ALL CELL PHONES AND ELECTRONIC DEVICES MUST BE TURNED OFF IN THE COUNCIL CHAMBERS

AGENDA

REEDLEY PLANNING COMMISSION REGULAR MEETING

5:00 P.M. – THURSDAY, MARCH 5, 2015

Meeting will be held at:

City of Reedley Council Chambers
845 "G" Street
Reedley, California 93654

The Council Chambers are accessible to the physically disabled. Requests for additional accommodations for the disabled, including auxiliary aids or services, should be made one week prior to the meeting by contacting the City Clerk at 637-4200 ext. 212.

City of Reedley's Internet Address: www.reedley.com/

Commissioners
Alberto Custodio, Chairman
Pete Perez, Vice-Chairman
Dawn Barcellos Gabriel Gutierrez Ron Hudson

Staff
Kevin Fabino, Community Development Director
Ellen Moore, Assistant Planner

PLEDGE OF ALLEGIANCE

ROLL CALL

PUBLIC COMMENT – *Provides an opportunity for members of the public to address the Planning Commission on items of interest to the public within the Commission's jurisdiction and which are not already on the agenda this evening. It is the policy of the Commission not to answer questions impromptu. Concerns or complaints will be referred to the Community Development Director's office. Speakers should limit their comments to not more than three (3) minutes. No more than ten (10) minutes per issue will be allowed. For items which are on the agenda this evening, members of the public will be provided an opportunity to address the Commission as each item is brought up for discussion.*

NOTICE TO PUBLIC

*Under a **CONSENT AGENDA** category, a recommended course of action for each item is made. Any Commissioner may remove any item from the **CONSENT AGENDA** in order to discuss and/or change the recommended course of action, and the Commission can approve the remainder of the **CONSENT AGENDA**.*

CONSENT AGENDA

1. Minutes of Regular Meeting, February 5, 2015 - Recommend Commission Approve.

PUBLIC HEARING

2. Consideration of General Plan Amendment Application No. 2014-01, Change of Zone Application No. 2014-02 and related Environmental Assessment No. 2014-13

    a) RECOMMEND TO THE CITY COUNCIL APPROVAL of the Negative Declaration (Environmental Assessment No. 2014-13) dated February 11, 2015, for the purpose of the proposed general plan amendment and change of zoning applications.

    b) RECOMMEND TO THE CITY COUNCIL APPROVAL of General Plan Amendment No. 2014-01, which is requesting the existing low density residential (4-8 dwelling units per acre) planned land use designation be reclassified to public facilities planned land use designation (±13-acres). A portion of the existing high density residential (15-29 dwelling units per acre) located at the northwesterly portion of the subject property is proposed to be changed to service commercial planned land use designation (±3-acres). The remaining ±3-acre portion of the existing high density planned land use designation is modified along the northern boundary of the property in a more orderly fashion.

    c) RECOMMEND TO THE CITY COUNCIL APPROVAL of Change of Zone Application No. 2014-02, which is requesting the reclassification of 3-acres, located in the northwesterly corner of the subject property from the RM(SP) (Multi-Family Residential-Specific Plan) zone district to the CS (*Service Commercial*) zone district designation.

3. Consideration and Support for Initiating a City-wide Change of Zone Application

    a) PLANNING COMMISSION has considered and supports the initiation of a city-wide Change of Zone Application.

    b) RECOMMEND TO THE CITY COUNCIL authorization to initiate a city-wide Change of Zone Application.

4. Consideration of Conditional Use Permit Application No. 2014-05, "Vesting" Tentative Tract Map No. 6096, dated December 17, 2014, and Environmental Assessment No. 2014-13, dated February 11, 2015, related to the proposed Kings River Village, Mixed-Use Project

    a) Through Resolution No. 2015-04, RECOMMEND TO THE CITY COUNCIL APPROVAL, of the Environmental Assessment No. 2014-13, a Mitigated Negative Declaration (MND), dated February 11, 2015, for the purpose of the proposed conditional use permit and tentative tract map applications.

    b) Through Resolution No. 2015-04, RECOMMEND TO THE CITY COUNCIL APPROVAL of Conditional Use Permit Application No. 2014-05, authorizing a mixed use project, pursuant to the Reedley Municipal Code, §10-13-9, Mixed Use. Proposed are 341 residential dwelling units

of various types, a combination of office and commercial/retail (@155,030 sq. ft.), and the Kings River Village, Master Development Guidelines, dated December 17, 2014.

c) Through Resolution No. 2015-05, APPROVE the Vesting Tentative Map No. 6096, dated December 17, 2014, authorizing the subdivision of land pursuant to the Subdivision Map Act.

COMMUNITY DEVELOPMENT DIRECTOR'S REPORT

3. Planning Project Updates
4. Engineering Project Updates

FUTURE AGENDA ITEMS

- March 19, 2015 - Development Impact Fees
- April 2, 2015 - Text Amendment
- April 16, 2015 - Conditional Use Permit
- May 7, 2015 - Text Amendment

ADJOURNMENT

REEDLEY PLANNING COMMISSION REGULAR MEETING – February 5, 2015

The regular meeting of the Reedley Planning Commission was held Thursday, February 5, 2015, in the City of Reedley Council Chambers, 845 "G" Street, Reedley. Chairman Custodio called the meeting to order at 5:00 p.m.

Pledge of Allegiance - led by Chairman Custodio.

ROLL CALL

Commissioners Present: Dawn Barcellos, Alberto Custodio, Gabriel Gutierrez, Pete Perez, and Ron Hudson.

Commissioners Excused: None.

City Staff Present: Kevin Fabino, Community Development Director and Ellen Moore, Assistant Planner.

PUBLIC COMMENT: None

CONSENT AGENDA

1. MINUTES OF SPECIAL MEETING, JANUARY 22, 2015

C. Hudson moved, C. Perez seconded, to approve the MINUTES OF THE SPECIAL MEETING OF JANUARY 22, 2015. Motion carried by the following vote:

AYES:	Hudson, Perez, Barcellos, Custodio.
NOES:	None.
ABSTAIN:	Gutierrez.
ABSENT:	None.

PUBLIC HEARING

2. Consideration of Tentative Parcel Map Application No. TPM-2015-1

a) APPROVE Environmental Assessment No. EA-2015-1, determining that Tentative Parcel Map Application No. TPM-2015-1 is exempt from CEQA, pursuant to Sections 15315 and 15332 of the CEQA Guidelines.

b) APPROVE Tentative Parcel Map Application No. TPM-2015-1, requesting authorization to subdivide one parcel (APN: 368-350-19) into two parcels of land for commercial development purposes.

Director K. Fabino presented the staff report to the Planning Commission.

Terra Mortensen of Galloway Planning, Architecture, & Engineering, 8050 North Palm Avenue, Fresno, CA 93711, spoke on behalf of the project.

The Planning Commission deliberated and discussed Tentative Parcel Map Application No. TPM-2015-1.

C. Perez moved, C. Gutierrez seconded, whereas the Planning Commission, using their independent judgment, approved Environmental Assessment No. EA-2015-1 and Tentative Parcel Map Application No. TPM-2015-1. Motion carried by the following vote:

AYES:	Perez, Gutierrez, Barcellos, Hudson, Custodio.
NOES:	None.
ABSTAIN:	None.
ABSENT:	None.

REEDLEY PLANNING COMMISSION REGULAR MEETING – February 5, 2015

COMMUNITY DEVELOPMENT DIRECTOR'S REPORT

Director K. Fabino gave an oral report of the current community development projects.

FUTURE AGENDA ITEMS

- February 19, 2015 - None; Meeting Cancelled
- March 5, 2015 - General Plan Amendment and Rezone Application
- March 19, 2015 - Vesting Tentative Subdivision Map and Conditional Use Permit
- April 2, 2015 - Text Amendment

Director K. Fabino discussed tentative future Planning Commission agenda items.

ADJOURNMENT

Meeting adjourned at 5:28 p.m.

ATTEST:

_____
Kevin E. Fabino, Secretary

_____
Alberto Custodio, Chairman
Reedley Planning Commission

REEDLEY PLANNING COMMISSION

ITEM NO: 2

DATE: March 5, 2015

TITLE: Consideration of General Plan Amendment Application No. 2014-01, Change of Zone Application No. 2014-02 and related Environmental Assessment No. 2014-13

SUBMITTED: Kevin E. Fabino, Director
Community Development Department

RECOMMENDATION

Staff recommends that the Planning Commission through Resolution 2015-02 take the following actions:

1. RECOMMEND TO THE CITY COUNCIL APPROVAL of the Negative Declaration (Environmental Assessment No. 2014-13) dated February 11, 2015, for the purpose of the proposed general plan amendment and change of zoning applications.

2. RECOMMEND TO THE CITY COUNCIL APPROVAL of General Plan Amendment No. 2014-01, which is requesting the existing low density residential (4-8 dwelling units/per acre) planned land use designation be reclassified to public facilities planned land use designation (±13-acres). A portion of the existing high density residential (15-29 dwelling units/per acre) located at the northwesterly portion of the subject property is proposed to be changed to service commercial planned land use designation (±3-acres). The remaining ±3-acre portion of the existing high density residential planned land use designation is modified along the northern boundary of the property in a more orderly fashion.

3. RECOMMEND TO THE CITY COUNCIL APPROVAL of Change of Zone Application No. 2014-02, which is requesting the reclassification of 3-acres, located in the northwesterly corner of the subject property from the RM (SP) (Multi-Family Residential-Specific Plan) zone district to the CS (*Service Commercial*) zone district designation.

EXECUTIVE SUMMARY

The purpose of these applications is to accommodate the future development of a groundwater recharge facility, a fire training center, and service commercial business. The City and Alta Irrigation District have committed to working jointly to develop a 10-acre stormwater and recharge basin. The proposed 3-acre parcel of undeveloped and vacant land on the northwest corner of Reed Avenue is proposed for a future commercial use. Under this proposal, two separate buildings (@25,000 sq. ft.) are to be constructed and will be used for administrative offices, funeral services, arrangements, vehicle garage and storage areas, and a self-contained cremation chamber, which will all meet state of California licensing and environmental standards.

The proposed planned land uses are consistent with the General Plan, guiding principles, and Land Use Element goals and policies. The proposed rezone application is also consistent with the Table 2-4 - Planned Land Use and Zone District Consistency Matrix of the Reedley General Plan Update 2030. Therefore, staff is recommending the Planning Commission recommend to the City Council the approval of the Negative Declaration, dated February 11, 2015, General Plan Amendment Application No. 2014-01 and Change of Zone Application No. 2014-02.

PROJECT DESCRIPTION/BACKGROUND

The City of Reedley has filed General Plan Amendment No. 2014-01 and Change of Zone Application No. 2014-02. The subject property (APN: 368-181-23) is approximately ±19-acres, bounded by Reed and Floral Avenues. The General Plan Amendment No. 2014-01 is requesting the existing low density residential (4-8 dwelling units/per acre) planned land use designation be reclassified to public facilities planned land use designation (±13-acres). A portion of the existing high density residential (15-29 dwelling units/per acre) located at the northwesterly portion of the subject property, is proposed to a service commercial planned land use designation (±3-acres). The remaining ±3-acre portion of the existing high density residential planned land use designation will be modified along the northern boundary of the property in a more orderly fashion. See the attached Exhibits A & B.

The Change of Zone Application No. 2014-02, proposes to reclassify 3-acres, located in the northwesterly corner of the subject property from the RM (SP) (Multi-Family Residential-Specific Plan) zone district to the CS (*Service Commercial*) zone district designation. The requested zone district designation is consistent with the GPU, Table 2-4 Planned Land Use and Zone District Consistency Matrix (Reedley GPU, Page 30). See the attached Exhibits C & D.

The purpose of these applications is to accommodate the future development of a groundwater recharge facility, a fire training center, and service commercial business. The project area is generally surrounded by existing residential development (Palm Village) to the north, unincorporated fallow farmland to the east, active agricultural activities to the south and west. The Reedley Cemetery is also directly west of the subject property. It should be noted that Floral Avenue is the jurisdictional boundary between the County of Fresno and County of Tulare.

The City and Alta Irrigation District (AID) have committed to working jointly to develop a 10-acre stormwater and recharge basin. The construction of a recharge/ponding basin further implements the General Plan Update 2030, ground water and storm water policies (e.g. CIR 3.10.18 and CIR 3.10.19). AID intend to jointly use this recharge facility as potential storage and recharge, while gaining the ability to divert water to either of its recharge or banking facilities downstream. The following benefits of this collaborative effort will minimize the potential environmental and development impacts:

- Increase the City's ability to recharge stormwater runoff by constructing a 29 acre basin.
- Reduce the number of single family homes developed from 209 to 151 at full build out.
- Eliminate the direct flow of unfiltered storm water into the Kings River.
- Kings River Conservation District supports the diversion of stormwater and recharge effort.
- Relocating existing stormwater facilities so that the Cemetery can expand.
- Eliminate a need for agricultural use and spraying adjacent to urban uses (health risk to surrounding residents).
- Reedley City Council and Alta Irrigation District Board of Directors are in full support of the project. The City and AID would jointly apply for grant funds to construct the recharge facility.
- Locates fire apparatus and training facilities outside of the urban core, where residents could be impacted by noise and activities.
- Project is fully funded by Development Impact Fees, grants and sale of surplus lands.

Also proposed is the construction of a Fire Training Center, which will facilitate and ensure the citizens of Reedley have adequate fire protection services. The Reedley Volunteer Fire Department has filed several grant applications for critically needed resources to protect the public, to train emergency personnel and to foster interoperability and support through community resilience. The purpose of many of these grant programs is enhanced through direct financial assistance, the health and safety of the public and firefighting personnel and to provide a continuum of support for emergency responders regarding fire, medical and all hazard events.

More specifically the Reedley Fire Department has sought the following, which could be live training opportunities on a dedicated portion of the subject property. Proposed are two Class "A" Mobile Live Fire and Rescue Training Trailers. The units will be designed to accommodate training in a manner which will provide for safety first, while allowing for realistic training scenarios. The unit is designed and built utilizing the most current codes, standards and recommendations published for this type of equipment. The trailer system will consist of two (2) level structures with door, hatch, and window openings. The system will be constructed from two (2) new 8' x 8.5' x 40' ISO containers and two (2) 40' ISO container chassis. Unit #1 will contain the burn room, and Unit # 2 will contain the SCBA and confined space props. When the containers are placed on the chassis, the overall height will be 13.5'.

