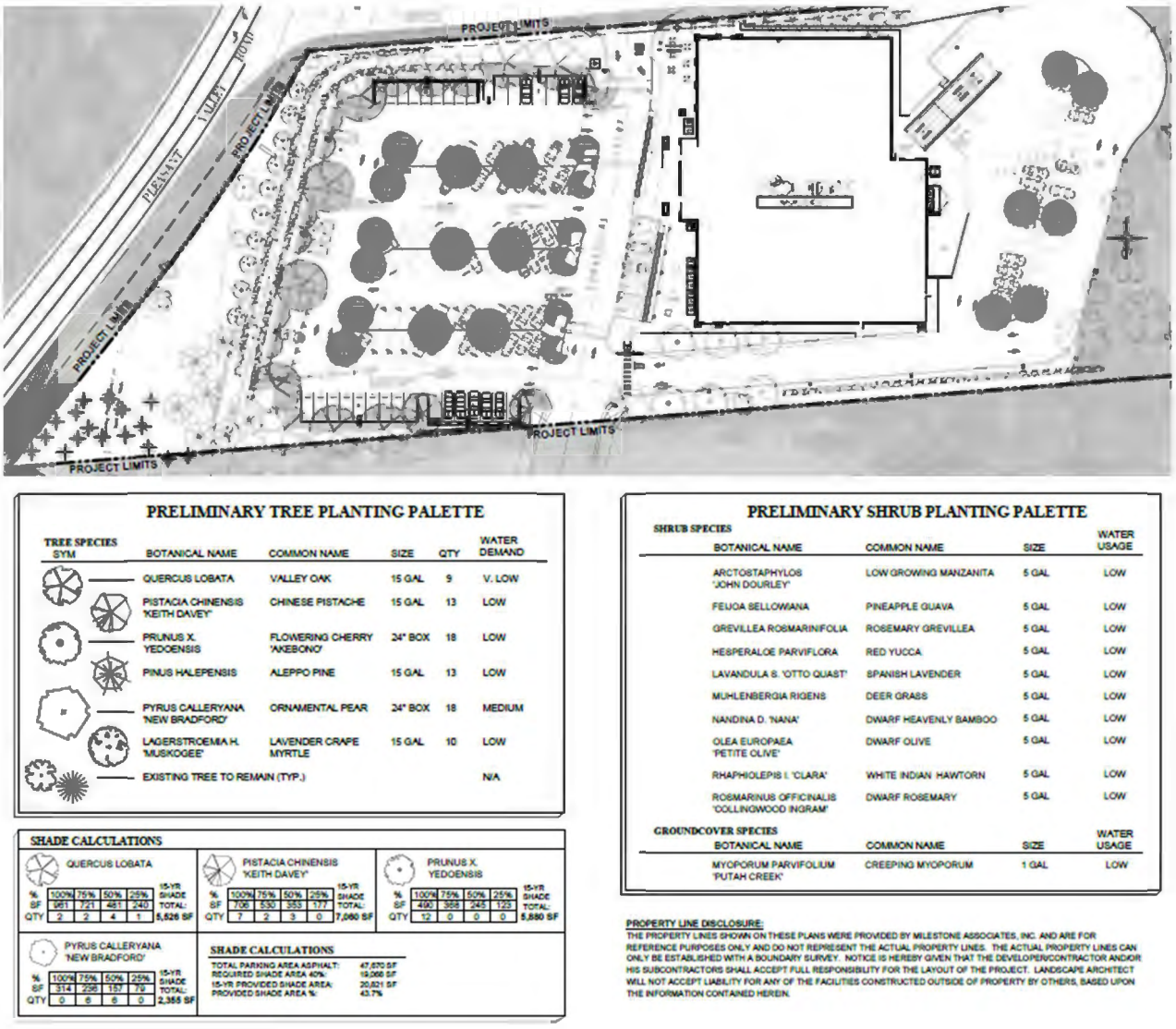


Figure 4. Landscape Design Plan

Proposed Preliminary earthwork calculations estimate a cut of approximately 39,200 cubic yards and fill of 17,255 cubic yards. The project will also include construction of a sidewalk along the south side of Pine Shadows Lane, from Pleasant Valley Road to the entrance to the proposed parking lot. Water will be provided from the local Nevada Irrigation District and wastewater connected to the Nevada County Sanitation District No. 1, Penn Valley, Zone 6 after the property is annexed into the District.

Other Permits that May be Necessary:

1. Grading and Building Permits – Nevada County Building Department
2. Encroachment Permits – Nevada County Public Works Department
3. Food Facility, CUPA Permits – Nevada County Dept. of Environmental Health
4. Stormwater Pollution Prevention Plan (SWPPP) – California State Water Resources Control Board
5. National Pollutant Discharge Elimination System (NPDES) General Permit– California State Water Resources Control Board

6. Dust Control Plan - Northern Sierra Air Quality Management District

Relationship to Other Projects:
There are no directly related development projects known to this project. This scope of work is proposed to allow the existing Holiday Market store located to the north near the entrance to Lake Wildwood to move from its existing building to a larger, new building.

Consultation with Native American Tribes:
Pursuant to Assembly Bill 52, tribal consultation began May 22, 2024. Native American tribes traditionally and culturally affiliated with the project area were notified of the project and invited to consultation. The United Auburn Indian Community (UAIC) tribe requested consultation with the County and an on-site survey was conducted by the tribe in August 2024. Based on this survey, UAIC recommended mitigation measures be incorporated into the project to address potential impacts to tribal cultural resources. These mitigation measures have been included and are discussed in Section 18, Tribal Cultural Resources, of this initial study.

Summary of Impacts and Proposed Mitigation Measures

Environmental Factors Potentially Affected:

All of the following environmental factors have been considered. Those environmental factors checked below would be potentially affected by this project, involving at least one impact that is "Less Than Significant with Mitigation" as indicated by the checklist on the following pages.

✓	1. Aesthetics		2. Agricultural and Forestry Resources	✓	3. Air Quality
✓	4. Biological Resources	✓	5. Cultural Resources		6. Energy
✓	7. Geology and Soils		8. Green House Gas Emissions		9. Hazards and Hazardous Materials
✓	10. Hydrology and Water Quality		11. Land Use and Planning		12. Mineral Resources
✓	13. Noise		14. Population and Housing		15. Public Services
	16. Recreation	✓	17. Transportation	✓	18. Tribal Cultural Resources
	19. Utilities and Service Systems		20. Wildfire	✓	21. Mandatory Findings of Significance

Recommended Mitigation Measures:

The following measures shall be implemented, and where appropriate, included as a note on construction plans as outlined in each.

1. AESTHETICS

Mitigation Measure 1A. Outdoor Light Fixtures. All outdoor light fixtures shall be fully shielded and downward facing to eliminate glare and prevent light trespass onto neighboring properties. Fixtures shall have high efficiency lamps. High pressure sodium, and mercury vapor light fixtures are prohibited.

Timing: *Prior to building permit issuance*
Reporting: *Agency approval of permits or plans*

Responsible Agency: *Planning Department*

Mitigation Measure 1B. Final Photometric Plan. The applicant shall provide a final lighting and photometric plan that demonstrates all project lighting shall be maintained on site. This plan should include all project lighting including but not limited to parking lot and circulation lighting, wall lighting, sign lighting, and landscaping lighting. This plan shall demonstrate all lighting values are at "0" at all property lines. Recommended methods for reducing potential light spill include: reducing the lumen output of proposed lighting systems, reducing the height of the proposed lights, reducing the number of proposed lights and relocating lights farther into the interior of the parcel.

Timing: *Prior to building permit issuance*
Reporting: *Agency approval of permits or plans*
Responsible Agency: *Planning Department*

3. AIR QUALITY

Mitigation Measure 3A: Alternatives to open burning. Alternatives to open burning of site-cleared vegetative material shall be used unless otherwise deemed infeasible by the Northern Sierra Air Quality Management District (NSAQMD). Among suitable alternatives are chipping, mulching, hauling to an approved disposal site, cutting for firewood, or conversion to biomass fuel. This shall be included as a note on all grading and improvement plans.

Timing: *During grading/construction*
Reporting: *Grading/Building plans*
Responsible Agency: *Planning Department/NSAQMD*

Mitigation Measure 3B: Use of grid power. During construction, grid power shall be used (as opposed to diesel generators) for job site power needs where feasible.

Timing: *During construction*
Reporting: *Building plans*
Responsible Agency: *Planning Department/Building Department*

Mitigation Measure 3C: Traffic control. Temporary traffic control shall be provided during all phases of the construction to improve traffic flow.

Timing: *During construction*
Reporting: *Grading/Building/Improvement plans*
Responsible Agency: *Planning Department/Public Works Department*

Mitigation Measure 3D: Traffic flow to off-peak hours. Construction activities shall be scheduled to direct traffic flow to off-peak hours as much as practicable.

Timing: *During construction*
Reporting: *Grading/Building plans*
Responsible Agency: *Planning Department/Public Works Department*

Mitigation Measure 3E: Prior to issuance of grading and improvement permits, a Dust Control Plan shall be submitted to the Northern Sierra Air Quality Management District pursuant to Rule 226 and approved. Include the approved Dust Control Plan on the project plans using clear phrasing and enforceable conditions, under its own heading. Provide evidence of NSAQMD approval to Nevada County with permit application submittal. The plan shall include but not be limited to the following measures, which shall also be included on all construction plans:

a. Contact details must be provided for the person/s responsible for ensuring that all dust control measures are performed in a timely manner during all phases of project construction.
b. All material excavated, stockpiled, or graded shall be sufficiently watered, treated, or covered to prevent fugitive dust from leaving the property boundaries and causing a public nuisance or a violation of an ambient air standard.
c. All land clearing, grading, earth moving, and excavation activities on the project shall be suspended as necessary to prevent excessive windblown dust when winds are expected to exceed 20 miles per hour.
d. All inactive portions of the site shall be covered, seeded, or watered until a suitable cover is established.
e. All material transported off-site shall be either sufficiently watered, or securely covered to prevent it being entrained in the air, and there must be a minimum freeboard of six inches maintained in the bed of the transport vehicle.
f. All areas with vehicle traffic shall be watered or have dust palliative applied as necessary to minimize dust emissions.
g. The construction contractor shall limit vehicle speeds on unpaved roads to a speed of 15 mph.
h. Paved streets adjacent to the project shall be swept or washed at the end of each day, or as needed to remove excessive accumulation of silt and/or mud which may have resulted from activities at the project site.

Timing: *Prior to issuance of grading and improvement permits*
Reporting: *Grading/Improvement plans*
Responsible Agency: *Planning Department/NSAQMD*

4. BIOLOGICAL RESOURCES

Mitigation Measure 4A: Avoid Impacts to Nesting Raptors and Other Birds. The following nest survey requirements apply if construction activities take place during the typical bird breeding/nesting season (typically February 15 through September 1).

Pre-Construction Nest Survey
A pre-construction nesting bird survey shall be conducted by a qualified biologist on the project site and within a 500-foot radius of proposed construction areas, where access is available, no more than seven days prior to the initiation of construction. If there is a break in construction activity of more than 14 days, then subsequent surveys shall be conducted.

If active raptor nests are found, no construction activities shall take place within 500 feet of the nest until the young have fledged. If active songbird nests are found, a 100-foot no disturbance buffer will be established. These no-disturbance buffers may be reduced if a smaller buffer is proposed by the Project Biologist and approved by the County after taking

into consideration the natural history of the species of bird nesting, the proposed activity level adjacent to the nest, habituation to existing or ongoing activity, and nest concealment (are there visual or acoustic barriers between the proposed activity and the nest). A qualified biologist can visit the nest as needed to determine when the young have fledged the nest and are independent of the site or the nest can be left undisturbed until the end of the nesting season.

Survey Report
A report summarizing the survey(s) shall be provided to the County within 30 days of the completed survey and is valid for one construction season. If no nests are found, no further mitigation is required.

Changes to Buffers and Completion of Nesting
Should construction activities cause a nesting bird to do any of the following in a way that would be considered a result of construction activities: vocalize, make defensive flights at intruders, get up from a brooding position, or fly off the nest, then the exclusionary buffer shall be increased such that activities are far enough from the nest to stop this agitated behavior. The exclusionary buffer will remain in place until the chicks have fledged or as otherwise determined by a qualified biologist in consultation with the County.

Construction activities may only resume within the buffer zone after a follow-up survey by the Project Biologist has been conducted and a report has been prepared indicating that the nest (or nests) are no longer active, and that no new nests have been identified.

Timing: *Prior to and during construction*
Reporting: *Grading/Building plans*
Responsible Agency: *Planning Department*

Mitigation Measure 4B: Avoid Impacts to Roosting Bats. Pre-construction roosting bat surveys shall be conducted by a qualified biologist within 14 days prior to any tree or building removal that will occur during the breeding season (April through August). If preconstruction surveys indicate that no roosts of special-status bats are present, or that roosts are inactive or potential habitat is unoccupied, no further mitigation is required. If roosting bats are found, exclusion shall be conducted as recommended by the qualified biologist. Methods may include acoustic monitoring, evening emergence surveys, and the utilization of two-step tree removal supervised by the qualified biologist. Two-step tree removal involves removal of all branches that do not provide roosting habitat on the first day, and then the next day cutting down the remaining portion of the tree. Building exclusion methods may include such techniques as installation of passive one-way doors, or the installation of netting when the bats are not present to prevent their reoccupation. Once the bats have been excluded, tree or building removal may occur.

Timing: *Prior to and during construction*
Reporting: *Grading/Building plans*
Responsible Agency: *Planning Department*

Mitigation Measure 4C: Avoid Impacts to Northern California Ringtail. To mitigate for potential impacts to Northern California ringtail, the following measure is recommended:

- Within 14 days prior to the initiation of any construction activities, a qualified biologist shall conduct non-invasive preconstruction surveys for Northern California ringtail and ringtail nests in suitable habitats (riparian habitats, oak woodlands with shrubby

understory, and/or trees 5 inches dbh or greater in riparian areas, particularly those with cavities) that will be disturbed by construction activity. Non-invasive methods may include camera traps and track plates as well as physical surveys of suitable habitat. If ringtail are found prior to the initiation of, and/or during construction activities, a qualified biologist shall consult with CDFW prior to relocation of any individual ringtail. The camera trap may be removed once construction begins.

- If a ringtail nest is observed within the proposed impact area during the preconstruction survey, the Project biologist shall establish a no-disturbance buffer and the nest shall be fenced off and avoided until the young have left the nest, and the nest is no longer active as determined by the Project biologist. A qualified biologist shall monitor to ensure that ringtails do not disperse into the construction area.
- If any ringtails are observed within the Project area, work will be suspended in a 100-foot radius of the animal until the animal leaves the Project site on its own volition. If necessary, the Project biologist will notify CDFW to determine the appropriate procedures related to relocation. Any worker who inadvertently injures or kills a ringtail or who finds one dead, injured, or entrapped must immediately report the incident to the Project biologist.

Timing: *Prior to and during construction*
Reporting: *Grading/Building plans*
Responsible Agency: *Planning Department*

Mitigation Measure 4D: Impacts to Landmark Grove and Landmark Oak Trees. Prior to removal of onsite Landmark Groves and Landmark Oak trees and issuance of a grading or building permit for the proposed project, payment of an in-lieu fee shall be made to the approved Bear Yuba Land Trust (BYLT) compensatory mitigation fund for protected oak resources. It shall be specified that the fee paid will be used to purchase mitigation landmark grove(s) within Nevada County. The compensatory mitigation ratio required by Nevada County is 2:1. An administration fee is included in the current rates charged by BYLT to cover their costs associated with this option.

At the time this mitigation measure was prepared, incorporating the 2:1 mitigation ratio for the oak woodlands results in an in-lieu fee of $13,530 per impacted acre (April 2024). In addition, a 2:1 mitigation is recommended for landmark trees which results in an in-lieu fee of $190 per impacted DBH inch. Based on impacts to Landmark Groves on the entire project site and 312 DBH inches of Landmark Oak trees, the total in-lieu mitigation fees would be $137,754 (BYLT, April 2024).

Efforts should be made to save trees where feasible. This may include the use of retaining walls, planter islands, pavers, or other techniques commonly associated with tree preservation. If any trees can ultimately be avoided, the Improvement Plans shall include a note and show placement of temporary construction fencing outside of the driplines of trees to be saved.

Timing: *Prior to removal of onsite Landmark Groves and Landmark Oak trees; Prior to issuance of grading and building permits*
Reporting: *Grading/Improvement plans*
Responsible Agency: *Planning Department*

Mitigation Measure 4E: Worker Environmental Awareness Training. Prior to any ground-disturbing or vegetation-removal activities, a Worker Environmental Awareness Training (WEAT) shall be prepared and administered to the construction crews. The WEAT shall include the following: discussion of the state and federal Endangered Species Act, the Clean Water Act, the Project's permits and CEQA documentation, and associated mitigation measures; consequences and penalties for violation or noncompliance with these laws and regulations; identification of special-status wildlife, location of any avoided Waters of the U.S; hazardous substance spill prevention and containment measures; and the contact person in the event of the discovery of a special-status wildlife species. The WEAT will also discuss the different habitats used by the species' different life stages and the annual timing of these life stages. A handout summarizing the WEAT information shall be provided to workers to keep on-site for future reference. Upon completion of the WEAT training, workers shall sign a form stating that they attended the training, understand the information presented and will comply with the regulations discussed. Workers will be shown designated "avoidance areas" during the WEAT training; worker access should be restricted to outside of those areas to minimize the potential for inadvertent environmental impacts. Fencing and signage around the boundary of avoidance areas may be helpful.

Timing: *Prior to any ground-disturbing or vegetation-removal activities*
Reporting: *Form signed confirming attendance at training*
Responsible Agency: *Planning Department*

5. CULTURAL RESOURCES

Mitigation Measure 5A. Halt work and contact the appropriate agencies if human remains or cultural materials are discovered during project construction. All equipment operators and employees involved in any form of ground disturbance at any phase of project improvements shall be advised of the remote possibility of encountering subsurface cultural resources. If such resources are encountered or suspected, work shall be halted immediately and the Nevada County Planning Department, United Auburn Indian Community of the Auburn Rancheria, and any other interested and affected tribe shall be contacted. A professional archaeologist shall be retained by the developer and consulted to access any discoveries and develop appropriate management recommendations for archaeological resource treatment. If bones are encountered and appear to be human, California Law requires that the Nevada County Coroner and the Native American Heritage Commission be contacted and, if Native American resources are involved, Native American organizations and individuals recognized by the County shall be notified and consulted about any plans for treatment. A note to this effect shall be included on the grading and construction plans for each phase of this project.

Timing: *Prior to the issuance of building/grading permits and during construction*
Reporting: *Agency approval of permits or plans*
Responsible Agency*: Planning Department*

7. GEOLOGY AND SOILS

Mitigation Measure 7A: Implement the Recommendations of the NV5 Geotechnical Engineering Report: The applicant shall include the recommendations of the NV5 Geotechnical Engineering Report (April 2024) incorporated herein by reference, provided in Appendix B of this initial study, and maintained on file with the Planning Department. These recommendations shall be incorporated in the project design and included in all

improvement plans, demolition permit(s), and grading and construction permits. These recommendations are specific to: Clearing and Grubbing, Expansive Soil, Soil Preparation for Fill Placement, Engineered Fill, Fill Slope Grading, Cut Slope Grading, Differential Fill Depth, Temporary Excavations, Underground Utility Trenches, Erosion Controls, Wet Weather Grading, Surface Water Drainage, Infiltration Basins, Construction Dewatering, Soil Corrosion Potential, Grading Plan Review and Construction Monitoring, Seismic Design Criteria, Foundations, Retaining Wall Design Criteria, Surface Water and Near-Surface Groundwater, Perimeter Foundation Drains, and Slab Underdrains.

Timing: *Prior to issuance of grading or improvement permits/During Construction*
Reporting: *Approval of permits or plans/During Construction*
Responsible Agency: *Building Department*

10. HYDROLOGY AND WATER QUALITY

Mitigation Measure 10A: Best Management Practices. Implement the following BMPs to minimize construction related impacts to water quality. The following BMPs shall be incorporated into all Contract Documents and Construction Plans for the project and implemented by the contractor to protect water quality:

a. Construction crews shall be instructed in preventing and minimizing water pollution on the job.
b. Interim erosion control measures may be needed and shall be installed during construction to assure adequate erosion control facilities are in place at all times.
c. Straw or rice mulch may be used if needed with a tackifier.
d. All earth moving or excavation activities shall cease when winds exceed 20 mph.
e. Haul trucks shall be always covered with tarpaulins or other effective covers.
f. Use broom and shovels when possible, to maintain a clean site. Use of a hose is not recommended. Introducing water as a cleanup method adds to water pollution.
g. Designate a concrete washout area, as needed; to avoid wash water from concrete tools or trucks from entering storm drain systems. Maintain washout area and dispose of concrete waste on a regular basis.
h. Establish a vehicle storage, maintenance, and refueling area, as needed, to minimize the spread of oil, gas, and engine fluids. Use of oil pans under stationary vehicles is strongly recommended.
i. Dust control measures shall conform to the requirements of the Dust Control Plan submitted to and approved by the Northern Sierra Air Quality Management District (NSAQMD).

Timing*: Prior to grading/building permit issuance and during construction*
Reporting*: Agency approval of permits or plans*
Responsible Agency*: Planning Department*

Mitigation Measure 10B: Provide copies of BMPs. Copies of the project's Mitigation Monitoring and Reporting Program and all BMPs shall be supplied to the Contractor(s) and their workers to assure compliance with mitigation measures during construction.

Timing*: Prior to grading/building permit issuance and during construction*
Reporting*: Agency approval of permits or plans*
Responsible Agency*: Planning Department*

13. NOISE

Mitigation Measure 13A: Limit construction work hours to 7:00 a.m. to 7:00 p.m. Monday-Saturday. During grading and construction, work hours shall be limited from 7:00 a.m. to 7:00 p.m., Monday - Saturday. Prior to issuance of grading and building permits, improvement plans shall include this restriction on the hours of construction.

Timing: *Prior to Issuance of Grading and Building Permits; During construction*
Reporting: *Planning Department approval of Grading and Building permits. Noted on improvement plans.*
Responsible Agency: *Planning Department*

Mitigation Measure 13B: Temporary construction noise control measures. The project shall utilize temporary construction noise control measures including the use of temporary noise barriers, or other appropriate measures as mitigation for noise generated during construction of the project.

Timing: *During construction of the project. Noted on improvement plans.*
Reporting: *Planning Department approval of Grading and Building permits.*
Responsible Agency: *Planning Department.*

Mitigation Measure 13C: Mufflers installed on project equipment and vehicles. All noise-producing project equipment and vehicles using internal-combustion engines shall be equipped with manufacturers-recommended mufflers and be maintained in good working condition.

Timing: *Prior to and during construction.*
Reporting: *Planning Department approval of Grading and Building permits. Noted on improvement plans.*
Responsible Agency: *Planning Department.*

Mitigation Measure 13D: Comply with applicable noise regulations. All mobile or fixed noise-producing equipment used on the project site that are regulated for noise output by a federal, state, or local agency shall comply with such regulations while in the course of project activity.

Timing: *During construction.*
Reporting: *Planning Department approval of Grading and Building permits. Noted on improvement plans.*
Responsible Agency: *Planning Department.*

Mitigation Measure 13E: Electrically powered equipment. *Where feasible, electrically powered equipment shall be used instead of pneumatic or internal-combustion- powered equipment.*

Timing: *During construction.*
Reporting: *Planning Department approval of Grading and Building permits. Noted on improvement plans.*
Responsible Agency: *Planning Department.*

Mitigation Measure 13F: Material stockpiles and mobile equipment. Material stockpiles and mobile equipment staging, parking, and maintenance areas shall be located as far as practicable from noise-sensitive receptors.

Timing: *During construction.*
Reporting: *Planning Department approval of Grading and Building permits. Noted on improvement plans.*
Responsible Agency: *Planning Department.*

Mitigation Measure 13G: Project area speed limits. Project area and site access road speed limits shall be established and enforced during the construction period.

Timing: *During construction.*
Reporting: *Planning Department approval of Grading and Building permits. Noted on improvement plans.*
Responsible Agency: *Planning Department.*

Mitigation Measure 13H: On-site truck circulation hours. All project on-site truck circulation related to grocery store operations shall be limited to the hours of 7:00 a.m. to 10:00 p.m. (i.e., daytime and evening hours only). On-site truck circulation shall be restricted during nighttime hours (10:00 p.m. to 7:00 a.m.).

Timing: *During grocery store operations; Ongoing.*
Reporting: *Project approval.*
Responsible Agency: *Planning Department.*

Mitigation Measure 13I: Project loading dock activities. All project loading dock activities related to grocery store operations shall be limited to the hours of 7:00 a.m. to 10:00 p.m. (i.e., daytime and evening hours only). Loading dock activities shall be restricted during nighttime hours (10:00 p.m. to 7:00 a.m.).

Timing: *During grocery store operations; Ongoing.*
Reporting: *Project approval.*
Responsible Agency: *Planning Department.*

17. TRANSPORTATION

Mitigation Measure 17A: Improvement of Commercial Avenue. Commercial Avenue shall be improved and extended through the project site and connect with Pine Shadow Lane in accordance with County standards.

Timing: *Prior to issuance of certificate of occupancy*
Reporting: *Shown on improvement plans and approved by CDA*
Responsible Agency: *Planning and Public Works Departments*

Mitigation Measure 17B: Change to parking along Commercial Avenue. Remove existing 90° parking along Commercial Avenue east of the existing cul-de-sac and re-stripe this portion of Commercial Avenue to provide a centerline yellow stripe and white fog lines delineating two, 11-foot wide traffic lanes. Allow for parallel parking along this portion of Commercial Avenue.

Timing: *Prior to issuance of certificate of occupancy*
Reporting: *Shown on improvement plans and approved by CDA*
Responsible Agency: *Planning and Public Works Departments*

Mitigation Measure 17C: Pleasant Valley Road/Commercial Avenue: The project applicant shall re-stripe the westbound Commercial Avenue approach to include a shared left-through lane and separate right-turn lane. With proposed project improvements for westbound Commercial Avenue, the Nevada County Connects transit stop would be moved east to the north side of the existing Commercial Avenue cul-de-sac where the transit bus already turns around for convenience purposes. Transit stop improvements will be coordinated with Nevada County Connects. With proposed improvements, the Pleasant Valley Road/Commercial Avenue intersection overall LOS would improve from LOS E (46.5 seconds of delay) to LOS D (33.5 seconds of delay) during the PM. The Pleasant Valley Road/Commercial Avenue intersection would continue to qualify for the peak hour signal warrant during the PM peak hour with Existing plus Project traffic.

Timing: *Plans approved, and striping completed prior to issuance of certificate of occupancy*
Reporting: *Noted on improvement plans and approved by CDA*
Responsible Agency: *Planning and Public Works Departments*

Mitigation Measure 17D: Pleasant Valley Road/Highway 20: The project applicant shall contribute to the County's Local Transportation Mitigation Fee (LTMF) based on the most recent Fee Schedule. The Nevada County Regional Transportation Plan (NCRTP) identifies a future project to widen and/or re-stripe the Pleasant Valley Road/Highway 20 intersection to add an additional southbound left-turn lane on Pleasant Valley Road and associated eastbound receiving/merge lane on eastbound Highway 20. Based on the NCRTP 2025-2045 (July 2025 Draft), the total costs for these improvements are estimated at $804,000 with funding sources from the County's Local Transportation Mitigation Fee (LTMF). The project applicant shall contribute their fair share toward this estimated cost based on the County's fee schedule. With planned Nevada County roadway improvements at the Pleasant Valley Road/Highway 20 intersection, overall vehicle delay would improve slightly during the AM peak hour to aide in vehicle progression and queuing.

Timing: *Prior to issuance of certificate of occupancy*
Reporting: *According to County requirements*
Responsible Agency: *Planning and Public Works Departments*

Mitigation Measure 17E: Commercial Drive/Rear Access Driveway: Install all-way-stop-control at the Commercial Drive/Project Rear Access Driveway intersection located south of the primary supermarket building.

Timing: *Prior to issuance of certificate of occupancy*
Reporting: *Noted on improvement plans and approved by CDA*
Responsible Agency: *Planning and Public Works Departments*

Mitigation Measure 17F: Raised speed table/crosswalk(s): Install raised speed table/crosswalk(s) on the Commercial Drive northern extension between the Holiday Market building and main parking field.

Timing: *Prior to issuance of certificate of occupancy*
Reporting: *Noted on improvement plans and approved by CDA*
Responsible Agency: *Planning and Public Works Departments*

Mitigation Measure 17G: Commercial Drive/Pine Shadows Lane: Install stop-sign control for northbound turning movements at Commercial Drive extension (site access driveway)/Pine Shadows Lane intersection.

Timing: *Prior to issuance of certificate of occupancy*
Reporting: *Noted on improvement plans and approved by CDA*
Responsible Agency: *Planning and Public Works Departments*

Mitigation Measure 17H: Sidewalks/Bicycle Racks: With proposed project development, pedestrian sidewalks shall be installed along key project frontages (west, north, and south sides of building) and along the south side of Pine Shadows Lane. Pedestrian connections shall be provided between the parking field and main building connecting to the recommended raised speed table/pedestrian crosswalks. Bicycle racks shall be provided along the main building frontage for bicycle parking.

Timing: *Prior to issuance of certificate of occupancy*
Reporting: *Noted on improvement plans and approved by CDA*
Responsible Agency: *Planning and Public Works Departments*

18. TRIBAL CULTURAL RESOURCES

Mitigation Measure 18A: Cultural Awareness Training. The applicant/contractor shall be required to provide a tribal cultural resources sensitivity and awareness training program (Worker Environmental Awareness Program [WEAP]) for all personnel involved in project construction, including field consultants and construction workers, at their own expense. The WEAP training shall be conducted by either a qualified archaeologist for cultural resources or a tribal representative for tribal cultural resources (TCRs). The WEAP shall be developed in coordination with interested Native American Tribes.

The WEAP shall be conducted before any project-related construction activities begin at the project site. The WEAP will include relevant information regarding sensitive cultural resources and tribal cultural resources, including applicable regulations, protocols for avoidance, and consequences of violating State laws and regulations. The WEAP will also describe appropriate avoidance and impact minimization measures for cultural resources and tribal cultural resources that could be located at the project site and will outline what to do and who to contact if any potential cultural resources or tribal cultural resources are encountered. The WEAP will emphasize the requirement for confidentiality and culturally appropriate treatment of any discovery of significance to Native Americans and will discuss appropriate behaviors and responsive actions, consistent with Native American tribal values. The training may be done in coordination with the project archaeologist.

All ground-disturbing equipment operators shall be required to receive the training and sign a form that acknowledges receipt of the training.

Timing: *Prior to any project-related grading or construction*
Reporting: *Noted on improvement plans; Project proponent/contractor to notify Planning Department when training is scheduled/completed*

***Responsible Agency**: Planning Department*

Mitigation Measure 18B: Tribal Monitoring at Initial Ground Disturbance. The project proponent shall contact the United Auburn Indian Community (UAIC) Tribal Historic Preservation Officer (thpo@auburnrancheria.com) at least 2 to 3 months prior to project ground-disturbing activities to retain the services of a UAIC Certified Tribal Monitor(s). The duration of the construction schedule and Tribal Monitoring shall be determined at this time.

A contracted UAIC Certified Tribal Monitor(s) shall monitor the initial ground disturbance in the project area. The project proponent shall pay the costs for the time spent by the Tribal Monitor. If there are cultural finds, the UAIC Tribal Historic Preservation Officer (THPO) may require additional Tribal Monitoring.

Tribal Monitors or Tribal Representatives shall have the authority to direct that work be temporarily paused, diverted, or slowed within 100 feet of the immediate impact area if sites, cultural soils, or objects of potential significance are identified. The temporary pause/diversion shall be of an adequate duration for the Tribal Representative to examine the resource.

Appropriate treatment of Tribal Cultural Resources (TCRs) or other cultural finds may include but is not limited to:

a. Recordation of the resource(s)
b. Avoidance and preservation of the resource(s)
c. Recovery and reburial of the resource(s) onsite or in a feasible off-site location in a designated area subject to no future disturbance. The location of the reburial shall be acceptable to the UAIC.

To track the implementation of this measure, the Tribal Monitor(s) shall document field-monitoring activities on a Tribal Monitor log. The Tribal Monitor(s) shall wear the appropriate safety equipment while on the construction site.

In consultation with the UAIC THPO, the Tribal Monitor and the project proponent shall determine a mutual end or reduction to the on-site monitoring if/when construction activities have a low potential for impacting Tribal Cultural Resources.

In the event the Tribal Monitor does not report to the job site at the scheduled time after receiving 24-hour business day notice, construction activities may proceed without tribal monitoring. At no time, regardless of the presence or absence of a Tribal Monitor, shall suspected TCRs be mishandled or disrespected.

The Nevada County Planning Department shall assist with resolution of disagreements between the project proponent/contractor and the Tribe if such occurs on the project.

***Timing:** Prior to and during initial ground disturbance of the site*
***Reporting:** Noted on improvement plans; Project proponent/contractor to notify Planning Department of contracted Certified Tribal Monitor(s); Notify Planning Department if TCRs discovered and construction work stopped*
***Responsible Agency**: Planning Department*

Mitigation Measure 18C: Unanticipated Discoveries of Tribal Cultural Resources. If any suspected TCRs or resources of cultural significance to UAIC, including but not limited to features, anthropogenic/cultural soils, cultural belongings or objects (artifacts), shell, bone, shaped stones or bone, or ash/charcoal deposits are discovered by any person during construction activities including ground disturbing activities, all work shall pause immediately within 100 feet of the find, or an agreed upon distance based on the project area and nature of the find. Work shall cease in and within the immediate vicinity of the find regardless of whether the construction is being actively monitored by a Tribal Monitor, cultural resources specialist, or professional archaeologist.

A Tribal Representative and the Nevada County Planning Department shall be immediately notified, and the Tribal Representative in coordination with the Planning Department shall determine if the find is a TCR (PRC §21074) and the Tribal Representative shall make recommendations for further evaluation and treatment as necessary.

The culturally affiliated Tribe shall consult with the Nevada County Planning Department to (1) identify the boundaries of the new TCR and (2) if feasible, identify appropriate preservation in place and avoidance measures, including redesign or adjustments to the existing construction process, and long-term management, or 3) if avoidance is infeasible, a reburial location in proximity of the find where no future disturbance is anticipated. Permanent curation of TCRs will not take place unless approved in writing by the culturally affiliated Tribe.

The construction contractor(s) shall provide secure, on-site storage for culturally sensitive soils or objects that are components of TCRs that are found or recovered during construction. Only Tribal Representatives shall have access to the storage. Storage size shall be determined by the nature of the TCR and can range from a small lock box to a conex box (shipping container). A secure (locked), fenced area can also provide adequate on-site storage if larger amounts of material must be stored.

The construction contractor(s) and the Nevada County Planning Department shall facilitate the respectful reburial of the culturally sensitive soils or objects. This includes providing a reburial location that is consistent with the Tribe’s preferences, excavation of the reburial location, and assisting with the reburial, upon request.

Any discoveries shall be documented on a Department of Parks and Recreation (DPR) 523 form within 2 weeks of the discovery and submitted to the appropriate CHRIS center in a timely manner.

Work at the TCR discovery location shall not resume until authorization is granted by the Nevada County Planning Department in coordination with the culturally affiliated Tribe.

If articulated or disarticulated human remains, or human remains in any state of decomposition or skeletal completeness are discovered during construction activities, the [City/County] Coroner and the culturally affiliated Tribe shall be contacted immediately. Upon determination by the [City/County] Coroner that the find is Native American in origin, the Native American Heritage Commission will assign the Most Likely Descendent who will work with the project proponent to define appropriate treatment and disposition of the burials.

Timing: *During project-related grading or construction*
Reporting: *Noted on improvement plans; Notify Planning Department if TCRs discovered and construction work stopped*
Responsible Agency: *Planning Department*

Mitigation and Monitoring Matrix

MEASURE #	MONITORING AUTHORITY	IMPLEMENTATION TIMING
1A	Planning Department	Prior to issuance of building permits
1B	Planning Department	Prior to issuance of building permits
3A	Planning Dept./NSAQMD	During grading/construction
3B	Planning/Building Depts.	During construction
3C	Planning/Public Works Depts.	During construction
3D	Planning/Public Works Depts.	During construction
3E	Planning Dept./NSAQMD	Prior to issuance of grading/imp. permits
4A	Planning Department	Prior to and during construction
4B	Planning Department	Prior to and during construction
4C	Planning Department	Prior to and during construction
4D	Planning Department	Prior to removal of onsite Landmark Groves and Landmark Oak trees; Prior to issuance of grading and building permits
4E	Planning Department	Prior to any ground-disturbing or vegetation-removal activities
5A	Planning Department	Prior to the issuance of building/grading permits and during construction
7A	Building Department	Prior to issuance of grading or improvement permits and during construction
10A	Planning Department	Prior to grading/building permit issuance and during construction
10B	Planning Department	Prior to grading/building permit issuance and during construction
13A	Planning Department	Prior to the issuance of grading and building permits; During construction
13B	Planning Department	During construction of the project. Noted on improvement plans
13C	Planning Department	Prior to and during construction
13D	Planning Department	During construction
13E	Planning Department	During construction
13F	Planning Department	During construction
13G	Planning Department	During construction
13H	Planning Department	During grocery store operations; Ongoing
13I	Planning Department	During grocery store operations; Ongoing
17A	Planning/Public Works Depts.	Prior to certificate of occupancy

17B	Planning/Public Works Depts.	Prior to certificate of occupancy
17C	Planning/Public Works Depts.	Plans approved and striping completed prior to issuance of certificate of occupancy
17D	Planning/Public Works Depts.	Prior to certificate of occupancy
17E	Planning/Public Works Depts.	Prior to certificate of occupancy
17F	Planning/Public Works Depts.	Prior to certificate of occupancy
17G	Planning/Public Works Depts.	Prior to certificate of occupancy
17H	Planning/Public Works Depts.	Prior to certificate of occupancy
18A	Planning Department	Prior to any project-related grading or construction
18B	Planning Department	Prior to and during initial ground disturbance of the site
18C	Planning Department	During project-related grading or construction

Initial Study and Checklist

Introduction

This checklist is to be completed for all projects that are not exempt from environmental review under the California Environmental Quality Act (CEQA). CEQA requires a brief explanation for answers to the Appendix G: Environmental Checklist except "No Impact" responses that are adequately supported by noted information sources. Answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts. This Initial Study uses the following terms to describe the level of significance of adverse impacts. These terms are defined as follows.

- **No Impact**: An impact that would result in no adverse changes to the environment.
- **Less than Significant Impact**: An impact that is potentially adverse but does not exceed the thresholds of significance as identified in the impact discussions. Less than significant impacts do not require mitigation.
- **Less than Significant with Mitigation**: An environmental effect that may cause a substantial adverse change in the environment without mitigation, but which is reduced to a level that is less than significant with mitigation identified in the Initial Study.
- **Potentially Significant Impact**: An environmental effect that may cause a substantial adverse change in the environment; either additional information is needed regarding the extent of the impact to make the significance determination, or the impact would or could cause a substantial adverse change in the environment. A finding of a potentially significant impact would result in the determination to prepare an EIR.

1. Aesthetics

Existing Setting: The project parcel is approximately 5.5-acres in size comprised of sloped terrain located along the east side of Pleasant Valley Road and south side of Pine Shadows Lane. Pleasant Valley Road serves as the main gateway to the Lake Wildwood Community Region from Highway 20 and Penn Valley. The parcel is located approximately 0.25 mile north of the Pleasant

Valley Road/State Route 20 intersection, within the northwest edge of the Penn Valley Community Region, in a partially developed commercial and industrial area along the east side of Pleasant Valley Road.

Views of the project site are predominantly seen travelling north and south along Pleasant Valley Road, which is a Nevada County maintained road. The public views from Pleasant Valley Road consist of commercial development on the east side of the road including a gas station and the Gateway Center shopping area near the intersection of Highway 20. A mini-storage facility is located directly north of the subject parcel. Mixed oak and pine woodlands are located on the undeveloped land west of Pleasant Valley Road. Access to the project site will be via Pleasant Valley Road to Pine Shadows Road to enter from the north or Pleasant Valley Road to Commercial Avenue to enter from the south. There will not be direct access from Pleasant Valley Road to the project site.

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
a. Have a substantial adverse effect on a scenic vista?			✓		A,1, 2
b. Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				✓	A,4; F,3
c. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?			✓		A,4; F,3
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?		✓			A,5

Impact Discussion:

1a. The project parcel contains two zoning districts: C1-SP (Community Commercial, Site Performance Combining), and M1-SP (Light Industrial, Site Performance Combining). The parcel has corresponding General Plan designations of Neighborhood Commercial (NC) and Industrial (IND). The Penn Valley Area Plan overlays the project parcel and surrounding community. The purpose of the Area Plan is to provide long-term guidance that is intended to improve the prosperity of Penn Valley in a way that supports a healthy economy, environment, protects the rural quality of life and the social fabric for the residents and general public.

A scenic vista is typically considered to be a view that possesses visual and aesthetic qualities of high value to the public. Scenic vistas can provide views of natural features or significant structures and buildings. The project site contains an existing residence and accessory buildings as well as a significant number of trees. The site is also located between a parcel developed with a mini-storage use to the north, and parcels developed with existing commercial uses to the south.

The proposed project requires review and approval of a Development Permit for the construction of a 30,711 square foot building to accommodate a Holiday Market grocery store and a Starbucks Coffee restaurant, along with related improvements. A General Plan Amendment (GPA24-0003) is also proposed to change the land use designation for the project parcel by increasing the amount of land designated Neighborhood Commercial (NC) from approximately 1.9 acres to approximately 4.3 acres and decreasing the amount of land designated Industrial (IND) from approximately 3.6 acres to approximately 1.2 acres. The project includes a corresponding Rezone (RZN24-0003) to amend Zoning District Map No. 16a for the approximate 4.3 acres to Neighborhood Commercial, Site Performance Combining District (C1-SP) and the approximate 1.2 acres to Light Industrial, Planned Development, Site Performance Combining (M1-PD-SP) District. The change from industrial to commercial designated land will result in less intensive uses with similar or fewer potential impacts which are not considered significant. In addition, the specific development project being considered is a 30,711 square foot grocery store building.

Removal of the residence and accessory buildings, along with the removal of trees to allow for construction of the project, will result in a change in the appearance of the site. Development of the project will incorporate contemporary design standards and will include perimeter landscaping along the northern, southern, and western property boundaries and interior landscaping of the parking lot. Existing trees located behind the proposed building, along the far eastern portion of the site, will be retained and will provide screening of the building from residences located to the east. With required landscaping and these design elements incorporated, potential impacts to scenic vistas are considered ***less than significant.***

1b. The subject parcel is located on Pleasant Valley Road, approximately 0.25 miles north of State Highway 20. The portion of State Highway 20 that runs through Penn Valley is not a listed scenic highway, pursuant to the State Department of Transportation (Caltrans) and the Nevada County General Plan (Chapter 18: Aesthetics). With the surrounding area being considered semi-urbanized, the addition of a grocery store building utilizing natural earth tone colors with varying and attractive design details will result in ***no impacts*** to the scenic resources in the area and will blend in with the surrounding built environment.

1c. The project parcel is located in a semi-urbanized area with existing commercial and industrial development located to the north and south. The project will result in a large number of trees and other vegetation being removed from the property to provide area for the proposed grocery store building, parking lot areas, and other related improvements. Required landscaping of the site in accordance with County requirements and the design details of the proposed building will lessen the potential for impacts. A ***less than significant*** impact is anticipated to the existing visual character or quality of public views of the site and its surroundings.

1d. The project will create a new source of lighting associated with the subject property. New lighting associated with the proposed building will include building/wall mounted lighting, pole lighting within the parking lot and circulation areas, and interior building lighting that may be seen from building windows. These new sources of light may be considered a visual impact; however, the project will be required to meet the Nevada County Code to ensure lighting is compatible with the surrounding area, including not allowing for light spill outside of the property boundaries. New proposed lighting will utilize the latest LED technology and will be downcast and directed downwards in compliance with local site development standards to prohibit light trespass and limit unnecessary light pollution.

Having all commercial lighting be downward facing and fully shielded is standard for all commercial development in Nevada County and generally will be ensured by a standard condition of approval for the project.

The project's submitted lighting and photometric plan, prepared by CSHQA Architecture and dated January 11, 2024, analyzes details related to potential light spill off the project site resulting from the proposed development. To address potential lighting impacts, recommended **Mitigation Measure 1A** requires all outdoor light fixtures to be fully shielded and downward facing to eliminate glare and prevent light trespass onto neighboring properties. In addition, fixtures shall have high efficiency lamps. As currently designed, there are a few areas to the north of the proposed building and south of the parking lot that show some light spill off the subject parcel. Therefore, **Mitigation Measure 1B** below requires a final photometric plan to be submitted prior to building permit issuance. The final plan shall demonstrate that all lighting can be kept on site and recommends providing bulbs with less intensity, a reduction in height of lighting fixtures, or removal or relocation of light standards to achieve this requirement. Similar to adjacent commercial development, applicable lighting standards will be required to be met for this parcel. Overall, proposed lighting will not substantially and adversely impact day and nighttime views in the area. With the incorporation of lighting standards and design criteria, potential impacts from proposed lighting is anticipated to be ***less than significant with mitigation***.

Mitigation: To reduce potential light impacts the following mitigation measures shall be required:

Mitigation Measure 1A. Outdoor Light Fixtures. All outdoor light fixtures shall be fully shielded and downward facing to eliminate glare and prevent light trespass onto neighboring properties. Fixtures shall have high efficiency lamps. High pressure sodium, and mercury vapor light fixtures are prohibited.

Timing: *Prior to building permit issuance*
Reporting: *Agency approval of permits or plans*
Responsible Agency: *Planning Department*

Mitigation Measure 1B. Final Photometric Plan. The applicant shall provide a final lighting and photometric plan that identifies all outdoor lighting fixtures and property lines and demonstrates all project lighting will be maintained on site. This plan shall include all project lighting including but not limited to parking lot and circulation lighting, wall lighting, sign lighting, and landscaping lighting. This plan shall demonstrate all lighting values are at "0" at all property lines. Recommended methods for reducing potential light spill include: reducing the lumen output of proposed lighting systems, reducing the height of the proposed lights, reducing the number of proposed lights and relocating lights farther into the interior of the parcel.

Timing: *Prior to building permit issuance*
Reporting: *Agency approval of permits or plans*
Responsible Agency: *Planning Department*

2. Agricultural and Forestry Resources

Existing Setting: The project site is not considered Prime Farmland, Unique Farmland, or Farmland of Statewide Significance by the State of California Farmland Mapping and Monitoring Program. The site is currently developed with a residence and accessory buildings and is designated as Grazing Land by the California Department of Conservation (California Important Farmland, 2023). The site is bordered to the north by a mini-storage facility, designated as Other Land, and to the south by various commercial uses, with properties designated Urban and Built-Up Land. The subject parcel is located within an existing commercial/industrial corridor along the east side of Pleasant Valley Road, 0.25 miles north of State Highway 20 and approximately one mile south of the entrance to the Lake Wildwood residential subdivision. There are no active Williamson Act contracts on the project parcel. There is no Timberland Production Zone (TPZ) or Forest (FR) zoning on the subject parcel, and no forestry uses are existing on these parcels or in the project vicinity.

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				✓	A,6
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?				✓	A
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resource Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?				✓	A
d. Result in the loss of forest land or conversion of forest land to non-forest use?				✓	A
e. Involve other changes in the existing environment, which due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				✓	A

Impact Discussion:

2a. The project parcel does not contain Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as identified by the Farmland Mapping and Monitoring Program under the California Department of Conservation. There is no existing agricultural use on the parcel. Therefore, ***no impact*** to protected farmlands is anticipated.

2b. There are no Williamson Act contracts on the subject project parcel. The subject parcel has a zoning classification of Neighborhood Commercial, Site Performance Combining (C1-SP) and Light Industrial, Site Performance (M1-SP). There is no agricultural zoning applied to the property. Therefore, ***no impact*** to zoning for agricultural use or Williamson Act contracts are anticipated.

2c,d,e. The subject property is not zoned for forest land use, and no change of zoning classification is proposed that would otherwise cause rezoning of forest land. The project will not result in loss of forest land or conversion of forest land to non-forest use. The property is designated as Grazing Land and would not result in the conversion of farmland to non-agriculture land use. There are no aspects of the project proposal that could result in conversion of farmland or forest land. Therefore, there is ***no impact*** to forest land or timberland.

Mitigation Measures: None required.

3. Air Quality

Existing Setting: Nevada County is in the Mountain Counties Air Basin (MCAB) and is under the Northern Sierra Air Quality Management District (NSAQMD), which has jurisdiction over an area encompassing Nevada, Plumas, and Sierra counties. Topography and meteorological conditions vary widely in the areas under the NSAQMD's jurisdiction and air quality conditions can be heavily influenced by local factors. Consequently, air quality conditions within the MCAB vary, resulting in differing attainment status designations for State and federal ambient air quality standards (AAQS) within various portions of the MCAB. The attainment status for AAQS for ozone, respirable particulate matter 10 microns in diameter or less (PM_{10}), fine particulate matter 2.5 microns in diameter or less ($PM_{2.5}$), and carbon monoxide (CO), are presented in Table 1 below.

Ozone is a secondary pollutant generated from ozone precursor gases, primarily oxides of nitrogen (NO_X) and reactive organic gases (ROG), which react with sunlight to create ozone. Reductions in ozone are accomplished through reducing precursor emissions. Western Nevada County is designated as being in nonattainment for the federal 8-hour ozone standard and all of Nevada County is designated as being in nonattainment for the State 1-hour ozone standard. Ozone exceedances in Nevada County are primarily due to transport of emissions from the broader Sacramento area and San Francisco Bay Area. As a result, the NSAQMD has jurisdiction over a relatively small portion of the pollutants using nonattainment within the MCAB.

Nevertheless, because portions of the MCAB have been designated as nonattainment, NSAQMD has prepared a federally enforceable State Implementation Plan (SIP) for western Nevada County in accordance with the Clean Air Act. The SIP is an air quality attainment plan designed to reduce emissions of ozone precursors sufficient to attain the federal ozone AAQS by the earliest practicable date. The Ozone Attainment Plan for western Nevada County was adopted on February 27, 2023. The SIP includes various reasonable available control measures (RACMs). Overall emissions of ozone precursors must be reduced in western Nevada County (consistent with Reasonable Further Progress requirements specified in the Clean Air Act) until attainment is reached. Most of the reductions are expected to come from motor vehicles throughout the MCAB, Sacramento region, and San Francisco Bay Area becoming cleaner as a result of State regulations mandating further emissions reductions.

Table 1: Attainment of ambient air quality standards (AAQS) within Northern Sierra Air Quality Management District (NSAQMD)

Pollutant	State Designation	Federal Designation
Ozone (O_3)	Nevada County: Non-attainment (due to overwhelming transport)	2008 O_3 Standard (75 ppb) Western Nevada County: Serious Non-attainment;

		2015 O_3 Standard (70 ppb) Western Nevada County: Serious Non-attainment;
PM_{10}	Nevada County: Non-attainment	Unclassified
PM2.5	Nevada County: Unclassified	2012 Annual Standard (12µg/m^3) Nevada County: Unclassifiable/Attainment
		2012 24-hour Standard (35µg/m^3) Unclassifiable/Attainment
CO	Nevada County: Unclassified	Unclassifiable/Attainment

Source: NSAQMD. Guidelines for Assessing and Mitigating Air Quality Impacts of Land Use Projects. Aug. 26, 2024

The NSAQMD has established significance thresholds associated with development projects for emissions of the ozone precursors ROG and NO_x, as well as for PM_{10}. Adopted NSAQMD rules and regulations, as well as the thresholds of significance, have been developed with the intent to ensure continued attainment of AAQS, or to work towards attainment of AAQS for which the area is currently designated nonattainment. The thresholds, expressed in pounds per day (lbs./day), are listed in Table 2 and apply to both construction-related emissions and operational emissions.

As shown in the table, NSAQMD has developed a tiered approach to determine significance levels based on a range of emissions levels. According to the NSAQMD Guidance, emissions that exceed 136 lbs./day (Level C) are considered to be significant. In addition, if emissions of two or more pollutants are determined to be within Level B, emissions are determined to be significant.

Table 2
NSAQMD Thresholds (lbs/day)

ROG	NO_x	PM_{10}
Level A		
<24	<24	<79
Level B		
24-136	24-136	79-136
Level C		
>136	>136	>136

Source: NSAQMD. Guidelines for Assessing and Mitigating Air Quality Impacts of Land Use projects. August 26, 2024.

Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**	**Reference Source (Appendix A)**
a. Conflict with or obstruct implementation of the applicable air quality plan?		✓			A,7
b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?		✓			A,7

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
c. Expose sensitive receptors to substantial pollutant concentrations?			✓		A,7; G
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?			✓		A,7

Impact Discussion:

3a,b To address potential air quality impacts, an Air Quality and Greenhouse Gas Impact Analysis was prepared for the project by Raney Planning and Management (February 2025). The proposed project's construction and operational emissions were quantified using the California Emissions Estimator Model (CalEEMod) software version 2022.1.1.28 – a State-wide model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify air quality emissions, including greenhouse gas (GHG) emissions, from land use projects. The model applies inherent default values for various land uses, including construction data, trip generation rates, vehicle mix, trip length, average speed, compliance with the California Building Standards Code (CBSC), etc. Where project-specific information is available, such information should be applied in the model. Accordingly, the proposed project's modeling assumes the following inherent site design features and project-specific information:

- Construction would occur over an approximately one-year period;
- Approximately 2,306-sf of building materials associated with the existing on-site single-family residence and ancillary structures would be demolished and removed from the project site;
- A total of 21,945 cubic yards (CY) of soils would be exported from the site during grading activities;
- The project would include the removal of 4.34 acres of mixed forest;
- Vehicle trips were adjusted consistent with project-specific trip rate data provided by GHD for the proposed project;[1]
- The proposed project would result in a 20 percent reduction in outdoor water usage beyond current State requirements; and
- All refrigerants used during operation of the proposed project would be R448A refrigerants.

All CalEEMod results are included in Appendix A of the Air Quality Analysis. The results of the emissions analysis for construction and operational emissions are discussed separately below.

Construction Emissions

According to the CalEEMod results, the proposed project would result in maximum unmitigated construction emissions as shown in Table 3. As shown in the table, the proposed project's construction emissions would be within the Level A thresholds for ROG and PM_{10} and the Level B thresholds for NO_X.

Table 3
Maximum Unmitigated Construction Emissions (lbs/day)

Pollutant	Proposed Project Emissions	Threshold Level
ROG	5.23	Level A
NO_X	31.7	Level B
PM_{10}	21.2	Level A

Source: CalEEMod, December 2024 (see Appendix A).

All projects Level A or greater, including the proposed project, are required to comply with the basic measures recommended by NSAQMD, as applicable, which would help to reduce the construction emissions from the levels presented in Table 3. NSAQMD-recommended measures for projects Level A or greater that are applicable to the proposed project include the following. These measures will be addressed as mitigation measures for the project:

- Alternatives to open burning of vegetative material will be used unless otherwise deemed infeasible by the NSAQMD. Among suitable alternatives are chipping, mulching, or conversion to biomass fuel **(Mitigation Measure 4A)**; and
- Grid power shall be used (as opposed to diesel generators) for job site power needs where feasible during construction. **(Mitigation Measure 4B)**.

In addition, projects that result in emissions which fall within the Level B thresholds are required to implement additional measures recommended by NSAQMD. The NSAQMD-recommended Level B measures that are applicable to the proposed project include the following, which will also be addressed as mitigation measures:

- Temporary traffic control shall be provided during all phases of the construction to improve traffic flow as deemed appropriate by local transportation agencies and/or Caltrans **(Mitigation Measure 4C)**; and
- Construction activities shall be scheduled to direct traffic flow to off-peak hours as much as practicable. **(Mitigation Measure 4D)**.

Furthermore, all development projects under the jurisdiction of the NSAQMD are required to prepare a Dust Control Plan pursuant to Rule 226 (Dust Control)**(Mitigation Measure 4E)**. The proposed project's required implementation of the Dust Control Plan will help to further minimize construction-related emissions of fugitive dust, which is a component of PM_{10}, from the levels presented in Table 3. With implementation of the Dust Control Plan as a mitigation measure, the actual emissions of PM_{10} would be lower than the levels presented in Table 3.

As discussed above, pursuant to the NSAQMD guidelines, projects are determined to have a less-than-significant impact if all ROG, NO_X, and PM_{10} are within Level A or if emissions for only one pollutant are within Level B. Given that the proposed project would result in emissions of ROG and PM_{10} within Level A, and emissions of NO_X within Level B, and would be required to implement all applicable NSAQMD-recommended

measures, the proposed project would result in a less-than-significant level during construction. While the NSAQMDD-recommended measures are not CEQA mitigation, the Air District requires such measures.

Operational Emissions

According to the CalEEMod results, the proposed project would result in maximum unmitigated operational criteria air pollutant emissions as shown in Table 4. As shown in the table, the proposed project's operational emissions would all be within threshold Level A.

Table 4
Maximum Unmitigated Operational Emissions (lbs/day)

Pollutant	Proposed Project Emissions	Threshold Level
ROG	7.82	Level A
NOx	7.25	Level A
PM_{10}	6.24	Level A

Source: CalEEMod, December 2024 (see Appendix A).

According to the NSAQMD, emissions within the Level A threshold are considered to be less-than-significant, and additional mitigation beyond the basic measures recommended by NSAQMD is not required. NSAQMD-recommended measures for projects Level A or greater that are applicable to the proposed project include the following:

- Streets shall be designed to maximize pedestrian access to transit stops.

Given the project's Level A emissions and required compliance with the applicable NSAQMD-recommended measures, the proposed project would result in a less-than-significant impact during operations.

Cumulative Emissions

Due to the dispersive nature and regional sourcing of air pollutants, air pollution is already largely a cumulative impact. The nonattainment status of regional pollutants, including ozone and PM, is a result of past and present development, and, thus, cumulative impacts related to these pollutants could be considered cumulatively significant.

To improve air quality and attain the health-based standards, reductions in emissions are necessary within nonattainment areas. Adopted NSAQMD rules and regulations, as well as the thresholds of significance, have been developed with the intent to ensure continued attainment of AAQS, or to work towards attainment of AAQS for which the area is currently designated nonattainment, consistent with applicable air quality plans. As future attainment of AAQS is a function of successful implementation of NSAQMD's planning efforts, by exceeding NSAQMD's Level C thresholds or Level B thresholds for two or more pollutants for construction or operational emissions, a project could contribute to the region's nonattainment status for ozone and PM emissions and could be considered to conflict with or obstruct implementation of the NSAQMD's air quality planning efforts.

As discussed above, the proposed project's construction and operational emissions would be less than significant. Thus, the proposed project would not be considered to result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment, and the project's incremental contribution to cumulative emissions would be considered less than significant.

Conclusion

With the above mitigation measures required, the proposed project would not be anticipated to result in emissions that would conflict with or obstruct implementation of the applicable regional air quality plans or result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard. Thus, the proposed project would result in a ***less than significant with mitigation*** impact.

3c. Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved. Heightened sensitivity may be caused by health problems, proximity to the emissions source, and/or duration of exposure to air pollutants. Children, pregnant women, the elderly, and those with existing health problems are especially vulnerable to the effects of air pollution. Sensitive receptors are typically defined as facilities where sensitive receptor population groups (i.e., children, the elderly, the acutely ill, and the chronically ill) are likely to be located. Accordingly, land uses that are typically considered to be sensitive receptors include residences, schools, playgrounds, childcare centers, retirement homes, convalescent homes, hospitals, and medical clinics. The nearest sensitive receptors to the project site include the existing single-family residences located approximately 300 feet to the northeast and 410 feet to the southeast.

The major pollutant concentrations of concern are localized CO emissions, toxic air contaminant (TAC) emissions, and criteria pollutant emissions, which are addressed in further detail below.

Localized CO Emissions

Localized concentrations of CO are related to the levels of traffic and congestion along streets and at intersections. High levels of localized CO concentrations are only expected where background levels are high, and traffic volumes and congestion levels are high. Emissions of CO are of potential concern, as the pollutant is a toxic gas that results from the incomplete combustion of carbon-containing fuels such as gasoline or wood.

Although NSAQMD does not have an established threshold for CO emissions, the maximum unmitigated daily construction and operational emissions of CO associated with the proposed project are presented in Table 5 below for informational purposes.

Table 5
Maximum Unmitigated Emissions of CO (lbs/day)

Project Phase	CO Emissions
Construction	31.1
Operations	43.4

Source: CalEEMod, December 2024 (see Appendix A).

Although NSAQMD does not have an established threshold for CO, the nearby air district, Placer County Air Pollution Control District (PCAPCD), who has authority over a portion of the MCAB, has a screening level for localized CO impacts. According to the PCAPCD screening levels, a project could result in a significant impact if the project would result in CO emissions from vehicle operations in excess of 550 lbs./day. As shown in Table 5, CO emissions associated with the proposed project would be well below the PCAPCD's 550 lbs./day screening level. Therefore, based on the nearby PCAPCD's screening levels for localized CO impacts, the proposed project would not be considered to expose sensitive receptors to substantial concentrations of localized CO.

TAC Emissions

Another category of environmental concern is toxic air contaminant (TAC) emissions. The CARB's *Air Quality and Land Use Handbook: A Community Health Perspective* (Handbook) provides recommended setback distances for sensitive land uses from major sources of TACs, including, but not limited to, freeways and high traffic roads, gas stations, chrome plating operations, distribution centers, and rail yards. The CARB has identified diesel particulate matter (DPM) from diesel-fueled engines as a TAC; thus, high volume freeways, stationary diesel engines, and facilities attracting heavy and constant diesel vehicle traffic are identified as having the highest associated health risks from DPM. Health risks associated with TACs are a function of both the concentration of emissions and the duration of exposure, where the higher the concentration and/or the longer the period of time that a sensitive receptor is exposed to pollutant concentrations would correlate to a higher health risk.

The proposed project would not involve any land uses or operations that would be considered major sources of TACs, including DPM. It should be noted that the proposed project would require the use of delivery trucks during operation. However, the number of trucks associated with on-site deliveries are anticipated to be relatively minor, such that the proposed project would not exceed CARB's 100 truck per day criteria to be considered a major source of TACs. In addition, the proposed project would involve the use of refrigerants. Some refrigerants are known to include cancer causing chemicals. However, as discussed above the operation of the proposed project would involve the use of R448A refrigerants which do not contain any known or anticipated carcinogens according to Occupational Safety and Health Administration (OSHA) or the International Agency for Research on Cancer. Therefore, the use of refrigerants would not be considered a major source of TACs.

Construction-related activities have the potential to generate TACs, specifically DPM, from on-road haul trucks and off-road equipment exhaust emissions. However, construction is temporary and occurs over a relatively short duration in comparison to the operational lifetime of the proposed project. Health risks are typically associated with exposure to high concentrations of TACs over extended periods of time (e.g., 30 years or greater), whereas the construction period associated with the proposed project is estimated to be approximately one year. Additionally, DPM is known to be highly dispersive, and only portions of the site would be disturbed at a time throughout the construction period. Operation of construction equipment would occur intermittently throughout the course of a day, rather than continuously at any one location on the project site. Operation of construction equipment within portions of the overall development area would allow for the dispersal of emissions and would ensure that construction activity is not continuously occurring in the portions of the project site closest to existing receptors.

In addition, all construction equipment and operation thereof would be regulated per the CARB's In-Use Off-Road Diesel Vehicle Regulation. The In-Use Off-Road Diesel Vehicle Regulation includes emissions reducing requirements such as limitations on vehicle idling, disclosure, reporting, and labeling requirements for existing vehicles, as well as standards relating to fleet average emissions and the use of Best Available Control Technologies. Thus, on-site emissions of PM would be reduced, which would result in a proportional reduction in DPM emissions and exposure of nearby residences to DPM. Project construction would also be required to comply with all applicable NSAQMD rules and regulations, including Rule 501 related to General Permit Requirements.

Considering the intermittent nature of construction equipment operating within an influential distance to the nearest sensitive receptors, the limited duration of construction activities, and compliance with regulations, the likelihood that any one nearby sensitive receptor would be exposed to high concentrations of DPM for any extended period of time would be low. Thus, the proposed project would not expose nearby sensitive receptors to substantial concentrations of TACs associated with construction emissions.

Naturally Occurring Asbestos

Another concern related to TAC emissions is naturally occurring asbestos (NOA). Asbestos is a term used for several types of naturally occurring fibrous minerals found in many parts of California. The most common type of asbestos is chrysotile, but other types are also found in California. When rock containing asbestos is broken or crushed, asbestos fibers may be released and become airborne. Exposure to asbestos fibers may result in health issues such as lung cancer, mesothelioma (a rare cancer of the thin membranes lining the lungs, chest and abdominal cavity), and asbestosis (a non-cancerous lung disease which causes scarring of the lungs). Because asbestos is a known carcinogen, NOA is considered a TAC. Sources of asbestos emissions include: unpaved roads or driveways surfaced with ultramafic rock; construction activities in ultramafic rock deposits; or rock quarrying activities where ultramafic rock is present. Properties with naturally occurring asbestos are subject to NSAQMD Rule 904, which requires preparation of an Asbestos Dust Mitigation Plan. In addition, the proposed project would be required to comply with all applicable NSAQMD rules and regulations regarding a Dust Control Plan pursuant to District Rule 226.

NOA is typically associated with fault zones, and areas containing ultramafic rock or contacts between ultramafic rock and other types of rocks. According to the Geologic Map of California prepared by the Department of Conservation, the project site is located within an area unlikely to contain NOA, as faults and ultramafic rock deposits are not known to exist in or around the project area.

Criteria Pollutants

The NSAQMD thresholds of significance were established with consideration given to the health-based air quality standards established by the Federal and State AAQS and are designed to aid the NSAQMD in achieving attainment of such AAQS. Although the NSAQMD's thresholds of significance are intended to aid achievement of the AAQS for which the MCAB is in nonattainment, the thresholds of significance do not represent a level above which individual project-level emissions would directly result in public health impacts. Nevertheless, a project's compliance with the NSAQMD's thresholds of significance provides an indication that criteria pollutants released as a result of project implementation would not inhibit attainment of the health based AAQS. Because project-related emissions would not exceed the NSAQMD thresholds for criteria pollutant emissions and, thus, would not inhibit attainment of the federal and State AAQS, the criteria pollutants emitted during project implementation would not be anticipated to result in measurable health impacts to sensitive receptors. Accordingly, the proposed project would not expose sensitive receptors to excess concentrations of criteria pollutants.

Conclusion

Based on the above analysis, the proposed project would not be anticipated to result in the production of substantial concentrations of localized CO, TACs, or criteria pollutants. Consequently, the proposed project would result in a ***less than significant*** impact related to the exposure of sensitive receptors to substantial pollutant concentrations.

3d. Emissions of principal concern include emissions leading to odors, emissions that have the potential to cause dust, or emissions considered to constitute air pollutants. Air pollutants have been discussed in sections "a" through "c" above. Therefore, the following discussion focuses on emissions of odors and dust.

Odors

Emissions such as those leading to odors have the potential to adversely affect people. Due to the subjective nature of odor impacts, the number of variables that can influence the potential for an odor impact, and the variety of odor sources, quantitative analysis to determine the presence of a significant odor impact is difficult. Typical odor-generating land uses include, but are not limited to, wastewater treatment plants, landfills, and composting facilities. The proposed project would not introduce any such land uses.

Construction activities often include diesel-fueled equipment and heavy-duty trucks, which could create odors associated with diesel fumes that may be considered objectionable. However, construction is temporary, and construction equipment would operate intermittently throughout the course of a day and would likely only occur over portions of

the site at a time. In addition, all construction equipment and operation thereof would be regulated per the In-Use Off-Road Diesel Vehicle Regulation. Project construction would also be required to comply with all applicable NSAQMD rules and regulations, particularly associated with permitting of air pollutant sources. The aforementioned regulations would help to minimize air pollutant emissions, as well as any associated odors related to operation of construction equipment. Considering the short-term nature of construction activities, as well as the regulated and intermittent nature of the operation of construction equipment, the proposed project would not be expected to create objectionable odors affecting a substantial number of people.