With the above objectives, the Reedley volunteers can achieve NFPA requirements for certification as firefighters and perform required annual refresher courses. It will keep the volunteers here in the City and prevent them from using valuable time-off from their everyday jobs to attend trainings. Recruitment and retention of the volunteer firefighters is critical for this City to maintain emergency fire and rescue services. If the Fire Department can attain the proper equipment and train the volunteers, the net result will gain firefighter safety, proficiency, commitment and future firefighters. This is the final hurdle for this volunteer fire department as to whether or not a volunteer can attend live fire training, become certified, and remain interested in serving the community.

The proposed 3-acre parcel of undeveloped and vacant land on the northwest corner of Reed Avenue is proposed for a future commercial use. Under this proposal, two separate buildings (@25,000 sq. ft.) are to be constructed and will be used for administrative offices, funeral services, arrangements, vehicle garage and storage areas, and a self-contained cremation chamber, which will all meet state of California licensing and environmental standards.

Both buildings will be wood framing construction and will be built on a typical slab-on-grade foundation, with a cement plaster finish. Both buildings will be designed with low-slope roofing systems and parapets. Some exposed tile roofing may be introduced. Additionally, the proposed project site will be paved, accessed and landscaped. Other site amenities will likely be provided such as pedestrian concrete flat work, site furnishings, special planting and gathering areas.

Proposed business hours of operations associated with public services are form 8:00 a.m. to 5:00 p.m., seven days a week. The estimated maximum number of employees on-site at any given time is 15. Deliveries will be made during normal working hours and made with vehicles weighing less than 2-ton and could occur 2 or 3 times a week.

By reference, no mechanical equipment related to this facility is "anticipated to generate any noise or waste beyond what is normal from a dental office..." (Operational Statement, dated January 26, 2015). No generation of hazardous waste is anticipated and the site must comply with State of California regulatory requirements. A separate entitlement application will be required to authorize future commercial uses on the 3-acre parcel.

The proposed rezone application is also consistent with the Table 2-4 - Planned Land Use and Zone District Consistency Matrix of the Reedley General Plan Update 2030. The overall project also represents a reduction in development over what was previously approved.

BORDERING PROPERTY INFORMATION

	Planned Land Use	Existing Zoning	Existing Land Use
North	Low Density Residential Planned Land Use	R-1 (Commercial Service) zone district	Existing Residential Development
East	Low Density Residential Planned Land Use	Agricultural (County of Fresno)	Active Farming Operations
South	Agricultural Land (County of Tulare)	RCO (Resource Cons. & Open Space) zone district & Agricultural (County of Tulare)	Active Farming Operations
West	Low Density Residential & Public Facility Planned Land Use	Agricultural (County of Fresno)	Reedley Cemetery & Active Farming Operations

LAND USE

On February 25, 2014, the City Council approved the Reedley General Plan Update 2030 (GPU) and certified the environmental analysis. The GPU goals and policies provide an overall direction for decision-making on development proposals and the day-to-day activities of the City's elected officials and staff. The GPU provides developers of future proposed projects a sense of certainty regarding the City's development expectation. Implementation of the GPU's goals and policies will stimulate and cause a positive, broad reaching effect on the surrounding agricultural industries, the quality of life for its citizenry, delivery of public utilities, and impacts to the community's social and economic vitality throughout the entirety of the planning horizon (2030).

The overall guiding land use principles described in the General Plan are designed to provide an overall direction to assist decision-makers in determining the appropriateness of a request to changing either a planned land use or zone district designation. Those guiding principles are described in detailed statements of goals and polices outlined in the approved GPU (GPU, 2.3 Land Use Element Guiding Principles). Below are the applicable policy statements:

(a) Plan for urban growth in a manner that minimizes impacts on agriculture and the consumption of agricultural land.

(b) Establish a pattern of urban development which provides for the economically efficient provision of urban services with particular emphasis on sewer, water and storm drainage infrastructure.

(c) Provide transitions between various land uses and intensities using high quality design.

There are specific Land Use Element goals and policies, which when applied, would further indicate the appropriateness of the request. In this case, these goals and policies further support the general plan and zone district reclassification, as well as, the potential future development of the commercial area.

Below are those directly applicable policy statements:

LU 2.7.23 Future commercial development in the planning area shall be well designed to respect neighborhood scale and traditional architectural design. Toward that end, commercial development will be reviewed utilizing the following design standards:

(a) Parking space requirements shall be minimized for commercial developments. Parking lots should be segmented to minimize the impact of parking on the streetscape. In particular, parking should be located to the rear or to the side of commercial and office buildings.

(b) Incorporate interface design standards (e.g.; setbacks, fencing) into each residential and commercial zone district to ensure compatibility.

(c) Commercial development shall be designed to facilitate pedestrian and bicycle access and function, featuring outdoor seating, pedestrian plazas and wide, shade-covered walkways.

(d) Landscaping, particularly shade trees and drought tolerant plants, shall be maximized in all commercial developments.

LU 2.7.24 Ensure that all commercial land uses are developed and maintained in a manner complementary to and compatible with adjacent residential land uses, to minimize interface problems with the surrounding environment, and to be compatible with public facilities and services. As part of the City's project review process, major emphasis will be given to site and building design in order to ensure and/or preserve functionality and community aesthetics.

(a) Development projects shall appropriately interface with adjacent properties.

(b) Shopping Centers shall embrace a unified building, landscaping and signage design.

(c) Building facades with visible sides of buildings shall not develop with featureless, "blank walls".

(d) Adequate screen roof-mounted mechanical equipment, and ensure that such equipment adhere to noise standard set forth in the General Plan Noise Element.

LU 2.7.25 Off-street parking for commercial areas shall be designed to adequately support surrounding land use pattern. Off-street parking areas shall also include landscaping to provide shading for at least 50 percent of the surfaced area within 10 years from planting.

LU 2.7.26 Encourage efficient use of land by allowing a percentage of compact car parking spaces.

LU 2.7.27 Planned unit developments shall be permitted in all commercial designations.

There are specific Circulation Element (3.10 Public Utilities) goals and policies, which when applied, would further indicate the appropriateness of the request. In this case, these goals and policies further support the general plan and zone district reclassification, as well as, the potential future development of the commercial area. Below are those directly applicable policy statements:

CIR 3.10D The City shall reduce by 15% its consumptive use by 2030

CIR 3.10.19A The City shall prepare and present to the City Council for consideration of adoption a comprehensive set of policies to ensure an adequate city-wide program for the recharge of ground water to support the growth and development patterns proposed within this GPU. These policies shall set performance standards for sustainable management of Reedley's use of groundwater and promote efforts to increase groundwater recharge. The policies, including those set forth below, shall be adopted such that their provisions are implemented by the deadlines set forth in the proposed policies. If the policy does not contain a specific deadline for adoption or implementation, it shall be considered for adoption within twelve (12) months of the GPU's adoption. After the adoption of the GPU, the Community Development Department shall provide an annual report to the City Council describing progress made toward the development, adoption and overall implementation of these policies.

The staff analysis supporting each policy shall include a discussion of the following: (1) How the policy would help to reduce consumptive use; (2) Whether and how the policy would assist in the City's efforts to recharge the underground aquifer; (3) How the policy would be integrated into the entitlement process; and, (4) How the policy would be enforced through the regulatory environment. The policies shall include the following:

a) The City shall develop and implement a public education component that addresses various topics related to the consumptive use of groundwater as well as efforts to recharge the underground aquifer and shall include periodic reports to the City Council and the public regarding its progress in implementing the policies.

b) The City shall work cooperatively with land owners, local and regional water agencies, and irrigation districts which rely upon the Kings Basin as a source of water to identify and implement infrastructure projects and other programs that serve to reduce the use of groundwater and/or facilitate the recharge of the aquifer.

c) The City shall work cooperatively with the irrigation districts to develop and implement new strategies to expand upon current efforts directed toward groundwater recharge. These strategies may include:

    1) Exploring the feasibility of joint water banking.

    2) Exploring opportunities to jointly participate in studies that will be used to facilitate new or expand wastewater recycling and reclamation opportunities.

d) Develop a methodology for early consultation (CEQA Section §21080.3) with the irrigation districts as part of the environmental review process when an entitlement application that involves annexing new land into the City is submitted. The comments received from the District will be fundamental to the development of conditions of approval applied to said projects. This process could be developed and implemented within one year after the adoption of the GPU.

e) On an on-going basis, the City shall strive to work with the irrigation districts to identify the most suitable locations for storm water basins based on soil type, elevation, and other factors.

f) The City shall continue to work with the Upper Kings Basin Integrated Regional Water Management Authority in developing a strong coalition of water agencies, cities, counties and environmental groups to address local water issues.

g) The City shall continue to work with the Kings River Conservation District to identify projects that would directly and efficiently increase groundwater recharge and to identify funding sources for said project, with the goal of submitting a grant application to the District for such a project by January 15, 2015.

h) Within one (1) year of the adoption of the GPU, the City Council shall complete a thorough review of the City's development impact fee program and shall consider the adoption of a comprehensive update of the various fees included in the program.

   1) This review shall include, but not be limited to, Storm Drainage, Water Distribution, Groundwater Recharge, Water Supply/Holding and Waste Water Collection and Treatment.

   2) Within each topic area, the review shall include the analysis of existing conditions, proposed new development, need necessitated by future development and proportional cost attributed to land use development.

i) By 2020, the City shall prepare an updated Groundwater Pumping, Recharge, and Consumptive Use Analysis report using the same methodology as the 2013 report. Part of this report will include policies, recommendations, and implementation measures. The analysis and recommendations shall be presented to the City Council for its consideration.

j) All annual reports, prepared by the Public Works Department related to water quality, water supply and delivery, and groundwater recharge shall be presented to the City Council for its consideration of adoptions.

k) The City shall continue to strive to develop and implement best management practices, strategies, in compliance with State law, and regulatory permits/requirements related to water quality and supply and groundwater recharge and report annually to the California Urban Water Conservation Council on its progress in development and implementing said practices.

l) The Public Works Department shall prepare an annual report that identifies, at a minimum, the amount of water used to irrigate the open space and the projected amount of groundwater recharge that has occurred. The City shall use industry standards to establish a formula to calculate the balancing of production to groundwater recharge.

Moreover, there are specific Safety Element (5.3 Fire Hazards) goals and policies, which when applied, would further indicate the appropriateness of the request. In this case, these goals and policies further support the general plan and zone district reclassification, as well as, the potential future development of the commercial area. Below are those directly applicable policy statements:

SE 5.3.1 Monitor water supply to insure adequacy for fire protection.

SE 5.3.2 Continue to provide adequate fire flow as a suppression measure.

SE 5.3.3 Continue to provide fire department training programs.

SE 5.3.4 Continue to review land use development proposals for fire safety considerations.

SE 5.3.8 Continue to implement the Community Facilities District to ensure additional staff and equipment to adequately service new development.

SE 5.3.9 Provide public safety education and awareness and ensure fire code compliance.

SE 5.3.10 Pursue funding opportunities and options for capital projects to repair, renovate and expand facilities and provide additional stations.

In order to approve proposed development projects, each project must be substantially consistent with the GPU goals and policies. To ensure that proposed projects do not significantly affect the environment the City's implementation of the GPU goals and policies will serve as a mitigation tool for avoiding or reducing project-specific and cumulative environmental effects of resulting from build out of the City pursuant to the GPU. The mitigation measures themselves are designed to fill "gaps" that may exist between the level of impact avoidance or reduction provided by implementation of GPU goals and policies, and the level of impact avoidance or reduction needed to mitigate significant impacts to a "less than significant level".

These policies and mitigation measures were designed as an enforceable commitment and not merely adopted to be disregarded as a formality, pursuant to Resolution No. 2014-015. Within this Resolution, the Findings of Fact states:

"To the extent that these findings conclude that various mitigation measures outlined in the Final EIR are feasible and have not been modified, superseded or withdrawn, the City hereby binds itself to implement these measures. These findings, in other words, are not merely informational, but rather constitute a binding set of obligations that will come into effect when the City Council adopts a resolution approving the Project."

On March 25, 2014, the City Council approved Resolution No. 2014-020, which approved the Reedley General Plan 2030 Update-Work/Implementation Plan (WIP). The purpose of this Plan is to outline the timelines of new policies and legislation necessary to move toward full implementation of the GPU. The WIP lists the new policies to be undertaken, timing of initiation and anticipated completion, responsible Department, and potential funding source. For the WIP, staff reviewed all of the GPU policies and selected only polices which were time sensitive and specifically state implementation within one year from the adoption of the GPU. Therefore, each proposed policies and/or proposed legislative action will require consideration and approval by the City Council over the duration of the 2014-2015 Plan period.

It should be also noted that there are many policies which will be implemented on an ongoing basis and are relevant and part of the evaluation of any future entitlement submitted for approval.

The WIP was also developed because it may take several years to develop the new policies as well as implementation of the various annual reviews that are required. The WIP will also serve as a performance based report card for Council, as City staff is required to prepare an annual report "describing progress made toward the development, adoption and implementation of these policies" (e.g., GPU-CIR 3.10.18, CIR 3.10.19A, COSP 4.3.3).

Therefore, the appropriateness of the proposed project has been examined with respect to its consistency with guiding land use principles, goals and policies of the Reedley General Plan Update 2030 and regulatory standards set forth in the Reedley Municipal Code and its compatibility with surrounding existing or proposed uses. These factors have been evaluated as described above. Upon

consideration of this evaluation, it can be concluded that the General Plan Amendment Application No. 2014-01 and Rezone Application No. 2014-02 is appropriate for the subject property. Based upon this analysis, staff has determined that this project is consistent will all applicable goals, policies and objectives in the GPU and any applicable regulations

ENVIRONMENTAL REVIEW

The Community Development Department staff consulted with responsible and trustee agencies (City Departments and external agencies) regarding the general plan and rezone applications, then prepared an initial study using Appendix G Checklist from the California Environmental Quality Act (CEQA) Guidelines.

The project has been determined to be a subsequent project that is not fully within the scope of the certified Program Environmental Impact Report prepared for the GPU. Pursuant to Public Resources Code §21083.3 and California Environmental Quality Act (CEQA Guidelines) §15168, this project has been evaluated with respect to each item on the attached environmental checklist to determine whether this project may cause any additional significant effect on the environment which was not previously examined in the Program Environmental Impact Report (SCH No. 2010031106).