Furthermore, the NSAQMD regulates objectionable odors through Rule 205 (Nuisance), which prohibits any person or source from emitting air contaminants or other material that result in any of the following: cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public; endanger the comfort, repose, health, or safety of any such persons or the public; or have a natural tendency to cause injury or damage to business or property. Rule 205 is enforced based on complaints. If complaints are received, the NSAQMD is required to investigate the complaint, as well as determine and ensure a solution for the source of the complaint, which could include operational modifications. Thus, although not anticipated, if odor complaints are made during construction or operation of the project, the NSAQMD would ensure that such odors are addressed, and any potential odor effects eliminated.

Dust

With respect to dust, as noted previously, the proposed project would be required to comply with all applicable NSAQMD rules and regulations. Specifically, implementation of a Dust Control Plan pursuant to District Rule 226 would be sufficient to reduce potential emissions of dust during construction. Following project construction, vehicles operating within the project site would be limited to paved areas of the site, and non-paved areas would be landscaped. Thus, project operations would not include sources of dust that could adversely affect a substantial number of people.

Conclusion

For the reasons described above, development of the proposed project would not result in emissions (such as those leading to odors) adversely affecting a substantial number of people, and a ***less than significant*** impact would result.

Mitigation Measures: To offset potential impacts to air quality, the following mitigation measures shall be required:

Mitigation Measure 3A: Alternatives to open burning. Alternatives to open burning of site-cleared vegetative material shall be used unless otherwise deemed infeasible by the Northern Sierra Air Quality Management District (NSAQMD). Among suitable alternatives are chipping, mulching, hauling to an approved disposal site, cutting for firewood, or conversion to biomass fuel. This shall be included as a note on all grading and improvement plans.

Timing: *During grading/construction*
Reporting: *Grading/Building plans*

Responsible Agency: *Planning Department/NSAQMD*

Mitigation Measure 3B: Use of grid power. During construction, grid power shall be used (as opposed to diesel generators) for job site power needs where feasible.

Timing: *During construction*
Reporting: *Building plans*
Responsible Agency: *Planning Department/Building Department*

Mitigation Measure 3C: Traffic control. Temporary traffic control shall be provided during all phases of the construction to improve traffic flow.

Timing: *During construction*
Reporting: *Grading/Building/Improvement plans*
Responsible Agency: *Planning Department/Public Works Department*

Mitigation Measure 3D: Traffic flow to off-peak hours. Construction activities shall be scheduled to direct traffic flow to off-peak hours as much as practicable.

Timing: *During construction*
Reporting: *Grading/Building plans*
Responsible Agency: *Planning Department/Public Works Department*

Mitigation Measure 3E: Prior to issuance of grading and improvement permits, a Dust Control Plan shall be submitted to the Northern Sierra Air Quality Management District pursuant to Rule 226 and approved. Include the approved Dust Control Plan on the project plans using clear phrasing and enforceable conditions, under its own heading. Provide evidence of NSAQMD approval to Nevada County with permit application submittal. The plan shall include but not be limited to the following measures, which shall also be included on all construction plans:

i. Contact details must be provided for the person/s responsible for ensuring that all dust control measures are performed in a timely manner during all phases of project construction.
j. All material excavated, stockpiled, or graded shall be sufficiently watered, treated, or covered to prevent fugitive dust from leaving the property boundaries and causing a public nuisance or a violation of an ambient air standard.
k. All land clearing, grading, earth moving, and excavation activities on the project shall be suspended as necessary to prevent excessive windblown dust when winds are expected to exceed 20 miles per hour.
l. All inactive portions of the site shall be covered, seeded, or watered until a suitable cover is established.
m. All material transported off-site shall be either sufficiently watered, or securely covered to prevent it being entrained in the air, and there must be a minimum freeboard of six inches maintained in the bed of the transport vehicle.
n. All areas with vehicle traffic shall be watered or have dust palliative applied as necessary to minimize dust emissions.
o. The construction contractor shall limit vehicle speeds on unpaved roads to a speed of 15 mph.
p. Paved streets adjacent to the project shall be swept or washed at the end of each day, or as needed to remove excessive accumulation of silt and/or mud which may have resulted from activities at the project site.

Timing: *Prior to issuance of grading and improvement permits*
Reporting: *Grading/Improvement plans*
Responsible Agency: *Planning Department/NSAQMD*

4. Biological Resources

Existing Setting: The subject parcel is 5.5 acres in size and located in the foothill region of Nevada County, within the community of Penn Valley, and is bordered to the west by Pleasant Valley Road and to the north by Pine Shadows Lane. Surrounding properties to the west are mostly undeveloped and contain Live Oak Woodlands. Properties to the east are developed with scattered rural residences and contain some Live Oak Woodlands. The parcel to the north is developed with a self-storage facility, and the parcels to the south contain various commercial and light industrial businesses.

While there is an existing residence in the center portion of the project site with an associated driveway, landscaping and outbuildings, the parcel contains a significant number of trees and other natural vegetation. In order to address potential impacts to biological resources, a Biological Resources Assessment (May 2024) and Special-Status Plant Survey Report (August 2024) were prepared for the project by Madrone Ecological Consulting.

According to the Biological Resources Assessment, the subject parcel is largely comprised of Interior Live Oak Woodland with a shrubby understory, bordered by roadways to the north and west. The Interior Live Oak Woodland has a primarily closed canopy (greater than 33% closure) that is dominated by interior live oak (*Quercus wislizeni*). Other trees common in the canopy include blue oak (*Q. douglasii*), Incense cedar (*Calocedrus decurrens*), Ponderosa pine (*Pinus ponderosa*), grey pine (*P. sabiniana*), and madrone (*Arbutus menziesii*) also occur. The shrub layer is relatively dense and is dominated by poison-oak (*Toxicodendron diversilobum*), creeping snowberry (*Symphoricarpos mollis*), toyon (*Heteromeles arbutifolia*), and Hollyleaf redberry (*Rhamnus ilicifolia*). The understory is relatively sparse due to the dense canopy and shrub layers, but dominant species in openings in this community include bristly dogtail grass (*Cynosurus echinatus)*, orchard grass (*Dactylis glomerata),* common buttercup (*Ranunculus californicus*), and common soap plant (*Chlorogalum pomeridianum)*. Urban portions of the parcel are paved or regularly maintained landscaping on and adjacent to Pleasant Valley Road and Pine Shadows Lane. No aquatic resources were found within the Study Area (Madrone 2024). The terrain within the Study Area is gently rolling, and generally slopes from approximately 1420 feet in the center of the site to approximately 1,400 feet on the east and west sides of the Study Area.

Nevada County Code Section 12.04.215 contains provisions to protect both Landmark Trees and Landmark Groves when a development project is proposed. A Landmark Tree includes any oak tree that is thirty-six (36) or more inches in diameter measured at breast height (DBH = 4' 6"), and a Landmark Grove includes hardwood tree groves with a 33+% canopy closure. Projects that propose to remove or disturb Landmark Trees and/or Landmark Groves may only be approved with review and approval of a Management Plan. Based on the large number of trees on the subject property, the size and location of the proposed project, and potential for impacts to Landmark Trees and Groves, a tree inventory field survey along with a Management Plan were required to be submitted with the project.

A Tree Inventory and Arborist Report (April 2024) was prepared for the project by Greg Matuzak Environmental Consulting. The Tree Inventory was conducted by an ISA Certified Arborist and included an inventory of all native trees equal to or greater than 6" DBH. A total of one hundred fifty (150) trees

with a DBH of 6" or greater were mapped within the project area. Of these, one hundred twenty-five (125) trees were identified as either Interior Live Oaks or Blue Oaks. A total of eight (8) native oak trees were identified to be Landmark Trees. The tree inventory was incorporated into the Biological Resources Assessment.

The subject parcel is not located within major deer migration corridors, critical deer winter or summer ranges, or critical fawning areas.

Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**	**Reference Source (Appendix A)**
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?		✓			A,8-10
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service?				✓	A,8
c. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				✓	A,8
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?				✓	A,8
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?		✓			A,5,10
f. Conflict with the provisions of an adopted Habitat Conservation Plan, or other approved local, regional, or state habitat conservation plan?				✓	A

Impact Discussion:

4a. Madrone Ecological Consulting conducted a field survey of the Study Area on February 12, 2024 as part of the Biological Resources Assessment to assess the suitability of habitats on-site to support special-status species. Meandering pedestrian surveys were performed on foot throughout the Study Area. Vegetation communities were classified in accordance with *The Manual of California Vegetation, Second Edition* (Sawyer, Keeler-Wolf and Evens 2009),

primarily accessed online (CNPS 2024), and plant taxonomy was based on the nomenclature in the Jepson eFlora (Jepson Flora Project 2024).

In addition, concurrent with the field survey the consultant conducted an aquatic resources delineation in accordance with the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987), the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)* (USACE 2008a), *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (USACE 2008b), and the Sacramento District's *Minimum Standards for Acceptance of Preliminary Wetlands Delineations* (USACE 2016).

As previously noted, a Tree Inventory was conducted on the project parcel by an ISA Certified Arborist (Greg Matuzak Environmental Consulting) and included an inventory of all native trees equal to or greater than 6" DBH. A total of one hundred fifty (150) trees with a DBH of 6" or greater were mapped within the project area. Of these, one hundred twenty-five (125) trees were identified as either Interior Live Oaks or Blue Oaks. A total of eight (8) native oak trees were identified to be Landmark Trees. The Interior Live Oak Woodland present on the project parcel also has greater than 33% canopy closure and is therefore considered a Landmark Grove by the Nevada County Code.

Most of the project site will be impacted by grading and clearing for the proposed project and related improvements. The eight Landmark Trees contain a total of 312 DBH inches that will be removed for the project in addition to the Landmark Grove over the entire parcel. To address this impact, the applicant will be required to mitigate through payment into the County's in-lieu mitigation fund administered by the Bear Yuba Land Trust (BYLT).

The Biological Resources Assessment includes a map showing the California Department of Fish and Wildlife, California Natural Diversity Data Base (CNNDB), indicating locations of special-status species in the area of the project site. This map shows occurrences of seven (7) special-status species within a five-mile radius of the project area. These species include: Chaparral Sedge, Scadden Flat Checkerbloom, Stebbin's Morning-Glory, Chinook Salmon (Central Valley Spring-run ESU), Steelhead (Central Valley DPS), Foothill yellow-legged Frog (North Sierra DPS), and California Black Rail.

A list of special-status species that were evaluated, including their listing status, habitat associations, and their potential to occur in the project Study Area was prepared for the Biological Resources Assessment. The following set of criteria was used to determine each species' potential for occurrence on the site:

- High: The site is within the known range of the species and suitable habitat exists.
- Moderate: The site is within the known range of the species and very limited suitable habitat exists.
- Low: The site is within the known range of the species and there is marginally suitable habitat.
- No Habitat Present: The site does not contain suitable habitat for the species, or the site is outside the known range of the species.

From the special-status species contained on the list, two plant species are listed as having a "High" potential for occurrence on site: Dubious pea and Oval-leaved viburnum. Five species of birds and mammals have a "High" potential for occurrence on site: Sharp-shinned hawk,

California spotted owl, Pallid bat, Northern California ringtail, and Fringed myotis. Finally, two species of mammals have a "Low" potential for occurrence on site: Townsend's big-eared bat and Hoary bat.

Listings of all plant and wildlife species observed during the February 2024 reconnaissance-level survey are included in the Biological Resources Assessment. None of the previously mentioned plant or wildlife species were observed during the survey.

In addition to the Biological Resources Assessment prepared in May 2024, an additional Special-Status Plant Survey Report was prepared by the same biological consultant (Madrone Ecological Consulting) in August 2024. The same biologist who conducted the February 2024 survey conducted a special-status plant survey of the project area on May 14, 2024. The target plant species for this survey were: Dubious pea and Oval-leaved viburnum.

Meandering pedestrian surveys were conducted throughout the project area. The surveys were floristic in nature, which means that all plant species observed on-site were identified to the taxonomic level necessary to determine rarity. Thus, if a special-status plant was present but not on the target list, it would have been detected and documented. No special-status plant species, including Dubious pea and Oval-leaved viburnum were observed during the May 14, 2024 protocol-level special status plant survey of the project area.

The Biological Resources Assessment identified potential impacts to nesting raptors and other birds, roosting bats, Northern California ringtail, and landmark trees and groves. To address these potential impacts to biological resources, **Mitigation Measure 4A** is recommended requiring a pre-construction nesting bird survey, preparation of a survey report, and potential additional mitigation if active raptor nests are found. **Mitigation Measure 4B** requires pre-construction roosting bat surveys be conducted during the breeding season. **Mitigation Measure 4C** will require non-invasive pre-construction surveys for Northern California ringtail and ringtail nests. **Mitigation 4D** requires mitigation for impacts to landmark trees and groves. Finally, **Mitigation Measure 4E** requires a Worker Environmental Awareness Training (WEAT) be prepared and administered to the construction crews prior to any ground disturbing or vegetation removal activities.

Based on the above information, the project would have ***less than significant impact with mitigation*** on special-status species or sensitive natural habitat.

4b,c. The subject parcel does not contain state or federally protected wetlands. Madrone Ecological Consulting conducted a protocol-level aquatic resources delineation and no wetlands or watercourses were found within or adjacent to the project study area. Furthermore, no riparian areas occur within the study area. Therefore, the proposed project will not negatively impact watercourse, wetland, riparian areas, their habitats or other sensitive natural communities. The project would therefore have ***no impact*** on wetlands or related habitats.

4d. With no wetlands, watercourses, or riparian areas on the subject property, there are no native or migratory fish to be impacted. Regarding potential wildlife corridors, the project parcel is located within a "Resident Herd" deer area and does not contain any known major deer migration corridors, critical winter or summer ranges, or any known critical deer fawning area, as identified in the Biological Resources Assessment and the Nevada County General Plan. During the field survey conducted for the Assessment, there were no deer observed on the property. Therefore, there will be ***no impact***.

4e. Nevada County Code Section 12.04.215 contains provisions to protect both Landmark Trees and Landmark Groves when a development project is proposed. A Landmark Tree includes any oak tree that is thirty-six (36) or more inches in diameter measured at breast height (DBH = 4' 6"), and a Landmark Grove includes hardwood tree groves with a 33+% canopy closure. Projects that propose to remove or disturb Landmark Trees and/or Landmark Groves may only be approved with review and approval of a Management Plan. Based on the large number of trees on the subject property, the size and location of the proposed project, and potential for impacts to Landmark Trees and Groves, a Tree Inventory and Arborist Report along with a Management Plan were required to be submitted with the project.

A Tree Inventory and Arborist Report (April 2024) was prepared for the project by Greg Matuzak Environmental Consulting. The Tree Inventory was conducted by an ISA Certified Arborist and included an inventory of all native trees equal to or greater than 6" DBH. A total of one hundred fifty (150) trees with a DBH of 6" or greater were mapped within the project area. Of these, one hundred twenty-five (125) trees were identified as either Interior Live Oaks or Blue Oaks. A total of eight (8) native oak trees were identified to be Landmark Trees. In addition, the Interior Live Oak Woodland present on the project parcel also has greater than 33% canopy closure and is therefore considered a Landmark Grove by the Nevada County Code.

Most of the project site will be impacted by grading and clearing for the proposed project and related improvements. The eight Landmark Trees contain a total of 312 DBH inches that will be removed for the project in addition to the Landmark Grove over the entire parcel. To address this impact, the applicant will be required to mitigate through payment into the in-lieu mitigation fund administered by the Bear Yuba Land Trust (BYLT). At the time this mitigation measure was prepared, incorporating the required 2:1 mitigation ratio for the oak woodlands results in an in-lieu fee of $13,530 per impacted acre (April 2024). In addition, a 2:1 mitigation is recommended for landmark trees which results in an in-lieu fee of $190 per impacted DBH inch. Based on impacts to Landmark Groves on the entire project site and 312 DBH inches of Landmark Oak trees, the total in-lieu mitigation fees would be $137,754 (BYLT, April 2024).

As previously discussed above, **Mitigation 4D** requires this mitigation for impacts to landmark trees and groves.

The proposed project will have ***less than significant impact with mitigation*** on local policies or ordinances protecting biological resources.

4f. The subject property is not included in any adopted Habitat Conservation Plan or other approved local, regional, or state habitat conservation plan . Therefore, the proposed project would have ***no impact*** on any of these plans.

Mitigation Measures: To offset potential impacts to biological resources, the following mitigation measures shall be required and shall be included in the improvement plans for the project:

Mitigation Measure 4A: Avoid Impacts to Nesting Raptors and Other Birds. The following nest survey requirements apply if construction activities take place during the typical bird breeding/nesting season (typically February 15 through September 1).

<u>Pre-Construction Nest Survey</u>

A pre-construction nesting bird survey shall be conducted by a qualified biologist on the project site and within a 500-foot radius of proposed construction areas, where access is available, no more than seven days prior to the initiation of construction. If there is a break in construction activity of more than 14 days, then subsequent surveys shall be conducted.

If active raptor nests are found, no construction activities shall take place within 500 feet of the nest until the young have fledged. If active songbird nests are found, a 100-foot no disturbance buffer will be established. These no-disturbance buffers may be reduced if a smaller buffer is proposed by the Project Biologist and approved by the County after taking into consideration the natural history of the species of bird nesting, the proposed activity level adjacent to the nest, habituation to existing or ongoing activity, and nest concealment (are there visual or acoustic barriers between the proposed activity and the nest). A qualified biologist can visit the nest as needed to determine when the young have fledged the nest and are independent of the site or the nest can be left undisturbed until the end of the nesting season.

Survey Report
A report summarizing the survey(s) shall be provided to the County within 30 days of the completed survey and is valid for one construction season. If no nests are found, no further mitigation is required.

Changes to Buffers and Completion of Nesting
Should construction activities cause a nesting bird to do any of the following in a way that would be considered a result of construction activities: vocalize, make defensive flights at intruders, get up from a brooding position, or fly off the nest, then the exclusionary buffer shall be increased such that activities are far enough from the nest to stop this agitated behavior. The exclusionary buffer will remain in place until the chicks have fledged or as otherwise determined by a qualified biologist in consultation with the County.

Construction activities may only resume within the buffer zone after a follow-up survey by the Project Biologist has been conducted and a report has been prepared indicating that the nest (or nests) are no longer active, and that no new nests have been identified.

Timing: *Prior to and during construction*
Reporting: *Grading/Building plans*
Responsible Agency: *Planning Department*

Mitigation Measure 4B: Avoid Impacts to Roosting Bats. Pre-construction roosting bat surveys shall be conducted by a qualified biologist within 14 days prior to any tree or building removal that will occur during the breeding season (April through August). If preconstruction surveys indicate that no roosts of special-status bats are present, or that roosts are inactive or potential habitat is unoccupied, no further mitigation is required. If roosting bats are found, exclusion shall be conducted as recommended by the qualified biologist. Methods may include acoustic monitoring, evening emergence surveys, and the utilization of two-step tree removal supervised by the qualified biologist. Two-step tree removal involves removal of all branches that do not provide roosting habitat on the first day, and then the next day cutting down the remaining portion of the tree. Building exclusion methods may include such techniques as installation of passive one-way doors, or the installation of netting when the bats are not present to prevent their reoccupation. Once the bats have been excluded, tree or building removal may occur.

Timing: *Prior to and during construction*
Reporting: *Grading/Building plans*
Responsible Agency: *Planning Department*

Mitigation Measure 4C: Avoid Impacts to Northern California Ringtail. To mitigate for potential impacts to Northern California ringtail, the following measure is recommended:

- Within 14 days prior to the initiation of any construction activities, a qualified biologist shall conduct non-invasive preconstruction surveys for Northern California ringtail and ringtail nests in suitable habitats (riparian habitats, oak woodlands with shrubby understory, and/or trees 5 inches dbh or greater in riparian areas, particularly those with cavities) that will be disturbed by construction activity. Non-invasive methods may include camera traps and track plates as well as physical surveys of suitable habitat. If ringtail are found prior to the initiation of, and/or during construction activities, a qualified biologist shall consult with CDFW prior to relocation of any individual ringtail. The camera trap may be removed once construction begins.
- If a ringtail nest is observed within the proposed impact area during the preconstruction survey, the Project biologist shall establish a no-disturbance buffer and the nest shall be fenced off and avoided until the young have left the nest, and the nest is no longer active as determined by the Project biologist. A qualified biologist shall monitor to ensure that ringtails do not disperse into the construction area.
- If any ringtails are observed within the Project area, work will be suspended in a 100-foot radius of the animal until the animal leaves the Project site on its own volition. If necessary, the Project biologist will notify CDFW to determine the appropriate procedures related to relocation. Any worker who inadvertently injures or kills a ringtail or who finds one dead, injured, or entrapped must immediately report the incident to the Project biologist.

Timing: *Prior to and during construction*
Reporting: *Grading/Building plans*
Responsible Agency: *Planning Department*

Mitigation Measure 4D: Impacts to Landmark Grove and Landmark Oak Trees. Prior to removal of onsite Landmark Groves and Landmark Oak trees and issuance of a grading or building permit for the proposed project, payment of an in-lieu fee shall be made to the approved Bear Yuba Land Trust (BYLT) compensatory mitigation fund for protected oak resources. It shall be specified that the fee paid will be used to purchase mitigation landmark grove(s) within Nevada County. The compensatory mitigation ratio required by Nevada County is 2:1. An administration fee is included in the current rates charged by BYLT to cover their costs associated with this option.

At the time this mitigation measure was prepared, incorporating the 2:1 mitigation ratio for the oak woodlands results in an in-lieu fee of $13,530 per impacted acre (April 2024). In addition, a 2:1 mitigation is recommended for landmark trees which results in an in-lieu fee of $190 per impacted DBH inch. Based on impacts to Landmark Groves on the entire project site and 312 DBH inches of Landmark Oak trees, the total in-lieu mitigation fees would be $137,754 (BYLT, April 2024).

Efforts should be made to save trees where feasible. This may include the use of retaining walls, planter islands, pavers, or other techniques commonly associated with tree preservation. If any trees can ultimately be avoided, the Improvement Plans shall include a note and show placement of temporary construction fencing outside of the driplines of trees to be saved.

Timing: *Prior to removal of onsite Landmark Groves and Landmark Oak trees; Prior to issuance of grading and building permits*
Reporting: *Grading/Improvement plans*
Responsible Agency: *Planning Department*

Mitigation Measure 4E: Worker Environmental Awareness Training. Prior to any ground-disturbing or vegetation-removal activities, a Worker Environmental Awareness Training (WEAT) shall be prepared and administered to the construction crews. The WEAT shall include the following: discussion of the state and federal Endangered Species Act, the Clean Water Act, the Project's permits and CEQA documentation, and associated mitigation measures; consequences and penalties for violation or noncompliance with these laws and regulations; identification of special-status wildlife, location of any avoided Waters of the U.S; hazardous substance spill prevention and containment measures; and the contact person in the event of the discovery of a special-status wildlife species. The WEAT will also discuss the different habitats used by the species' different life stages and the annual timing of these life stages. A handout summarizing the WEAT information shall be provided to workers to keep on-site for future reference. Upon completion of the WEAT training, workers shall sign a form stating that they attended the training, understand the information presented and will comply with the regulations discussed. Workers will be shown designated "avoidance areas" during the WEAT training; worker access should be restricted to outside of those areas to minimize the potential for inadvertent environmental impacts. Fencing and signage around the boundary of avoidance areas may be helpful.

Timing: *Prior to any ground-disturbing or vegetation-removal activities*
Reporting: *Form signed confirming attendance at training*
Responsible Agency: *Planning Department*

5. Cultural Resources

Existing Setting:
The subject parcel is approximately 5.5-acres in size and located within the western portion of Nevada County in Penn Valley, situated along the east side of Pleasant Valley Road, approximately 0.25 mile north of State Route 20. The subject parcel contains an oak woodland environment with extensive tree cover, manzanita, blackberry bushes, and other vegetation and is developed with a two-story residence, a single-story guest house, and two accessory buildings. These existing buildings will be demolished and removed to make room for the proposed market building. The subject parcel has a slope of approximately 16%. Due to the possible cultural sensitivity of the project site, the applicant was required to submit a cultural resources assessment prepared by a qualified consultant. A Cultural and Paleontological Resources Assessment was prepared by Natural Investigations Company (Lori Harrington, M.A., R.P.A, and Dylan Stapleton, M.A., R.P.A.) and submitted with the project.

The cultural investigations comprised a records search conducted by the North Central Information Center at Sacramento State University (NCIC), received on December 11, 2023; a Sacred Lands File (SLF) search conducted by the Native American Heritage Commission (NAHC), received on December 15, 2023; a University of California Museum of Paleontology (UCMP) records search completed on January 16, 2024; geoarchaeological analyses; a pedestrian survey of the project area completed on January 11, 2024; and the preparation of a report documenting the investigation results for the Project in compliance with the California Environmental Quality Act (CEQA).

Cultural resources investigations for the project identified no previous surveys or previously recorded cultural resources in the project area. The SLF search for the project noted negative results of the presence of sensitive Native American resources in the area. A geoarchaeological analysis determined that the sensitivity of the project area for the presence of buried deposits of cultural resources is low. The cultural and paleontology surface survey of the Project area did not identify any new resources or any indication of buried deposits of cultural resources.

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
a. Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?		✓			A,11
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?		✓			A,11
c. Disturb any human remains, including those interred outside of formal cemeteries?		✓			A,11

Impact Discussion:

5a-c. As noted in the above section, the Cultural and Paleontological Resources Assessment prepared for this project determined the sensitivity of the project area for the presence of buried deposits of cultural resources is low. In addition, the cultural and paleontology surface survey of the project area did not identify any new resources or any indication of buried deposits of cultural resources.

While the sensitivity of the project area for the presence of buried deposits of cultural resources is low, a mitigation measure is being required to address any unanticipated discoveries of cultural or unique paleontological resources onsite. If there are any resources discovered during construction activities including ground disturbing activities, all work shall be stopped immediately within 100 feet of the find, or an agreed upon distance based on the project area and nature of the find. Work shall cease within the immediate vicinity of the find, the County Planning Department shall be notified, and a cultural resources specialist, professional archaeologist, or other qualified consultant shall be contacted to evaluate the find. The cultural resources shall be properly treated based on the recommendations of the consultant.

The Assessment notes that indigenous archaeological sites have been identified within the ¼ mile record search radius of the project site. To ensure the protection of possible cultural resources, the Assessment recommends that a qualified archaeologist and a Native American tribal representative monitor the initial grading and ground disturbance on the project parcel as a mitigation measure. In addition, if human remains, historical or archaeological resources are discovered inadvertently during on-site grading or construction, a mitigation measure is recommended that requires work be halted and appropriate agencies contacted. Mitigation measures for monitoring of the initial grading and ground disturbance on the site and to address possible inadvertent or unanticipated discoveries are discussed in more detail and contained in Section 18, Tribal Cultural Resources (Mitigation Measures 18B and 18C). With these mitigations required, potential impacts are considered ***less than significant with mitigation***.

Mitigation Measures: To offset potentially adverse cultural resource impacts associated with the project activities, the following **Mitigation Measure 5A** shall be required and shall be included in the improvement plans for the project. **See Mitigation Measures 18A – 18C** in Section 18, Tribal Cultural Resources, for other related measures.

Mitigation Measure 5A. Halt work and contact the appropriate agencies if human remains or cultural materials are discovered during project construction. All equipment operators and employees involved in any form of ground disturbance at any phase of project improvements shall be advised of the remote possibility of encountering subsurface cultural resources. If such resources are encountered or suspected, work shall be halted immediately and the Nevada

County Planning Department, United Auburn Indian Community of the Auburn Rancheria, and any other interested and affected tribe shall be contacted. A professional archaeologist shall be retained by the developer and consulted to access any discoveries and develop appropriate management recommendations for archaeological resource treatment. If bones are encountered and appear to be human, California Law requires that the Nevada County Coroner and the Native American Heritage Commission be contacted and, if Native American resources are involved, Native American organizations and individuals recognized by the County shall be notified and consulted about any plans for treatment. A note to this effect shall be included on the grading and construction plans for each phase of this project.

Timing: *Prior to the issuance of building/grading permits and during construction*
Reporting: *Agency approval of permits or plans*
Responsible Agency*: Planning Department*

6. Energy

Existing Setting: On February 12, 2019, the Nevada County Board of Supervisors approved the Energy Action Plan (EAP) as the County's unincorporated area's roadmap for expanding energy-efficiency, water-efficiency, and renewable-energy, and the cost-savings that accompany these efforts. The EAP is focused on operations of structures, infrastructure that generates energy, and efficient use of water. The subject parcel is currently developed with an existing residence and accessory buildings, which will be removed to make room for the proposed 30,711 SF grocery store building. Pacific Gas & Electric (PG&E) will serve the proposed facility for electricity.

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during construction or operation?			✓		A,12
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?			✓		A,12

Impact Discussion:

6a,b. Construction techniques and equipment used to construct the project will be consistent with local and state regulations. Typical construction activities require the use of energy (e.g., electricity and fuel) for various purposes such as the operation of construction equipment and tools, as well as grading and construction travel. The size and scope of the project is not likely to require extraordinary, or non-typical construction equipment, or techniques resulting in a wasteful, or inefficient construction operation. The operation of the proposed grocery store and Starbucks Coffee will utilize existing available power and energy sources and will be subject to meeting all federal, state and local codes in relation to this use. The local Energy Action Plan does not address energy use during the construction phase, so there is no conflict with the local plan. There is a ***less than significant impact*** related to excessive energy consumption or conflicts with renewable energy or energy efficiency plans.

Mitigation Measures: None required.

7. Geology and Soils

Existing Setting: The project 5.5-acre parcel is comprised of land that generally slopes to the west and south towards Pleasant Valley Road and Commercial Avenue, with the rear portion of the parcel sloping to the east. The parcel is located along the south side of Pine Shadows Lane and the west side of Pleasant Valley Road. Directly north of the project site is a mini-storage facility and directly south are parcels developed with commercial and light industrial uses. The subject parcel is developed with a residence and accessory buildings in the central portion of the site.

According to the Natural Resources Conservation Service (NRCS) Soil Survey Database (NRCS 2024), five soil mapping units occur within the project Study Area: (BoC) Boomer loam, 5-15% slopes; (SfB) Sierra sandy loam, deep, 2 to 9% slopes, LRU 18XI; (SfC) Sierra sandy loam, 9 to 15% slopes, LRU 18XI; (SfD) Sierra sandy loam, deep, 15 to 30% slopes, LRU 18XI; and (SoC) Sobrante loam, 2 to 15% slopes. The Sierra and Sobrante soils are material weathered from granite, while the Boomer soils weathered from metavolcanics as well as granite. All of the soil mapping units have the potential to have inclusions of gabbro, diorite, or volcanic soils, however, all of the rock outcrops observed within the Study Area were granite, and the plant species observed were not typical of those found in more nutrient limiting geologic units such as gabbro or volcanic soils.

According to the *Geologic Map of the Chico Quadrangle, California, 1:250,000* (Saucedo and Wagner, 1992) published by the California Division of Mines and Geology, the property is located in an area mapped as Mesozoic-age Volcanic and Gabbroic rock from the Smartsville Complex.

A Geotechnical Engineering Report was prepared by the NV5 Engineering consulting firm (dated April 2024) and submitted with this project application. According to the report, NV5 conducted a field investigation on February 22, 2024. During the investigation, the consultant observed the local topography and surface conditions. The consultant performed a subsurface investigation which included the excavation of 6 exploratory trenches across the project area. They excavated to depths ranging between 8 and 13 feet below the ground surface (bgs) using a CAT 315 excavator equipped with a 24-inch bucket. They obtained samples using a hand-actuated slide sampler and mattock. An engineer from the consulting firm logged the soil conditions revealed in the exploratory trenches and collected relatively undisturbed and bulk soil samples for laboratory testing.

During the field investigation, the consultant encountered groundwater seepage in two of six exploratory trenches (T-1 and T-6). The observations of groundwater conditions were made after a period of relatively wet weather. Although the consultant did not observe groundwater in all of the exploratory trenches, they note their experience has shown that seepage may be encountered in excavations which reveal the soil/weathered rock transition, particularly during or after the rainy season.

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
a. Directly or indirectly cause potential substantial adverse effects, including risk of loss, injury or death involving: i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. ii. Strong seismic ground shaking? iii. Seismic-related ground failure including liquefaction? iv. Landslides?				✓	A,13
b. Result in substantial soil erosion or the loss of topsoil?		✓			A,8,13
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?		✓			A,13
d. Be located on expansive soil creating substantial direct or indirect risks to life or property?		✓			A,13
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				✓	B
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		✓			A,11

Impact Discussion:

7a. The Alquist-Priolo Earthquake Fault Zoning Act was adopted in 1972 to prevent the construction of buildings used for human occupancy on the surface trace of active faults. Ground or fault rupture is generally defined as the displacement that occurs along the surface of a fault during an earthquake. Generally, western Nevada County is in a low intensity zone for earthquake severity.

Regional faulting is associated with the central area of the Foothill Fault System. The Foothill Fault System is a broad zone of northwest trending, east dipping normal faults formed along the margin of the Great Valley and the Sierra Nevada geologic provinces on the western flank of the Sierra Nevada and southern Cascade Mountain ranges.

The applicant's geotechnical consultant, NV5, reviewed Special Publication 42 (California Geological Survey (CGS), 2018), which is intended to promote uniform and effective statewide implementation of the evaluation and mitigation elements of the Alquist-Priolo Earthquake Fault Zoning Act. Pursuant to CGS (2018) guidance, NV5 used the online *California Earthquake*

Hazards Zone Application (EQ Zapp; *https://www.conservation.ca.gov/cgs/fgeohazards/eq-zapp*) to determine whether the Site is located within an Earthquake Fault Zone (also known as Alquist-Priolo Zone, or A-P Zone). A-P Zones are regulatory zones that encompass traces of Holocene-active faults to address hazards associated with surface fault rupture. According to the California Earthquake Hazards Zone Application, the site location is not within an A-P Zone. There are no known faults that cross through the project site.

NV5 has concluded that based on their site observations, the geology of the region, and their experience in the area, the risk of seismically induced hazards such as slope instability, liquefaction, and surface rupture are remote at the project site. Therefore, there is ***no impact*** for impacts to rupture of known earthquake faults, seismic ground shaking, seismic-related ground failure including liquefaction and landslides.