The City of Reedley, as the Lead Agency, proposes to adopt a Negative Declaration for this project. This Negative Declaration is tiered from the certified Program Environmental Impact Report (SCH No. 2010031106) (PEIR) prepared for the Reedley General Plan Update 2030 (GPU). The project has been determined to be a subsequent project that is not fully within the scope of the certified Program Environmental Impact Report prepared for the GPU. Pursuant to Public Resources Code §21083.3 and California Environmental Quality Act (CEQA Guidelines) §15168, this project has been evaluated with respect to each item on the attached environmental checklist to determine whether this project may cause any additional significant effect on the environment which was not previously examined in the Program Environmental Impact Report (SCH No. 2010031106). The resulting Environmental Assessment is appended to this report.

All applicable mitigation measures of the Program Environmental Impact Report (SCH No. 2010031106), Mitigation Monitoring Checklist, have been applied to the project necessary to assure that the project will not cause significant adverse cumulative impacts, growth inducing impacts, and irreversible significant effects beyond those identified by the PEIR.

The project is not located on a site which is included on any of the lists enumerated under Section 65962.5 of the Government Code including, but not limited to, lists of hazardous waste facilities, land designated as hazardous waste property, hazardous waste disposal sites and others, and the information in the Hazardous Waste and Substance Statement required under subdivision (f) of that Section.

The environmental assessment resulted in a proposed finding of a Negative Declaration and staff published a Notice of Intent to make this finding in the Reedley Exponent and posted the Notice of Intent with the Fresno County Clerk, on February 11, 2015. No comments or appeals regarding the proposed environmental finding have been received to date.

PUBLIC NOTICING

Pursuant to the California Environmental Quality Act (CEQA Guidelines) the Notice of Intent (Negative Declaration) for Environmental Assessment No. 2014-13 was filed with the Clerk of Fresno County on February 11, 2015. The filing of this document begins a 20-day comment period. On February 12, 2015, the Notice of Intent was published in the Reedley Exponent.

Pursuant to the Government Code Section 65091 (Planning and Zoning Law) and Reedley Municipal Code, §10-22, it is required that a notice be sent to owners of property within 300 feet of the subject property. The City of Reedley, Community Development Department has mailed this notice to the property owners within at least 350 feet of the project. See Attachment 3.

FISCAL IMPACT

There has been no impact to the general fund.

ATTACHMENTS & EXHIBITS

1. Resolution No. 2015-02, Recommending to the City Council Approval of Environmental Assessment No. 2014-13, dated February 11, 2015, General Plan Amendment Application No. 2014-01 and Change of Zone Application No. 2014-02

2. Vicinity Map

3. Public Noticing Mapping

Exhibit A: Existing Planned Land Use Designation, General Plan 2030

Exhibit B: Proposed Planned Land Use Designation, General Plan Application No. 2014-01

Exhibit C: Existing Zone District Designations (Ordinance No. 2007-06)

Exhibit D: Proposed Reclassification of Zone District Designations, Rezone Application No. 2014-02

Exhibit E: 3-Acre Parcel - Conceptual Site Plan

Exhibit F: Environmental Assessment No. 2014-13, Negative Declaration (ND) dated February 11, 2015

Attachment 1

Resolution No. 2015-02

Recommending to the City Council Approval of
Environmental Assessment No. 2014-13, dated February 11, 2015,
General Plan Application No. 2014-01
and
Rezone Application No. 2014-02

RESOLUTION NO. 2015-02

A RESOLUTION OF THE CITY OF REEDLEY PLANNING COMMISSION RECOMMENDING TO THE CITY COUNCIL APPROVAL OF ENVIRONMENTAL ASSESSMENT NO. 2014-13, DATED FEBRUARY 11, 2015, GENERAL PLAN AMENDMENT APPLICATION NO. 2014-01 AND REZONE APPLICATION NO. 2014-02

WHEREAS, the City of Reedley has filed General Plan Amendment Application No. 2014-01 and Change of Zone Application No. 2014-02; and

WHEREAS, the subject property (APN: 368-181-23) is approximately ± 19-acres, bounded by Reed and Floral Avenues; and

WHEREAS, the General Plan Amendment Application No. 2014-01 is requesting the existing low density residential (4-8 dwelling units/per acre) planned land use designation be reclassified to public facilities planned land use designation (±13-acres). A portion of the existing high density residential (15-29 dwelling units/per acre) planned land use designation located at the northwesterly portion of the subject property is proposed to be changed to service commercial planned land use designation (±3-acres). The remaining ±3-acre portion of the existing high density residential planned land use designation is modified along the northern boundary of the property in a more orderly fashion; and

WHEREAS, the Change of Zone Application No. 2014-02, proposes to reclassify 3-acres located in the northwesterly corner of the subject property from the RM (SP) (Multi-Family Residential-Specific Plan) zone district to the CS (*Service Commercial*) zone district designation; and

WHEREAS, the purpose of these applications is to accommodate the future development of a groundwater recharge facility, a fire training center, and a future commercial business; and

WHEREAS, the proposed planned land use designations are consistent with the General Plan, guiding principles, and Land Use, Circulation and Safety Elements, goals and policies; and

WHEREAS, the proposed rezone application is also consistent with the Table 2-4 - Planned Land Use and Zone District Consistency Matrix of the Reedley General Plan Update 2030; and

WHEREAS, the Community Development Department staff consulted with responsible and trustee agencies (City Departments and external agencies) regarding the general plan and rezone applications, then prepared an initial study using Appendix G Checklist from the California Quality Act (CEQA) Guidelines; and

WHEREAS, the City of Reedley, as the Lead Agency, proposes the adoption of a Negative Declaration for this project; and

WHEREAS, this Negative Declaration is tiered from the certified Program Environmental Impact Report (SCH No. 2010031106) (PEIR) prepared for the Reedley General Plan Update 2030 (GPU); and

WHEREAS, the environmental assessment resulted in a proposed finding of a Negative Declaration and staff published a Notice of Intent to make this finding in the Reedley Exponent and posted the Notice of Intent with the Fresno County Clerk, on February 11, 2015; and

WHEREAS, pursuant to the Government Code Section 65091 (Planning and Zoning Law) and Reedley Municipal Code, §10-22, it is required that a notice be sent to owners of property within 300 feet of the subject property. The City of Reedley, Community Development Department has mailed this notice to the property owners within at least 350 feet of the project; and

WHEREAS, no public comments or appeals regarding the proposed environmental finding or project have been received to date; and

WHEREAS, the City of Reedley Planning Commission, at the regular meeting on March 5, 2015, held a duly noticed public hearing, received a written staff report, invited public comment, and independently deliberated.

NOW, THEREFORE, BE IT RESOLVED that the City of Reedley Planning Commission, using their independent judgment, hereby recommends to the City Council approval of the Environmental Assessment No. 2014-13, dated February 11, 2015, General Plan Amendment Application No. 2014-01 and Change of Zone Application No. 2014-02 based on the following:

1. The above recitals are true and correct; and

2. The General Plan Amendment Application No. 2014-01 is consistent with the General Plan Update 2030, guiding principles, and Land Use, Circulation and Safety Elements, goals and policies; and

3. Change of Zone Application No. 2014-02 is consistent with Table 2-4 - Planned Land Use and Zone District Consistency Matrix of the Reedley General Plan Update 2030; and

4. The project is not located on a site which is included on any of the lists enumerated under Section 65962.5 of the Government Code including, but not limited to, lists of hazardous waste facilities, land designated as hazardous waste property, hazardous waste disposal sites and others, and the information in the Hazardous Waste and Substance Statement required under subdivision (f) of that Section; and

5. The appropriateness of the proposed project has been examined with respect to its consistency with guiding land use principles, goals and policies of the Reedley General Plan Update 2030 and regulatory standards set forth in the Reedley Municipal Code and its compatibility with surrounding existing or proposed uses; and

6. Upon consideration of this above evaluation, it can be concluded that the General Plan Application No. 2014-01 and Rezone Application No. 2014-02 are appropriate for the subject property; and

7. After consultation with responsible and trustee agencies staff prepared an initial study using the Appendix G checklist from the California Quality Act (CEQA) Guidelines; and

8. The City of Reedley, as the Lead Agency, proposes to adopt a Negative Declaration for this project. This Negative Declaration is tiered from the certified Program Environmental Impact Report (SCH No. 2010031106) (PEIR) prepared for the Reedley General Plan Update 2030 (GPU).

9. All applicable mitigation measures of the Program Environmental Impact Report (SCH No. 2010031106), Mitigation Monitoring Checklist, have been applied to the project necessary to assure that the project will not cause significant adverse cumulative impacts, growth inducing impacts, and irreversible significant effects beyond those identified by the PEIR.

10. This resolution is effective immediately upon adoption.

This foregoing resolution is hereby approved and adopted at a regular meeting of the Reedley Planning Commission, in the City of Reedley, held on the 5th day of March, 2015, by the following vote:

AYES:

NOES:

ABSTAIN:

ABSENT:

_____
Alberto Custodio, Chairman
City of Reedley Planning Commission

ATTEST:

_____
Kevin E. Fabino, Secretary

Attachment 2

Vicinity Map

VICINITY MAP

Attachment 3

Public Noticing Mapping

GPA Application No. 2014-01
and Rezone Application No. 2014-02
"The Triangle" (APN: 365-181-23)

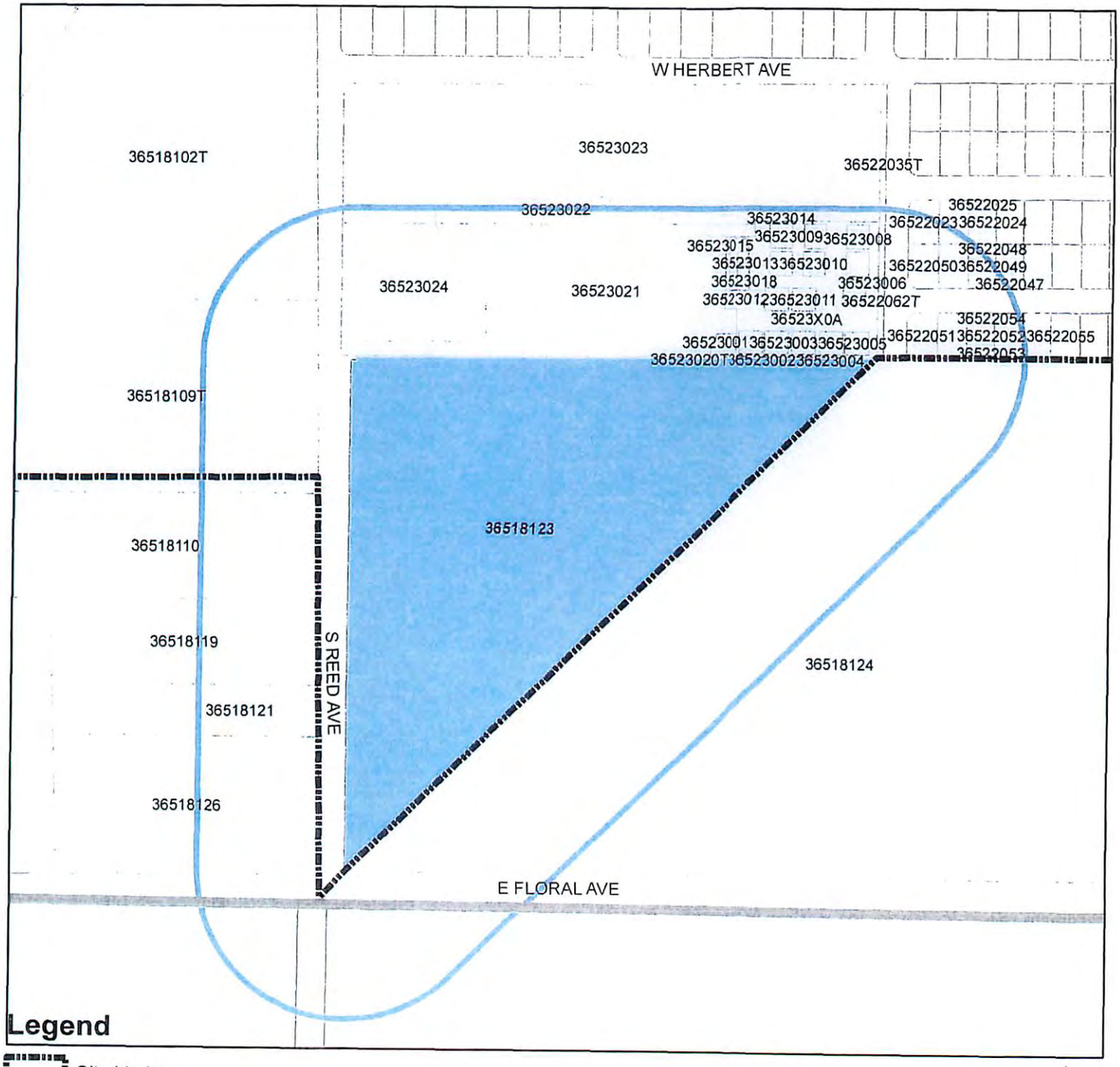
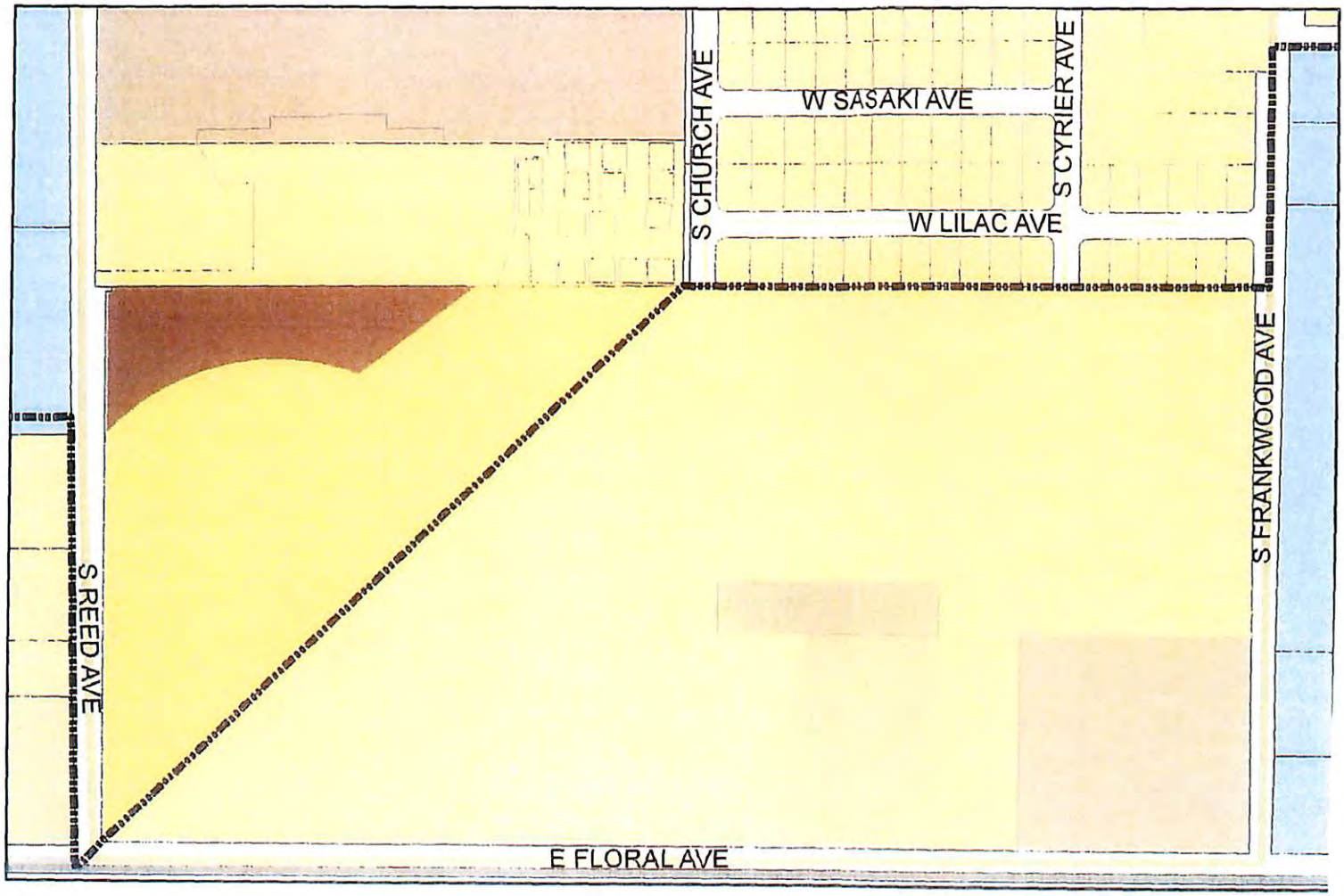