7b,c,d. A Geotechnical Engineering Report prepared by NV5 Engineering (dated April 2024) was submitted along with the project application. According to the report, the consultant has found the site to be suitable for the proposed improvements, provided the geotechnical engineering recommendations and design criteria presented in the report are incorporated into the project plans. The recommendations of this report will ensure that potential impacts to geology and soils are less than significant. While no potential adverse impacts to geology and soil are anticipated because of this project, adherence to the recommendations of the Geotechnical Engineering Report as provided in **Appendix B** of this initial study is required.

NV5 did not express concerns for soil erosion or loss of topsoil. Potential soil erosion is to be mitigated through appropriate measures identified in the Geotechnical Engineering Report. These include the installation of fiber rolls down slope of the proposed area of disturbance to reduce migration of sediment from the site. Fiber rolls on slopes are intended to reduce sediment discharge from disturbed areas, reduce the velocity of water flow, and aid in the overall revegetation of slopes. In addition, erosion controls are to be installed on all cut and fill slopes to minimize erosion caused by surface water runoff. All soil exposed in permanent slope faces should be hydroseeded or hand seeded/strawed with an appropriate seed mixture compatible with the soil and climate conditions of the site.

As stated above, based on the conclusions of the consultant, the risk of seismically induced hazards such as slope instability, liquefaction, and surface rupture are remote at the project site.

The Geotechnical Engineering Report states that expansive soil, where encountered, should be over-excavated to a minimum depth of 3 feet below building pad subgrade and at least 2 feet below exterior hardscapes, slabs-on-grade and pavement sections. Over-excavations should extend a minimum 5 feet laterally from the edge of foundation elements and minimum 2 feet laterally from the edge of hardscapes. Over-excavations should be backfilled with approved non-expansive soil, placed and compacted in accordance with the following grading recommendations. Excavated expansive soil(s) should either be disposed of offsite, placed in non-structural areas, or placed within the lower portion of deep fills.

With **Mitigation Measure 7A** requiring the NV5 Engineering recommendations be incorporated into the project, there will be a ***less than significant impact with mitigation*** to geology and soils.

7e. The Nevada County Department of Environmental Health (NCDEH) has reviewed the project and commented their records indicate a permit for a septic system serving a 4-bedroom residence

and detached guest house on the subject parcel was finaled in 1980. The applicant intends to remove this system and connect to public sewer (Nevada County Sanitation District Services). An abandonment permit is required to be obtained from the Environmental Health Department for the removal of this septic system and will be addressed as a condition of approval.

The project parcel is bordered to the south by properties that are served by municipal sewer (Nevada County Sanitation District). The project proposes to connect to the County Sanitation District for sewer services. The District has reviewed the project and provided a "Will Serve Letter" indicating it has sufficient capacity in the Penn Valley Zone to accommodate an annexation request for the parcel for the development of the grocery store. For the Sanitation District to provide future sewer service to the project parcel, it will be necessary for the parcel to annex into Nevada County Sanitation District No. 1, Penn Valley, Zone 6, and acquire sewer capacity. Annexation will require a separate review process through the Nevada County Local Agency Formation Commission (LAFCo) prior to the applicant submitting a sewer connection application.

The project requires the removal of the existing septic system on the property and connection to public sewer and does not propose any septic tanks or alternative wastewater disposal systems. Therefore, there is **no impact** related to soils needed to serve septic systems.

7f. There is no evidence of any unique paleontological resources or sites or unique geologic features in the project area. **Mitigation Measure 5A** described in Section 5 above, would require construction to be halted in the unlikely event that there is a discovery of cultural resources, including historic, prehistoric, tribal, and paleontological resources so they can be evaluated and protected. Therefore, impacts to paleontological resources and unique geological features is ***less than significant with mitigation***.

Mitigation Measures: To mitigate potential impacts to geology and soils from project grading and construction, the following mitigation measure, in addition to **Mitigation Measure 5A,** shall be required:

Mitigation Measure 7A: Implement the Recommendations of the NV5 Geotechnical Engineering Report: The applicant shall include the recommendations of the NV5 Geotechnical Engineering Report (April 2024) incorporated herein by reference, provided in Appendix B of this initial study, and maintained on file with the Planning Department. These recommendations shall be incorporated in the project design and included in all improvement plans, demolition permit(s), and grading and construction permits. These recommendations are specific to: Clearing and Grubbing, Expansive Soil, Soil Preparation for Fill Placement, Engineered Fill, Fill Slope Grading, Cut Slope Grading, Differential Fill Depth, Temporary Excavations, Underground Utility Trenches, Erosion Controls, Wet Weather Grading, Surface Water Drainage, Infiltration Basins, Construction Dewatering, Soil Corrosion Potential, Grading Plan Review and Construction Monitoring, Seismic Design Criteria, Foundations, Retaining Wall Design Criteria, Surface Water and Near-Surface Groundwater, Perimeter Foundation Drains, and Slab Underdrains.

Timing: *Prior to issuance of grading or improvement permits/During Construction*
Reporting: *Approval of permits or plans/During Construction*
Responsible Agency: *Building Department*

8. Greenhouse Gas Emissions

Existing Setting: Global climate change refers to changes in average climatic conditions on the earth, including temperature, wind patterns, precipitation and storms. Global warming, a related concept, is the observed increase in the average temperature of the earth's surface and atmosphere. One identified cause of global warming is an increase of greenhouse gases (GHGs) in the atmosphere. Greenhouse gases (GHGs) are those gases that trap heat in the atmosphere. GHGs are emitted by natural and industrial processes, and the accumulation of GHGs in the atmosphere regulates the earth's temperature. Events and activities, such as the industrial revolution and the increased combustion of fossil fuels (e.g. gasoline, diesel, coal, etc.), are believed to have contributed to the increase in atmospheric levels of GHGs. GHGs that are regulated by the State and/or EPA are carbon dioxide (CO2), methane (CH4), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF6) and nitrous oxide (NO2). Emission inventories typically focus on GHG emissions due to human activities only, and compile data to estimate emissions from industrial, commercial, transportation, domestic, forestry, and agriculture activities. CO2 emissions are largely from fossil fuel combustion and electricity generation. Agriculture is a major source of both methane and NO2, with additional methane coming primarily from landfills. Most HFC emissions come from refrigerants, solvents, propellant agents, and industrial processes, and persist in the atmosphere for longer periods of time and have greater effects at lower concentrations compared to CO2. Global warming adversely impacts air quality, water supply, ecosystem balance, sea level rise (flooding), fire hazards, and causes an increase in health-related problems.

In September 2006, AB 32, the California Climate Solutions Act of 2006, was enacted. Among other requirements, AB 32 required the CARB to identify statewide level of GHG emissions in 1990 to serve as the emissions limit to be achieved by 2020, and to develop and implement a Scoping Plan. On September 8, 2016, AB 197 and Senate Bill (SB) 32 were enacted with the goal of providing further control over GHG emissions in the State. SB 32 built on previous GHG reduction goals by requiring that the CARB ensure that statewide GHG emissions are reduced to 40 percent below the 1990 level by 2030.

In addition, the Governor signed Senate Bill 97 in 2007 directing the California Office of Planning and Research to develop guidelines for the analysis and mitigation of the effects of greenhouse gas emissions and mandating that GHG impacts be evaluated in CEQA documents. CEQA Guidelines Amendments for GHG Emissions were adopted by OPR on December 30, 2009. The Northern Sierra Air Quality Management District (NSAQMD) has prepared a guidance document, Guidelines for Assessing Air Quality Impacts of Land Use Projects, which includes mitigations for general air quality impacts that can be used to mitigate GHG emissions when necessary. Continuing to reduce greenhouse gas emissions is critical for the protection of all areas of the state, but especially for the state's most disadvantaged communities, as those communities are affected first, and, most frequently, by the adverse impacts of climate change, including an increased frequency of extreme weather events, such as drought, heat, and flooding.

Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**	**Reference Source (Appendix A)**
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			✓		A,7
b. Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?			✓		A,7

Impact Discussion:

8a,b. Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. Therefore, the cumulative global emissions of GHGs contributing to global climate change can be attributed to every nation, region, and city, and virtually every individual on Earth. An individual project's GHG emissions are at a micro-scale level relative to global emissions and effects to global climate change; however, an individual project could result in a cumulatively considerable incremental contribution to a significant cumulative macro-scale impact. As such, impacts related to emissions of GHG are inherently considered cumulative impacts. To address potential GHG impacts, an Air Quality and Greenhouse Gas Analysis was prepared for the project by Raney Planning and Management (February 2025).

Development of the proposed project would cumulatively contribute to increases of GHG emissions. Estimated GHG emissions attributable to future development would be primarily associated with increases of carbon dioxide (CO_2) and, to a lesser extent, other GHG pollutants, such as methane (CH_4) and nitrous oxide (N_2O) associated with area sources, mobile sources or vehicles, utilities (electricity and natural gas), water usage, wastewater generation, and the generation of solid waste. The primary source of GHG emissions for the project would be mobile source emissions. The common unit of measurement for GHG is expressed in terms of annual metric tons of CO_2 equivalents ($MTCO_2e$/yr).

The proposed project is located within the jurisdictional boundaries of the NSAQMD, which does not currently have any established thresholds for GHG emissions. While NSAQMD prefers that GHG emissions are generally quantified for decision-makers and the public to consider, the NSAQMD typically excludes regulation of mobile source emissions, as such emissions are regulated by CARB on a State-wide basis.

In addition, pursuant to the Governor's Office of Land Use and Climate Innovation (LCI), certain projects are presumed to have a less-than-significant effect on Vehicle Miles Traveled (VMT) due to project size, project location, or project type. Specifically, according to LCI, local-serving uses may generally be presumed to have a less-than-significant VMT impact and can generally be screened from further VMT analysis. LCI based the presumption on substantial research demonstrating that adding local-serving uses typically improves destination accessibility to residents, often reducing trip distances because residents need to travel shorter distances than they previously did, as adding new local-serving uses typically shifts trips away from another use rather than adding entirely new trips to the region. A direct correlation exists between VMT and mobile source GHG emissions. Thus, according to the NSAQMD, a reasonable assumption can be made that if the proposed project is determined to meet the LCI's screening criteria for local-serving retail uses, the proposed project's mobile source GHG emissions can also be screened out of further analysis.

The LCI Technical Advisory notes that projects less than 50,000 sf can generally be considered local serving. The proposed project would consist of a 30,711-sf grocery store. Thus, the project would be below 50,000 sf, and, as a result, would be considered local serving. In addition, given the nature of the proposed project and the surrounding area, a reasonable assumption can be made that the majority of patrons visiting the proposed project would be travelling from the immediately surrounding area. For example, aside from the existing Holiday Market located north of the project site, which is being replaced by the proposed project, the nearest existing grocery

store to the project site is located within the City of Grass Valley, approximately eight miles east of the project. Thus, the proposed project would provide a closer retail opportunity to the residents of Penn Valley and the surrounding area. As a result, because the proposed project's VMT meets the local-serving retail screening criteria established in the LCI's Technical Advisory, further analysis of the proposed project's mobile-source GHG emissions is not provided herein.

With regard to all other construction and operational GHG emissions generated by the project, because the NSAQMD has not adopted GHG thresholds, the thresholds of the nearby Placer County Air Pollution Control District (PCAPCD) were applied to the proposed project for the purposes of this analysis. The thresholds of significance were adopted by the PCAPCD to aid in compliance with the statewide goals established by AB 32 and SB 32, and the NASAQMD has determined that the thresholds are appropriate for the proposed project. Accordingly, the applicable thresholds of significance for this analysis are presented in Table 6.

GHG emissions resulting from construction and operations of the proposed project were modeled using the CalEEMod emissions model under the same assumptions as discussed in Section III, Air Quality, of this IS/MND. All modeling outputs are included in Appendix A of the Air Quality and Greenhouse Gas Analysis.

Construction

Construction of the proposed project would occur over the course of approximately one year. It should be noted that construction GHG emissions are a one-time release and are, therefore, not typically expected to generate a significant contribution to global climate change. As discussed above, the NSAQMD has not adopted thresholds of significance for construction related GHG emissions. Therefore, the total emissions have been compared to the thresholds of significance used by the nearby air district of PCAPCD. The maximum unmitigated GHG emissions from construction of the proposed project are presented in Table 7 below.

Table 7
Unmitigated Construction GHG Emissions ($MTCO_2e$/yr)

Construction Emissions	Maximum Annual GHG Emissions
Project Emissions	297.00
PCAPCD Threshold	10,000.00
Exceeds Thresholds?	**NO**

Source: CalEEMod, December 2024 (see Appendix A).

As shown above, construction of the proposed project would result in maximum annual GHG emissions far below the applicable threshold of significance.

Operations

As discussed above, because the proposed project's VMT meets the local-serving retail screening criteria established in the LCI's Technical Advisory, further analysis of the proposed project's mobile-source GHG emissions is not provided herein. The estimated unmitigated operational GHG emissions generated by the proposed project for all other emission sources are presented in Table 8.

Table 8
Unmitigated Operational GHG Emissions ($MTCO_2e$/yr)

Operational Emissions	Maximum Annual GHG Emissions
Area	0.45
Energy	205
Water	6.30
Waste	54.1
Refrigerants	609
Vegetation	4.90
Total Emissions	*879.75*
PCAPCD Threshold	1,100.00
Exceeds Thresholds?	**NO**

Source: CalEEMod, December 2024 (see Appendix A).

As shown in Table 8, the proposed project's maximum unmitigated operational GHG emissions would be below the PCAPCD's 1,100 $MTCO_2e$/yr threshold.

Conclusion

Based on the above, the proposed project would not be considered to generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, or conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs, and a ***less than significant*** impact would occur.

Mitigation Measures: None required

9. Hazards and Hazardous Materials

Existing Setting: No existing or proposed schools are located within one-quarter mile of the project area. The project area is not within an airport land use plan or within two miles of a public airport or public use airport or in the vicinity of a private airstrip. The Department of Toxic Substances Control (DTSC) EnviroStor database was utilized to check for past hazardous information on the project property and no hazardous information resulted from this search. Similarly, the State Water Resources Control Board online GeoTracker database was utilized, with no hazardous information being identified for the subject parcel. According to the California Environmental Reporting System (CERS), the project is not within or adjacent to any hazardous materials sites compiled, nor is it located on an abandoned solid waste disposal site known to the County. The subject parcel is located approximately one mile south of the Penn Valley Fire Station located at the entrance to the Lake Wildwood subdivision and 1.5 miles northwest of the Penn Valley Fire Station located on Spenceville Road and is within a designated High fire severity zone (Cal Fire, Fire Hazard Severity Zones, December 2022).

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			✓		A,B
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			✓		A,B
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				✓	A
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment?				✓	A,14
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				✓	A
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			✓		A,E
g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?			✓		A,D

Impact Discussion:

9a,b. The proposed project would not result in the routine transport and use of hazardous materials to the site and would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. Most trips to the site will involve customers coming and going to do grocery shopping or to go to the Starbucks Coffee shop, and employees arriving for work and leaving. Due to the construction phase of the project and based on the variety of products to be sold at the grocery store, it is likely some of the items to be stored or sold are likely to be considered hazardous.

The Nevada County Environmental Health Department has reviewed the project and commented the applicant and/or facility operator shall adhere to all applicable codes and regulations regarding the storage of hazardous materials and the generation of hazardous wastes set forth in California Health and Safety Code 25100 - 25258.2 including the electronic reporting requirement to the California Environmental Reporting System (CERS). In addition, the applicant and/or facility operator must apply for and obtain a permit for the storage of hazardous materials and the generation of hazardous wastes from the Nevada County

Department of Environmental Health (NCDEH), the Certified Unified Program Agency (CUPA). The applicant and/or facility operator shall secure and annually renew the permit for this facility within 30 days of becoming subject to applicable regulations.

Based on the above information, potential impacts of the proposed project would be a ***less than significant*** related to routine transport, use, or disposal of hazardous materials.

9c. There are no existing or proposed schools within one-quarter mile of the proposed project. The nearest schools (Vantage Point Charter and Ready Springs Elementary) are located approximately 1.3 miles southeast of the subject property. Therefore, there would be ***no impact*** related to hazardous emissions or substances near a school.

9d. No portion of the project area is included on the State of California Hazardous Waste and Substances Sites (Cortese) List of hazardous materials sites. The Environmental Health Department has reviewed the project and has no record of hazardous materials used or generated, or hazardous wastes disposed of, on this site. There are no known abandoned mine lands (AML) on this parcel known to this Department. Therefore, the project would not create significant hazard to the public or the environment, and ***no impact*** would occur.

9e. The proposed project is not located within an airport land use plan or within two miles of an airport. Therefore, there would be ***no impact.***

9f. There is no currently adopted emergency response/evacuation plan for the immediate area. In case of an emergency, Highway 20 would serve as the primary route for traffic running east to west from Yuba County to Grass Valley/Nevada City. While the project would be utilized by vehicles and residents to the area that would need to evacuate, both during construction and operation, the project site is less than 1,000 feet away from Highway 20 and would not significantly hinder the flow of traffic during an evacuation. The project also proposes to provide two ingress/egress points for the project. The applicant will be required to comply with the requirements of the Penn Valley Fire Protection District as well as the Office of the County Fire Marshal's requirements. Based on this information and since the Penn Valley Fire Protection District fire station is 1.5 miles away, potential impacts are considered to be ***less than significant.***

9g. Although the project is located within a High Fire Hazard Severity Zone, the project parcel is within an area being developed into commercial uses, with existing surrounding commercial development located to the north and south of the parcel. The project will be constructed to current California Building Code requirements, requiring fire sprinklers within the grocery store building and additional fire safety requirements. Therefore, the potential to expose people or structures to wildland fire hazards would be decreased. As such, the proposed project would result in ***less than significant*** *impacts* related to this issue.

Mitigation Measures: None required.

10. Hydrology and Water Quality

Existing Setting: The project area is located in western unincorporated Nevada County, within the Penn Valley Community Region. There are no streams or rivers on the project property. In addition, there are no wetlands, drainages, or riparian habitat present on the project parcel. The project corridor is not located within or near a 100-year flood hazard zone according to the Federal Emergency Management

Agency's (FEMA) Flood Information Maps. Finally, the project site is not located within any groundwater basins or priority basins identified by the DWR Bulletin 118, or the Sustainable Groundwater Management Act (SGMA) Basin Prioritization Dashboard. The nearest DWR Bulletin 118 basins are the North and South Yuba Subbasins of the Sacramento Valley Basin (5-21.60 and 5-021.61, respectively) which are approximately eight (8) miles west of the proposed project site.

Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**	**Reference Source (Appendix A)**
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?		✓			A
b. Substantially decrease groundwater supplies or interfere with groundwater recharge such that the project may impede sustainable groundwater management of the basin?			✓		A,13
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: i) Result in substantial erosion or siltation on- or off-site; ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-or off-site; iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or iv) impede or redirect flood flows?		✓			A,15
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?				✓	A
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?		✓			A
f. Place housing within a 100-year flood hazard area as mapped on a federal Flood hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				✓	A
g. Place within a 100-year flood hazard area structures that would impede or redirect flood flows?				✓	A

Impact Discussion:

10a,e. The project proposes a Development Permit (DVP 24-2) to allow a 30,711 square foot commercial grocery store building and related improvements that will be shared by Holiday Market and a Starbucks Coffee restaurant. A General Plan Amendment (GPA24-0003) is also proposed to

change the land use designation for the project parcel by increasing the amount of land designated Neighborhood Commercial (NC) from approximately 1.9 acres to approximately 4.3 acres and decreasing the amount of land designated Industrial (IND) from approximately 3.6 acres to approximately 1.2 acres. The project includes a corresponding Rezone (RZN24-0003) to amend Zoning District Map No. 16a for the approximate 4.3 acres to Neighborhood Commercial, Site Performance Combining District (C1-SP) and the approximate 1.2 acres to Light Industrial, Planned Development, Site Performance Combining (M1-PD-SP) District. The change from industrial to commercial designated land will result in less intensive uses with similar or fewer potential impacts which are not considered significant. In addition, the specific development project being considered is a 30,711 square foot grocery store building.

In addition to the proposed building, other proposed improvements include 158 paved parking spaces and access ways both in front (west of) and behind (east of) the proposed building, landscaped areas, and retaining walls. The project contains storm water drains to properly manage water drainage. There are no present surface or ground water basins on the project parcel.

Since the project will disturb more than one acre, a Stormwater Pollution Prevention Plan (SWPP) will be required as a condition of approval for the project. No Groundwater Sustainability Agency, no Groundwater Sustainability Plan, and no sustainability criteria or goals have been established for the project parcel or surrounding area. Connection to existing hydrant and water line supply will be required. Watering trucks will be filled with municipal water, following granted permission. Potential impacts to adjacent drainage areas could include potential run-off of exposed soils from excavation and equipment related pollutants like oil and gas. To protect water quality, **Mitigation Measures 10A and 10B** requires best management practices for preventative erosion and sediment control measures in the project area, to include distribution of these practices to the contractor to ensure compliance. Erosion control measures will need to be included in the improvement plans that correspond to the development. Therefore, project related impacts to water quality standards and waste discharge requirements would be ***less than significant with mitigation***.

10b. As described above, the project is not located within an area regulated by the Department of Water Resources (DWR) and State Water Resources Control Board (SWRCB) via the Sustainable Groundwater Management Act (SGMA). This project proposal is not defined as a project under the California Clean Water Act §10912(a) and is therefore not required to complete a water supply assessment.

A geotechnical report was prepared and provided for the project by the consulting firm NV5 (April 2024). The consultant conducted a field investigation on the property in February 2024. No onsite springs or seeps were noted as being observed. A subsurface investigation included the excavation of 6 exploratory trenches across the subject property, excavated to depths ranging between 8 and 13 feet below the ground surface. Samples using a hand-actuated slide sampler and mattock were obtained. Ground water seepage was encountered in two of the six exploratory trenches. The consultant's observations of groundwater conditions were made after a period of relatively wet weather.

There are no prioritized basins or sustainable groundwater management plans for this area, nor is ground water proposed to be used. The project does not propose to interfere or decrease ground water supplies or interfere with groundwater recharge to the extent that sustainability of groundwater management would be impeded. Water service will be provided by municipal water

(Nevada Irrigation District), and a Will-Serve letter has been provided by the District. This area is not a part of a sustainable groundwater management plan. Therefore, the proposed project will not result in impacts to groundwater resources. Offsite run-off will be subject to NPDES permitting and Clean Water Act regulations to ensure downstream resource are not impacts by the project. Due to the regulations in place for this type of land use as well as it not being in an area subject to the Sustainable Groundwater Management Act (SGMA) this project's impact would be ***less than significant***.

10c. The proposed project will not alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces. A Drainage Report, prepared by King Engineering, was prepared with the intent to analyze the property and demonstrate the project is designed to ensure post-development flows will not exceed pre-development flows for a 10-year and 100-year storm, per applicable Nevada County drainage requirements.

There are no streams, rivers, or other waterways either on the subject parcel or immediately adjacent to it. Proposed impervious surfaces on site include the area covered by the proposed 30,711 square foot grocery store building, driveways, sidewalks, and paved parking lot area. The total proposed impervious surface area is approximately 131,646 square feet, which results in a 55% coverage with impervious surface over the subject parcel. This is well below the maximum 85% of impervious surface coverage that is permitted in the C1 zone district and is not anticipated to create any substantial impacts to the amount of surface run off and associated impacts.

The Drainage Report submitted with the application demonstrates that the resultant drainage from this project will be captured onsite through stormwater control devices, to ensure project post-development flows do not exceed pre-development flows (see Exhibit A, Table 4). As a condition of approval, the applicant will be required to submit grading and drainage plans with an accompanying analysis prepared by a registered civil engineer to demonstrate no net stormwater runoff from the proposed project. Substantial altering of existing drainage patterns will not be impeded nor will flood flows be re-directed because of the project. The area is not in a flood zone so the development will not impede or redirect flood flows. Potential for erosion and siltation on/off-site have been addressed through a project specific geotechnical report. With the implementation of standard Geotechnical recommendations as required by **Mitigation Measures 7A** and with the adherence to **Measures 10A and 10B,** which require erosion/sediment control measures and best management practices for stormwater quality in the project area, there will be a ***less than significant with mitigation*** in relation to alteration of existing drainage patterns.

10d. The proposed project site is not located within a 100-year flood hazard zone. The subject parcel is located within Zone "X", which is defined as "areas determined to be outside the 0.2% annual chance floodplain" in the Flood Insurance Rate Map (FIRM) prepared by the Federal Emergency Management Agency (FEMA). With the project not being in a floodplain or an area prone to flood risk, there would be ***no impact*** associated with risks of releasing pollutants due to project inundation in flood hazard, tsunami, or seiche zones.

10f. No housing is proposed as part of this project, and the project is not within a 100-year flood hazard area. Therefore, there will be ***no impacts*** related to placing housing within a flood zone.

10g. The project is not within a 100-year flood hazard area, so there are ***no impacts*** related to structures impeding or redirecting flood flows.

Mitigation Measures: In addition to **Mitigation Measure 7A**, the following water quality mitigation measures/best management practices (BMPs) are also identified:

Mitigation Measure 10A: Best Management Practices. Implement the following BMPs to minimize construction related impacts to water quality. The following BMPs shall be incorporated into all Contract Documents and Construction Plans for the project and implemented by the contractor to protect water quality:

j. Construction crews shall be instructed in preventing and minimizing water pollution on the job.
k. Interim erosion control measures may be needed and shall be installed during construction to assure adequate erosion control facilities are in place at all times.
l. Straw or rice mulch may be used if needed with a tackifier.
m. All earth moving or excavation activities shall cease when winds exceed 20 mph.
n. Haul trucks shall be always covered with tarpaulins or other effective covers.
o. Use broom and shovels when possible, to maintain a clean site. Use of a hose is not recommended. Introducing water as a cleanup method adds to water pollution.
p. Designate a concrete washout area, as needed; to avoid wash water from concrete tools or trucks from entering storm drain systems. Maintain washout area and dispose of concrete waste on a regular basis.
q. Establish a vehicle storage, maintenance, and refueling area, as needed, to minimize the spread of oil, gas, and engine fluids. Use of oil pans under stationary vehicles is strongly recommended.
r. Dust control measures shall conform to the requirements of the Dust Control Plan submitted to and approved by the Northern Sierra Air Quality Management District (NSAQMD).

***Timing**: Prior to grading/building permit issuance and during construction*
***Reporting**: Agency approval of permits or plans*
***Responsible Agency**: Planning Department*

Mitigation Measure 10B: Provide copies of BMPs. Copies of the project's Mitigation Monitoring and Reporting Program and all BMPs shall be supplied to the Contractor(s) and their workers to assure compliance with mitigation measures during construction.

***Timing**: Prior to grading/building permit issuance and during construction*
***Reporting**: Agency approval of permits or plans*
***Responsible Agency**: Planning Department*

11. Land Use and Planning

Existing Setting: The subject project property is in western Nevada County at the intersection of Pine Shadows Lane and Pleasant Valley Road, approximately 0.25 mile north of State Route 20, within the Penn Valley community region. The western one-third portion of the subject property is designated Neighborhood Commercial (NC) by the Nevada County General Plan, while the central and eastern two-thirds portion is designated Industrial (IND). The parcel has corresponding zoning classifications of Neighborhood Commercial with Site Performance Combining District (C1-SP) and Light Industrial with Site Performance and Planned Development Combining District (M1-PD-SP). The SP combining district requires adherence to policies and standards of the Penn Valley Area Plan.

Located directly north of the subject parcel is property that is also designated Neighborhood Commercial (NC), and property developed with a mini-storage facility that is designated Industrial (IND) by the General Plan. To the east are parcels designated Rural-5 (RUR-5) that are developed with scattered rural residences. To the south are parcels designated Neighborhood Commercial (NC) and Industrial (IND) developed with various commercial uses. To the west are parcels designated Planned Development, with an underlying mix of Neighborhood Commercial and Open Space, that are mostly undeveloped.

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
a. Physically divide an established community?				✓	A
b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?			✓		A

Impact Discussion:

11a. The proposed project is located within a commercial/light industrial corridor and not a residential community. The development of the Holiday Market grocery store will not divide an established community. The project is located along Pleasant Valley Road and the subject parcel is located between previously developed parcels. The entrance to the Lake Wildwood residential community is located over one mile north of the subject parcel. All anticipated traffic due to the project will use existing roadways and no traffic closures are expected that could divide the nearby community temporarily during construction. Therefore, the proposed project would have ***no impacts*** related to division of an existing community.

11b. The proposed project will not result in a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. The subject parcel currently has a General Plan designation of both Neighborhood Commercial (NC) and Industrial (IND) and corresponding zoning of Neighborhood Commercial, Site Performance Combining (C1-SP) District and Light Industrial, Planned Development, Site Performance Combining (M1-PD-SP) District. The General Plan Amendment proposes to change the land use designation for the project parcel by increasing the amount of land designated Neighborhood Commercial (NC) from approximately 1.9 acres to approximately 4.3 acres and decreasing the amount of land designated Industrial (IND) from approximately 3.6 acres to approximately 1.2 acres. The project includes a corresponding Rezone to amend Zoning District Map No. 16a for the approximate 4.3 acres to Neighborhood Commercial, Site Performance Combining District (C1-SP) and the approximate 1.2 acres to Light Industrial, Planned Development, Site Performance Combining (M1-PD-SP) District.

There are no new General Plan or zoning designations proposed by the project. The project will result in an increase in Neighborhood Commercial and corresponding C1-SP zoning of approximately 2.4 acres (1.9 to 4.3 acres) which will result in a decrease in Industrial and corresponding M1-PD-SP zoning of approximately 2.4 acres (3.6 to 1.2 acres). Uses within commercial designated areas are generally considered to be less intensive than uses in industrial designated areas. In addition, the specific development project being considered is a 30,711

square foot grocery store building. As a result, the proposed General Plan and zoning changes are anticipated to have a less than significant impact on land use and planning.

The project is subject to the design standards of the Western Nevada County Design Guidelines and the standards of the Penn Valley Area Plan. In reviewing the project, special consideration was given to the design and aesthetics of the project. The project incorporates several design features to enhance the overall aesthetics of the project, including utilizing several different materials and colors on the front of the building, varying roof lines and heights, and various building articulations. As discussed in Aesthetics above, potential lighting impacts are mitigated to ensure compliance with County Standards. Overall, the project is consistent with the County design standards and comprehensive site development standards and subsequently, the project will have a ***less than significant impact*** due to any conflicts with land use plans, policies and regulations that have the purpose of mitigating impacts to environmental resources.

Mitigation Measures: None required.

12. Mineral Resources

Existing Setting: Mineral resources, particularly gold, have played a major role in the history of Nevada County. Since 1849, when gold was first discovered in the area, to the years preceding World War II, most of the County's population was economically supported directly or indirectly by the local gold mining industry. Other metals produced in the County since 1880 include silver, copper, lead, zinc, chromite, and small amounts of tungsten and manganese. Industrial minerals include barite, quartz for silicon production, small amounts of limestone, asbestos, clay, and mineral paint. Also, significant deposits of sand, gravel, and rock types suitable for construction aggregate are exposed throughout the County. (Mineral Land Classification of Nevada County, State Division of Mines and Geology, 1990).

In order to promote the conservation of the state's mineral resources, and ensure adequate reclamation of mined lands, the Surface Mining and Reclamation Act of 1975 (SMARA) was enacted. SMARA requires that the State Geologist classify land in California for its mineral resource potential. Local governments are required to incorporate the mineral and classification reports and maps into their general plans and consider the information when making land use decisions. Areas subject to mineral land classification studies are divided into various Mineral Resource Zone (MRZ) categories that reflect varying degrees of mineral potential. There are no identified mines or mineral resources in the project vicinity and the project is not located within an MRZ designated area. The closest known mineral resource area (MRZ-2) is located approximately one mile southwest of the project area.

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				✓	A
b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				✓	A

Impact Discussion:

12a,b. The project includes a Development Permit (DVP24-2) for a proposed a 30,711 square foot grocery store building with parking lot and other related improvements. A General Plan Amendment (GPA24-0003) is also proposed to change the land use designation for the project parcel by increasing the amount of land designated Neighborhood Commercial (NC) from approximately 1.9 acres to approximately 4.3 acres and decreasing the amount of land designated Industrial (IND) from approximately 3.6 acres to approximately 1.2 acres. The project includes a corresponding Rezone (RZN24-0003) to amend Zoning District Map No. 16a for the approximate 4.3 acres to Neighborhood Commercial, Site Performance Combining District (C1-SP) and the approximate 1.2 acres to Light Industrial, Planned Development, Site Performance Combining (M1-PD-SP) District. Uses within commercial designated areas are generally considered to be less intensive than uses in industrial designated areas. In addition, the specific development project being considered is a 30,711 square foot grocery store building. As a result, the proposed General Plan and zoning changes are anticipated to have a less than significant impact.

The subject parcel was previously developed with a residence and accessory buildings that will be removed to accommodate the proposed grocery store and related improvements. The subject parcel does not contain known or designated mineral resources. Therefore, there is ***no impact*** related to the loss of known mineral resources.

Mitigation Measures: None required.

13. Noise

Existing Setting: The proposed project site is located along the south side of Pine Shadows Lane and the east side of Pleasant Valley Road, approximately 0.25 mile north of the intersection of State Route 20 and Pleasant Valley Road. State Route 20 is a two-lane highway with additional left and right turn lanes at the intersection. Located north of the project site across Pine Shadows Lane is property developed with a mini-storage facility. To the south of the project site are various commercial uses. To the east are parcels developed with rural residences and to the west across Pleasant Valley Road are parcels that are mostly undeveloped with some scattered residences.

Noise-sensitive land uses are generally defined as locations where people reside or where the presence of unwanted sound could adversely affect the primary intended use of the land. Places where people live, sleep, recreate, worship, and study are generally considered to be sensitive to noise because intrusive noise can be disruptive to these activities. The nearest neighboring noise-sensitive uses to the project site are residences located approximately 225 feet to the northeast and 410 feet to the southeast, respectively.

The proposed project has the potential to generate noise impacts from automobiles driven by grocery store customers and employees arriving and leaving the subject parcel (noise from parking lot areas). In addition, potential noise impacts could be generated by large heavy and medium duty trucks making deliveries to the site which may utilize the front doors or the loading dock at the rear of the building. Noise from normal operation of rooftop mechanical equipment (HVAC) could also impact neighboring properties. In order to evaluate and address these potential noise impacts, an Environmental Noise and Vibration Assessment was prepared by Bollard Acoustical Consultants (October 8, 2024) and submitted with this project.