Exhibit A

Existing Planned Land Use Designation, General Plan 2030

Exhibit A
Existing Planned Land Use Designations
Land Use Map, GPU 2030
General Plan Amendment Application No. 2014-01



0 225 450 900 Feet

N

Legend

City Limits

Sphere of Influence

GPU 2030 Street Class

(Per Figure 3.1 Circulation Diagram, page 57)

Arterial Street

Collector Street

Local Street

GPU 2030 Planned Land Use Designations

(Per City Council Resolution No. 2014-015)

Low Density Residential (4-8 du/acre)

Medium Density Residential (8-15 du/acre)

High Density Residential (15-29 du/acre)

Open Space

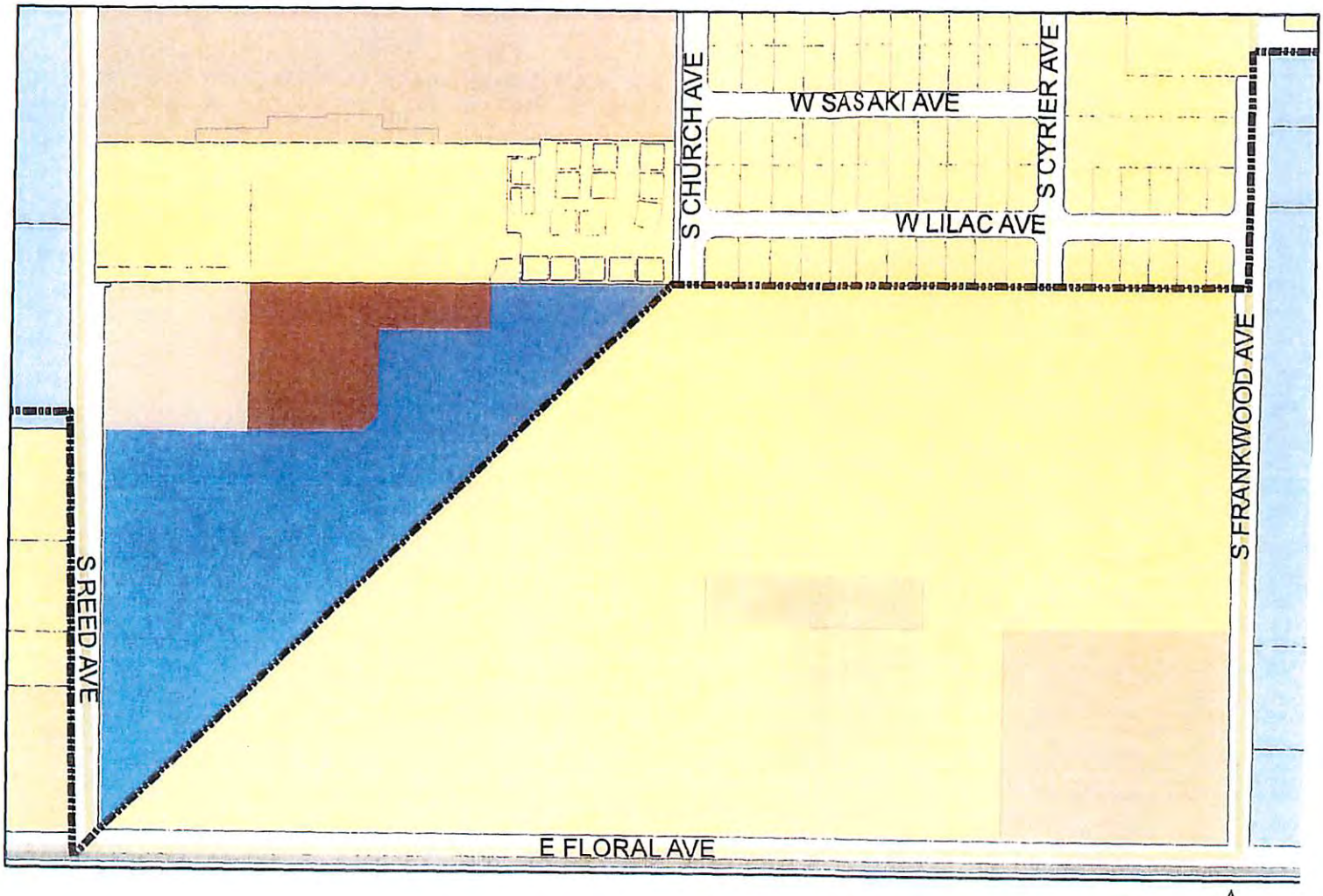
Public/Institutional Facility

Service Commercial

Exhibit B

Proposed Planned Land Use Designation,
General Plan Application No. 2014-01

Exhibit B
Proposed Planned Land Use Designations
Land Use Map, GPU 2030
General Plan Amendment Application No. 2014-01



Legend

City Limits

Sphere of Influence

GPU 2030 Street Class

(Per Figure 3.1 Circulation Diagram, page 57)

Arterial Street

Collector Street

Local Street

GPU 2030 Planned Land Use Designations

(Per City Council Resolution No. 2014-015)

Low Density Residential (4-8 du/acre)

Medium Density Residential (8-15 du/acre)

High Density Residential (15-29 du/acre)

Open Space

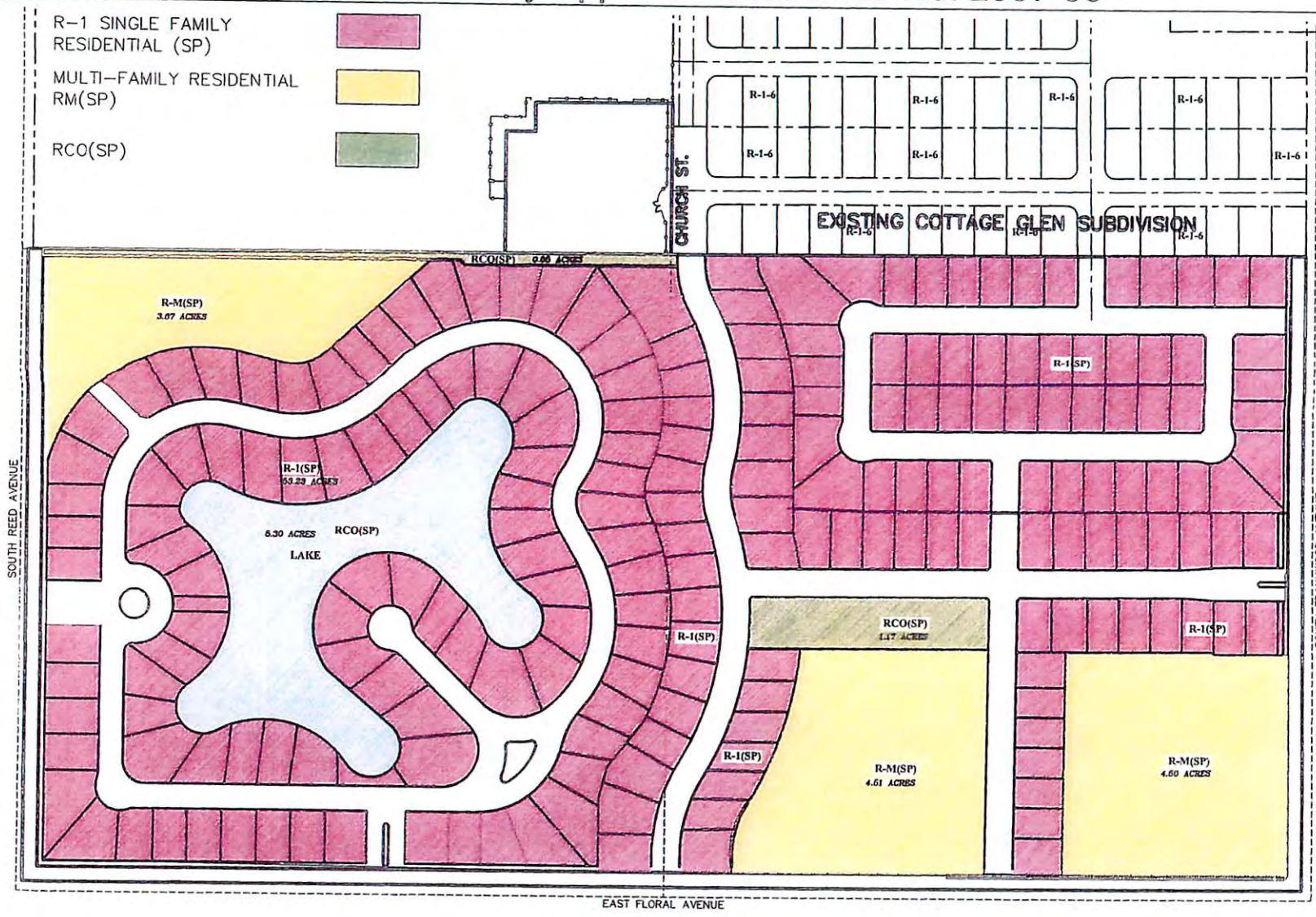
Public/Institutional Facility

Service Commercial

Exhibit C

Existing Zone District Designations (Ordinance No. 2007-06)

Exhibit C: Previously Approved Ordinance No. 2007-06



PROPOSED ZONING DESIGNATION
LAKEWOOD, TRACT 5452
CITY OF REEDLEY

SCALE: 1" = 300'

0 150 300 600

APRIL 2008

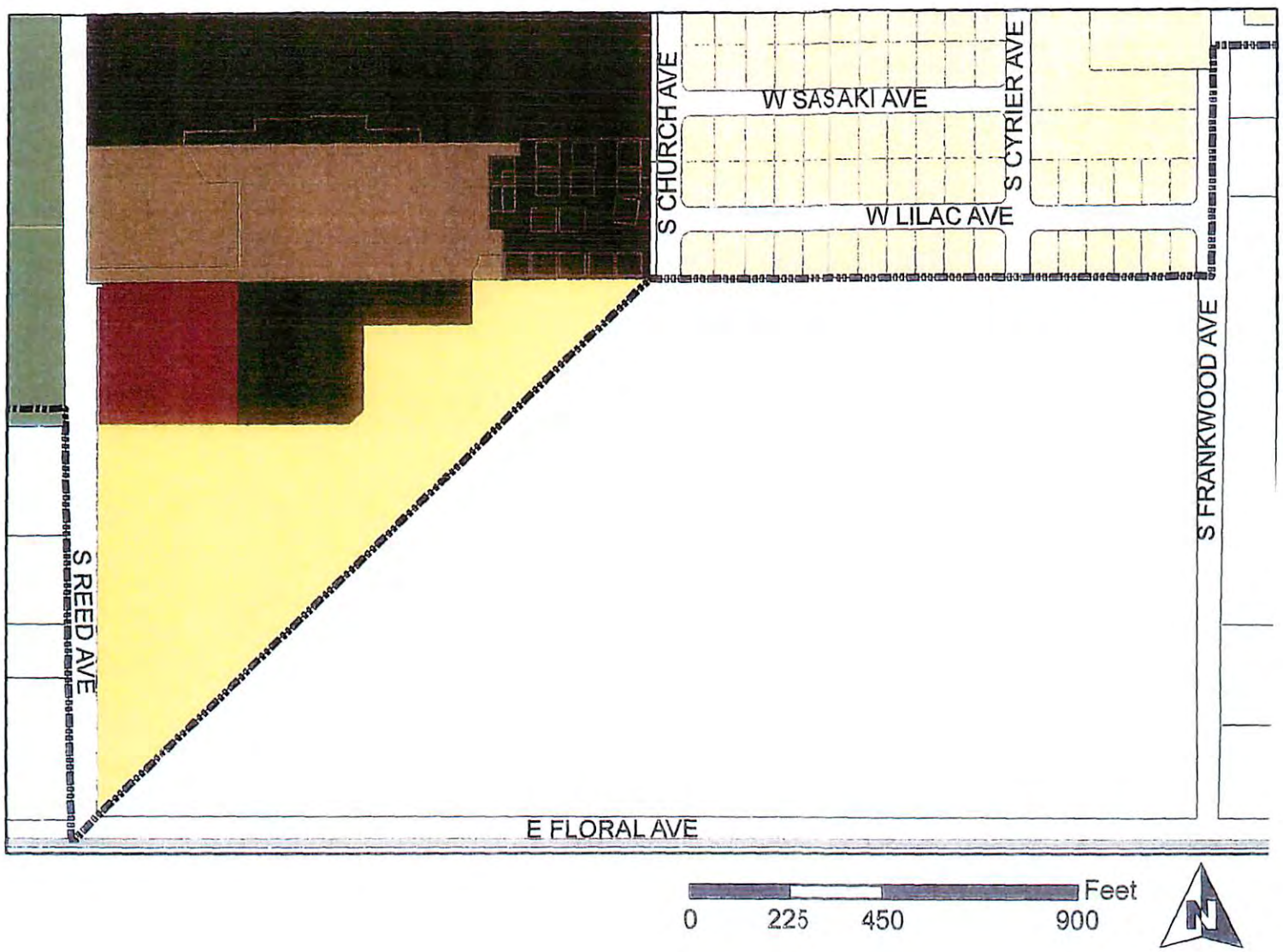
PREPARED BY:
YAMABE & HORN ENGINEERING, INC.
1300 EAST SHAW AVE. SUITE 176
FRESNO, CA 93710