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess standards established in the local General Plan or noise ordinance, or applicable standards of other agencies?		✓			A,16
b. Generation of excessive ground borne vibration or ground borne noise levels?			✓		A,16
c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				✓	A,16

Impact Discussion:

13a. During project construction, heavy equipment would be used for grading excavation, paving, and building construction, which would increase ambient noise levels when in use. Noise levels would vary depending on the type of equipment used, how it is operated, and how well it is maintained. Noise exposure at any single point outside the project work area would also vary depending upon the proximity of equipment activities to that point.

Noise sources of primary concern would involve pneumatic hammers and power cutting tools, heavy equipment with diesel motors and backing alarms, and dirt movers including graders, excavators, and compactors. This is typical noise generated during any construction site at this scale and should operate during daytime hours. While short-term increases in noise will occur that can be attributed to this project, construction activities are exempt from the County's Noise Standards as they are temporary in nature and cease once construction is completed. Noise impacts from construction activities, however, are not exempt from CEQA-related impacts. Since existing residential uses are located to the east of the project site and commercial uses are located to the south of project site, some inconvenience and noise annoyance will occur during construction activities. To assist in reducing this impact, **Mitigation Measure 13A** is included which restricts construction activities to daytime hours (7 a.m. to 7 p.m.) Monday-Saturday.

The Environmental Noise and Vibration Assessment prepared for the project recommends additional measures be incorporated into project on-site construction operations to reduce the potential for annoyance at nearby existing noise-sensitive receptors (i.e., residences). These measures include the use of temporary construction noise control measures; ensuring project equipment and vehicles using internal-combustion engines are equipped with manufacturers-recommended mufflers; having all mobile or fixed noise-producing equipment used on the project site that are regulated for noise output by a federal, state, or local agency comply with such regulations; encouraging the use of electrically powered equipment instead of pneumatic or internal-combustion- powered equipment where feasible; locating material stockpiles and mobile equipment staging, parking, and maintenance areas as far as practicable from noise-sensitive receptors; and establishing and enforcing project area and site access road speed limits during the construction period (**Mitigation Measures 13B – 13G**).

With incorporation of these mitigation measures, potential temporary noise impacts will be ***less than significant with mitigation***.

Regarding potential permanent noise impacts that may be generated, the Noise and Vibration Assessment states that with development of the project, traffic volumes on the local roadway network will increase. Those increases in daily traffic volumes will result in a corresponding increase in traffic noise levels at existing uses located along those roadways.

The FHWA Traffic Noise Model (FHWA-RD-77-108) was used to quantify increases in existing traffic noise levels at the existing sensitive land uses nearest to the project area roadway network. The FHWA Model predicts hourly L_{eq} values for free-flowing traffic conditions. Estimates of the hourly distribution of traffic for a typical 24-hour period were used to develop DNL values from L_{eq} values.

Traffic data in the form of peak hour intersection turning movements were obtained from the traffic impact analysis prepared by the project transportation consultant (GHD). Those data were converted to Average Daily Traffic (ADT) segment volumes by applying a factor of 5 to the sum of AM and PM peak hour conditions. Other inputs were obtained from the noise consultant's observations and noise measurement data. Traffic noise levels associated with those scenarios at the distances representing the nearest noise-sensitive land uses to the project area roadways are summarized in the Noise and Vibration Assessment.

Based on this analysis, project-generated traffic noise level increases would not result in significant noise impacts at existing noise-sensitive receptors located along the project area roadway network.

The project proposes operation of a grocery store with associated parking. Based on information provided to the noise consultant, the project proposes hours of operation from 6:00 a.m. to 11:00 p.m. The primary noise sources associated with on-site operations have been identified as parking area movements, delivery truck circulation (i.e., medium and heavy truck passbys), truck delivery activities (i.e., unloading of project at storefront and rear loading dock area), and rooftop mechanical equipment (HVAC). Noise generated by those operations were quantified through a combination of reference noise level data and application of accepted noise modeling techniques.

Noise level limits were applied at the property line of the closest noise-sensitive property to the project, identified as 18691 and 18694 Pine Shadows Lane (APN: 051-240-013) – a 5.03 acre property zoned General Agricultural (AG) that is developed with a residence and is located immediately northeast of the project parcel. Satisfaction of the County's noise level criteria at the property line of the closest noise-sensitive use (APN: 051-240-013) would ensure for compliance at noise-sensitive uses located farther away.

The proposed project will have two primary parking areas – a larger one on the west (front) side of the building and a smaller one on the east (rear) side of the building. As a means of determining potential noise exposure due to project parking area activities, the noise consultant utilized specific parking lot noise level measurements conducted by them. Specifically, a series of individual noise measurements were conducted of multiple vehicle types arriving and departing a parking area, including engines starting and stopping, car doors opening and closing, and

persons conversing as they entered and exited the vehicles. The results of those measurements revealed that individual parking lot movements generated mean noise levels of approximately 70 dB SEL at a reference distance of 50 feet. The maximum noise level associated with parking lot activity typically did not exceed 65 dB L_{max} at the same reference distance.

Based on the analysis, predicted noise levels from worst-case project parking area movements would satisfy the applied Nevada County daytime, evening and nighttime hourly average (L_{eq}) and maximum (L_{max}) exterior noise level standards at the property line of APN: 051- 240-013 (the closest parcel containing an existing residence).

The project site will receive deliveries of products from both heavy and medium duty trucks. On-site circulation of heavy and medium duty trucks has the potential to generate noise impacts. According to delivery information provided by the project applicant, the grocery store would receive deliveries from all heavy trucks at a loading dock area located at the rear of the building. Deliveries from medium trucks will occur at both the rear loading dock and through the front doors of the store.

On-site truck passbys are expected to be relatively brief and will occur at low speeds. To predict noise levels generated by project on-site truck circulation, Bollard Acoustical Consultants utilized file data obtained from measurements conducted by them of heavy and medium duty truck passbys with provided store delivery information. According to the store delivery information provided, worst-case daily deliveries are estimated to occur on Fridays (7 medium trucks, 7 heavy trucks). Based on the proposed site design, and for the purpose of this analysis, it was conservatively assumed that the project could receive a total of 2 heavy trucks (loading dock) and 3 medium trucks (2 loading dock, 1 store front) during the same worst-case busy hour.

Data from the Noise Assessment indicates that predicted hourly average noise levels from project on-site truck circulation would satisfy the applied Nevada County daytime, evening and nighttime hourly average (L_{eq}) exterior noise level standards at the property line of APN: 051-240-013 (the closest parcel containing an existing residence). However, project on-site truck circulation noise is predicted to exceed the applied Nevada County nighttime maximum (L_{max}) exterior noise level standard at the property line of APN: 051-240-013.

Because project on-site truck circulation noise exposure is predicted to exceed the applied County nighttime exterior maximum (L_{max}) noise level standard at the property line of APN: 051-240-013, this impact is identified as potentially significant. To avoid the potential for exceeding the applied County exterior nighttime maximum (L_{max}) noise level standard at the property line of APN: 051-240-013, **Mitigation Measure 13H** is included which limits all project on-site truck circulation to the hours of 7:00 a.m. to 10:00 p.m. (i.e., daytime and evening hours only).

Noise related to truck deliveries has the potential to generate noise impacts. According to delivery information provided by the project applicant, the grocery store would receive deliveries from all heavy trucks at a loading dock area located at the rear of the building. The provided delivery information also indicates that deliveries from medium trucks will primarily occur at the rear loading dock, with the potential for some to occur at the front of the store building.

Any medium truck delivery activities that could occur at the front of the store (located on the west side of building) would be substantially screened from view at the property line of APN:

051-241-013 (located on the east side of the building). Due to the significant noise level reduction that the proposed store building envelope would provide, an analysis of medium truck delivery activity noise from the front of the store at the property line of APN: 051-241-013 was not included in this impact discussion. Rather, the following section includes an analysis of noise associated with the project loading dock area – which is the closer of the two delivery areas to APN: 051-241-013.

The primary noise sources associated with the loading dock area have been identified as heavy and medium-duty trucks stopping (air brakes), backing into the loading bays (back-up alarms), and pulling away from the dock area (revving engines). To quantify the noise generated by project loading dock operations, Bollard Acoustical Consultants utilized noise level data obtained from their field measurements of similar loading dock areas in recent years. According to their measurement data, loading dock hourly average (L_{eq}) and maximum (L_{max}) noise levels are approximately 60 dB L_{eq} and 75 dB L_{max} (respectively) at a reference distance of 50 feet from the docks. The noise level measurements included 3 heavy truck arrivals and departures (with unloading activities), and 4 medium-duty truck deliveries during the busy hour of measurements.

Based on the consultant's measurement data, project loading dock noise level exposure at the property line of the closest noise-sensitive parcel (General Agricultural zoned with a residence, APN: 051-240-013) was calculated and the results of those calculations were included in the Noise Assessment. Since project loading dock activity noise exposure is predicted to exceed the applied County nighttime exterior hourly average (L_{eq}) and maximum (L_{max}) noise level standards at the property line of APN: 051-240-013, this impact is identified as potentially significant. To avoid the potential for exceeding the applied County exterior nighttime hourly average (L_{eq}) and maximum (L_{max}) noise level standards at the property line of APN: 051-240-013, **Mitigation Measure 13l** is required which limits all project loading dock activities to the hours of 7:00 a.m. to 10:00 p.m. (i.e., daytime and evening hours only).

Project rooftop mechanical equipment (HVAC) has the potential to generate noise impacts to surrounding properties. The rooftop mechanical plans for the proposed grocery store building provided to the noise consultant indicate that a combination of condensers, air-handing units, and an exhaust fan will be located on the building rooftop.

For this analysis, it was conservatively assumed that all identified noise-generating rooftop-mounted mechanical equipment would be in operation concurrently (believed to be worst- case noise exposure). Based on this operations assumption, the provided rooftop mechanical plans and rooftop mechanical plan schedule, and using the cited equipment manufacturer reference sound level data above with accepted sound propagation (-6 dB per doubling of distance), combined project rooftop-mounted mechanical equipment noise exposure at the property line of the closest noise-sensitive parcel (General Agricultural zoned with residence, APN: 051-240-013) was calculated and the results of those calculations are presented in the Noise Assessment. Because operation of the rooftop mechanical equipment is typically a steady state noise source, the equipment was assessed relative to the County's hourly average (L_{eq}) noise level standard descriptors.

The data from this analysis indicates that predicted hourly average noise level exposure from combined project rooftop mechanical equipment would satisfy the applied Nevada County daytime, evening and nighttime hourly average (L_{eq}) exterior noise level standards at the

property line of APN: 051-240- 013 (the closest parcel containing an existing residence). Based on the analysis, this impact is identified as being less than significant.

Finally, the calculated cumulative (combined) hourly average (L_{eq}) and highest predicted maximum (L_{max}) noise levels from analyzed project operations at the property line of the closest noise- sensitive parcel (General Agricultural zoned with residence, APN: 051-240-013) is presented in the Noise Assessment. According to this information, hourly average (L_{eq}) and highest predicted maximum (L_{max}) noise level exposure from cumulative (combined) on-site operations is calculated to exceed the applied Nevada County nighttime hourly average (L_{eq}) and maximum (L_{max}) exterior noise level standards at the property line of APN: 051-240-013 (the closest parcel containing an existing residence).

Since cumulative (combined) and highest predicted project on-site operations noise exposure is calculated to exceed the applied County nighttime exterior hourly average (L_{eq}) and maximum (L_{max}) noise level standards at the property line of APN: 051-240-013, this impact is identified as potentially significant. To avoid the potential for an exceedance of the applied County exterior nighttime hourly average (L_{eq}) and maximum (L_{max}) noise level standards at the property line of APN: 051-240-013, previously noted **Mitigation Measure 13H** and **Mitigation Measure 13I** will be implemented. With these measures implemented, cumulative noise impacts will be ***less than significant with mitigation***.

13b. During project construction, heavy equipment would be used for grading, excavation, paving, and building construction, which would generate localized vibration in the immediate vicinity of those activities. The nearest off-site existing structures have been identified as a storage unit building located on APN: 051-240-023 to the north, a commercial building on APN: 051-240-017 to the south, and a commercial building on APN: 051-290-059 to the southwest.

The Noise and Vibration Assessment contains a table that includes the range of vibration levels for equipment commonly used in general construction projects at a distance of 25 feet. The data also includes projected equipment vibration levels at the nearest off-site existing structures. According to the data, vibration levels generated from on-site construction activities are below the FTA threshold for damage to engineered structures (98 VdB) at a reference distance of 25 feet from those activities. In addition, the construction-related vibration levels shown in the Vibration Assessment are predicted to be below the strictest impact level criterion of 74 VdB for institutional land uses with primarily daytime uses presented in the Assessment. Finally, the construction-related vibration levels are predicted to be generally below the human threshold of perception (65 VdB) at the nearest identified structures. Based on this analysis, on-site construction within the project area is not expected to result in excessive ground borne vibration levels at nearby existing off-site buildings.

It is expected the project would not result in the exposure of persons to excessive ground borne vibration levels at proposed uses of the project. Because vibration levels due to the proposed project are expected to be satisfactory relative to the applicable FTA vibration impact criteria for damage to structures and annoyance, this impact is considered to be ***less than significant***.

13c. The project site is not located within the vicinity of a private airstrip, within an airport land use plan, or within two miles of a public airport and would therefore not expose people residing or

working in the project area to excessive noise levels. Therefore, there is ***no impact*** from the project.

Mitigation Measures: To reduce potential temporary and permanent noise impacts the following mitigation shall apply:

Mitigation Measure 13A: Limit construction work hours to 7:00 a.m. to 7:00 p.m. Monday-Saturday. During grading and construction, work hours shall be limited from 7:00 a.m. to 7:00 p.m., Monday - Saturday. Prior to issuance of grading and building permits, improvement plans shall include this restriction on the hours of construction.

Timing: *Prior to Issuance of Grading and Building Permits; During construction*
Reporting: *Planning Department approval of Grading and Building permits. Noted on improvement plans.*
Responsible Agency: *Planning Department*

Mitigation Measure 13B: Temporary construction noise control measures. The project shall utilize temporary construction noise control measures including the use of temporary noise barriers, or other appropriate measures as mitigation for noise generated during construction of the project.

Timing: *During construction of the project. Noted on improvement plans.*
Reporting: *Planning Department approval of Grading and Building permits.*
Responsible Agency: *Planning Department.*

Mitigation Measure 13C: Mufflers installed on project equipment and vehicles. All noise-producing project equipment and vehicles using internal-combustion engines shall be equipped with manufacturers-recommended mufflers and be maintained in good working condition.

Timing: *Prior to and during construction.*
Reporting: *Planning Department approval of Grading and Building permits. Noted on improvement plans.*
Responsible Agency: *Planning Department.*

Mitigation Measure 13D: Comply with applicable noise regulations. All mobile or fixed noise-producing equipment used on the project site that are regulated for noise output by a federal, state, or local agency shall comply with such regulations while in the course of project activity.

Timing: *During construction.*
Reporting: *Planning Department approval of Grading and Building permits. Noted on improvement plans.*
Responsible Agency: *Planning Department.*

Mitigation Measure 13E: Electrically powered equipment. *Where feasible, electrically powered equipment shall be used instead of pneumatic or internal-combustion- powered equipment.*

Timing: *During construction.*

Reporting: *Planning Department approval of Grading and Building permits. Noted on improvement plans.*
Responsible Agency: *Planning Department.*

Mitigation Measure 13F: Material stockpiles and mobile equipment. Material stockpiles and mobile equipment staging, parking, and maintenance areas shall be located as far as practicable from noise-sensitive receptors.

Timing: *During construction.*
Reporting: *Planning Department approval of Grading and Building permits. Noted on improvement plans.*
Responsible Agency: *Planning Department.*

Mitigation Measure 13G: Project area speed limits. Project area and site access road speed limits shall be established and enforced during the construction period.

Timing: *During construction.*
Reporting: *Planning Department approval of Grading and Building permits. Noted on improvement plans.*
Responsible Agency: *Planning Department.*

Mitigation Measure 13H: On-site truck circulation hours. All project on-site truck circulation related to grocery store operations shall be limited to the hours of 7:00 a.m. to 10:00 p.m. (i.e., daytime and evening hours only). On-site truck circulation shall be restricted during nighttime hours (10:00 p.m. to 7:00 a.m.).
Timing: *During grocery store operations; Ongoing.*
Reporting: *Project approval.*
Responsible Agency: *Planning Department.*

Mitigation Measure 13I: Project loading dock activities. All project loading dock activities related to grocery store operations shall be limited to the hours of 7:00 a.m. to 10:00 p.m. (i.e., daytime and evening hours only). Loading dock activities shall be restricted during nighttime hours (10:00 p.m. to 7:00 a.m.).
Timing: *During grocery store operations; Ongoing.*
Reporting: *Project approval.*
Responsible Agency: *Planning Department.*

14. Population and Housing

Existing Setting: The subject 5.5-acre property is located in western Nevada County at the intersection of Pine Shadows Lane and Pleasant Valley Road, approximately 0.25 mile north of State Route 20, within the Penn Valley community region. The western one-third portion of the subject property is designated Neighborhood Commercial (NC) by the Nevada County General Plan, while the central and eastern two-thirds portion is designated Industrial (IND). The parcel has corresponding zoning classifications of Neighborhood Commercial with Site Performance Combining District (C1-SP) and Light Industrial with Site Performance and Planned Development Combining District (M1-PD-SP). There are no abutting properties that are zoned for residential

use. Properties to the east are zoned AG-5 (General Agricultural, 5-acre minimum) and are developed with scattered residences.

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
a. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				✓	A,1
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				✓	A,1

Impact Discussion:

14a. The proposed project involves the construction of a 30,711 square foot building that will contain a grocery store (Holiday Market) and a Starbucks Coffee restaurant. The project will require expanding the C1 (Neighborhood Commercial) zoning on the property to accommodate the proposed businesses. The subject property has split zoning with the western one-third portion being zoned C1-SP and the eastern two-thirds portion being zoned M1-PD-SP. As a result of the rezoning, the C1-SP portion will increase from approximately 1.9 acres to 4.3 acres and the M1-PD-SP portion will decrease from approximately 3.6 acres to 1.2 acres.

Uses within commercial designated areas are generally considered to be less intensive than uses in industrial designated areas. In addition, the specific development project being considered is a 30,711 square foot grocery store building. As a result, the proposed General Plan and zoning changes are anticipated to have a less than significant impact to population and housing. The project does not involve any new or increases in existing residential zoning and therefore will not result in any substantial population growth.

The existing Holiday Market is located to the north of the subject property, directly across from the entrance to the Lake Wildwood subdivision, in a building that is substantially smaller in size. The proposed project will allow the market a larger space to accommodate its updated design and allow room for a Starbucks Coffee and will serve local residents and visitors to the area. Since the project primarily involves relocation of an existing business (Holiday Market) allowing it to expand its building size, it is not anticipated to induce substantial unplanned population growth in the area. The only road extension will be the minor extension of Commercial Avenue from the south to the subject property to provide a secondary access point. The project does not propose any new homes that could otherwise induce an unplanned population growth in the area. Therefore, there is ***no impact*** on induction of unplanned population growth.

14b. The project is proposed on a vacant commercially and industrially zoned property. The project is located within an established commercial and industrial corridor of the Penn

Valley Community Region and will result in an approximate 2.4 acre increase in C1-SP zoning and a corresponding 2.4 acre decrease in M1-PD-SP zoning. No changes to existing residential zoning is proposed by the project. No residents will be displaced as a result of this project and there is no existing housing that will be impacted that would necessitate the construction of replacement housing elsewhere. Therefore, the proposed project would have ***no impact*** related to the induction or displacement of housing and people.

Mitigation Measures: None required.

15. Public Services

Existing Setting: The following public services are provided to the project parcel:

Fire: The Penn Valley Fire Protection District provides fire protection services to the project parcel.
Police: The Nevada County Sheriff's Department provides law enforcement services.
Schools: The project site is within the Penn Valley Union School District and the Nevada Joint Union High School District.
Parks: The project is within the Western Gateway Park and Recreation District.
Water: The site is served by public water from Nevada Irrigation District.
Sewer: The site is served by the Nevada County Sanitation District.

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
a. Result in substantial adverse physical impacts associated with the provision of or need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following the public services:					
i) Fire protection?			✓		A
ii) Police protection?			✓		A
iii) Schools?			✓		A
iv) Parks?			✓		A
v) Other public services or facilities?			✓		A

Impact Discussion:

15a. The proposed project will utilize a commercially/industrially zoned property and allow both an existing grocery store business to relocate and expand in size and allow a Starbucks Coffee within the grocery store building to serve both local residents and visitors of the area. The property site is currently developed with a residence and accessory buildings which will be removed to allow for the proposed 30,711 square foot market building. No impact is expected to be added to the local school district as the project will not increase population and does not propose any new residential housing. Local park use is not

anticipated to be substantially increased. Service provisions from local governmental facilities including services from the local fire protection district and sheriff's department is not anticipated to be significantly impacted by the proposed project. Increased service from applicable departments/districts are appropriately designed and applicable fees to compensate for service will be paid at time of building permit issuance and/or certificate of occupancy. Additionally, the project has been routed to all applicable service providers during the initial distribution review phase and no comments indicating that services cannot be provided have been received. Subsequently this project is anticipated to have ***a less than significant impact*** on public services.

Mitigation Measures: None required.

16. Recreation

Existing Setting: The project parcel is in the Penn Valley community region, within the Western Gateway Park and Recreation District, and is zoned for commercial and industrial use. There are no recreational areas in the immediate vicinity of the project site. The nearest recreational site is the Western Gateway Park located approximately 0.20-miles southeast of the project site. No recreational facilities exist on the project parcel.

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
a. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				✓	A
b. Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?				✓	A
c. Conflict with established recreation uses of the area, including biking, equestrian and/or hiking trails?				✓	A

Impact Discussion:

16a.-c. The proposed Holiday Market grocery store and Starbucks Coffee shop do not have the potential to increase the use of existing neighborhood or regional parks or other recreational facilities. The project involves the relocation of an existing grocery store currently located to the north of the subject parcel, across from the entrance to the Lake Wildwood subdivision. The project will provide a larger and more modern facility for the grocery store along with the addition of Starbucks Coffee within the building, and by itself will not result in an increase in population that would result in the need for additional recreational facilities. The project will not conflict with established recreation uses of the area, including biking, equestrian and/or hiking trails. Based on this information, the project would have **no impact** related to recreational facilities.

Mitigation Measures: None required.

17. Transportation

Existing Setting: The proposed project site is within the Penn Valley community region along the east side of Pleasant Valley Road at its intersection with Pine Shadows Lane. State Highway 20 intersects with Pleasant Valley Road approximately 0.25 mile to the south of the project parcel. Pleasant Valley Avenue is designated a Major Collector and State Route 20 is designated a Principle Arterial by the Circulation Element of the Nevada County General Plan.

The site will be accessed by Pine Shadows Lane which borders the property's north side with the paved portion of the road ending in a cul-de-sac just east of the proposed entrance to the site. Commercial Avenue extends northeast from Pleasant Valley Road south of the subject property and currently ends just south of the project site. Commercial Avenue will be extended to access the project parcel's south side.

Pedestrian and bicycle facilities in the project study area are minimal reflecting the rural nature of the study area. There are no pedestrian sidewalks or crosswalks between Penn Valley Road and Pine Shadows Lane along Pleasant Valley Road. At the State Route 20/Pleasant Valley Road signalized intersection, there are pedestrian activated push buttons for north-south and east-west crossings. However, there are no pedestrian crosswalks striped for these crossings. Painted shoulders exist along Pleasant Valley Road north of State Route 20 but are not currently designated as Class II bicycle facilities. Nevada County Transit Route 6 has a regular bus stop south of the project site at the gas station located at the Commercial Street/Pleasant Valley Road intersection.

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
a. Conflict with a program plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle or pedestrian facilities?		✓			A,17,18; C
b. Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?			✓		A,17,18; C
c. Substantially increase hazards due to a geometric design feature (e.g., a sharp curve or dangerous intersection) or incompatible uses (e.g., farm equipment)?			✓		A,C,E
d. Result in inadequate emergency access?				✓	A, D, 24
e. Result in an increase in traffic hazards to motor vehicles, bicyclists, or pedestrians, including short-term construction and long-term operational traffic?			✓		A,C,E,F

Impact Discussion:
17a. The project proposal involves a Development Permit (DVP24-2) that would result in the

construction of a 30,711 square foot commercial building to accommodate a grocery store (Holiday Market) and a Starbucks Coffee within the grocery store building. A General Plan Amendment (GPA24-0003) is also proposed to change the land use designation for the project parcel by increasing the amount of land designated Neighborhood Commercial (NC) from approximately 1.9 acres to approximately 4.3 acres and decreasing the amount of land designated Industrial (IND) from approximately 3.6 acres to approximately 1.2 acres. The project includes a corresponding Rezone (RZN24-0003) to amend Zoning District Map No. 16a for the approximate 4.3 acres to Neighborhood Commercial, Site Performance Combining District (C1-SP) and the approximate 1.2 acres to Light Industrial, Planned Development, Site Performance Combining (M1-PD-SP) District.

Uses within commercial designated areas are generally considered to be less intensive than uses in industrial designated areas. In addition, the specific development project being considered is a 30,711 square foot grocery store building. As a result, the proposed General Plan and zoning changes are anticipated to have a less than significant impact to transportation.

The project has the potential to generate additional traffic that could conflict with a program plan, ordinance, or policy addressing the circulation system. The applicant has submitted a Traffic Impact Analysis (TIA), or traffic study, prepared by GHD consultants to analyze potential transportation related impacts. This analysis has been consulted in the review of this project, is summarized in the discussion that follows, and is on file with the Planning Department.

Study Intersections and Roadway Segments

Five primary intersections adjacent to and providing access to the project site were selected for evaluation in coordination with the County of Nevada and Caltrans Highway Operations staff for the weekday AM and PM peak hour conditions. The study intersections for the project are listed below:

1. Lake Wildwood Drive and Pleasant Valley Road
2. Pine Shadows Lane and Pleasant Valley Road
3. Commercial Avenue and Pleasant Valley Road
4. Highway 20 and Pleasant Valley Road
5. Penn Valley Drive and Pleasant Valley Road

In addition to key intersection analyses, the following roadway segments were evaluated for volume capacities adjacent to the proposed project site:

- Highway 20 south of Pleasant Valley Road
- Highway 20 north of Pleasant Valley Road
- Pleasant Valley Road east of Highway 20

The roadway network that provides primary vehicle circulation for the project study area includes Lake Wildwood Drive, Pleasant Valley Road, Pine Shadows Lane, Commercial Avenue, Highway 20, and Penn Valley Drive. Regional access is provided by Highway 20, south of the project site.

Data Collection and Analysis

For the purposes of proposed project analysis, new intersection turning movement counts for the five existing intersections were collected on Tuesday, August 30, 2022, during the AM peak and PM peak periods. The AM peak hour is defined as the one continuous hour of peak traffic flow counted between 7:00 AM and 9:00 AM, and the PM peak hour is defined as the one continuous hour of peak traffic flow counted between 4:00 PM and 6:00 PM under typical weekday conditions.

The amount of automobile delay required due to traffic conditions, traditionally measured as level of service (LOS), is no longer considered an environmental impact under CEQA. Instead, traffic impacts are determined by changes to vehicle miles traveled (VMT), discussed in the following section. Nevada County General Plan policies, however, include LOS requirements to ensure adequate traffic flow through intersections and roadway segments is maintained.

To maintain consistency with the County of Nevada's *General Plan* policies for transportation facilities, LOS methodologies for intersections will be used to determine if the project causes an increase in traffic that is substantial and adverse in relation to the traffic load and capacity of the existing street system. LOS is a qualitative measure of traffic operating conditions, whereby a letter grade "A" through "F" is assigned to an intersection, or roadway segment, representing progressively worsening traffic conditions. LOS "A" represents free-flow operating conditions and LOS "F" represents over-capacity conditions.

Since the project site is located within the Penn Valley Community Region, Circulation Element Policy LU-4.1.2 from the General Plan is applicable:

"The minimum acceptable level of service (LOS) for areas identified as Community Regions in the General Plan shall be LOS D, except where the existing LOS is less than D. In those situations, the LOS shall not be allowed to drop below the existing LOS. Level of service shall be based on the typical highest peak hour of weekday traffic."

Existing Intersection Operations

The Traffic Impact Analysis indicates the five evaluated intersections have existing AM and PM peak hour LOS ranging from LOS A (Pleasant Valley Road/Pine Shadows Lane – AM peak hour) to LOS D (Pleasant Valley Road/Commercial Avenue – PM peak hour) and are operating at acceptable conditions (LOS D or better) during the AM and PM peak hour. Three roadway segments in the vicinity of the project site are also operating at acceptable conditions (LOS D or better) and have a PM peak hour LOS B (Pleasant Valley Road, north of Highway 20), PM peak hour LOS D (Highway 20, east of Pleasant Valley Road) and PM peak hour LOS D (Highway 20, west of Pleasant Valley Road).

The Pleasant Valley Road/Commercial Avenue intersection would meet the minimum volumes for signalization (Warrant #3, Peak Hour) under existing conditions.

Vehicle Queues

The 95th percentile queue lengths were also analyzed using microsimulation (through *Simtraffic* Software) for the study intersection. Based on the results of the traffic study,

storage capacities are adequate to store the 95th percentile vehicle queues at the study intersections based on SimTraffic microsimulation with the exception of the Pleasant Valley Road/Lake Wildwood Drive and Pleasant Valley Road/Highway 20 intersections. At the all-way-stop-controlled intersection of Pleasant Valley Road/Lake Wildwood Drive, there would minor vehicle queues (1-2 car lengths) for the westbound left and right-turn movements during the AM and PM peak hour from Wildwood Lake Drive onto Pleasant Valley Road.

The Pleasant Valley Road/Highway 20 intersection currently experiences vehicle queuing for the short (100-foot) northbound segment between Penn Valley Road and Highway 20 for the left, through, and right-turn movements. Vehicle queues occur primarily during the PM peak hour and typically do not exceed one-car length.

The traffic study notes that significant vehicle queuing was observed for the southbound left-turn movement from Pleasant Valley Road onto eastbound Highway 20 during the AM peak hour. The vehicle queue extended for approximately 800-1,000 feet back north on Pleasant Valley past Commercial Avenue and Pine Shadows Lane. The southbound vehicle queue dissipated after 15-30 minutes during the AM peak hour.

Project Trip Generation

Project site trip generation has been estimated for the proposed Holiday Market using square footage of the proposed market building. Daily and peak hour project trip generation was calculated by utilizing the Institute of Transportation Engineers (ITE) Publication *Trip Generation Manual (11th Edition)* trip rates for Supermarket (ITE Code 850).The number of trips were estimated for daily and AM and PM peak hours of adjacent street traffic.

Since this type of project would serve traffic already using local roadways (Pleasant Valley Road), a pass-by reduction of trips can be considered. The pass by reduction is calculated based on ITE Publication *Trip Generation Handbook (3rd Edition, September 2017).* A brief description of pass-by trips from the *ITE Trip Generation Handbook* is as follows:

> *A pass-by trip is made as an intermediate trip on the way from an origin to a primary trip destination without route diversion. Pass-by trips are attracted from traffic passing the site on an adjacent street or roadway that offer direct access to the generator. Pass-by trips are not diverted from another roadway not adjacent to the site.*

According to average pass-by trip percentages from ITE Trip Generation Handbook (3rd Edition), supermarket uses would see a reduction of 36% during the AM peak hour and 36% during the PM peak hour. This coincides with the typical need or ability to get grocery items from the supermarket on the way to/from your destination (pass-by trips rather than new trips).

Since the proposed project would replace the existing Holiday Market use currently located north of the project site at the Wildwood Center, there would be an overall increase in net new vehicle trips. The Holiday Market at the Wildwood Center totals 12,870 square feet of supermarket uses. Since the existing Holiday Market at the Wildwood Center is currently generating vehicle trips, the net new increase in vehicle trips was calculated.

After accounting for existing Holiday Market uses at the Wildwood Center, the proposed project is expected to generate a net increase of 1,632 daily trips with 50 AM peak hour trips and 156 PM peak hour trips. Applying pass-by trip ratios, the proposed project would be expected to generate 1,071 net new daily trips with 33 net new AM peak hour trips and 102 net new PM peak hour trips. However, since the proposed project is essentially being moved and enlarged from the Wildwood Center to its current proposed site, all calculated peak hour vehicle trips associated with a 30,711 square-foot supermarket would be travelling through the access roadways/driveways at Pine Shadows Lane and Commercial Drive. Pass-by trips are not discounted at proposed project driveways from Pleasant Valley Road. Therefore, these vehicle trips would equate to 87 AM peak trips and 271 PM peak hour trip at proposed project driveways.

Project Trip Distribution and Assignment

Project trip distribution patterns were estimated based on the current Nevada County Travel Demand Model, geographical location of the development site, existing traffic flow adjacent to the site, and previous development studies. Trip distribution percentages reflect the primary flow of traffic past the project site, existing adjacent commercial-use traffic patterns, and engineering judgement.

Existing Plus Project Conditions were simulated by superimposing traffic generated by the proposed project onto existing intersection traffic volumes. Existing Plus Project scenario refers to the analysis scenario in which traffic impacts associated with the proposed project are investigated in comparison to the Existing Conditions scenario. Within this scenario, the project generated peak hour traffic volumes have been added to the Existing Conditions volumes to obtain the Existing Plus Project volumes.

Existing Plus Project Intersection Operations

The Traffic Impact Analysis includes a summary of the intersection operations for the weekday AM and PM peak hour scenarios for the Existing Plus Project Conditions. According to the summary, four out of the five study intersections would be operating at acceptable conditions (LOS D or better) during the AM and PM peak hour under Existing Plus Project Conditions. However, the intersection of Pleasant Valley Road and Commercial Avenue would be operating at LOS E (46.5 seconds of delay) during the PM Peak Hour.

The Pleasant Valley Road/Commercial Drive intersection would continue to meet the minimum volumes for signalization under Existing plus Project Conditions.