04/14/08....04222EX2.DWG

Exhibit D

Proposed Reclassification of Zone District Designations

Exhibit D
Proposed Zoning Designations
Rezone Application No. 2014-02



Legend

City Limits

Sphere of Influence

Zoning Designation

- R-1(SP) One Family Residential
- R-1-6 One Family Residential
- RCO Resource Conservation and Open Space
- RM-2 Multiple Family Residential
- RM-3 Multiple Family Residential

Exhibit E

3-Acre Parcel - Conceptual Site Plan

EXHIBIT E
CONCEPTUAL SITE PLAN

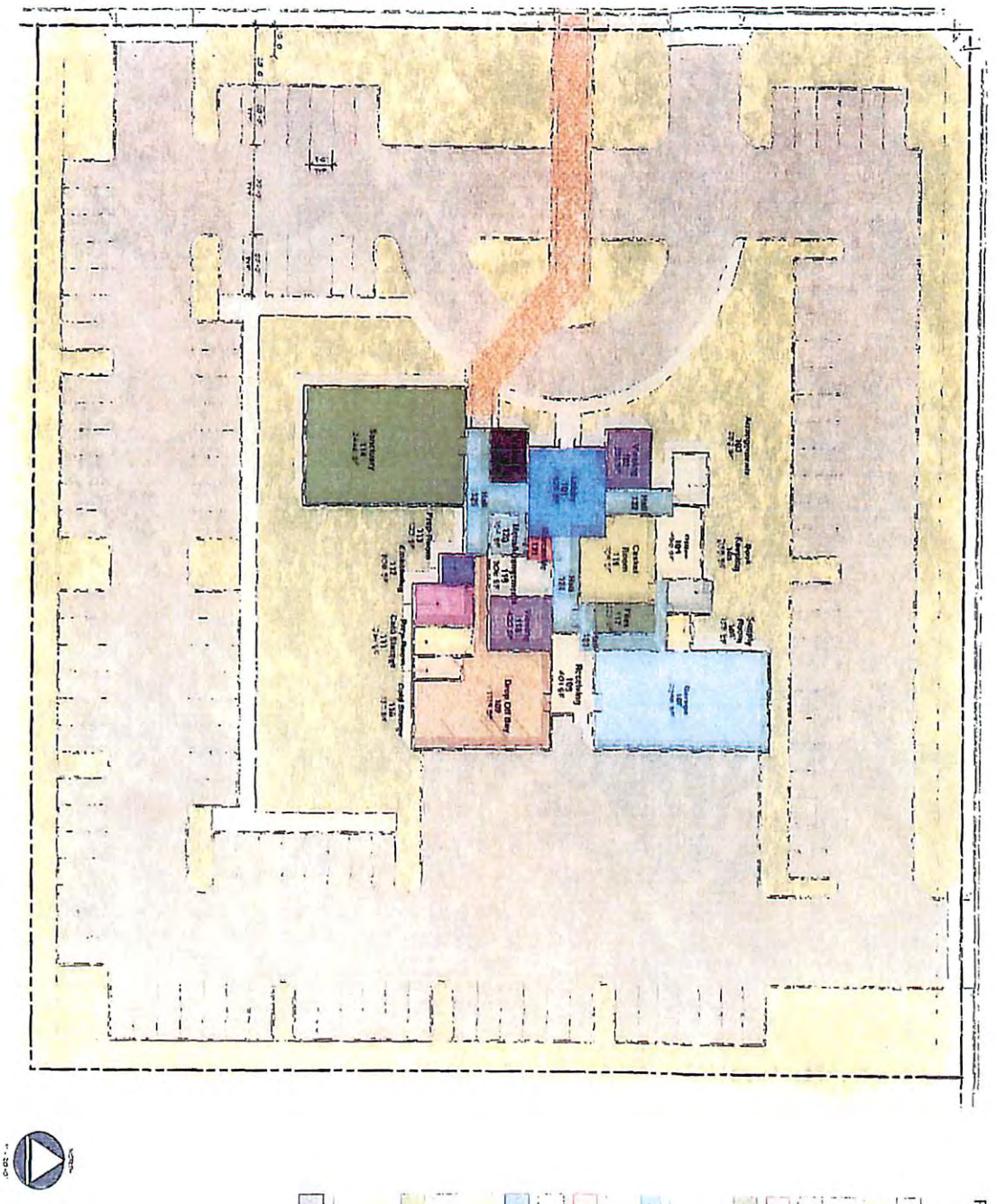


Exhibit F

Environmental Assessment No. 2014-13
Negative Declaration (ND) dated February 11, 2015

CITY OF REEDLEY
NEGATIVE DECLARATION
prepared for **Environmental Assessment (EA) No. 2014-013**

The Notice of Intent for this proposed environmental finding was filed with the

FRESNO COUNTY CLERK
2221 Kern Street
Fresno, California 93721-2600

On February 11, 2014
(copy Attached)

APPLICANT:

City of Reedley
Community Development Department
1733 Ninth Street
Reedley, California 93654

PROJECT LOCATION: The western side of Reed and Floral Avenues and bound by the Alta Irrigation facilities.

Site Latitude: 36° 34' 31.602" N
Site Longitude: 119° 27' 28.111" W

Assessor's Parcel Number: 368-181-23 (Approximately ±19-acres)

PROJECT DESCRIPTION: The City of Reedley has initiated Environmental Assessment No. 2014-13 for the purpose of assessing the environmental effects of General Plan Amendment No. 2014-01 and Rezone Application No. 2014-02 applications. The City of Reedley has filed both the General Plan Amendment No. 2014-01 and Rezone Application No. 2014-02 applications. The subject property (APN: 368-181-23) is approximately ±19-acres, bounded by Reed and Floral Avenues. The General Plan Amendment No. 2014-01 is requesting the existing low density residential (4-8 dwelling units/per acre) planned land use designation be reclassified to Public Facilities planned land use designation (±13-acres). A portion of the existing high density residential (15-29 dwelling units/per acre) located at the northwesterly portion of the subject property, is proposed to be service commercial (±3-acres) and the remaining portion (±3-acres) high density residential planned land use designation modified along the northern boundary of the property in a more orderly fashion. See the attached Exhibits A & B.

The Rezone Application No. 2014-02, proposes to reclassify 3-acres, located in the northwesterly corner of the subject property from the RM (Multi-Family Residential) zone district to the CS (*Service Commercial*) zone district designation. The requested zone district designation is consistent with the GPU, Table 2-4 Planned Land Use and Zone District Consistency Matrix (Reedley GPU, Page 30). See the attached Exhibits C & D.

The purpose of these applications is to accommodate the future development of a groundwater recharge facility, a fire training center, and service commercial business. The Project is fully funded by Development Impact Fees, grants and sale of surplus lands.

The project area is generally surrounded by existing residential development (Palm Village) to the north, unincorporated fallow farmland to the east, active agricultural activities to the south and west. The Reedley Cemetery is also directly west of the subject property. It should be noted that Floral Avenue is the jurisdictional boundary between the County of Fresno and County of Tulare.

The City and Alta Irrigation District have committed to working jointly to develop a 10-acre stormwater and recharge basin. The construction of a recharge/ponding basin further implements the General Plan Update 2030, ground water and storm water policies (e.g. CIR 3.10.18 and CIR 3.10.19). Alta Irrigation intends to jointly use this recharge facility as potential storage and recharge, while gaining the ability to divert water to

either of its recharge or banking facilities downstream. The following benefits of this collaborative effort will minimize the potential environmental and development impacts:

- Increase the City's ability to recharge stormwater runoff by constructing a 29 acre basin.
- Reduce the number of single family homes developed from 209 to 151 at full build out.
- Eliminate the direct flow of unfiltered storm water into the Kings River.
- Kings River Conservation District supports the diversion of stormwater and recharge effort.
- Relocating existing stormwater facilities so that the adjacent Cemetery can expand.
- Eliminate a need for agricultural use and spraying adjacent to urban uses (senior health risk).
- Reedley City Council and Alta Irrigation District Board of Directors are in full support of the project. The City and AID would jointly apply for grant funds to construct the recharge facility.

Also proposed is the construction of a Fire Training Center, which will facilitate and ensure the citizens of Reedley have adequate fire protection services. One project goals is to locate fire apparatus and training facilities outside of the urban core, where residents would not be impacted by training activities.

The Reedley Volunteer Fire Department has filed several grant applications for critically needed resources to protect the public, to train emergency personnel and to foster interoperability and support through community resilience. The purpose of many of these grant programs is enhance through direct financial assistance, the health and safety of the public and firefighting personnel and to provide a continuum of support for emergency responders regarding fire, medical and all hazard events.

More specifically the Reedley Fire Department has sought the following, which could be live training opportunities on a dedicated portion of the subject property. Proposed are two Class "A" Mobile Live Fire and Rescue Training Trailers. The units will be designed to accommodate training in a manner which will provide for safety first, while allowing for realistic training scenarios. The unit is designed and built utilizing the most current codes, standards and recommendations published for this type of equipment. The trailer system will consist of two (2) level structures with door, hatch, and window openings. The system will be constructed from two (2) new 8' x 8.5' x 40' ISO containers and two (2) 40' ISO container chassis. Unit #1 will contain the burn room, and Unit # 2 will contain the SCBA and confined space props. When the containers are placed on the chassis, the overall height will be 13.5'.

With the above objectives, the Reedley volunteers can achieve NFPA requirements for certification as firefighters and perform required annual refresher courses. It will keep the volunteers here in the City and prevent them from using valuable time-off from their everyday jobs to attend trainings. Recruitment and retention of the volunteer firefighters is critical for this City to maintain emergency fire and rescue services. If the Fire Department can attain the proper equipment and train the volunteers, the net result will gain firefighter safety, proficiency, commitment and future firefighters. This is the final hurdle for this volunteer fire department as to whether or not a volunteer can attend live fire training, become certified, and remain interested in serving the community.

The proposed 3-acre parcels of undeveloped and vacant land on the north east corner of Reed Avenue is proposing a commercial use. Under this proposal, two separate buildings (@25,000 sq. ft.) are to be constructed and will be used for administrative offices, funeral services, arrangements, vehicle garage and storage areas, and a self-contained cremation chamber, which will all meet state of California licensing and environmental standards.

Both buildings will be wood framing construction and will be built on a typical slab-on-grade foundation, with a cement plaster finish. Both buildings will be designed with low-slope roofing systems and parapets. Some exposed tile roofing may be introduced. Additionally, the proposed project site will be paved, accessed and landscaped. Other site amenities will likely be provide such as pedestrian concrete flat work, site furnishings, special planting and gathering areas.

Proposed business hours of operations associated with public services are form 8:00 a.m. to 5:00 p.m., seven days a week. The estimated maximum number of employees on-site at any given time is 15. Deliveries will be made during normal working hours and made with vehicles weighing less than 2-tones and could occur 2 or 3 times a week.

No mechanical equipment related to this facility is, "anticipated to generate any noise or waste beyond what is normal from a dental office..." (Operational Statement, dated January 26, 2015). No generation of hazardous waste is anticipated and the site must comply with State of California regulatory requirements.

The City of Reedley has conducted an environmental analysis for the above-described project, contained in the attached initial study. The City of Reedley, as the Lead Agency, proposes to adopt a Negative Declaration for this project. This Negative Declaration is tiered from the certified Program Environmental Impact Report (SCH No. 2010031106) (PEIR) prepared for the Reedley General Plan Update 2030 (GPU). The project has been determined to be a subsequent project that is not fully within the scope of the certified Program Environmental Impact Report prepared for the GPU. Pursuant to Public Resources Code §21083.3 and California Environmental Quality Act (CEQA Guidelines) §15168, this project has been evaluated with respect to each item on the attached environmental checklist to determine whether this project may cause any additional significant effect on the environment which was not previously examined in the Program Environmental Impact Report (SCH No. 2010031106).

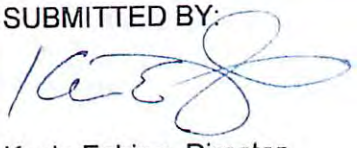
After conducting a review of the adequacy of the Program Environmental Impact Report (SCH No. 2010031106) pursuant to Public Resources Code Section 21083.3, the City of Reedley, as the lead agency, finds that no substantial changes have occurred with respect to circumstances under which the Program Environmental Impact Report (SCH No. 2010031106) was certified, and that no new information which was not known and could not have been know at the time that the PEIR was certified, has become available.

The completed environmental impact checklist, its associated narrative, and any proposed mitigation measure(s) reflect applicable comments of responsible and trustee agencies, as well as research and analysis conducted to examine the interrelationship between the proposed project and the physical environment. The information contained in the project application and its related environmental assessment application, responses to requests for comment, checklist, initial study narrative, and any attached thereto, combine to form the record indicating that an initial study has been completed in compliance with the California Environmental Quality Act and the CEQA Guidelines.

All new development activity and many non-physical projects contribute directly or indirectly toward cumulative impacts on the physical environment. It has been determined that the incremental effect contributed by this project toward cumulative impacts is not considered substantial or significant in itself, and/or that cumulative impacts accruing from this project may be mitigated to less than significant consistent with the Program Environmental Impact Report (SCH No. 2010031106), Mitigation Monitoring Checklist, with no other mitigation measures required.