Existing Plus Project Vehicle Queuing

With Existing plus Project volumes, the 95th percentile queue lengths were analyzed using microsimulation (through *Simtraffic* Software) for the study intersections. Storage capacities are adequate to store the 95th percentile vehicle queues at the study intersections based on SimTraffic microsimulation with the exception of the Pleasant Valley Road/Lake Wildwood Drive and Pleasant Valley Rad/Highway 20 intersections. At the all-way-stop-

controlled intersection of Pleasant Valley Road/Lake Wildwood Drive, there would minor vehicle queues (1-2 car lengths) for the westbound left and right-turn movements during the AM and PM peak hour from Wildwood Lake Drive onto Pleasant Valley Road.

The Pleasant Valley Road/Highway 20 intersection currently experiences vehicle queuing for the short (100-foot) northbound segment between Penn Valley Road and Highway 20 for the left, through, and right-turn movements. Vehicle queues occur primarily during the PM peak hour and typically do not exceed one-car length.

With Existing plus Project traffic, vehicle queuing would continue for the southbound left-turn movement from Pleasant Valley Road onto northbound Highway 20 during the AM peak hour. Although not reflected in the SimTraffic queue estimates, the vehicle queue extends for approximately 800-1,000 feet back north on Pleasant Valley past Commercial Avenue and Pine Shadows Lane. This southbound vehicle queue would dissipate after 15-30 minutes during the AM peak hour based on observations.

According to the traffic study, all three study roadway study segments are operating at acceptable (LOS D or better) conditions with Existing plus Project traffic during the AM and PM peak hours.

Internal Circulation

Customers will access the project site from Pleasant Valley Road via Pine Shadows Lane along the north side of the property and/or via a northerly extension of Commercial Avenue from the south. The northerly extension of Commercial Drive would form the north-south internal drive aisle between the Holiday Market building (proper) and associated main parking field west of the building. Once on-site, patrons would access the parking field and circulate around an internal drive aisle providing access to perpendicular parking spaces located along the north, west, and south perimeters of the parking field. Within the parking field, east-west drive aisles would provide access to diagonal parking spaces (3 rows).

With the northerly extension of Commercial Drive to Pine Shadows Lane, vehicle traffic from existing businesses south of the proposed project site could be attracted to the route. Since the Commercial Drive north extension would divide the Holiday Market's main parking field from the supermarket building, there would be increased chances for pedestrian/vehicle conflicts and safety issues where patrons cross the internal drive aisle. As a result, four mitigation measures are recommended to calm vehicle traffic and improve overall safety. These measures are discussed below under the Summary and Recommended Mitigation Measures heading.

Pedestrian and Bicycle Access

Pedestrian and bicycle access to the proposed project is currently limited to existing pedestrian crossings at the Pleasant Valley Road/Highway 20 intersection and a limited pedestrian sidewalk along the east side of Commercial Avenue (extending for approximately 350-feet from cul-de-sac north to proposed project frontage). A Class I multi-use pedestrian-bike path exists south of the proposed project site, south of State Highway 20 and extending along Penn Valley Road east to Spenceville Road.

With the proposed project development, pedestrian sidewalks should be installed along key project frontages (west, north, and south sides of building) and along the south side of Pine Shadows Lane. Pedestrian connections should be provided between the parking field and main building connecting to the recommended raised speed table/pedestrian crosswalks. As noted above, bicycle racks will be required to be provided along the main building frontage for bicycle parking in accordance with Nevada County Code requirements.

Collision Analysis

There were no fatal or severe injury collisions recorded for the study locations in the past five years. In addition, the calculated collision rates for the study locations were compared to the average collision rates for similar facilities statewide, as indicated in the *2019 Collision Data on California State Highways* (Caltrans). Four of the five study intersections are experiencing collision rates below the State average for similar facilities. However, the intersection of Pleasant Valley Road and Penn Valley Drive is experiencing a collision rate higher than the California Average in 2019.

Existing Parking along Commercial Avenue

In addition to the roads, intersections, and traffic evaluated in the Traffic Impact Analysis, staff has noted along Commercial Avenue and east of the existing cul-de-sac, there are existing striped 90-degree parking spaces extending from the curb out into Commercial Avenue. These parking spaces provide additional parking for the existing businesses located directly east of Commercial Avenue.

As a condition of project approval, Commercial Avenue will be required to be improved and extended from the end of the existing street through the project site to connect with Pine Shadow Lane and meet County Local Class 2 road standards. According to the Department of Public Works, the existing 90-degree parking spaces along Commercial Avenue will be required to be removed and this portion of Commercial Avenue will be required to be re-striped to provide a centerline yellow stripe and white fog lines that delineate two, 11-foot wide traffic lanes. In their place, parallel parking will be permitted along this portion of Commercial Avenue.

Staff reviewed previous land use approvals for the adjacent parcels to the east and confirmed the 90-degree parking spaces extending out into Commercial Avenue were approved as “interim” parking area and provide parking above and beyond the required on-site parking for these parcels. Therefore, the removal of these parking spaces for the improvement of Commercial Avenue will not have a negative impact on parking for these parcels.

Summary and Recommended Mitigation Measures

The Traffic Impact Analysis (TIA) was routed to Caltrans, the Nevada County Transportation Commission (NCTC), and the Nevada County Department of Public Works for review and comments. Upon initial review, Caltrans provided a comment letter requesting more information and citing potential project traffic impacts. The applicant’s traffic consultant (GHD Consultants) prepared and provided a written response to Caltrans’ comment letter. After reviewing the response, Caltrans indicated they had no comments at this time.

The Nevada County Transportation Commission (NCTC) provided no comments regarding the project. The Nevada County Public Works Department has reviewed the project and the Traffic Impact Analysis and agrees with the consultant's recommended mitigation measures. In addition, the Public Works Department will require the following as conditions of approval to address transportation related issues:

- Obtain an Encroachment Permit from the County which includes a Traffic Control Plan;
- New driveways shall conform to the County's Commercial Approach standards;
- A truck turning analysis shall be completed for ingress and egress to the project site along with internal circulation areas;
- Provide a sight distance exhibit and analysis for the encroachments of Pine Shadow Lane and Commercial Avenue onto the public right of way of Pleasant Valley Road;
- Create and/or join an established Road Maintenance Agreement for the maintenance of Commercial Avenue and Pine Shadow Lane roadways and other infrastructure, including storm water facilities.

The traffic operations analysis prepared for the TIA has found that under Existing Plus Project conditions, the Pleasant Valley Road/Commercial Avenue intersection would be operating at unacceptable conditions (LOS E – 46.5 seconds of delay) during PM peak hour. In addition, Pleasant Valley Road experiences significant southbound vehicle queuing during the AM peak hour of 800-1,000 feet based on field observations and northbound vehicle queuing during both peak hours in its short segment between Penn Valley Road and Highway 20.

The Public Works Department has recommended **Mitigation Measure 17A** to ensure Commercial Avenue is properly improved and extended to connect with Pine Shadow Lane in accordance with County standards. Along with this extension, **Mitigation Measure 17B** requires removal of the existing 90° parking along Commercial Avenue east of the existing cul-de-sac and re-stripe this portion of Commercial Avenue to provide a centerline yellow stripe and white fog lines delineating two, 11-foot wide traffic lanes.

Consistent with the Nevada County Regional Transportation Plan (NCRTP) 2015-2035 (*Nevada County, January 2018*), recommended **Mitigation Measure 17C** will require re-striping of the westbound Commercial Avenue approach to the Pleasant Valley Road/Commercial Avenue intersection to include a shared left-through lane and separate right-turn lane. **Mitigation Measure 17D** requires the payment of the County's Local Transportation Mitigation Fee (LTMF) towards future widening and/or re-striping at the Pleasant Valley Road/Highway 20 intersection to add an additional southbound left-turn lane on Pleasant Valley Road and associated eastbound receiving/merge lane on eastbound Highway 20.

In addition, the following **Mitigation Measures 17E** through **17H** are being required to improve pedestrian and bicycle safety and reduce pedestrian/vehicle conflicts along Commercial Drive and Pine Shadows Lane in and around the proposed project site.

- Install all-way-stop-control at the Commercial Drive/Project Rear Access Driveway intersection located south of the primary supermarket building.

- Install raised speed table/crosswalk(s) on the Commercial Drive northern extension between the Holiday Market building and main parking field.

- Install stop-sign control for northbound turning movements at the Commercial Drive extension (site access driveway)/Pine Shadows Lane intersection.

- With proposed project development, pedestrian sidewalks shall be installed along key project frontages (west, north, and south sides of building) and along the south side of Pine Shadows Lane. Pedestrian connections shall be provided between the parking field and main building connecting to the recommended raised speed table/pedestrian crosswalks. Bicycle racks shall be provided along the main building frontage for bicycle parking in accordance with Nevada County Code requirements.

With these mitigation measures required, potential project transportation impacts are **less than significant with mitigation**.

17b. CEQA Guidelines Section 15064.3(a) states that "Generally, vehicle miles traveled is the most appropriate measure of transportation impacts." Vehicle miles traveled (VMT) refers to the amount and distance of automobile travel attributable to a project. Other relevant considerations may include the effects of the project on transit and non-motorized travel. Regarding land use projects, CEQA Guidelines Section 15064.3(b)(1) states that vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact.

Caltrans recently published an update for their Transportation Impact Study Guidelines (TISG, May 20, 2020). The Caltrans' TISG is intended for use in preparing a transportation impact analysis of land use projects and replaces the prior 2002 Guidelines. The TISG heavily references the California Governor's Office of Land Use and Climate Innovation's (LCI) Technical Advisory as a basis for its guidance.

Understanding Caltrans requirements for VMT, the applicant's traffic consultant evaluated the proposed project considering the TISG guidelines and its likely VMT impact. Based on TISG guidelines, it was determined a Vehicle Miles Traveled (VMT) analysis will not be required for this proposed project due to its size, land use, and overall characteristics. Based on the LCI guidance, the proposed project is a locally serving commercial-retail development and falls under the 50,000 square foot threshold for such VMT analyses

The LCI Technical Advisory also addresses various types of commercial-retail projects as follows:

"Because new retail development typically redistributes shopping trips rather than creating new trips, estimating the total change in VMT (i.e., the difference in total VMT in the area affected with and without the project) is the best way to analyze a retail project's transportation impacts. By adding retail opportunities into the urban fabric and thereby improving retail destination proximity, local-serving retail development tends to shorten trips and reduce VMT. Thus, lead agencies generally may presume such development creates a less-than-significant transportation impact. Regional-serving retail development, on the other hand, which can lead to substitution of longer trips for shorter ones, may tend to have

a significant impact. Where such development decreases VMT, lead agencies should consider the impact to be less-than-significant. Many cities and counties define local-serving and regional-serving retail in their zoning codes. Lead agencies may refer to those local definitions when available, but should also consider any project-specific information, such as market studies or economic impacts analyses that might bear on customers' travel behavior. Because lead agencies will best understand their own communities and the likely travel behaviors of future project users, they are likely in the best position to decide when a project will likely be local serving. Generally, however, retail development including stores larger than 50,000 square feet might be considered regional-serving, and so lead agencies should undertake an analysis to determine whether the project might increase or decrease VMT."

The proposed project is a purely local-serving commercial-retail development and does not exceed 50,000 square feet. However, based on CEQA guidance, one of two other criteria options must be met to compliment the finding of locally serving and retail less than 50,000 square feet that include the following:

Regional Location. A commercial project with no single-building floor-plate greater than 50,000 square feet is eligible if it locates in a "low vehicle travel area."

Proximity to Households. A project with no single-building floor-plate greater than 50,000 square feet located within one-half mile of 1800 households is eligible.

Based on the above information and criteria, the proposed project is within a "low vehicle travel area" and satisfies all requirements to be screened out and not require VMT analysis. The project's impacts associated with VMT increases are considered ***less than significant***.

17c,e. The project has been reviewed by the Nevada County Department of Public Works, Caltrans, the Nevada County Transportation Commission, the Penn Valley Fire Protection District and the Nevada County Fire Prevention Planner/CalFire. The TIA prepared for the project also analyzed the project, including addressing potential safety and project queuing impacts. The design of the project provides two entrances and exits to the project site with access from the north at Pine Shadows Lane and access from the south through the extension of Commercial Avenue. Neither of these access points propose any sharp curves or geometric design features that would result in a potential hazard to vehicles accessing the subject parcel.

As a condition of project approval, the County Department of Public Works will require the applicant to provide a site distance exhibit and analysis for the encroachments of Pine Shadow Lane and Commercial Avenue onto the public right of way of Pleasant Valley Road complying with County standards. In addition, proposed landscaping and other improvements shall be designed , installed, and maintained to ensure that driver sight distance is sufficient. The project will be required to obtain an encroachment permit for any work within the Pleasant Valley Road Right of Way which includes a Traffic Control Plan showing all public roadways where work is to be performed. With the implementation of these conditions of approval, this project's impacts will be ***less than significant*** related to potential safety and traffic hazards.

17d. The existing roads that will serve the project site including Pleasant Valley Road, Pine Shadows Lane, and Commercial Avenue are currently used by the Penn Valley Fire Protection District for emergency access to properties in the vicinity. Besides a minor extension of Commercial Avenue to serve the project parcel from the south, no new roadways are proposed with this project. Emergency access will be adequately provided through the project access driveways from Pine Shadows Lane and the northerly extension of Commercial Avenue.

The Penn Valley Fire Protection District, the Nevada County Department of Public Works, Caltrans and the Nevada County Fire Prevention Planner/CalFire have reviewed the proposed project and have not identified any significant impacts to emergency access. The proposed project would add a 30-foot wide entrance/exit to the site along Pine Shadows Lane and a 40-foot wide entrance/exit at Commercial Avenue along the south side of the property. These access points are designed to meet Nevada County design standards and no adverse impacts have been identified resulting in impacts to emergency access. Therefore, the proposed project will have ***no impact*** to emergency access.

Mitigation Measures: To reduce potential transportation impacts and improve overall intersection operations and vehicle progression along Pleasant Valley Road at Commercial Avenue and Highway 20, the following mitigation measures are recommended:

Mitigation Measure 17A: Improvement of Commercial Avenue. Commercial Avenue shall be improved and extended through the project site and connect with Pine Shadow Lane in accordance with County standards.

Timing: *Prior to issuance of certificate of occupancy*
Reporting: *Shown on improvement plans and approved by CDA*
Responsible Agency: *Planning and Public Works Departments*

Mitigation Measure 17B: Change to parking along Commercial Avenue. Remove existing 90° parking along Commercial Avenue east of the existing cul-de-sac and re-stripe this portion of Commercial Avenue to provide a centerline yellow stripe and white fog lines delineating two, 11-foot wide traffic lanes. Allow for parallel parking along this portion of Commercial Avenue.

Timing: *Prior to issuance of certificate of occupancy*
Reporting: *Shown on improvement plans and approved by CDA*
Responsible Agency: *Planning and Public Works Departments*

Mitigation Measure 17C: Pleasant Valley Road/Commercial Avenue: The project applicant shall re-stripe the westbound Commercial Avenue approach to include a shared left-through lane and separate right-turn lane. With proposed project improvements for westbound Commercial Avenue, the Nevada County Connects transit stop would be moved east to the north side of the existing Commercial Avenue cul-de-sac where the transit bus already turns around for convenience purposes. Transit stop improvements will be coordinated with Nevada County Connects. With proposed improvements, the Pleasant Valley Road/Commercial Avenue intersection overall LOS would improve from LOS E (46.5 seconds of delay) to LOS D (33.5 seconds of delay) during the PM. The Pleasant Valley

Road/Commercial Avenue intersection would continue to qualify for the peak hour signal warrant during the PM peak hour with Existing plus Project traffic.

Timing: *Plans approved, and striping completed prior to issuance of certificate of occupancy*
Reporting: *Noted on improvement plans and approved by CDA*
Responsible Agency: *Planning and Public Works Departments*

Mitigation Measure 17D: Pleasant Valley Road/Highway 20: The project applicant shall contribute to the County's Local Transportation Mitigation Fee (LTMF) based on the most recent Fee Schedule. The Nevada County Regional Transportation Plan (NCRTP) identifies a future project to widen and/or re-stripe the Pleasant Valley Road/Highway 20 intersection to add an additional southbound left-turn lane on Pleasant Valley Road and associated eastbound receiving/merge lane on eastbound Highway 20. Based on the NCRTP 2025-2045 (July 2025 Draft), the total costs for these improvements are estimated at $804,000 with funding sources from the County's Local Transportation Mitigation Fee (LTMF). The project applicant shall contribute their fair share toward this estimated cost based on the County's fee schedule. With planned Nevada County roadway improvements at the Pleasant Valley Road/Highway 20 intersection, overall vehicle delay would improve slightly during the AM peak hour to aide in vehicle progression and queuing.

Timing: *Prior to issuance of certificate of occupancy*
Reporting: *According to County requirements*
Responsible Agency: *Planning and Public Works Departments*

Mitigation Measure 17E: Commercial Drive/Rear Access Driveway: Install all-way-stop-control at the Commercial Drive/Project Rear Access Driveway intersection located south of the primary supermarket building.

Timing: *Prior to issuance of certificate of occupancy*
Reporting: *Noted on improvement plans and approved by CDA*
Responsible Agency: *Planning and Public Works Departments*

Mitigation Measure 17F: Raised speed table/crosswalk(s): Install raised speed table/crosswalk(s) on the Commercial Drive northern extension between the Holiday Market building and main parking field.

Timing: *Prior to issuance of certificate of occupancy*
Reporting: *Noted on improvement plans and approved by CDA*
Responsible Agency: *Planning and Public Works Departments*

Mitigation Measure 17G: Commercial Drive/Pine Shadows Lane: Install stop-sign control for northbound turning movements at Commercial Drive extension (site access driveway)/Pine Shadows Lane intersection.

Timing: *Prior to issuance of certificate of occupancy*
Reporting: *Noted on improvement plans and approved by CDA*
Responsible Agency: *Planning and Public Works Departments*

Mitigation Measure 17H: Sidewalks/Bicycle Racks: With proposed project development, pedestrian sidewalks shall be installed along key project frontages (west, north, and south sides of building) and along the south side of Pine Shadows Lane. Pedestrian connections shall be provided between the parking field and main building connecting to the recommended raised speed table/pedestrian crosswalks. Bicycle racks shall be provided along the main building frontage for bicycle parking.

Timing: *Prior to issuance of certificate of occupancy*
Reporting: *Noted on improvement plans and approved by CDA*
Responsible Agency: *Planning and Public Works Departments*

18. Tribal Cultural Resources

Existing Setting: California State Assembly Bill (AB) 52 required an update to CEQA Appendix G (Initial Study Checklist) of the CEQA Guidelines to include questions related to impacts to Tribal Cultural Resources (TCRs). Changes to Appendix G were approved by the Office of Administrative Law on September 27, 2016. The most common types of Tribal Cultural Resources include stone tools (projectile points, flaked stone, and milling stones), shell beads, and a cultural soil called “midden” that have cultural or sacred value to California Native American Tribes. TCRs can also be native plants, trees, and cultural landscapes. Types of artifacts and sites from the historic era include bottles, cans, ceramics, building foundations, and bricks. The proposed project was circulated to traditionally and culturally affiliated Native American tribes having historical lands within Nevada County. See Section 5 (Cultural Resources) for additional information regarding tribal resources.

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
a. Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.		✓			A, I

Impact Discussion:

18a. In accordance with AB 52, the project application was distributed to respective tribal agencies for tribal cultural resource review and comment. The United Auburn Indian Community (UAIC) requested consultation with the Nevada County Planning Department regarding the proposed project.

UAIC conducted a background search for the identification of Tribal Cultural Resources for the project, which included a review of pertinent literature, historic maps, and a records search using UAIC's Tribal Historic Information System (THRIS). UAIC's THRIS database is composed of UAIC's areas of oral history, ethnographic history, and places of cultural and religious significance, including UAIC Sacred Lands that are submitted to the Native American Heritage Commission (NAHC). The THRIS resources shown in this region also include previously recorded indigenous resources identified through the California Historic Resources Information System Center (CHRIS) as well as historic resources and survey data. The background research identified a previously recorded TCR in close proximity to the project area, and no known TCRs in the project area.

On August 29, 2024, René Guerrero, UAIC Tribal Monitoring Program Lead, conducted a survey for the identification of TCRs. The entire planned development area was surveyed with ground visibility approximately 5%. The landscape includes oak, pine, coyote brush,

manzanita, and poison oak. Mugwort (*Mún mún* – an important tribal plant) was observed in the southeast portion of project area, which appears to be an ephemeral drain/waterway.

Based on the tribe's review and the survey results, and due to the proximity (within ¼ to 1/3 mile) of significant cultural sites and limited ground visibility, the Tribal Historic Preservation Officer (THPO Fore) requests paid tribal monitoring for initial ground disturbing activities including clearing, grubbing, disking, stripping, and stump removals. THPO Fore recommendations also include a mitigation measure to address unanticipated discoveries to reduce significant impacts to any TCRs that may be discovered during project construction. The UAIC has also provided a Cultural Awareness Brochure to be shared with the applicant, relevant project personnel, and construction workers along with requiring Cultural Awareness Training as a mitigation measure for the project.

Mitigation Measures 18A, 18B, and 18C specifically address these potential impacts to tribal cultural resources (TCRs). With the described mitigation measures in place, impacts to these Tribal Cultural Resources will be ***less than significant with mitigation***.

Mitigation Measures: To address potentially adverse cultural or historical resources impacts associated with project construction activities, the following mitigation measures shall be required and shall be included as notes on all future site plans.

Mitigation Measure 18A: Cultural Awareness Training. The applicant/contractor shall be required to provide a tribal cultural resources sensitivity and awareness training program (Worker Environmental Awareness Program [WEAP]) for all personnel involved in project construction, including field consultants and construction workers, at their own expense. The WEAP training shall be conducted by either a qualified archaeologist for cultural resources or a tribal representative for tribal cultural resources (TCRs). The WEAP shall be developed in coordination with interested Native American Tribes.

The WEAP shall be conducted before any project-related construction activities begin at the project site. The WEAP will include relevant information regarding sensitive cultural resources and tribal cultural resources, including applicable regulations, protocols for avoidance, and consequences of violating State laws and regulations. The WEAP will also describe appropriate avoidance and impact minimization measures for cultural resources and tribal cultural resources that could be located at the project site and will outline what to do and who to contact if any potential cultural resources or tribal cultural resources are encountered. The WEAP will emphasize the requirement for confidentiality and culturally appropriate treatment of any discovery of significance to Native Americans and will discuss appropriate behaviors and responsive actions, consistent with Native American tribal values. The training may be done in coordination with the project archaeologist.

All ground-disturbing equipment operators shall be required to receive the training and sign a form that acknowledges receipt of the training.

Timing: *Prior to any project-related grading or construction*
Reporting: *Noted on improvement plans; Project proponent/contractor to notify Planning Department when training is scheduled/completed*
Responsible Agency*: Planning Department*

Mitigation Measure 18B: Tribal Monitoring at Initial Ground Disturbance. The project proponent shall contact the United Auburn Indian Community (UAIC) Tribal Historic Preservation Officer (thpo@auburnrancheria.com) at least 2 to 3 months prior to project ground-disturbing activities to retain the services of a UAIC Certified Tribal Monitor(s). The duration of the construction schedule and Tribal Monitoring shall be determined at this time.

A contracted UAIC Certified Tribal Monitor(s) shall monitor the initial ground disturbance in the project area. The project proponent shall pay the costs for the time spent by the Tribal Monitor. If there are cultural finds, the UAIC Tribal Historic Preservation Officer (THPO) may require additional Tribal Monitoring.

Tribal Monitors or Tribal Representatives shall have the authority to direct that work be temporarily paused, diverted, or slowed within 100 feet of the immediate impact area if sites, cultural soils, or objects of potential significance are identified. The temporary pause/diversion shall be of an adequate duration for the Tribal Representative to examine the resource.

Appropriate treatment of Tribal Cultural Resources (TCRs) or other cultural finds may include but is not limited to:

d. Recordation of the resource(s)
e. Avoidance and preservation of the resource(s)
f. Recovery and reburial of the resource(s) onsite or in a feasible off-site location in a designated area subject to no future disturbance. The location of the reburial shall be acceptable to the UAIC.

To track the implementation of this measure, the Tribal Monitor(s) shall document field-monitoring activities on a Tribal Monitor log. The Tribal Monitor(s) shall wear the appropriate safety equipment while on the construction site.

In consultation with the UAIC THPO, the Tribal Monitor and the project proponent shall determine a mutual end or reduction to the on-site monitoring if/when construction activities have a low potential for impacting Tribal Cultural Resources.

In the event the Tribal Monitor does not report to the job site at the scheduled time after receiving 24-hour business day notice, construction activities may proceed without tribal monitoring. At no time, regardless of the presence or absence of a Tribal Monitor, shall suspected TCRs be mishandled or disrespected.

The Nevada County Planning Department shall assist with resolution of disagreements between the project proponent/contractor and the Tribe if such occurs on the project.

Timing: *Prior to and during initial ground disturbance of the site*
Reporting: *Noted on improvement plans; Project proponent/contractor to notify Planning Department of contracted Certified Tribal Monitor(s); Notify Planning Department if TCRs discovered and construction work stopped*
Responsible Agency*: Planning Department*

Mitigation Measure 18C: Unanticipated Discoveries of Tribal Cultural Resources. If any suspected TCRs or resources of cultural significance to UAIC, including but not limited to features, anthropogenic/cultural soils, cultural belongings or objects (artifacts), shell, bone, shaped stones or bone, or ash/charcoal deposits are discovered by any person during construction activities including ground disturbing activities, all work shall pause immediately within 100 feet of the find, or an agreed upon distance based on the project area and nature of the find. Work shall cease in and within the immediate vicinity of the find regardless of whether the construction is being actively monitored by a Tribal Monitor, cultural resources specialist, or professional archaeologist.

A Tribal Representative and the Nevada County Planning Department shall be immediately notified, and the Tribal Representative in coordination with the Planning Department shall determine if the find is a TCR (PRC §21074) and the Tribal Representative shall make recommendations for further evaluation and treatment as necessary.

The culturally affiliated Tribe shall consult with the Nevada County Planning Department to (1) identify the boundaries of the new TCR and (2) if feasible, identify appropriate preservation in place and avoidance measures, including redesign or adjustments to the existing construction process, and long-term management, or 3) if avoidance is infeasible, a reburial location in proximity of the find where no future disturbance is anticipated. Permanent curation of TCRs will not take place unless approved in writing by the culturally affiliated Tribe.

The construction contractor(s) shall provide secure, on-site storage for culturally sensitive soils or objects that are components of TCRs that are found or recovered during construction. Only Tribal Representatives shall have access to the storage. Storage size shall be determined by the nature of the TCR and can range from a small lock box to a conex box (shipping container). A secure (locked), fenced area can also provide adequate on-site storage if larger amounts of material must be stored.

The construction contractor(s) and the Nevada County Planning Department shall facilitate the respectful reburial of the culturally sensitive soils or objects. This includes providing a reburial location that is consistent with the Tribe's preferences, excavation of the reburial location, and assisting with the reburial, upon request.

Any discoveries shall be documented on a Department of Parks and Recreation (DPR) 523 form within 2 weeks of the discovery and submitted to the appropriate CHRIS center in a timely manner.

Work at the TCR discovery location shall not resume until authorization is granted by the Nevada County Planning Department in coordination with the culturally affiliated Tribe.

If articulated or disarticulated human remains, or human remains in any state of decomposition or skeletal completeness are discovered during construction activities, the [City/County] Coroner and the culturally affiliated Tribe shall be contacted immediately. Upon determination by the [City/County] Coroner that the find is Native American in origin, the Native American Heritage Commission will assign the Most Likely Descendent who will

work with the project proponent to define appropriate treatment and disposition of the burials.

Timing: *During project-related grading or construction*
Reporting: *Noted on improvement plans; Notify Planning Department if TCRs discovered and construction work stopped*
Responsible Agency: *Planning Department*

19. Utilities and Service Systems

Existing Setting: The subject property is in the western portion of unincorporated Nevada County, within the Penn Valley community region, approximately 0.25 mile north of the intersection of Pleasant Valley Road and State Route 20. The site is served by Pacific Gas & Electric (PG&E) for electricity needs. Solid waste services are provided by Waste Management. Nevada Irrigation District (NID) serves the parcel with potable water and Nevada County Sanitation District No. 1 (Penn Valley Zone 6) services the site for wastewater disposal. Pursuant to plan information submitted by the applicant, there are both PG&E and NID easements located near the west property line of the subject parcel.

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
a. Require or result in the relocation or the construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas or telecommunication facilities, the construction or relocation of which could cause significant environmental effects?			✓		A,I
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?			✓		A,C,H
c. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?			✓		A,C
d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste goals?			✓		A
e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?			✓		A

Impact Discussion:

19a. The project parcel is located within the boundaries of the Nevada Irrigation District (NID). The District provided a comment letter dated October 21, 2024. The letter states that according to District records, the parcel has a standby account (#36351) and treated water service is available to the parcel from the Lake Wildwood Treatment Plan upon proper application to NID and payment of applicable connection fees.

Regarding wastewater treatment, the project parcel is currently located outside the boundaries of the Nevada County Sanitation District. The District boundary currently runs along the south side of the project parcel and there are several parcels to the south that are currently served by the District. The Nevada County Sanitation District provided a "will serve" letter dated June 20, 2024, which states it has sufficient capacity in the Penn Valley Zone to accommodate an annexation request for the project parcel for the development of the proposed grocery store. For the District to provide future sewer service, it will be necessary for the parcel to annex into Nevada County Sanitation District No. 1, Penn Valley, Zone 6, and acquire sewer capacity. The property owner will be required to complete the annexation process through the Local Agency Formation Commission (LAFCo) prior to submitting a sewer connection application.

After the annexation process is completed, the property owner will be required to acquire all necessary permits and permissions and to install the infrastructure to facilitate capture and conveyance of sewerage from the proposed building to the mainline connection point at the District's force main.

A Preliminary Drainage Report was submitted with the application. The Report contains calculations which demonstrate post-development drainage peak flow from the project parcel will not exceed pre-development peak flow. The applicant will be required to submit a final Drainage Plan and hydrologic and hydraulic calculations in accordance with County improvement standards and storm drainage criteria. Storm drainage improvements shall meet County standards.

The project will not result in the relocation or expansion of other utilities that would result in significant impacts. Based on this information, a ***less than significant*** impact related to utilities and service systems and their environmental effects is anticipated.

19b. The subject parcel is located within the boundaries of the Nevada Irrigation District (NID). The District has reviewed the project and commented that pursuant to their records, the subject parcel has a standby account (#36351), and treated water service is available to this parcel from the Lake Wildwood Treatment Plant. NID also initially commented that due to the proposed used of the property, a Water Demand Analysis is required to determine the appropriate meter size, related capacity fees, and appropriate backflow prevention.

The applicant submitted a Water Demand Analysis to NID with resubmittal of the application to the County. The results of the Analysis are a recommendation for a 1" water meter size for the proposed project. The District has reviewed the Water Demand Analysis and commented it's acceptable for domestic use and the 1" water meter size is approved. The District indicated, however, the estimated values for irrigation are preliminary and will need to review the final landscape plan when it's submitted to determine final values.

The subject property is located within the Penn Valley Area Plan. Regarding landscaping of the site, the Design Guidelines of the Plan state that "Drought tolerant and fire-resistant

plants are encouraged" (LD3). The applicant has submitted a preliminary landscape plan showing that all proposed trees and shrubs, with the exception of one tree species, are low water users. The preliminary landscape plan does not contain information demonstrating the plan is compliant with the State of California's Model Water Efficiency Landscape Ordinance (MWELO). As a condition of approval, the final landscape and irrigation plan will be required to demonstrate compliance with MWELO requirements. Water fixtures in the proposed building shall be required to be low-flow and in compliance with California Building Code requirements for efficient use. Since the project will comply with all state and local regulations related to water conservation, the impacts related to sufficient water supplies are anticipated to be ***less than significant***.

19c. The proposed project will be served by Nevada County Sanitation District No. 1 for public sewer/wastewater services. The District has reviewed the project and commented it does have sufficient capacity in the Penn Valley Zone to accommodate an annexation request for the subject property for the development of a grocery store. For the District to provide future sewer service to the subject property, the parcel will be required to annex into Nevada County Sanitation District No. 1, Penn Valley, Zone 6, and acquire sewer capacity. Annexation will require completion of the annexation process through the Local Agency Formation Commission (LAFCo) prior to submitting a Sewer Connection Application.

The District initially commented that for the proposed project, the subject parcel (APN 051-240-014) will need to acquire a minimum of 14 Equivalent Dwelling Units (EDUs) at the time of connection. One EDU equates to roughly 190 gallons of wastewater generated per day. Based on information subsequently provided in the Preliminary Sewer Analysis (November 2024), the District has indicated the EDU count required for this project would be reduced from 14 EDUs to 8 EDUs at the time of connection.

Proposed sewer plans for the property will be required to be reviewed and approved by the Sanitation District prior to construction/installation. The property owner will be responsible for maintaining the infrastructure on the parcels to ensure that they are free from ground and rainwater intrusion.

Final sewer system design will require approval from the Sanitation District and sewer connect fees will apply. Standard conditions of approval will ensure that these requirements are adhered too. Based on the review of submitted materials by the Nevada County Sanitation District, potential impacts to the wastewater treatment provider are ***less than significant***.

19d,e. The development and operation of the proposed grocery store and Starbucks Coffee uses are not anticipated to result in significant amounts of solid waste; however, any waste generated would be required to comply with federal, state and local statutes and regulations related to solid waste. The applicant is proposing to install a trash compactor near the loading dock at the rear of the building, along with a recycling area where's it's anticipated materials such as glass, plastics, and cardboard would be recycled. Based on this information, there should be a ***less than significant*** impact.

Mitigation Measures: None required

20. Wildfire

Existing Setting: The project parcel is within the Penn Valley Fire Protection District and is designated within a High Fire Hazard Severity Zone by the CalFire Fire Hazard Severity Zone maps. The project site is adjacent to various commercial uses to the south and a light industrial use (mini-storage buildings) to the north. The subject parcel currently has a significant number of trees and vegetation cover. With construction of the project, however, only existing trees near the southwest corner, west property line, and behind the proposed building and parking area within the far eastern portion of the property will be retained. Landscaping including trees and shrubs will be planted along the north, west, and south property lines and within the proposed parking lot areas.

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
a. Substantially impair an adopted emergency response plan or emergency evacuation plan?			✓		A,E,J,33
b. Due to slope, prevailing winds, or other factor, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrollable spread of wildfire?			✓		A,C,E,J
c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?				✓	A,E
d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?				✓	A,E

Impact Discussion:

20a. The proposed project would result in construction of a 30,711 square foot building that will house both a Holiday Market grocery store and a Starbucks Coffee restaurant. The project will involve the relocation of the existing Holiday Market, which is currently located to the north at the Pleasant Valley Road/Lake Wildwood Drive intersection and opposite the entrance to the Lake Wildwood Subdivision, into a larger building that will allow the grocery store to provide more products and services than their current location.

The design of the project includes two ingress and egress points, one along the north side of the property to Pine Shadows Lane, and one along the south side of the property with the extension of Commercial Avenue. These access points along with internal circulation areas are designed to meet Nevada County commercial standards. The project has been reviewed by the Penn Valley Fire Protection District, the Nevada County Department of

Public Works, and the Nevada County Fire Prevention Planner and no adverse impacts from the project resulting in the impairment of an emergency or evacuation plan were raised through this review. The site is located approximately one mile south of the Penn Valley Fire Protection District station located at the Gate 1 entrance to the Lake Wildwood subdivision and 1.5 miles northwest of the District's station on Spenceville Road. The proximity of these two stations that will serve the site will result in relatively short response times. Therefore, the impact of this project related to the impairment of an adopted emergency response plan or emergency evacuation plan is considered ***less than significant***.

20b. Based on topographical information provided, the highest point on the subject property is 1435 feet located near the south property line in the eastern portion of the property. The project site topography generally slopes from this point to both the western property line near Pleasant Valley Road and the eastern property line. While the property does contain sloping topography, a large portion of the site will be cleared of vegetation and graded to provide area for the grocery store building, parking, and circulation areas. Rockery retaining walls will be utilized along the west side frontage of the project, the northwest corner of the site, and along the southern property line in the eastern portion of the property. The proposed building will be designed to meet applicable California Building Code requirements and will be equipped with overhead sprinklers, multiple doors for emergency access, and other fire safety measures. Wildland Urban Interface (WUI) standards and appropriate defensible space/vegetative clearance will be required. With State and local fire standards required, there is a ***less than significant impact*** related to exposing project occupants to pollutant concentrations from a wildfire or the uncontrollable spread of wildfire.

20c. The project does not propose the installation or maintenance of new infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk. Commercial Avenue will be extended north to tie into the subject parcel but that is a minor extension. Therefore, there is ***no impact*** on exacerbating fire risk or temporary or ongoing impacts to the environment related to installation or maintenance of associated infrastructure.

20d. The project does not pose significant risks based on the project site being downstream from a potential flood source or an area with potential for landslides due to run off. Similarly, there is no post-fire slope instability due to proper grading and use of retaining walls. Additionally, a large portion of the central and western portions of the site will be mostly cleared of natural vegetation that could result in potential wildfire impacts. There are also no significant changes of drainage instability with a proposed water drainage system. There are no watercourses in the vicinity of the project site that could receive runoff or sediment from the project. Standard requirements for erosion control and regulatory permitting are in place to ensure slope instability, and potential drainage changes because of the project do not impact downstream resources. Subsequently, this project will have ***no impact*** to this criterion.

Mitigation: None required.

21. Mandatory Findings of Significance

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
a. Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of major periods of California's history or prehistory?		✓			A
b. Does the project have environmental effects that are individually limited but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of the project are considered when viewed in connection with the effects of past, current, and probable future projects.)			✓		A
c. Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?		✓			A

Impact Discussion:

21a. This Initial Study and proposed Mitigated Negative Declaration evaluates the potential impact the proposed project could have on the environment. Compliance with existing federal, state, and local regulations and mitigation measures identified in this Initial Study will reduce all potential impacts of the proposed project to a less than significant level. As discussed in the Biological Resources section, the project will have a less than significant impacts with mitigation on the habitat and populations of protected plant and animal species. The Cultural Resources, Geology and Soils, and Tribal Cultural Resources sections find that impacts to important examples of major periods of California's history or prehistory will also be less than significant with mitigation. With the proposed mitigation measures, this project will have a ***less than significant impact with mitigation*** to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of major periods of California's history or prehistory.

21b. The proposed project is to establish a commercial use (grocery store with coffee shop) in an existing commercial/industrial corridor on a commercial and industrial zoned property. This project proposes a General Plan Amendment and a rezone which will result in an adjustment in the sizes of the commercial and industrial designated portions of the property.

The commercial portion will increase from approximately 1.9 acres to 4.3 acres and the industrial portion will decrease from approximately 3.6 acres to 1.2 acres. While there will be an increase of approximately 2.4 acres of the commercial portion to accommodate the grocery store building, parking and circulation areas, and related improvements, there will also be a decrease in the amount of the industrial portion of 2.4 acres that will be available for future industrial uses. Uses within commercial designated areas are generally considered to be less intensive than uses in industrial designated areas. In addition, the specific development project being considered is a 30,711 square foot grocery store building.

The resulting change in the commercial and industrial acreages is not anticipated to significantly increase allowed density, change allowed uses, or create potential impacts that are individually limited but cumulatively considerable. The proposed grocery store and coffee shop are subject to all applicable local, state, and federal regulations and permitting, and any future change in use will require environmental review pursuant to CEQA. Therefore, the project's cumulatively considerable impacts are ***less than significant***.

21c. The proposed project would not result in any substantial adverse effects to human beings, directly or indirectly, since each potentially significant impact can be reduced to a less than significant level with adherence to the mitigation measures outlined in this initial study and compliance with existing federal, state, and local regulations. This includes potential impacts to aesthetics, geology and soils, hydrology and water quality, noise, and transportation. Therefore, there would be no substantial adverse effects to human beings because of the project, resulting in impacts that would be ***less than significant with mitigation.***

Mitigation Measures: To offset potentially adverse impacts to aesthetics, biological resources, cultural resources, geology and soils, hydrology and water quality, noise, transportation, and tribal cultural resources, see the listing of **Recommended Mitigation Measures** beginning on page 9 of this initial study.

Recommendation of the Project Planner

Based on this initial evaluation:

____ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

__X__ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

____ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

____ I find that the proposed project MAY have a "potentially significant impact" or a "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

____ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Prepared by:

Steve Geiger

Date: October 17, 2025

Steve Geiger, Senior Planner

Appendix A – Reference Sources

A. Nevada County Department of Planning
B. Nevada County Department of Environmental Health
C. Nevada County Department of Public Works
D. Nevada County Building Department
E. Penn Valley Fire Protection District
F. California Department of Transportation (Caltrans)
G. Northern Sierra Air Quality Management District
H. Nevada Irrigation District
I. United Auburn Indian Community (UAIC)

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15. King Engineering. Drainage Report, May 2024.
16. Bollard Acoustical Consultants. *Environmental Noise & Vibration Assessment (October 2024).*
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19. United States Department of Agriculture Soil Conservation Service and Forest Service in cooperation with University of California Agricultural Experiment Station. (1993). Soil Survey of Nevada County Area, California. Retrieved from https://websoilsurvey.sc.egov.usda.gov/app/
20. California Department of Conservation. (2021). EQ Zapp: California Earthquake Hazards Zone Application. Retrieved from https://maps.conservation.ca.gov/cgs/EQZApp/app/

Appendix B: NV5, Geotechnical Engineering Report (April 2024)
Holiday Market – Penn Valley: Recommendations

GRADING

The following sections present NV5 grading recommendations. The grading recommendations address clearing and grubbing, soil preparation, fill placement, fill slope grading, erosion control, surface water drainage, construction dewatering, underground utility trenches, soil corrosion potential, plan review, and construction monitoring.

Clearing and Grubbing. Areas proposed for fill placement, road and driveway construction, and building areas should be cleared and grubbed to remove vegetation, weak and porous soils, and other deleterious materials as described below.

1. Strip and remove debris from clearing operations and the weak and porous soil containing shallow vegetation, roots and other deleterious materials. Trees and shrubs that will not be part of the proposed development should be removed and their primary root systems grubbed. We anticipate that the depth of grubbing and clearing would be in the upper 6 inches, but the actual depth of stripping will vary across the Site and may be greater in wooded areas. Actual stripping depth should be determined by a representative of the geotechnical engineer in the field at the time of stripping. The organic topsoil can be stockpiled onsite and used in landscape areas but is not suitable for use as engineered fill.

2. The project geotechnical engineer should approve any proposed use of the spoil generated from stripping prior to placement on the Site.

3. Over excavate any relatively loose debris and soil that is encountered in our exploratory trenches or any other onsite excavations to underlying, competent material. Possible excavations include exploratory trenches excavated by others, mantles or soil test pits, holes resulting from tree stump or boulder removal, and mining relics.

4. If loose, untested fill is encountered during site development, over excavate to competent native soil or weathered rock and replace with engineered fill in accordance with Section 5.1.4, “Engineered Fill,” of this report. Relatively loose fill shall be removed to within and a minimum of 5 feet beyond proposed structure footprints.

5. Over excavate any encountered existing underground utilities, such as leach lines, abandoned sewer, water, and fuel lines, stumps and oversize rocks. Excavate the remaining cavities or holes to a sufficient width so that an approved backfill soil can be placed and compacted in the cavities or holes. Enough backfill soil should be placed and compacted in order to match the surrounding elevations and grades. The project engineer or their representative should observe and approve the preparation of the cavities and holes prior to placing and compacting engineered fill soil in the cavities and holes as recommended herein.

6. All rocks greater than 8 inches in greatest dimension (oversized rock) should be removed from the top 12 inches of native soil, if encountered, by scarifying to a depth of 12 inches below finish grade in areas to support pavement, slabs-on-grade or other flatwork. Oversized rock may be used in landscape areas, rock landscape walls, rock faced slopes, or removed from the Site. Oversized rock can be stockpiled onsite and used to construct fills but must be placed

at or near the bottom of deep fills and must be placed in windrows to avoid nesting. No oversized rock should be placed in the upper 3 feet of any structural fill. Unless used as rip-rap, oversized rock placed in fill should not be located within 5 feet horizontally of the finished fill slope face. The project geotechnical engineer should approve the use of oversized rock prior to constructing fill.

7. If fine grained, potentially expansive soil, as determined by NV5, is encountered during grading, it should be mixed with granular soil, or over excavated and stockpiled for removal from the project site or for later use in landscape areas.

8. Vegetation, deleterious materials, structural debris, and oversized rocks not used in landscape areas, drainage channels, or other non-structural uses should be removed from the Site.

Expansive Soil. Expansive soil, where encountered, should be over-excavated to a minimum depth of 3 feet below building pad subgrade and at least 2 feet below exterior hardscapes, slabs-on-grade and pavement sections. Over-excavations should extend a minimum 5 feet laterally from the edge of foundation elements and minimum 2 feet laterally from the edge of hardscapes. Over-excavations should be backfilled with approved non-expansive soil, placed and compacted in accordance with the following grading recommendations. Excavated expansive soil(s) should either be disposed of offsite, placed in non-structural areas, or placed within the lower portion of deep fills.

It may be possible to mix potentially expansive soil with granular soil in order to reuse the material as structural fill. The actual mix ratio should be evaluated by NV5 at the time of construction, but a typical mix ratio for this type of application is about 4 parts granular soil to 1-part expansive soil. We recommend that an NV5 representative be present during site grading and earthwork to evaluate the implementation of our recommendations and provide additional or revised recommendations, if needed.

Soil Preparation for Fill Placement. After completing site clearing and applicable mitigation activities, the exposed soil surface should be prepared for placement and compaction of engineered fills, as described below.

1. The exposed surface soil should be scarified to a minimum depth of 12 inches below the existing ground surface, or to resistant rock, whichever is shallower. Following scarification, the soil should be uniformly moisture conditioned to within approximately 3 percentage points of the ASTM D1557 optimum moisture content. In expansive soil conditions, the exposed surface should be moisture conditioned to within approximately 2 to 5 percentage points above the ASTM D1557 optimum moisture content and sufficient to completely close all shrinkage cracks for their full depth. If grading is performed during the dry season, the shrinkage cracks may extend to a few feet below the surface. Therefore, it may be necessary to excavate a portion of the cracked soils to obtain the proper moisture condition and degree of compaction.

2. The scarified and moisture conditioned soil should then be compacted to achieve a minimum relative compaction of 90 percent, or between 88 and 92 percent in expansive soil conditions, based on ASTM D1557 maximum dry density. The moisture content, density and relative percent compaction should be tested by an NV5 field representative to evaluate whether the compacted soil meets or exceeds the minimum percent compaction and moisture content requirements. The earthwork contractor shall assist the project engineer or their field

representative by excavating test pads with the onsite earth moving equipment. Native soil preparation beneath concrete slab-on-grade structures (i.e., floors, sidewalks, patios, etc.) should be prepared as specified in Section 5.2, “Structural Improvement Design Criteria.”

3. The prepared native soil surface should be proof-rolled with a fully loaded, 4,000-galloncapacity water truck with the rear of the truck supported on a double-axle, tandem-wheel undercarriage or approved equivalent. The proof-rolled surface should be visually observed by the project engineer or their field representative to be firm, competent and relatively unyielding. The project engineer or their field representative may also evaluate the surface material by hand probing with a ¼-inch-diameter steel probe, however, this evaluation method should not be performed in place of proof rolling as described above.

4. Construction Quality Assurance (CQA) tests should be performed using the minimum testing frequencies presented in Table 5.1.3-1 or as modified by the project engineer to better suit the site conditions and change in soil or construction methods.

Table 5.1.3-1, Minimum Testing Frequencies

ASTM No.	Test Description	Minimum Test Frequency[1]
D1557	Modified Proctor Compaction Curve	1 per 1,500 CY or Material Change [2]
D6938	Nuclear Density and Moisture Content	1 per 250 CY

Notes:
(1) These are minimum testing frequencies that may be increased or decreased at the project engineer’s discretion on the basis of the construction method and/or site conditions encountered during grading.
(2) Whichever criteria provide the greatest number of tests.
ASTM = ASTM International
CY = cubic yards
No. = number

5. The native soil surface should be graded to minimize ponding of water and to drain surface water away from the building foundations and associated structures. Where possible, surface water should be collected, conveyed and discharged into natural drainage courses, storm sewer inlet structures, permanent engineered stormwater runoff percolation/evaporation basins or engineered infiltration subdrain systems.

Engineered Fill. All fill placed beneath structural improvements (e.g., foundation elements, pavements, slabs-on-grade and utility lines) and as part of a fill slope or retaining structures should be considered structural engineered fill. Material used for structural fill should consist of uncontaminated, predominantly granular, non-expansive native soil or approved import soil.

Import Fill Soil. Import fill soil should meet the geotechnical engineering material properties described in the following Section 5.1.4.2, “Engineered Fill Construction with Testable Earth Materials.” Import soil should be predominantly granular, non-expansive and free of deleterious material. Prior to importation to the Site, the source generator should document that the import fill meets the guidelines set forth by the California Environmental Protection Agency (CalEPA) Department of Toxic Substances Control (DTSC) in their 2001 “Information Advisory, Clean Imported Fill Material.” This advisory represents the best practice for characterization of soil prior to import for use as engineered fill. Import material that is proposed for use onsite should be

submitted to NV5 for approval and possible laboratory testing at least 72 hours prior to transport to the Site.

Engineered Fill Construction with Testable Earth Materials. Testable earth materials are generally considered to be soils with gravel and larger particle sizes retained on the No. 4 mesh sieve that make up less than 30 percent by dry weight of the total mass. The relative percent compaction of testable earth materials can readily be determined by the following ASTM test procedures: laboratory compaction curve (D1557), field moisture and density (D6938). Construction of engineered fills with testable earth materials is described below.

1. Testable Soil used for fill should consist of uncontaminated, predominantly granular, nonexpansive native soil or approved import soil. If encountered, rock used in fill should be broken into pieces no larger than 8 inches in diameter. Rocks larger than 8 inches are considered oversized material and should be stockpiled for offhaul or use in landscape areas and drainage channels. If approved by the project geotechnical engineer, oversized rock may be placed at or near the bottom of deep fills. Oversized rock must be placed in windrows to avoid nesting and to facilitate the placement of compacted fill. No oversized rock should be placed in the upper 3 feet of any structural fill. The project geotechnical engineer should approve the use of oversized rock prior to constructing fill.

2. Cohesive, predominantly fine-grained, or potentially expansive soil encountered during grading should be stockpiled for removal, mixed as directed by NV5, or used in landscape areas. As an option, cohesive fine-grained or potentially expansive soil can often be placed in the deeper portions of proposed fill (e.g., depths greater than 3 feet below subgrade in building footprints). However, this option would have to be evaluated on a case-by-case basis with consideration of the fill depth and proposed loading.

3. Soil used to construct engineered fill should be uniformly moisture conditioned to within approximately 3 percentage points of the ASTM D1557 optimum moisture content. If site grading is performed during or following periods of wet weather, near-surface site soils may be significantly above its optimum moisture content. These conditions could hamper equipment maneuverability and efforts to compact fill materials to the recommended compaction criteria. Fill material may require drying to facilitate placement and compaction, particularly during or following the wet season. Suitable compaction results may be difficult to obtain without processing the soil (e.g., disking during favorable weather, covering stockpiles during periods of precipitation, etc.).

4. Fill should be constructed by placing uniformly moisture conditioned soil in maximum 12-inch thick loose, horizontal lifts (layers) prior to compacting.

5. The earthwork contractor should compact each loose soil lift with a tamping foot compactor such as a Caterpillar (CAT) 815 Compactor or equivalent as approved by NV5's project engineer or their field representative. A smooth steel drum roller compactor should not be used to compact loose soil lifts for construction of engineered fills.

6. All fill should be compacted to a minimum relative compaction of 90 percent of the ASTM D1557 maximum dry density. The upper 12 inches of fill in paved areas, beneath proposed slabs-on-grade, and within the proposed building footprint should be compacted to a minimum of 95 percent relative compaction.

7. The moisture content, density and relative percent compaction of all engineered fills should be tested by a representative of NV5 during construction to evaluate whether the compacted soil meets or exceeds the minimum compaction and moisture content requirements. The field and laboratory CQA tests should be performed consistent with the testing frequencies presented in Table 5.1.4.2-1 or as modified by the project engineer to better suit the site conditions. The earthwork contractor shall assist the project engineer's field representative by excavating test pads with the onsite earth-moving equipment.

Table 5.1.4.2-1, Minimum Testing Frequencies for Engineered Fill

ASTM No.	Test Description	Minimum Test Frequency(1)
D1557	Modified Proctor Compaction Curve	1 per 1,500 CY or Material Change (2)
D6983	Nuclear Moisture and Density	1 per 250 CY

Notes:
(1) These are minimum testing frequencies that may be increased or decreased at the project engineer's discretion on the basis of the site conditions encountered during grading.
(2) Whichever criteria provide the greatest number of tests.
ASTM = ASTM International
CY = cubic yards
No. = number

8. The prepared finished grade or finished subgrade soil surface should be proof-rolled with a fully loaded, 4,000-gallon-capacity water truck with the rear of the truck supported on a double-axle, tandem-wheel undercarriage or approved equivalent. The proof-rolled surface should be visually observed by the project engineer or their field representative to be firm, competent and relatively unyielding.

Rock Fill Placement. Based on NV5's observation of the rocky nature of the subsurface conditions revealed in some of our exploratory trenches, they anticipate that fill material generated from the Site may contain significant rock fragments, and that compaction testing with conventional methods may be difficult or inappropriate. Typically, fill that consists primarily of soil can be tested for relative compaction by using a nuclear density gauge. Structural fill material with more than 30 percent rock larger than ¾-inch cannot be reliably tested using conventional compaction testing equipment.

They recommend that quality assurance during rock fill placement be based on a procedural approach, or method specification, rather than a specified relative compaction. The procedural requirements will depend on the equipment used, as well as the nature of the fill material, and will need to be determined by the geotechnical engineering firm onsite. Typically, procedural recommendations are based on the measured relative compaction of a test fill constructed onsite.

Based on NV5's experience in the area, we anticipate that the procedural specification will require a minimum of six passes (back and forth equaling one pass) with a Cat 563 or similar, self-propelled, vibratory compactor to compact a maximum 12-inch thick, loose lift. Processing or screening of the fill material will be needed to remove rocks larger than approximately 12 inches in maximum dimension. Continuous or nearly continuous observation by a representative of NV5 would be required during fill placement to confirm that procedural specifications have been met.

Fill Slope Grading. Based on NV5's understanding of the project, they anticipate that fill slopes will be created as part of the proposed development. In general, permanent fill slopes should be no steeper than 2:1 (H:V). NV5 should review fill slope configurations greater than approximately 10 feet in height, if proposed, prior to fill placement. Compaction and fill slope grading must be confirmed by NV5 in the field. Steeper fill slopes may be constructed and should be reviewed approved by the geotechnical engineer of record.

1. Where fill placement is proposed on native slopes steeper than approximately 5:1 (H:V) a base keyway and routine benches that expose undisturbed bedrock must be provided. Unless otherwise recommended by the project geotechnical engineer, the base key should be at least 8 feet wide and excavated at the toe of the fill a minimum of 2 feet into competent stratum, as determined by a 1:1 (H:V) plane extending down from the toe of the fill. The bottom of the base key should be sloped slightly into the hillside at an approximate gradient of 5 percent or greater. The keyway excavation and limits should be observed and approved by a representative of NV5 prior to fill placement.

2. A subdrain should be installed at the rear of the keyway and where evidence of seepage is observed. The subdrain should consist of a 4-inch diameter (minimum) perforated plastic pipe embedded in drain rock material wrapped in woven geotextile filter fabric. The drain rock material should be at least 12 inches thick and extend at least 48 inches above the bottom of the keyway and/or 12 inches above and below the seepage zone. The depth and extent of subdrains should be determined by a representative of NV5 in the field during construction. In addition, subdrains should be installed at a minimum slope of 1 percent and should have cleanouts located at their ends and at turning points. Outlet and riser pipe fittings should not be perforated. A licensed land surveyor or civil engineer should provide "record drawings" depicting the locations of subdrains and cleanouts.

3. The fill must be benched into existing side slopes as fill placement progresses. Benching must extend through loose surface soil into firm material, and at intervals such that no loose surface soil is beneath the fill. As a minimum, a horizontal bench should be excavated every 5 vertical feet or as determined by a representative of NV5.

4. Fill should be placed in horizontal lifts to the lines and grades shown on the project plans. Fill slopes should not be constructed or extended horizontally by placing soil on an existing slope face and/or compacted by track walking.

5. Slopes should be constructed by overbuilding the slope face and then cutting it back to the design slope gradient and grade.

6. Where placement of oversized rock in deep fill is proposed, the oversized rock should be placed a minimum of 5 feet horizontally from the finished fill slope face.

7. Steeper fill slopes and reinforced soil slopes may be feasible with the use of geotextile reinforcement, RSP, and/or rock facing. NV5 can provide reinforced or buttressed fill slope design for the project, if requested.

8. Fill slopes should be constructed with surface benches at least every 25 feet (vertically); the benches should be a minimum of 8 feet wide, and should be sloped to drain to the rear and protected from erosion. The benches should be sloped longitudinally at a gradient of at least

1 percent. The discharge point of concentrated runoff should be either collected in a closed pipe that discharges onto erosion resistant natural drainages or other areas that are provided with energy dissipators.

Cut Slope Grading. Based on NV5's understanding of the project at this time, they anticipate that permanent cut slopes will be created during grading of the proposed improvements. It may be very difficult to excavate below depths of approximately 6 feet and ripping or blasting may be required. In general, permanent cut slopes should not be steeper than 2:1 (H:V). Cut slopes may be 1½:1 (H:V) in areas of shallow resistant bedrock, as approved by the geotechnical engineer. Steeper cut slopes may be feasible, depending on the soil/rock conditions encountered, and should be reviewed on a case-by-case basis and approved by the project geotechnical engineer. The upper two feet of all cut slopes should be graded to an approximate 2:1 (H:V) slope to reduce sloughing and erosion of looser surface soil. The upper two to five feet of cut slopes should be rounded into the existing terrain above the slope to remove loose material and produce a contoured transition from cut face to natural ground. Scaling to remove unstable cobbles and boulders may be necessary. Permanent cut slopes should be observed in the field by the geotechnical engineer to verify that the exposed soil (bedrock) conditions are as anticipated. The geotechnical engineer is not responsible for measuring the angles of these slopes.

To reduce the potential for erosion, slopes surfaces steeper than 2:1 (H:V) shall be protected with a slope surface reinforcement/armoring system depending on the exposed near surface soil/rock. Appropriate slope surface reinforcement/armoring systems may include rock slope protection (RSP), shotcrete or geo-synthetic liners with/without anchors. Proposed slope armoring systems shall be approved by the project geotechnical engineer prior to application.

Temporary cut slopes may be constructed to facilitate retaining wall construction. We anticipate that subsurface conditions will be favorable for construction of temporary cut slopes no steeper than ½:1 (H:V) for a maximum height of approximately 6 feet. Cuts into existing fill may need to be flatter to remain stable. To reduce the likelihood of sloughing or failure, temporary cut slopes should not remain over the winter or heavy storm events.

An NV5 representative must observe temporary cut slopes steeper than 1½:1 (H:V) during grading to confirm the soil conditions encountered. We recommend that personnel not be allowed between the cut slope and the proposed retaining structure, form work, grading equipment, or parked vehicles during construction, unless the stability of the slope has been reviewed by NV5 or the slope has been confirmed to meet OSHA excavation standards.

Differential Fill Depth. The recommendations presented in this section are intended to reduce the magnitude of differential settlement-induced structural distress associated with variable fill depth beneath structures.

1. Site grading should be performed so that cut-fill transition lines do not occur directly beneath any structures. The cut portion of the cut-fill building pads, if proposed, should be scarified to a minimum depth of 12 inches, and recompacted to 95 percent relative compaction.

2. Differential fill depths beneath structures should not exceed 5 feet. For example, if the maximum fill depth is 8 feet across a building pad, the minimum fill depth beneath that pad should not be less than 3 feet. If a cut-fill building pad is used in this example, the cut portion would need to be over excavated 3 feet and rebuilt with compacted fill.

Temporary Excavations. All temporary excavations must comply with applicable local, state and federal safety regulations, including the current Occupational Safety and Hazards Administration (OSHA) excavation and trench safety standards. Construction site safety is the responsibility of the contractor, who is solely responsible for the means, methods and sequencing of construction operations. Under no circumstances should the findings, conclusions and recommendations presented herein be inferred to mean that NV5 is assuming any responsibility for temporary excavations, or for the design, installation, maintenance and performance of any temporary shoring, bracing, underpinning or other similar systems. NV5 could provide temporary cut slope gradients, if required.

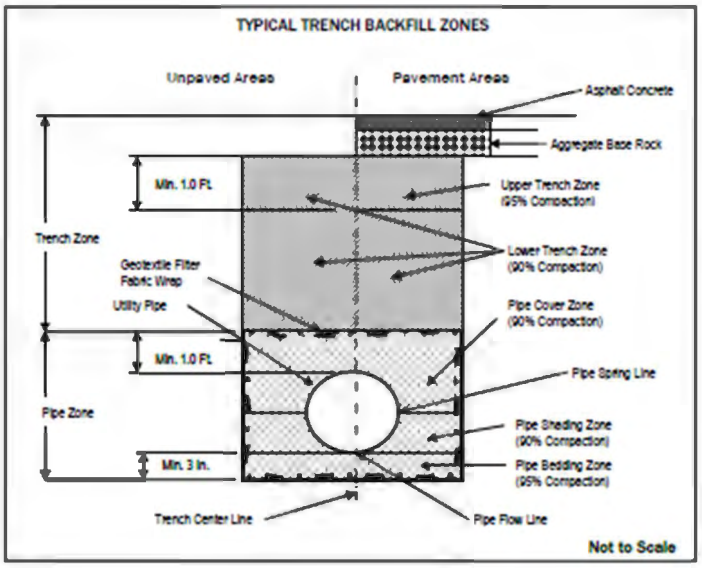
Underground Utility Trenches. Underground utility trenches should be excavated and backfilled as described below for each trench zone shown in the figure below.

1. Trench Excavation Equipment: NV5 anticipates that the contractor will be able to excavate all underground utility trenches to depths of five feet, or in areas of cuts greater than 3 feet bgs, with a Case 580 Backhoe or equivalent. Underground utility trenches greater than 5 feet bgs, or in areas of cuts greater than 3 feet, may require blasting or ripper teeth on an excavator to facilitate removal of the bedrock.

2. Trench Shoring: All utility trenches that are excavated deeper than 4 feet bgs are required by California OSHA to be shored with bracing equipment or sloped back to an appropriate slope gradient prior to being entered by any individuals.

3. Trench Dewatering: If the utility trenches are excavated during the winter rainy season, shallow or perched groundwater seepage will likely be encountered. The earthwork contractor may need to employ dewatering methods as discussed in Section 5.1.14, “Construction Dewatering” in order to excavate, place and compact the trench backfill materials.

4. Pipe Zone Backfill Type and Compaction Requirements: The backfill material type and compaction requirements for the pipe zone, which includes the bedding zone, the shading zone and the cover zone are described in the detail below.



- Pipe Zone Backfill Material Type: Trench backfill used within the pipe zone, which includes the bedding zone, the shading zone, and the cover zone, should consist of ¾-inch-minus, washed, crushed rock. The crushed rock particle size gradation should meet the following requirements (percentages are expressed as dry weights using ASTM D422 test method): 100 percent passing the ¾-inch sieve, 80 to 100 percent passing the ½-inch sieve, 60 to 100 percent passing the 3/8-inch sieve, 0 to 30 percent passing the No. 4 sieve, 0 to 10 percent passing the No. 8 sieve, and 0 to 3 percent passing the No. 200 sieve. If groundwater is encountered within the trench during construction, or if groundwater is expected to rise during the rainy season to an elevation that will infiltrate the pipe zone within the trench, then the pipe zone material should be wrapped with a minimum 6 ounce per square yard, non-woven geotextile filter fabric such as TenCate® Mirifi N140 or an approved equivalent. The geotextile seam should be located along the trench centerline and have a minimum 1-foot overlap. If the utility pipes are coated with a corrosion protection material, then the pipes should be wrapped with a minimum 6 ounce per square yard, non-woven, geotextile cushion fabric such as TenCate® Mirifi N140 or an approved equivalent. The geotextile cushion fabric should have a minimum 6-inch seam overlap. The geotextile cushion fabric will protect the pipe from being scratched by the crushed rock backfill material.
- Pipe Bedding Zone Compaction: Trench backfill soil placed in the pipe bedding zone (beneath the utilities) should be a minimum of 3 inches thick, moisture conditioned to within ± 3 percentage points of the ASTM D1557 optimum moisture content and compacted to achieve a minimum relative compaction of 95 percent of the ASTM D1557 maximum dry density. Crushed rock should be mechanically consolidated under the observation of NV5.
- Pipe Shading Zone Compaction: Trench backfill soil placed within the pipe shading zone (above the bedding zone and to a height of one pipe radius above the pipe spring line) should be moisture conditioned to within ± 3 percentage points of the ASTM D1557 optimum moisture content and compacted to achieve a minimum relative compaction of 90 percent of the ASTM D1557 maximum dry density. Crushed rock should be mechanically consolidated under the observation of NV5. The pipe shading zone backfill material should be shovel-sliced to remove voids and to promote compaction.
- Pipe Cover Zone Compaction: Trench backfill soil placed within the pipe cover zone (above

the pipe shading zone to 1 foot over the pipe top surface) should be moisture conditioned to within ± 3 percentage points of the ASTM D1557 optimum moisture content and compacted to achieve a minimum relative compaction of 90 percent of the ASTM D1557 maximum dry density. Crushed rock should be mechanically consolidated under the observation of NV5.

- Groundwater Migration through Utility Trenches: Trench backfill for utilities exceeding 3 percent slope should incorporate Clay or CLSM check dams every 400 feet within any trenches excavated into competent bedrock to prevent sediment transportation along the trench alignment as a result of perched groundwater. Clay or CLSM check dams should be placed where utility trenches enter into a building footprint.

5. Trench Zone Backfill and Compaction Requirements: The trench zone backfill materials consist of both lower and upper zones, as discussed below.

   • Trench Zone Backfill Material Type: Soil used as trench backfill within the lower and upper intermediate zones, as shown on the preceding figure, should consist of non-expansive soil with a PI of less than or equal to 15 (based on ASTM D4318) and should not contain rocks greater than 3 inches in greatest dimension.
   • Lower Trench Zone Compaction: Soil used to construct the lower trench zone backfills should be uniformly moisture conditioned to within 0 and 4 percentage points of the ASTM D1557 optimum moisture content, placed in maximum 12-inch-thick loose lifts prior to compacting and compacted to achieve a minimum relative compaction of 90 percent of the ASTM D1557 maximum dry density.
   • Upper Trench Zone Compaction (Road and Parking Lot Areas): Soil used to construct the upper trench zone backfills should be uniformly moisture conditioned to within 0 and 4 percentage points greater than the ASTM D1557 optimum moisture content, placed in maximum 8-inch-thick loose lifts (layers) prior to compacting and compacted to achieve a minimum relative compaction of 95 percent of the ASTM D1557 maximum dry density.
   • Upper Trench Zone Compaction (Non-Road and Non-Parking Lot Areas): Soil used to construct the upper trench zone backfills should be uniformly moisture conditioned to within 0 and 2 percentage points greater than the ASTM D1557 optimum moisture content, placed in maximum 6-inch-thick loose lifts (layers) prior to compacting and compacted to achieve a minimum relative compaction of 90 percent of the ASTM D1557 maximum dry density.

6. CQA Testing and Observation Engineering Services: The moisture content, dry density and relative percent compaction of all engineered utility trench backfills should be tested by the project engineer's field representative during construction to evaluate whether the compacted trench backfill materials meet or exceed the minimum compaction and moisture content requirements presented in this report. The earthwork contractor shall assist the project engineer's field representative by excavating test pads with the onsite earth moving equipment.

   • Compaction Testing Frequencies: The field and laboratory CQA tests should be performed consistent with the testing frequencies presented in Table 5.1.9-1 or as modified by the project engineer to better suit the site conditions.

Table 5.1.9-1, Minimum Testing Frequencies for Utility Trench Backfill

ASTM No.	Test Description	Minimum Test Frequency[1]
D1557	Modified Proctor Compaction Curve	1 per 500 CY [2] Or Material Change
D6983	Nuclear Moisture and Density	1 per 100 LF per 24-Inch-Thick Compacted Backfill Layer [2] The maximum loose lift thickness shall not exceed 12-inches prior to compacting.