The project is not located on a site which is included on any of the lists enumerated under Section 65962.5 of the Government Code including, but not limited to, lists of hazardous waste facilities, land designated as hazardous waste property, hazardous waste disposal sites and others, and the information in the Hazardous Waste and Substance Statement required under subdivision (f) of that Section.
The initial study has concluded that the proposed project will not result in any adverse effects which fall within the "Mandatory Findings of Significance" contained in Section 15065 of the State CEQA Guidelines.

With the PEIR, Mitigation Monitoring Checklist imposed, there is no substantial evidence in the record that this project may have additional significant direct, indirect or cumulative effects on the environment that are significant and that were not identified and analyzed in the certified Program Environmental Impact Report (SCH No. 2010031106).

Additional information on the proposed project, including a copy of the proposed environmental findings, may be obtained from the City of Reedley, Community Development Department, City Hall, 1733 Ninth Street, Reedley, California 93654. Phone: 559-637-4200, Ext. 286, e-mail Kevin.Fabino@reedley.ca.gov.	
INITIAL STUDY PREPARED BY: Kevin E. Fabino, Director	SUBMITTED BY: 
DATE: February 11, 2014	Kevin Fabino, Director Community Development Department CITY OF REEDLEY

Attachments: Notice of Intent to adopt a Negative Declaration for Environmental Assessment (EA) No. 2014-012, dated February 12, 2015

Initial Study (including checklist from CEQA Guidelines Appendix G)

Program Environmental Impact Report (SCH No. 2010031106), Mitigation Monitoring Checklist

E201510000040

CITY OF REEDLEY

NOTICE OF INTENT TO ADOPT A FINDING OF A NEGATIVE DECLARATION

Environmental Assessment (EA) No. 2014-013

FILED WITH:

FRESNO COUNTY CLERK
2221 Kern Street
Fresno, California 93721-2600

FILED
FEB 11 2015
10:11 AM
FRESNO COUNTY CLERK
By Crystal S. Bailey
DEPUTY

APPLICANT:

City of Reedley
Community Development Department
1733 Ninth Street
Reedley, California 93654

PROJECT LOCATION: The western side of Reed and Floral Avenues and bound by the Alta Irrigation facilities.

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The Rezone Application No. 2014-02, proposes to reclassify 3-acres, located in the northwesterly corner of the subject property from the RM (Multi-Family Residential) zone district to the CS (*Service Commercial*) zone district designation. The requested zone district designation is consistent with the GPU, Table 2-4 Planned Land Use and Zone District Consistency Matrix (Reedley GPU, Page 30). See the attached Exhibits C & D.

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E201510000040

The City and Alta Irrigation District have committed to working jointly to develop a 10-acre stormwater and recharge basin. The construction of a recharge/ponding basin further implements the General Plan Update 2030, ground water and storm water policies (e.g. CIR 3.10.18 and CIR 3.10.19). Alta Irrigation intends to jointly use this recharge facility as potential storage and recharge, while gaining the ability to divert water to either of its recharge or banking facilities downstream. The following benefits of this collaborative effort will minimize the potential environmental and development impacts:

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Also proposed is the construction of a Fire Training Center, which will facilitate and ensure the citizens of Reedley have adequate fire protection services. One project goals is to locate fire apparatus and training facilities outside of the urban core, where residents would not be impacted by training activities.
The Reedley Volunteer Fire Department has filed several grant applications for critically needed resources to protect the public, to train emergency personnel and to foster interoperability and support through community resilience. The purpose of many of these grant programs is enhance through direct financial assistance, the health and safety of the public and firefighting personnel and to provide a continuum of support for emergency responders regarding fire, medical and all hazard events.

More specifically the Reedley Fire Department has sought the following, which could be live training opportunities on a dedicated portion of the subject property. Proposed are two Class "A" Mobile Live Fire and Rescue Training Trailers. The units will be designed to accommodate training in a manner which will provide for safety first, while allowing for realistic training scenarios. The unit is designed and built utilizing the most current codes, standards and recommendations published for this type of equipment. The trailer system will consist of two (2) level structures with door, hatch, and window openings. The system will be constructed from two (2) new 8' x 8.5' x 40' ISO containers and two (2) 40' ISO container chassis. Unit #1 will contain the burn room, and Unit # 2 will contain the SCBA and confined space props. When the containers are placed on the chassis, the overall height will be 13.5'.

With the above objectives, the Reedley volunteers can achieve NFPA requirements for certification as firefighters and perform required annual refresher courses. It will keep the volunteers here in the City and prevent them from using valuable time-off from their everyday jobs to attend trainings. Recruitment and retention of the volunteer firefighters is critical for this City to maintain emergency fire and rescue services. If the Fire Department can attain the proper equipment and train the volunteers, the net result will gain firefighter safety, proficiency, commitment and future firefighters. This is the final hurdle for this volunteer fire department as to whether or not a volunteer can attend live fire training, become certified, and remain interested in serving the community.

The proposed 3-acre parcels of undeveloped and vacant land on the north east corner of Reed Avenue is proposing a commercial use. Under this proposal, two separate buildings (@25,000 sq. ft.) are to be constructed and will be used for administrative offices, funeral services, arrangements, vehicle garage and storage areas, and a self-contained cremation chamber, which will all meet state of California licensing and environmental standards.

E20150000040

Both buildings will be wood framing construction and will be built on a typical slab-on-grade foundation, with a cement plaster finish. Both buildings will be designed with low-slope roofing systems and parapets. Some exposed tile roofing may be introduced. Additionally, the proposed project site will be paved, accessed and landscaped. Other site amenities will likely be provide such as pedestrian concrete flat work, site furnishings, special planting and gathering areas.

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No mechanical equipment related to this facility is, "anticipated to generate any noise or waste beyond what is normal from a dental office..." (Operational Statement, dated January 26, 2015). No generation of hazardous waste is anticipated and the site must comply with State of California regulatory requirements.

SUMMARY OF FINDINGS:

The City of Reedley has conducted an environmental analysis for the above-described project. See the attached Property Vicinity Map below. The project has been determined to be a subsequent project that is not fully within the scope of the certified Program Environmental Impact Report (SCH No. 2010031106) prepared for the Reedley General Plan 2030 Update (GPU). Therefore, the City of Reedley, as the lead agency, proposes to adopt a Negative Declaration for this project.

The completed environmental impact checklist, its associated narrative, and any proposed mitigation measure(s) reflect applicable comments of responsible and trustee agencies, as well as research and analysis conducted to examine the interrelationship between the proposed project and the physical environment. The information contained in the project application and its related environmental assessment application, responses to requests for comment, checklist, initial study narrative, and combine to form the record indicating that an initial study has been completed in compliance with the California Environmental Quality Act and the CEQA Guidelines.

All new development activity and many non-physical projects contribute directly or indirectly toward cumulative impacts on the physical environment. It has been determined that the incremental effect contributed by this project toward cumulative impacts is not considered substantial or significant in itself, and/or that cumulative impacts accruing from this project may be mitigated to less than significant consistent with the Program Environmental Impact Report (SCH No. 2010031106), Mitigation Monitoring Checklist, with no other mitigation measures required.

There is no substantial evidence in the record that this project may have additional significant direct, indirect or cumulative effects on the environment that are significant and that were not identified and analyzed in the certified Program Environmental Impact Report prepared for the Reedley General Plan Update 2030. After conducting a review of the adequacy of the Program Environmental Impact Report (SCH No. 2010031106) pursuant to Public Resources Code Section 21083.3, as the lead agency, finds that no substantial changes have occurred with respect to circumstances under which the Program Environmental Impact Report (SCH No. 2010031106) was certified, and that no new information which was not known and could not have been know at the time that the Program Environmental Impact Report (SCH No. 2010031106) was certified, has become available.

The project is not located on a site which is included on any of the lists enumerated under Section 65962.5 of the Government Code including, but not limited to, lists of hazardous waste facilities, land designated as hazardous waste property, hazardous waste disposal sites and others, and the information in the Hazardous

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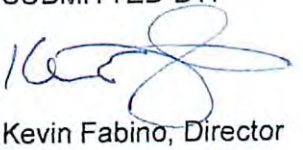
Waste and Substance Statement required under subdivision (f) of that Section.

The initial study has concluded that the proposed project will not result in any adverse effects which fall within the "Mandatory Findings of Significance" contained in Section 15065 of the State CEQA Guidelines.

Additional information on the proposed project, including a copy of the proposed environmental findings, may be obtained from the City of Reedley, Community Development Department, City Hall, 1733 Ninth Street, Reedley, California 93654.

ANY INTERESTED PERSON may comment on the proposed environmental finding. Comments may be submitted at any time between the publication date of this notice and close of business on March 4, 2015. Please direct comments to Kevin Fabino, Director of the Community Development Department at City Hall, 1733 Ninth Street, Reedley, California 93654, or phone: 559-637-4200, Ext. 286, e-mail Kevin.Fabino@reedley.ca.gov.

INITIAL STUDY PREPARED BY: Kevin E. Fabino, Director	SUBMITTED BY:  Kevin Fabino, Director Community Development Department CITY OF REEDLEY
DATE: February 11, 2015	

Attachments:
Property Vicinity Map

Exhibit A – Existing Planned Land Use Designation, General Plan 2030
Exhibit B – Proposed Planned Land Use Designation, General Plan Application No. 2014-01
Exhibit C – Existing Zone District Designations (Ordinance No. 2007-06)
Exhibit D – Proposed Reclassification of Zone District Designations
Exhibit E – 3-Acre Parcel - Conceptual Site Plan

VICINITY MAP

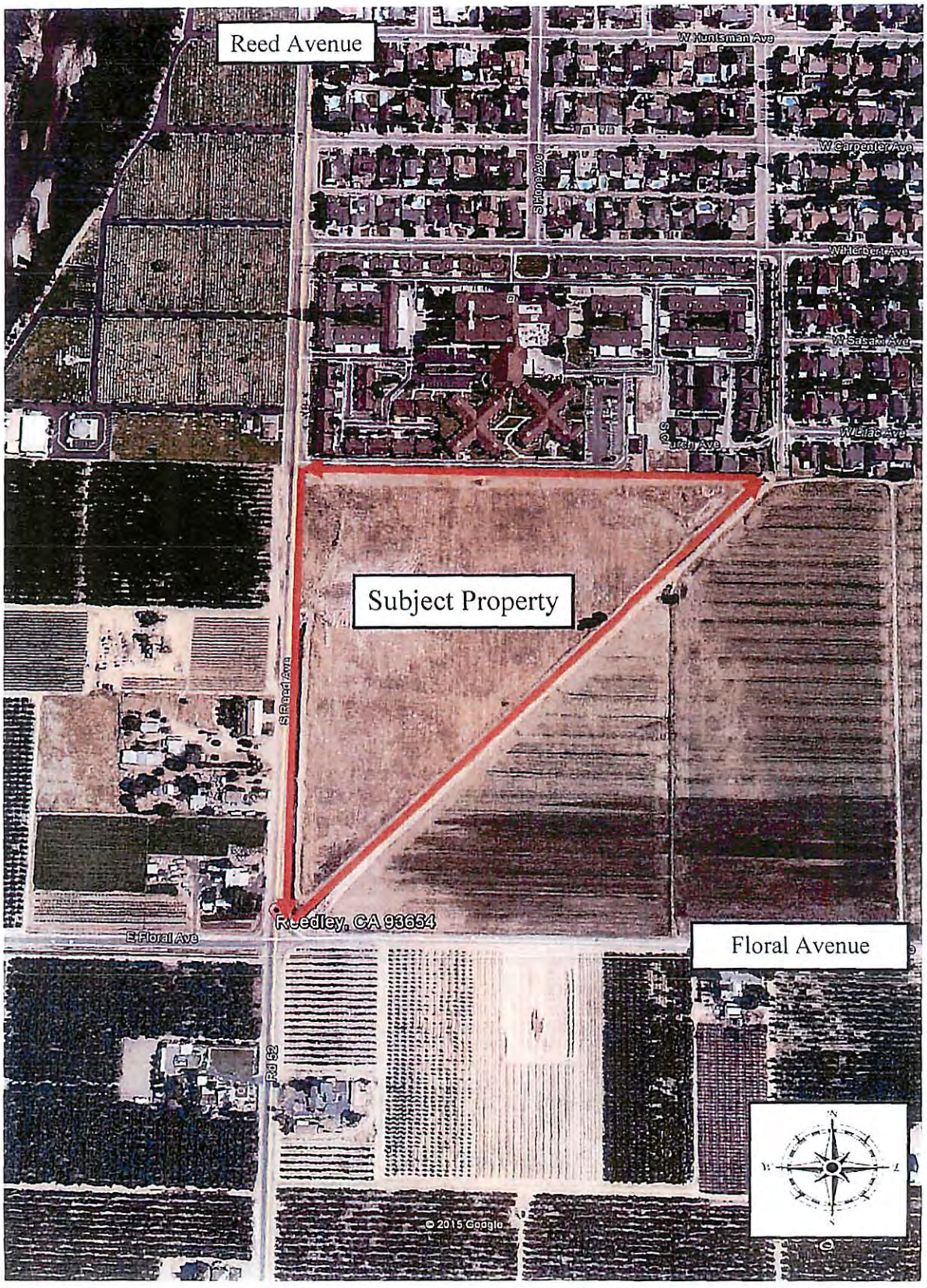
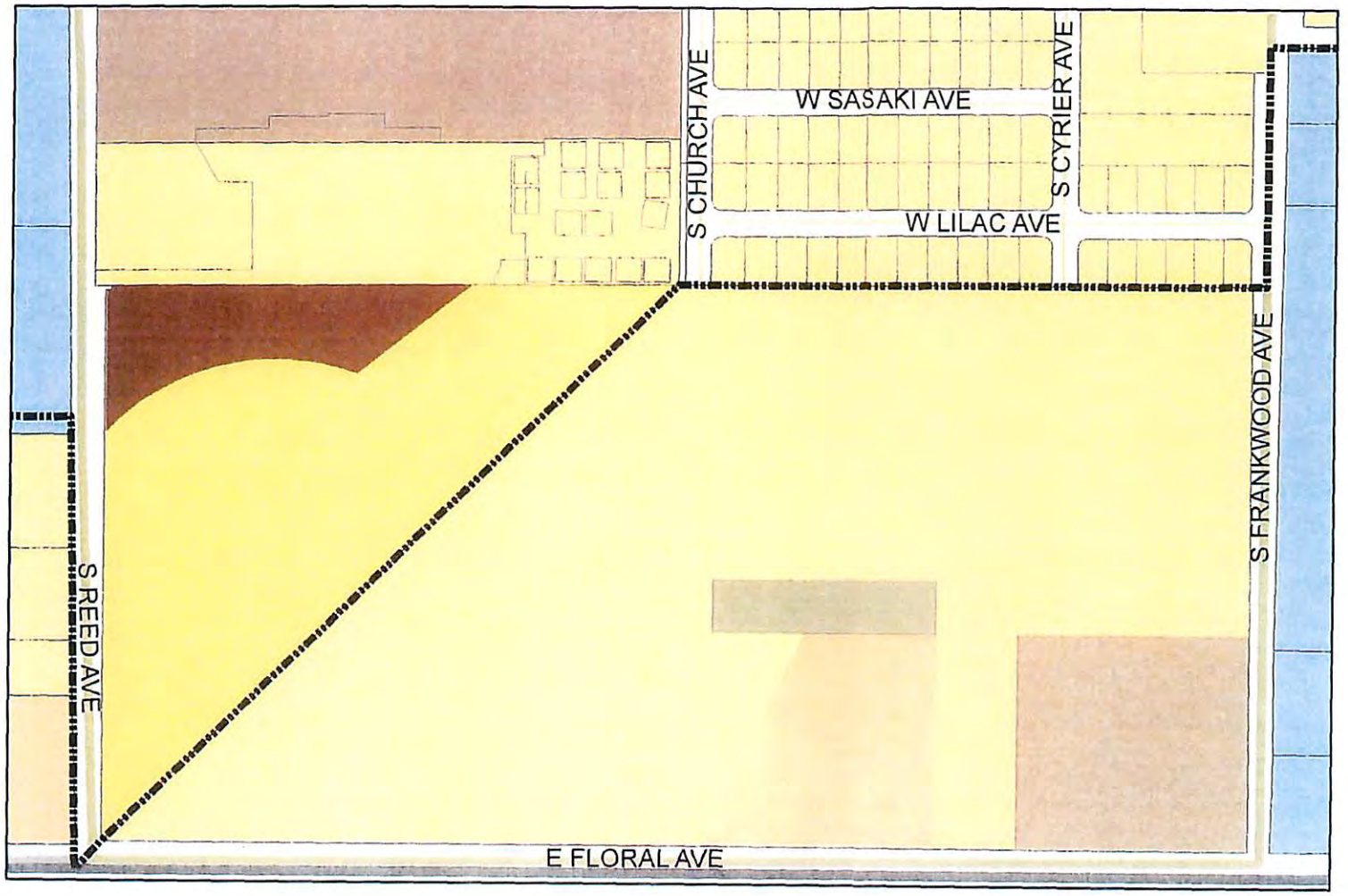