Notes: (1) These are minimum testing frequencies that may be increased or decreased at the project engineer's discretion on the basis of the site conditions encountered during grading.
(2) Whichever criteria provide the greatest number of tests.
ASTM No. = ASTM International Number
CY = cubic yards

- Final Proof Rolling: The prepared finished grade AB rock surface and/or finished subgrade soil surface of utility trench backfills should be proof rolled, as mentioned above in Section 5.1.4, "Engineered Fill."

Erosion Controls. Graded portions of the Site should be seeded as soon as possible to allow vegetation to become established prior to and during the rainy season. In addition, grading that results in greater than one acre of soil disturbance or in sensitive areas may require the preparation of a site-specific stormwater pollution prevention plan. As a minimum, the following controls should be installed prior to and during grading to reduce erosion.

1. Prior to commencement of site work, fiber rolls should be installed down slope of the proposed area of disturbance to reduce migration of sediment from the Site. Fiber rolls on slopes are intended to reduce sediment discharge from disturbed areas, reduce the velocity of water flow, and aid in the overall revegetation of slopes. The fiber rolls should remain in place until construction activity is complete and vegetation becomes established.

2. Erosion controls should be installed on all cut and fill slopes to minimize erosion caused by surface water runoff.

3. All soil exposed in permanent slope faces should be hydroseeded or hand seeded/strawed with an appropriate seed mixture compatible with the soil and climate conditions of the Site as recommended by the local Resource Conservation District. Alternatively, an appropriate manufactured erosion control mat may be applied.

4. If grading is performed during wet weather, exposed soil may be susceptible to excessive disturbance. This could create a situation where previously completed earthwork needs to be repaired, possibly leading to project delays. Sediment and erosion control efforts, particularly stormwater mitigation, should be implemented in accordance with local accepted industry standards and best management practices.

Wet Weather Grading. Generally, grading is performed more economically during the summer months when onsite soils are usually dry of optimum moisture content. Delays should be anticipated in site grading performed during the rainy season or early spring due to excessive moisture in onsite soils. Special and relatively expensive construction procedures, including dewatering of excavations and importing granular soils, should be anticipated if grading must be completed during the winter and early spring or if localized areas of soft saturated soils are found during grading in the summer and fall.

Open excavations also tend to be more unstable during wet weather as groundwater seeps towards the exposed cut or fill slopes. Severe sloughing and occasional slope failures should be anticipated. The occurrence of these events will require extensive clean up and the installation of slope protection measures, thus delaying projects. The general contractor is responsible for the performance, maintenance, and repair of temporary cut slopes.

Surface Water Drainage. Proper surface water drainage is important to the successful development of the project. NV5 recommends the following measures to help mitigate surface water drainage problems:

a. Slope final grades in structural areas so that surface water drains away from building pad finish subgrade at a minimum 2 percent slope for a minimum distance of 10-feet. For structures utilizing slab-on-grade interior floor systems they recommend increasing the slope to 4 percent.
b. To reduce surface water infiltration, compact and slope all soil placed adjacent to building foundations such that water is not allowed to pond. Backfill should be free of deleterious materials.
c. Direct all building downspouts to solid pipe collectors which discharge to natural drainage courses, storm sewers, catchment basins, infiltration subdrains or other drainage facilities.
d. Construct V-ditches at the top of cut and fill slopes where necessary to reduce concentrated surface water flow over slope faces. Typically, V-ditches should be 3 feet wide and at least 6 inches deep. Surface water collected in V-ditches should be directed away and downslope from proposed building pads and driveways into a drainage channel.

Infiltration Basins. It is NV5's opinion that the soils evaluated at the Site can be suitable for use of an onsite infiltration basin for water quality purposes for minor rainfall events, provided the soil infiltration parameters presented herein are incorporated into the basin design and designed by a qualified individual. Based on the soil conditions observed at the Site, the soil will infiltrate to the transition point between weathered rock and native soil and follow this transition to the adjacent drainage channel downhill from the basin. We recommend utilizing 0.12 inches per hour for basin design with the following recommendations implemented:

1. Minimize compaction for the bottom of the basin to promote infiltration and establish vegetation prior to rain events to increase infiltration. The basin must separate from the toe of any slopes over 4 to 1 with a keyway to avoid compromising the integrity of the keyway.
2. Provide an overflow pathway for drainage resulting from rainfall events that exceed the maximum rainfall to be treated and avoid damage through erosion.
3. Ensure the lowest excavated elevation for the basin does not extend into competent rock. If bottom elevation of basin is below competent rock, infiltration rate will be significantly reduced and groundwater will collect within the portion embedded within the rock and reduce the efficiency of the basin. Underdrain systems may be warranted to ensure this collection point has a route to gravity drain to a drainage pathway. Avoid obstructions along the sides of the infiltration basin, such as impermeable liners, that would inhibit lateral seepage at the transition between the weathered rock and surface soils. Consult with a landscape architect or qualified individual to determine proper depth of highly permeable planting media and drain rock layer, if a subdrain is warranted to ensure proper vegetation growth and runoff treatment.

Construction Dewatering. Seepage may be encountered during grading, particularly in deeper excavations made during site preparation. The earthwork contractor should be prepared to dewater excavations if seepage is encountered during grading. Seepage may be encountered if grading is performed during or immediately after the rainy season. In addition, perched groundwater may be encountered on low permeability soil or weathered rock layers even during the summer months. If subsurface seepage or groundwater conditions are encountered which prevent or restrict fill placement or construction of the proposed improvements, subdrains may be necessary. If groundwater or saturated soil conditions are encountered during grading, we should be retained to observe the conditions and provide site specific subsurface drainage recommendations. The following typical measures can be employed to mitigate the presence of seepage in excavations.

1. NV5 anticipates that dewatering of utility trenches can be performed by constructing sumps to depths below the trench bottom and removing the water with sump pumps.
2. Additional sump excavations and pumps should be added as necessary to keep the excavation bottom free of standing water and relatively dry when placing and compacting the trench backfill material.
3. If groundwater enters the trench faster than it can be removed by the dewatering system, the underlying compacted soil may become unstable while compacting successive soil lifts. If this occurs, the unstable soil may need to be removed and replaced with free draining open graded drain rock. If drain rock is used, it should meet or exceed the following gradation specifications: 100 percent passing the ¾- inch sieve, 95 to 100 percent passing the ½-inch sieve, 70 to 100 percent passing the ⅜-inch sieve, 0 to 55 percent passing the No. 4 sieve, 0 to 10 percent passing the No. 8 sieve, and 0 to 3 percent passing the No. 200 sieve. Other approved backfill materials can again be used after placing the drain rock to an elevation that is higher than the groundwater.
4. NV5 recommends that the utility trench excavations be performed as late in the summer months as possible to allow the groundwater table to reach its lowest seasonal elevation.

Soil Corrosion Potential. NV5 reviewed the Online Soil Survey prepared by the USDA Soil Conservation Service (*https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx*). Based on review of soil survey information the native soil conditions onsite possess a low to moderate corrosion potential for concrete and uncoated steel. To reduce the likelihood of corrosion problems, materials used for underground utilities, permanent subsurface drainage improvements, and foundation systems should be selected based on local experience and practice. If alternative or new construction methods or materials are being proposed, it may be appropriate to have the selected materials evaluated by a corrosion engineer for compatibility with the onsite soil and groundwater conditions.

Grading Plan Review and Construction Monitoring. Coordination between the design team and the geotechnical engineer is recommended to assure that the design is compatible with the soil, geologic and groundwater conditions encountered during our study. NV5's experience, and that of the engineering profession, clearly indicates that during the construction phase of a project the risks of costly design, construction and maintenance problems can be significantly reduced by retaining a design geotechnical engineering firm to review the project plans and specifications and to provide geotechnical engineering consultation, observation and CQA testing services during construction. Construction quality assurance includes review of plans and specifications and performing construction monitoring as described below.

1. NV5 should be allowed to review the final earthwork grading improvement plans prior to

commencement of construction to determine whether the recommendations have been implemented and, if necessary, to provide additional and/or modified recommendations.

2. Prior to commencing a new phase of construction, a meeting should be held at the Site that includes, but is not limited to, the owner or owner's representative, the general contractor, the grading contractor, the foundation contractor, the underground contractor, any specialty contractors, the project civil engineer, other members of the project design team and NV5. This meeting should serve as a time to discuss and answer questions regarding the recommendations presented herein and to establish the coordination procedure between the contractors and NV5.

3. Prior to commencement of a new phases of development on the Site, NV5 should be retained to observe the soil/rock conditions within and surrounding the proposed improvements to confirm or modify our recommendations. A preconstruction meeting with the contractor and subcontractors involved should be held to discuss and review the applicable recommendations of this report as they apply to the proposed construction.

4. NV5 should be retained to perform construction quality assurance (CQA) monitoring of all earthwork grading performed by the contractor to determine whether our recommendations have been implemented, and if necessary, provide additional and/or modified recommendations. Upon your request we will prepare a CQA geotechnical engineering services proposal that will present a work scope, a tentative schedule and a fee estimate for your consideration and authorization. If NV5 is not retained to provide geotechnical engineering CQA services during the construction phase of the project, then NV5 will not be responsible for geotechnical engineering CQA services provided by others nor any aspect of the project that fails to meet your or a third party's expectations in the future.

STRUCTURAL IMPROVEMENT DESIGN CRITERIA

The following sections present NV5's structural improvement design criteria and recommendations. The recommendations address foundations, seismic parameters, and concrete slabs-on-grade design.

Seismic Design Criteria. NV5 developed the code-based seismic design parameters in accordance with Section 1613 of the 2022 CBC and the Structural Engineers Association of California (SEAOC) and California Office of Statewide Health Planning and Development (OSHPD) "Seismic Design Maps" web application, formerly facilitated by the USGS. The internet-based application (*https://seismicmaps.org/*) is used for determining seismic design values from the 2016 ASCE-7 Standard, and the 2021 International Building Code (2021 IBC) in accordance with the 2022 CBC. The spectral acceleration, site class, site coefficients and adjusted maximum considered earthquake spectral response acceleration, and design spectral acceleration parameters are presented in Table 5.2.1-1. The Seismic Design Parameter detailed report from the SEAOC/OSHPD analysis is provided in Appendix C. Our classification of onsite soil conditions is based on field observations and laboratory tests. The onsite soil consists of fine-grained soil and weathered rock. Based on the presence of stiff fine grained and dense granular soil at relatively shallow depths, we classified the onsite soil as "very dense soil and soft rock" (Site Class "C") for design purposes.

Table 5.2.1-1, 2022 CBC Seismic Design Parameters

Description	Value	Reference
Latitude North (degree)	39.20787633	Google Earth
Longitude West (degree)	-121.20244327	Google Earth
Site Coefficient, F_a	1.287	*2022 CBC, Table 1613A.3.3(1); ASCE 7-16, Section 11.4.3*
Site Coefficient, F_v	1.500	*2022 CBC, Table 1613A.3.3(2); ASCE 7-16, Section 11.4.*
Site Class	C	*ASCE 7-16, Section 20.3, Table 20.3-1*
Short (0.2 sec) Spectral Response, S_s (g)	0.532	*ASCE 7-16, Section 11.4.3*
Long (1.0 sec) Spectral Response, S_1 (g)	0.237	*ASCE 7-16, Section 11.4.3*
Short (0.2 sec) MCE Spectral Response, S_{MS} (g)	0.685	*ASCE 7-16, Section 11.4.3*
Long (1.0 sec) MCE Spectral Response, S_{M1} (g)	0.356	*ASCE 7-16, Section 11.4.3*
Short (0.2 sec) Design Spectral Response, S_{DS} (g)	0.457	*ASCE 7-16, Section 11.4.3*
Long (1.0 sec) Design Spectral Response, S_{D1} (g)	0.237	*ASCE 7-16, Section 11.4.3*
Risk Category (I, II, III or IV)	II	*ASCE 7-16, Table 1.5.1*
Seismic Design Category, SDC	D	*ASCE 7-16, Section 11.6*
Geometric Mean Peak Ground Acceleration (PGA_M) (g)	0.276	*ASCE 7-16, Section 11.8.3*

Notes:
CBC = California Building Code
ASCE = American Society of Civil Engineers
MCE = Maximum Considered Earthquake
sec = second
g = gravitational acceleration

Foundations. Provided that the grading for the project is performed in accordance with the recommendations presented in this report, our opinion is that the Site will be suitable for the use of conventional shallow foundations including perimeter foundations, isolated interior footings, and interior slabs-on-grade. Following are our recommendations for foundations constructed on compacted and tested fill or competent native soil:

Shallow continuous and isolated spread foundations

1. Footings for single story structures should be a minimum of 12 inches wide and trenched through any loose surface material, potentially expansive soil, or untested fill, and a minimum of 12 inches into competent native soil, weathered rock or compacted fill. Footings for two-story structures, if proposed, should be a minimum of 15 inches wide and trenched a minimum of 18 inches into competent native soil, weathered rock or compacted fill. If clay is encountered at the base of footing excavations, the footing should be deepened through the clay lens into underlying granular material or weathered rock, as determined in the field by NV5.

2. Footing trenches should be cleaned of all loose soil and construction debris prior to placing concrete. A representative from NV5 should observe the footing excavations prior to concrete placement.

3. As a minimum, the footings should be designed with two No. 4 rebar reinforcement, one near the top of the footing and one near the bottom. Concrete coverage over steel reinforcements

should be a minimum of 3 inches as recommended by the American Concrete Institute (ACI).

4. The concrete should have a minimum 2,500 pounds per square inch compressive break strength after 28 days of curing, have a water-to-cement ratio from 0.40 to 0.50, and should be placed with minimum and maximum slumps of 4 and 6 inches, respectively. Since water is often added to uncured concrete to increase workability, it is important that strict quality control measures be employed during placement of the foundation concrete to ensure that the water-to-cement ratio is not altered prior to or during placement.

5. Footing excavations should be saturated prior to placing concrete to reduce the risk of problems caused by wicking of moisture from curing concrete. However, concrete should not be placed through standing water in the footing excavations.

6. Bearing Capacity: In an effort to reduce the likelihood of settlement-induced distress to the proposed structures, we recommend that strip and isolated footings with a minimum embedment depth of 12 inches in competent soil or compacted fill be sized for an allowable bearing capacity of 2,500 psf for dead plus live loads. This value can be increased by 300 psf for each additional foot of embedment up to a limiting value of 3,100 psf. Allowable bearing may be increased by 33 percent for additional transient loading, such as wind or seismic loads.

7. Lateral Resistance: A triangularly distributed lateral resistance (passive soil resistance) of 300d psf, where d is footing depth, may be used for footings. This value may be increased by 33 percent for wind and seismic. As an alternate to the passive soil resistance described above, a coefficient of friction for resistance to sliding of 0.35 may be used. Both values can be combined for short-term transient loading.

8. Total settlement of individual foundations will vary depending on the plan dimensions of the foundation and actual structural loading. Based on anticipated foundation dimensions and loads, we estimate that total post-construction settlement of footings designed and constructed in accordance with our recommendations will be on the order of ½-inch. Differential settlement between similarly loaded, adjacent footings is expected to be less than ¼-inch, provided footings are founded on similar materials (e.g., all on structural fill, native soil, or rock). Differential settlement between adjacent footings founded on dissimilar materials (e.g., one footing on soil and an adjacent footing on rock) may approach the maximum anticipated total settlement. Settlement of foundations is expected to occur rapidly and should be essentially complete shortly after initial application of loads.

9. Prior to placing concrete in any foundation excavation, the project geotechnical engineer or their field representative should observe the excavations to document that the following requirements have been achieved: minimum foundation dimensions, minimum reinforcement steel placement and dimensions, removal of all loose soil, rock, wood debris or other deleterious materials, and that firm and competent native or engineered fill soil is exposed along the entire foundation excavation bottom and no expansive soil is observed. Strict adherence to these requirements is paramount to the satisfactory behavior of a building foundation. Minor deviations from these requirements can cause the foundations to undergo minor to severe amounts of settlement which can result in cracks developing in the foundation and adjacent structural members, such as concrete slab-on-grade floors.

Concrete Slab-On-Grade Interior, Sidewalk and Patio

NV5's opinion is that interior concrete slab-on-grade building floors, patios, sidewalks and driveways may be used in conjunction with perimeter concrete foundations for the proposed improvements. The applicable project structural or civil engineer should design slabs-on-grade with regard to the anticipated loading. This section presents typical slab sections and reinforcement schedules used for residential construction in the region and construction recommendations. NV5 recommends using the guideline procedures, methods and material properties that are presented in the following ASTM and ACI documents for construction of concrete slab-on-grade floors:

- ACI 302.1R-04, Guide for Concrete Floor and Slab Construction, reported by ACI Committee 302.
- ASTM E1643-98 (Reapproved 2005), Standard Practice for Installation of Water Vapor Retarders Used in Contact with Earth or Granular Fill Under Concrete Slabs.
- ASTM E1745-97 (Reapproved 2004), Standard Specifications for Plastic Water Vapor Retarders Used in Contact with Soil or Granular Fill under Concrete Slabs.
- ASTM F710-5, Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring.

The concrete slab-on-grade components are described below from top to bottom. If static or intermittent live floor loads greater than 250 pounds per square foot (psf) are anticipated, then a California-licensed structural engineer should design the necessary concrete slab-on-grade floor thickness and steel reinforcements.

1. Minimum 4-Inch-Thick Concrete Slab: The concrete slab should be installed with a minimum 2,500 pounds per square inch (psi) compressive strength after 28 days of curing. NV5 recommends that the concrete design have a water/cement ratio no greater than 0.45 and should be placed with minimum and maximum slumps of 3 and 5 inches, respectively. Pozzolans or other additives may be added to increase workability. The concrete mix design is the responsibility of the concrete supplier. The slab-on-grade should be a minimum of 4 inches thick.

2. Steel Reinforcement: Reinforcement should be used to improve the load-carrying capacity, to reduce cracking caused by shrinkage during curing and from both differential and repeated loadings. It should be understood that it is nearly impossible to prevent all cracks from development in concrete slabs; in other words, it should be expected that some cracking will occur in all concrete slabs no matter how well they are reinforced. Concrete slabs that will be subjected to heavy loads should be designed with steel reinforcements by a California licensed structural engineer.

3. Rebar: As a minimum, use No. 3 rebar (ASTM A615/A 615M-04 Grade 60), tied and placed with minimum 18-inch centers in both directions (perpendicular) and supported on concrete "dobies" to position the rebar in the center of the slab during concrete pouring. "Hooking and pulling" of steel during concrete placement is not recommended. NV5 does not recommend that the steel reinforcements of the concrete slab-on-grade floor be tied into the perimeter or interior continuous strip foundations or interior isolated column foundations. In other words, we recommend that the concrete slab-on-grade floors be constructed as independent structural members so that they can move (float) independently from the foundation structures.

4. Under slab Vapor-Moisture Retarder Membrane: In slab-on-grade areas where moisture

sensitive floor coverings are proposed, an under slab retarder membrane should be placed over the base course or gravel subdrain to reduce both liquid water and water vapor transmission through the concrete slab-on-grade floor. NV5 recommends using at a minimum a Class A (ASTM E1745-97 [Reapproved 2004]), minimum 15-mil-thick, plastic, vapor-moisture, retarder membrane material such as Stego Wrap® under slab vapor retarder membranes or equivalents. Additionally, the following materials are recommended: Stego® Tape and Stego® Mastic or equivalents to seal membrane joints and any utility penetrations. The vapor barrier should be installed in accordance with the selected manufacturer's instructions. Concrete should be placed directly on the vapor barrier.

5. Regardless of the type of moisture-vapor retarder membrane used, moisture can wick up through a concrete slab-on-grade floor. Excessive moisture transmission through a concrete slab floor can cause adhesion loss, warping and peeling of resilient floor coverings, deterioration of adhesive, seam separation, formation of air pockets, mineral deposition beneath flooring, odor and both fungi and mold growth. Slabs can be tested for water transmissivity in areas that are moisture sensitive. Commercial sealants, polymer additives to the concrete at the batch plant, entrained air, flyash, and a reduced water-to-content ratio can be incorporated into the concrete slab-on-grade floor mix design to reduce its permeability and water-vapor transmissivity properties. A waterproofing consultant should be contacted to provide detailed recommendations if moisture sensitive flooring materials will be installed on the concrete slab-on-grade floors.

6. Minimum 4-Inch-Thick Crushed Rock or Class II Aggregate Base Rock Layer: Interior floors should be underlain by clean crushed rock, while exterior floors should use either crushed rock or Class II AB rock. Crushed rock should be mechanically consolidated under the observation of NV5. AB rock layers should be placed and compacted to a minimum of 95 percent of the ASTM D1557 dry density with a moisture content of ± 3 percentage points of the ASTM D1557 optimum moisture content. The crushed rock should be washed to produce a particle size distribution of 100 percent (by dry weight) passing the ¾ inch sieve and 5 percent passing the No. 4 sieve and 0 to 3 percent passing the No. 200 sieve. An alternative rock material for external slab-on-grade concrete surfaces would include AB rock meeting the specification of Caltrans Class II AB. Just prior to pouring the concrete slab, the rock layer should be moistened to a saturated surface dry (SSD) condition. This measure will reduce the potential for water to be withdrawn from the bottom of the concrete slab while it is curing and will help minimize the development of shrinkage cracks. Where traffic loads are possible, we recommend a minimum concrete thickness of six inches.

7. Concrete slabs impart a relatively small load on the subgrade (approximately 50 psf). Therefore, some vertical movement should be anticipated from possible expansion, freeze-thaw cycles, or differential loading. If the current property owner elects to eliminate the crushed rock or AB rock layer beneath the interior and exterior concrete slabs-on-grade for economic reasons, then there will be an inherent greater risk assumed by the developer for the development of both shrinkage and bearing-related cracks in the associated slabs.

8. Subgrade Soil Preparation: The subgrade soil should be prepared and compacted consistent with the recommendations of Section 5.1, "Grading." The top 12 inches of the non-expansive soil should be compacted to a minimum of 95 percent of the ASTM D1557 dry density with relatively uniform moisture content within ± 3 percentage points of the ASTM D1557 optimum moisture content. Prior to placing slab rock, subgrade soil must be moisture conditioned to

between 75 and 90 percent saturation to a depth of 24 inches. Moisture conditioning should be performed for a minimum of 24 hours prior to concrete placement. Clayey soil may take up to 72 hours to reach this required degree of saturation. If the soil is not moisture conditioned prior to placing concrete, moisture will be wicked out of the concrete, possibly contributing to shrinkage cracks. Additionally, our opinion is that moisture conditioning the soil prior to placing concrete will reduce the likelihood of soil swell or heave following construction at locations where fine grained, potentially expansive soil is encountered. To facilitate slab-on-grade construction, we recommend that the slab subgrade soil be moisture conditioned following rock placement. Following moisture conditioning, the vapor retarder should be placed.

9. Crack Control Grooves: Crack control grooves should be installed during placement or saw cuts should be made in accordance with the ACI and Portland Cement Association (PCA) specifications. Generally, NV5 recommends that expansion joints be provided between the slab and perimeter footings, and that crack control grooves or saw cuts are installed on10-foot-centers in both directions (perpendicular).

10. Field Observations: Field observations of all concrete slab-on-grade surfaces and installed steel reinforcements should be made by an NV5 construction monitor prior to pouring concrete.

11. To reduce the potential for groundwater intrusion, a drain may be constructed beneath concrete slabs-on-grade in areas where groundwater and/or saturated soil may be present during wet periods. Subdrains should consist of a minimum of four inches of clean crushed gravel placed over native subgrade leveled or sloped at two percent towards a 4-inch diameter perforated drain pipe. The drain pipe should be placed with perforations faced down in a minimum 12-inch wide gravel-filled trench. The depth of the trench may vary depending on cover requirements for the drain pipe and the slope required to drain water from beneath the slab to a properly constructed infiltration facility. A minimum of one pipe should be installed in each area of the slab surrounded by continuous perimeter foundation elements.

12. In general, NV5 recommends that subgrade elevations on which the concrete slab-on-grade floors are constructed be a minimum of 6 inches above the elevation of the surrounding parking lots, driveways and landscaped areas. Elevating the building will reduce the potential for subsurface water to enter beneath the concrete slab-on-grade floors and exterior surfaces and underground utility trenches. The subgrade soil around the slabs-on-grade should be sloped away from the proposed slab subgrade a minimum of 4 percent for a distance of 10 feet as discussed in the" Surface Water Drainage" section of this report. A representative from NV5 should observe pad and subgrade elevations prior to forming the slab footings.

13. Concrete slabs should be moisture cured for at least seven days after placement. Excessive curling of the slab may occur if moisture conditioning is not performed. This is especially critical for slabs that are cast during the warm summer months.

Retaining Wall Design Criteria. The following active and passive pressures are for retaining walls in cut native soil or backfilled with granular onsite soil. If import soil is used, a representative from NV5 should be retained to observe and test the soil to determine its strength properties. The pressures exerted against retaining walls may be assumed to be equal to a fluid of equivalent unit weight.

Table 5.2.3-1 presents equivalent fluid unit weights for cut native soil and onsite fill compacted per the grading recommendations presented in this report. For approximately horizontal backfill we assume that the retained fill surface will be no steeper than 10 percent for a minimum distance of the wall height from the back of the retaining wall. The passive pressures below assume footings are founded in competent native soil or engineered fill.

Table 5.2.3-1, Equivalent Fluid Unit Weights (1)

Loading Condition	Retained Cut or Compacted Fill (approximately horizontal backfill)	Retained Cut or Compacted Fill (retained slope up to 2:1, H:V)
Active Pressure (pcf)	30	45
Passive Pressure (pcf)	300	300
At-Rest Pressure (pcf)	45	55
Coefficient of Friction	0.35	0.35

Note: (1) The equivalent fluid unit weights presented are ultimate values and do not include a factor of safety. The passive pressures provided assume footings are founded in competent native soil or engineered fill.

Please note that the use of the tabulated active pressure unit weight requires that the wall design accommodate sufficient deflection for mobilization of the retained soil to occur. Typically, a wall yield of less than 1 percent of the wall height is sufficient to mobilize active conditions in granular soil. However, if the walls are rigid or restrained to prevent rotation, at-rest conditions should be used for design.

Recommendations for design and construction of retaining walls are listed below:

1. Compaction equipment should not be used directly adjacent to retaining walls unless the wall is designed or braced to resist the additional lateral pressures.

2. If any surface loads are closer to the top of the retaining wall than its height, NV5 should review the loads and loading configuration. NV5 should review and provide specific backfill criteria for all retaining walls over 10 feet in height. Utilities that run through retaining wall backfill should allow for vertical movement where they pass through the wall.

3. Retaining wall backfill should consist of granular material, nearly free of organic debris, with a liquid limit less than 40, a plasticity index less than 15, 100 percent passing the 8-inch sieve, and less than 30 percent passing the No. 200 sieve. Expansive soils should not be used for wall backfill. Where expansive soils are present in the excavation made to install the retaining wall, the excavation should be sloped back 1:1 from the back of the footing or grade beam.

4. Backfill should be uniformly moisture conditioned to within two percent of the optimum moisture content and compacted with appropriate compaction equipment to at least 90 percent of the maximum dry density. If the retaining wall backfill will support foundations or rigid pavements, the backfill should be compacted to at least 95 percent of the maximum dry density.

5. Additional lateral loading on retaining structures due to seismic accelerations may be considered at the designer's option, especially for walls greater than 6 feet in height. For an

earthquake producing a design horizontal acceleration of 0.2g, we recommend that the resulting additional lateral force applied to unrestrained (cantilevered) retaining structures with drained level backfill onsite be estimated as Pae=4H2 pounds, where H is the height of the wall in feet a Pae value of 10H2 should be used for restrained walls. The additional seismic force may be assumed to be applied at a height of 0.3H above the base of the wall. This seismic loading is for a drained, level backfill condition only; NV5 should be consulted for values of seismic loading due to non-level or non-drained backfill conditions. The use of reduced factors of safety is often appropriate when reviewing overturning and sliding resistance during seismic events.

Retaining walls should be supported on spread footings or drilled piers, as applicable, designed in accordance with the recommendations presented in this report. Retaining wall foundations should be designed by the project civil or structural engineer to resist the lateral forces set forth in this section.

Retaining Wall Backdrains

1. Retaining wall design criteria presented in Table 5.2.3-1 assume that retaining walls are well drained to reduce hydrostatic pressures. Walls should be designed with a back-drain system, such as a gravel drain or geosynthetic blanket, to reduce additional lateral forces and minimize saturation of the backfill soil. Retaining walls designed to resist full hydrostatic pressure do not need to be backdrained.

2. Rock drains should consist of a minimum 12-inch wide, Caltrans Class II, permeable drainage blanket, placed directly behind the wall; or crushed washed rock enveloped in a non-woven geotextile filter fabric such as Amoco 4546™ or equivalent. The drain material should extend to within 1½ feet of the surface. The upper 1½ feet should be backfilled with compacted soil to exclude surface water. Drains should have a minimum 4-inch diameter, perforated, schedule 40, PVC pipe placed at the base of the wall, inside the drain rock, with the perforations placed down. The PVC pipe should be sloped so that water is directed away from the wall by gravity. A geosynthetic drainage blanket such as Enkadrain™ or equivalent may be substituted for the rock drain, provided the collected water is channeled away from the wall. If a geosynthetic blanket is used, backfill must be compacted carefully so that equipment or soil does not tear or crush the drainage blanket.

3. Adequate drainage and waterproofing for retaining walls associated with finished interior spaces are essential to reduce the likelihood of seepage and vapor transmission into the living space. We recommend that an appropriate waterproofing sealant be applied to the exterior surface of such retaining walls. Moisture retarding material should consist of sheet membrane rubberized asphalt, polymer-modified asphalt, butyl rubber, or other approved material capable of bridging nonstructural cracks, applied in accordance with the manufacturer's recommendations. A manufactured water-stop and/or key should be placed at all cold joints. The project architect or contractor may wish to consult with a waterproofing expert regarding additional options for reducing moisture migration into living areas.

GEOTECHNICAL DRAINAGE

This section of the report presents NV5's recommendations to reduce the possibility of surface water and near-surface groundwater entering below grade areas. For the discussion of subsurface drainage related to grading, refer to Section 5.1.14, "Construction Dewatering."

Based on NV5's observations and past experience with geotechnical investigations in the project vicinity, there is a likely potential for seasonal saturation of near-surface soil and groundwater seepage into foundation areas. Depending on final site grades, rainfall, irrigation practices, and other factors beyond the scope of this study, perched groundwater will likely seasonally develop above onsite rock and/or fine-grained soil. Near-surface groundwater may enter under-floor crawlspaces, migrate through concrete floor slabs, degrade asphalt concrete pavements, increase frost heave, and contribute to other adverse conditions.

Surface. Final site grading should be planned so that surface water is directed away from all slopes foundations and hardscapes including pavements. Ponding of surface water should not be allowed near pavements or structures. Grades should be sloped away from structures a minimum of 2 percent in paved areas and 4 percent for unpaved areas, and drainage gradients should be maintained to carry all surface water to a properly designed infiltration facility. Where a gradient flatter than 2 percent for paved areas and 4 percent for unpaved areas is required to satisfy design constraints, area drains should be installed within the rear and side yard swales with a spacing no greater than about 20 feet. The surface drainage system should generally be kept separate from the any subsurface drainage system. Surface water should not be infiltrated at elevations above the lowest foundation elements.

Water seepage or the spread of extensive root systems into the soil subgrade of footings, slabs or pavements could cause differential movements and consequent distress in these structural elements. Landscaping should be planned with consideration for these potential problems. Backfill soil placed adjacent to building foundations should be placed and compacted such that water is not allowed to pond or infiltrate. Backfill should be free of deleterious material and placed and compacted in accordance with the recommendations presented in Section 5.1, "Grading."

Roofs should be provided with gutters and the downspouts should empty onto splash blocks that discharge directly onto paved areas or be connected to a closed collector pipe that discharges flow to positive drainage well away from foundations, onto paved areas (or) erosion resistant natural drainages or into the Site's surface drainage system. Roof downspouts and surface drains must be maintained entirely separate from the slab underdrains recommended hereinafter.

Where lots abut natural slopes and excavations are retained by wooden bulkheads, persistent seepage of groundwater into rear yards should be anticipated. In order to mitigate this condition, both surface and subsurface drains should be installed in the rear yard. The subdrains should be installed at the base of the bulkhead and should be constructed as the perimeter foundation drains, subsequently discussed.

Perimeter Foundation Drains. Where interior crawl spaces are lower than adjacent exterior grade, exterior subdrains should be installed adjacent to perimeter foundations, except on the downhill side, to prevent surface runoff from entering the crawl space. Foundation drains should consist of trenches that are at least 12 inches below the crawl space surface and are sloped to drain by gravity. Four-inch diameter perforated pipe sloped to drain to outlets by gravity should be placed in the bottom of the trenches. The top of subdrain pipes should be at least 12 inches lower

than the adjacent crawl space grade. The perimeter subdrain trenches should be backfilled to within 6 inches of the surface with Class 2 permeable material or ¾-inch drain rock wrapped in filter fabric. The upper 6 inches should be backfilled with compacted soil to exclude surface water. Where perimeter foundation drains are not used, water ponding in the crawl space should be anticipated. Where retaining walls are used for perimeter foundations, retaining wall backdrains may be used in lieu of foundation drains.

Slab Underdrains. Where living area (interior) slab subgrades are less than 6 inches above adjacent exterior grade and where migration of moisture through the slab would be detrimental, slab underdrains or blanket drains should be considered in slab-on-grade floor areas to reduce moisture transmission through the floor and help maintain subgrade support. Slab underdrains should consist of 6-inch wide trenches that extend at least 6 inches below the bottom of the slab rock and slope to drain by gravity. The slab underdrain trenches should be spaced no further than 20 feet apart, both ways. Additional drain trenches should be installed, as necessary, to drain all isolated under slab areas. Four-inch diameter perforated pipe (SDR 35 or better) sloped to drain to outlets by gravity should be placed in the bottom of the trenches. Slab underdrain trenches should be backfilled to subgrade level with clean, free draining slab rock. If slab underdrains are not used, it should be anticipated that water will enter the slab rock, permeate through the concrete slab and ruin floor coverings.