Exhibit A
Existing Planned Land Use Designations
Land Use Map, GPU 2030
General Plan Amendment Application No. 2014-01



Legend

City Limits

Sphere of Influence

GPU 2030 Street Class

(Per Figure 3.1 Circulation Diagram, page 57)

Arterial Street

Collector Street

Local Street

GPU 2030 Planned Land Use Designations

(Per City Council Resolution No. 2014-015)

Low Density Residential (4-8 du/acre)

Medium Density Residential (8-15 du/acre)

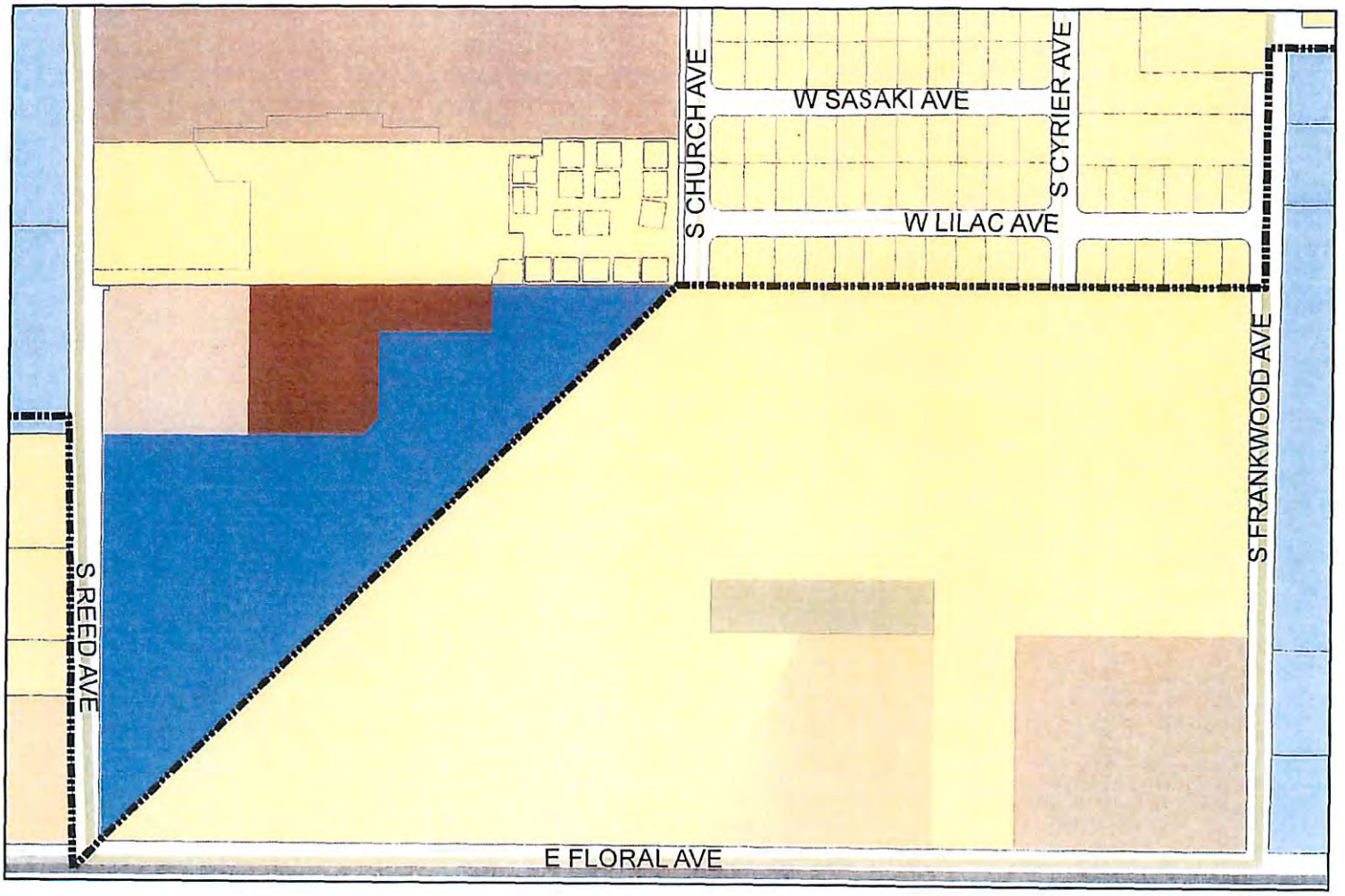
High Density Residential (15-29 du/acre)

Open Space

Public/Institutional Facility

Service Commercial

Exhibit B
Proposed Planned Land Use Designations
Land Use Map, GPU 2030
General Plan Amendment Application No. 2014-01



0 225 450 900 Feet

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Legend

City Limits

Sphere of Influence

GPU 2030 Street Class

(Per Figure 3.1 Circulation Diagram, page 57)

Arterial Street

Collector Street

Local Street

GPU 2030 Planned Land Use Designations

(Per City Council Resolution No. 2014-015)

Low Density Residential (4-8 du/acre)

Medium Density Residential (8-15 du/acre)

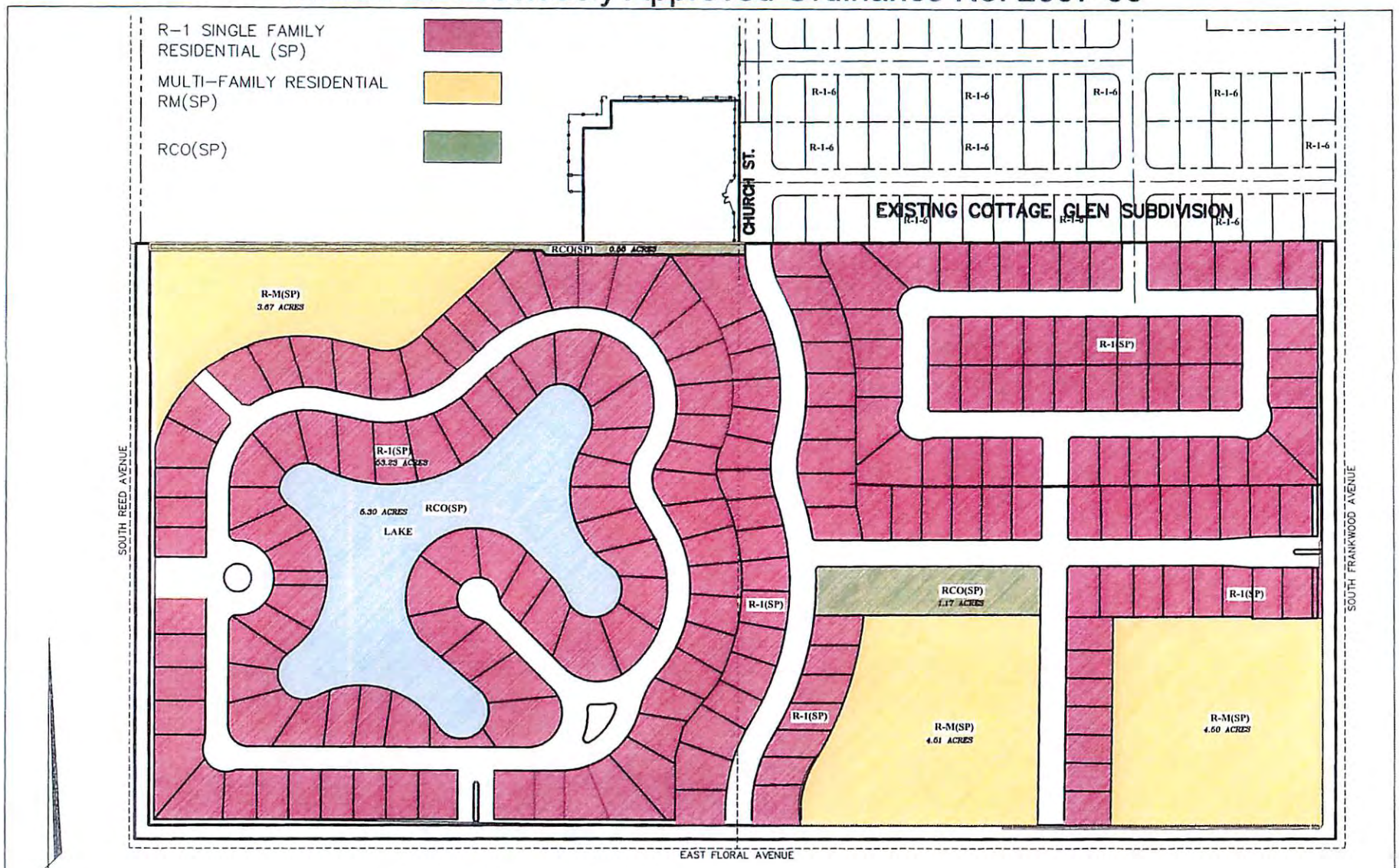
High Density Residential (15-29 du/acre)

Open Space

Public/Institutional Facility

Service Commercial

Exhibit C: Previously Approved Ordinance No. 2007-06



PROPOSED ZONING DESIGNATION
LAKEWOOD, TRACT 5452
CITY OF REEDLEY

SCALE: 1" = 300'

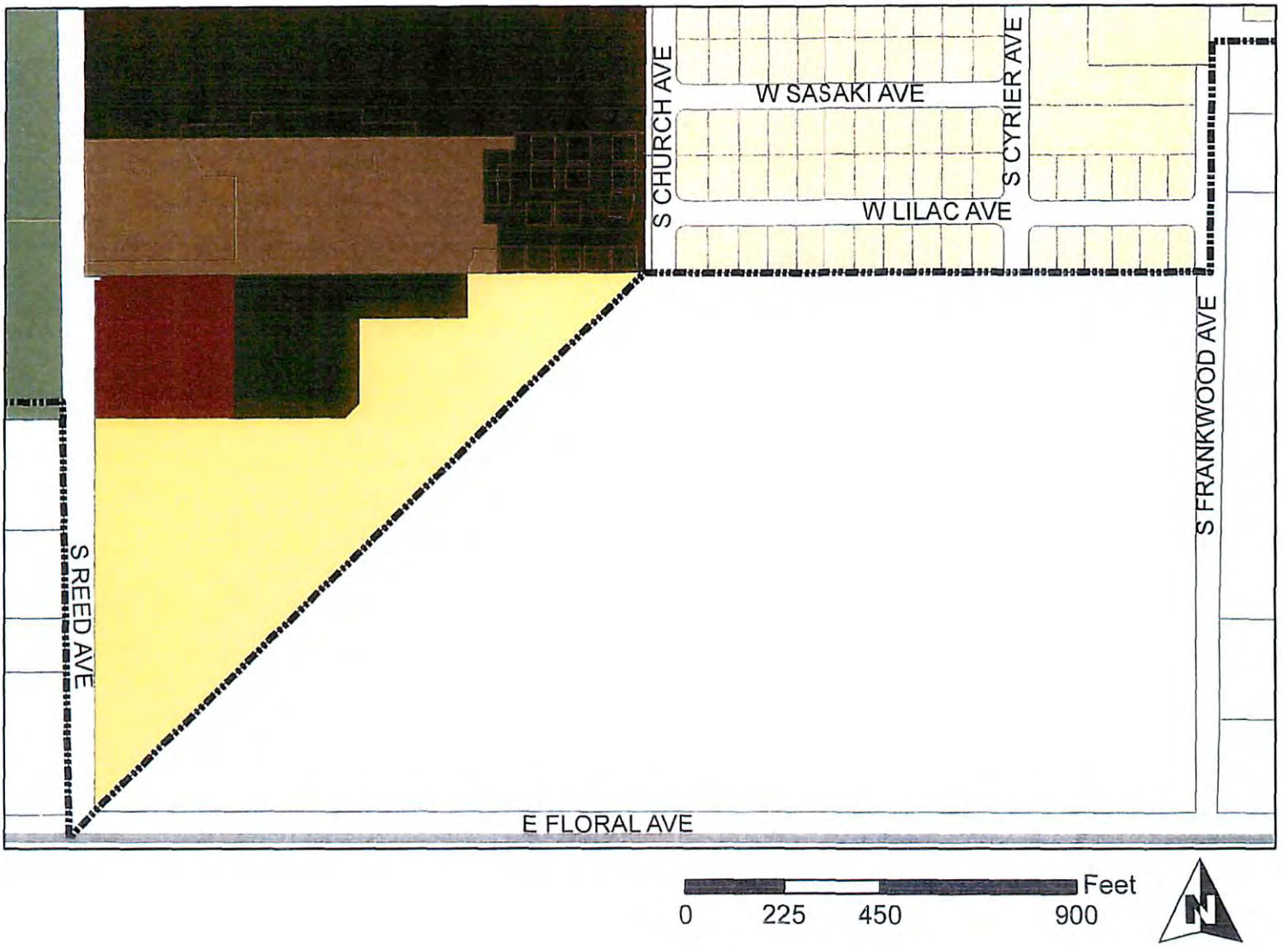
0 150 300 600

APRIL 2008

PREPARED BY:
YAMABE & HORN ENGINEERING, INC.
1300 EAST SHAW AVE. SUITE 176
FRESNO, CA 93710

04/14/08....04222EX2.DWG

Exhibit D
Proposed Zoning Designations
Rezone Application No. 2014-02



Legend

City Limits

Sphere of Influence

Zoning Designation

R-1(SP) One Family Residential

R-1-6 One Family Residential

RCO Resource Conservation and Open Space

RM-2 Multiple Family Residential

RM-3 Multiple Family Residential

EXHIBIT E
CONCEPTUAL SITE PLAN

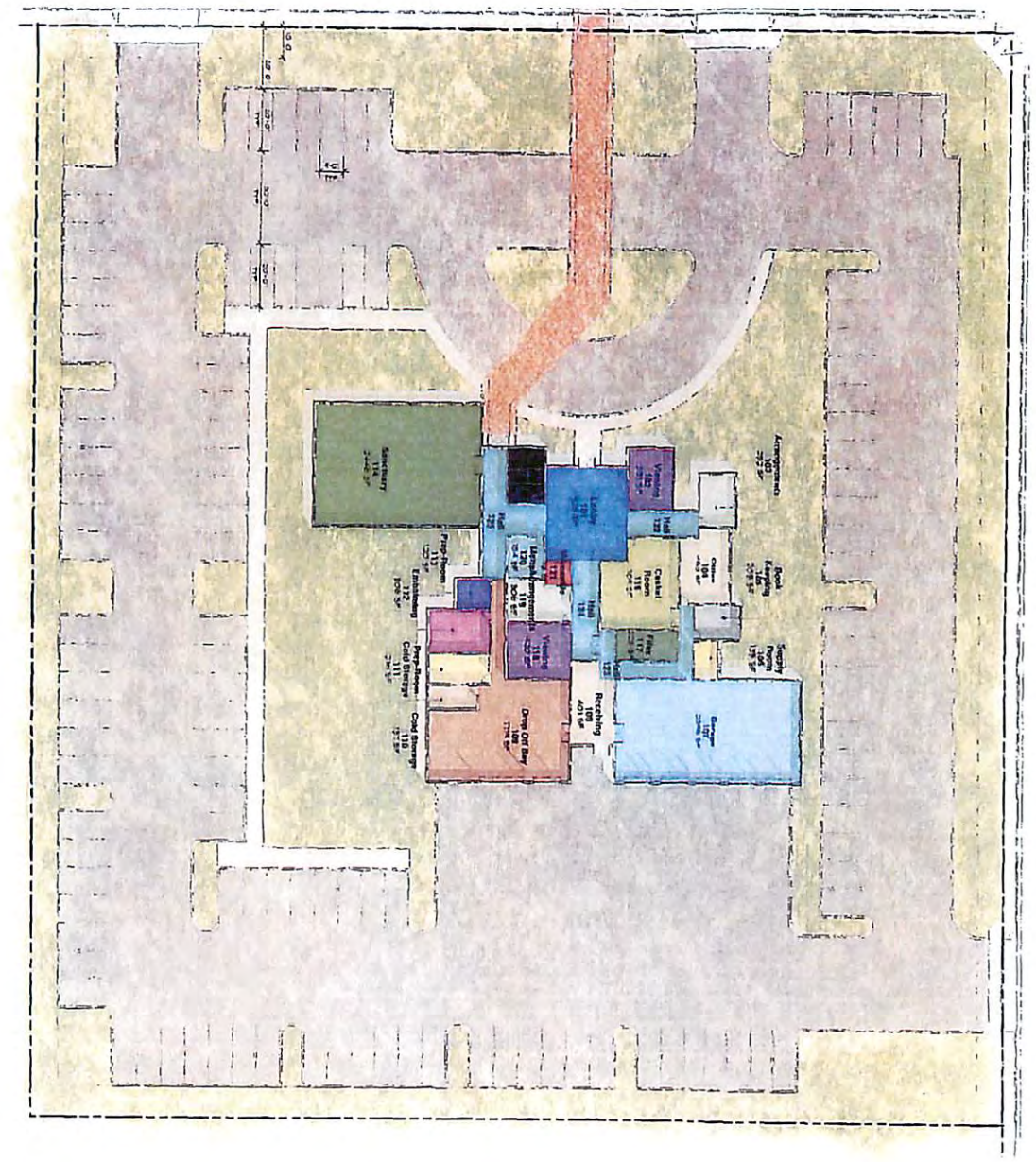


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EXHIBIT A

INITIAL STUDY, USING CEQA GUIDELINES APPENDIX G CHECKLIST
analyzing a subsequent project under City of Reedley, certified Program Environmental Impact Report (SCH No. 2010031106) prepared for the Reedley General Plan Update 2030

Environmental Assessment No. 2014-13

February 11, 2015

1. **Project title:** General Plan Amendment No. 2014-01 and Rezone Application No. 2014-02

2. **Lead agency name and address:**

   City of Reedley
   Community Development Department
   1733 Ninth Street,
   Reedley, California 93654

3. **Contact person and phone number:**

   Kevin Fabino, Director
   Community Development Department
   1733 Ninth Street,
   Reedley, California
   (559) 637-4200 ext. 286

   e-mail Kevin.Fabino@reedley.ca.gov

4. **Project location:** The western side of Reed and Floral Avenues and bound by the Alta Irrigation District facilities.

   Site Latitude: 36° 34' 31.602" N
   Site Longitude: 119° 27' 28.111" W

   Assessor's Parcel Number: 368-181-23 (Approximately ±19-acres)

5. **Project applicant/sponsor name and address:**

   Kevin Fabino, Director
   Community Development Department
   1733 Ninth Street,
   Reedley, California
   (559) 637-4200 ext. 286

6. **General plan designation:**
   Existing: Residential Planned Land Use
   Proposed: Residential and Public Facility Planned Land Uses

7. **Zoning:**
   Existing: RM (Multi-Family Residential) zone district
   Proposed: CS (*Commercial Service*) zone district

8. **Description of project:** The City of Reedley has initiated Environmental Assessment No. 2014-13 for the purpose of assessing the environmental effects of General Plan Amendment No. 2014-01 and Rezone Application No. 2014-02 applications. The City of Reedley has filed both the General Plan Amendment No. 2014-01 and Rezone Application No. 2014-02 applications. The subject property (APN: 368-181-23) is approximately ±19-acres, bounded by Reed and Floral Avenues. The General Plan Amendment No. 2014-01 is requesting the existing low density residential (4-8 dwelling units/per acre) planned land use designation be reclassified to Public Facilities planned land use designation (±13-acres). A portion of the existing high density residential (15-29 dwelling units/per acre) located at the northwesterly portion of the subject property, is proposed to be service commercial (±3-acres) and the remaining portion (±3-acres) high density residential planned land use designation modified along the northern boundary of the property in a more orderly fashion. See the attached Exhibits A & B.

The Rezone Application No. 2014-02, proposes to reclassify 3-acres, located in the northwesterly corner of the subject property from the RM (Multi-Family Residential) zone district to the CS (*Service Commercial*) zone district designation. The requested zone district designation is consistent with the GPU, Table 2-4 Planned Land Use and Zone District Consistency Matrix (Reedley GPU, Page 30). See the attached Exhibits C & D.

The purpose of these applications is to accommodate the future development of a groundwater recharge facility, a fire training center, and service commercial business. The Project is fully funded by Development Impact Fees, grants and sale of surplus lands.

The project area is generally surrounded by existing residential development (Palm Village) to the north, unincorporated fallow farmland to the east, active agricultural activities to the south and west. The Reedley Cemetery is also directly west of the subject property. It should be noted that Floral Avenue is the jurisdictional boundary between the County of Fresno and County of Tulare.

The City and Alta Irrigation District have committed to working jointly to develop a 10-acre stormwater and recharge basin. The construction of a recharge/ponding basin further implements the General Plan Update 2030, ground water and storm water policies (e.g. CIR 3.10.18 and CIR 3.10.19). Alta Irrigation intends to jointly use this recharge facility as potential storage and recharge, while gaining the ability to divert water to either of its recharge or banking facilities downstream. The following benefits of this collaborative effort will minimize the potential environmental and development impacts:

- Increase the City's ability to recharge stormwater runoff by constructing a 29 acre basin.
- Reduce the number of single family homes developed from 209 to 151 at full build out.
- Eliminate the direct flow of unfiltered storm water into the Kings River.
- Kings River Conservation District supports the diversion of stormwater and recharge effort.
- Relocating existing stormwater facilities so that the adjacent Cemetery can expand.
- Eliminate a need for agricultural use and spraying adjacent to urban uses (senior health risk).
- Reedley City Council and Alta Irrigation District Board of Directors are in full support of the project. The City and AID would jointly apply for grant funds to construct the recharge facility.

Also proposed is the construction of a Fire Training Center, which will facilitate and ensure the citizens of Reedley have adequate fire protection services. One project goals is to locate fire apparatus and training facilities outside of the urban core, where residents would not be

impacted by training activities.

The Reedley Volunteer Fire Department has filed several grant applications for critically needed resources to protect the public, to train emergency personnel and to foster interoperability and support through community resilience. The purpose of many of these grant programs is enhance through direct financial assistance, the health and safety of the public and firefighting personnel and to provide a continuum of support for emergency responders regarding fire, medical and all hazard events.

More specifically the Reedley Fire Department has sought the following, which could be live training opportunities on a dedicated portion of the subject property. Proposed are two Class "A" Mobile Live Fire and Rescue Training Trailers. The units will be designed to accommodate training in a manner which will provide for safety first, while allowing for realistic training scenarios. The unit is designed and built utilizing the most current codes, standards and recommendations published for this type of equipment. The trailer system will consist of two (2) level structures with door, hatch, and window openings. The system will be constructed from two (2) new 8' x 8.5' x 40' ISO containers and two (2) 40' ISO container chassis. Unit #1 will contain the burn room, and Unit # 2 will contain the SCBA and confined space props. When the containers are placed on the chassis, the overall height will be 13.5'.

With the above objectives, the Reedley volunteers can achieve NFPA requirements for certification as firefighters and perform required annual refresher courses. It will keep the volunteers here in the City and prevent them from using valuable time-off from their everyday jobs to attend trainings. Recruitment and retention of the volunteer firefighters is critical for this City to maintain emergency fire and rescue services. If the Fire Department can attain the proper equipment and train the volunteers, the net result will gain firefighter safety, proficiency, commitment and future firefighters. This is the final hurdle for this volunteer fire department as to whether or not a volunteer can attend live fire training, become certified, and remain interested in serving the community.

The proposed 3-acre parcels of undeveloped and vacant land on the north east corner of Reed Avenue is proposing a commercial use. Under this proposal, two separate buildings (@25,000 sq. ft.) are to be constructed and will be used for administrative offices, funeral services, arrangements, vehicle garage and storage areas, and a self-contained cremation chamber, which will all meet state of California licensing and environmental standards.

Both buildings will be wood framing construction and will be built on a typical slab-on-grade foundation, with a cement plaster finish. Both buildings will be designed with low-slope roofing systems and parapets. Some exposed tile roofing may be introduced. Additionally, the proposed project site will be paved, accessed and landscaped. Other site amenities will likely be provide such as pedestrian concrete flat work, site furnishings, special planting and gathering areas.

Proposed business hours of operations associated with public services are form 8:00 a.m. to 5:00 p.m., seven days a week. The estimated maximum number of employees on-site at any given time is 15. Deliveries will be made during normal working hours and made with vehicles weighing less than 2-tones and could occur 2 or 3 times a week.

No mechanical equipment related to this facility is, "anticipated to generate any noise or waste beyond what is normal from a dental office..." (Operational Statement, dated January 26, 2015). No generation of hazardous waste is anticipated and the site must comply with State of California regulatory requirements.

The proposed rezone application is also consistent with the Table 2-4 - Planned Land Use and Zone District Consistency Matrix of the Reedley General Plan Update 2030. Lastly the proposed amended tentative tract map is consistent with the Subdivision Map Act (California Government Code Section 66410 et. seq.), which requires that a proposed subdivision not be approved unless the map, together with its design and improvements, is found to be consistent with the General Plan and any applicable zoning regulations. The overall project also represents a reduction in development over what was previously approved.

9. **Surrounding land uses and setting:**:

	Planned Land Use	Existing Zoning	Existing Land Use
North	Low Density Residential (1-4 dwelling/per acre) Planned Land Use	CS (*Commercial Service*) zone district	Existing residential development
East	County of Fresno	Agricultural Use	Fallow Farmland
South	County of Tulare	Agricultural	Active Agriculture
West	Low Density Residential (1-4 dwelling/per acre) & Public Facility Planned Land Uses	R-1 (*Single Family*) zone district	Reedley Cemetery & Active Agriculture

10. **Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement):**

Alta Irrigation District

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

Pursuant to Public Resources Code Section 21001.1 and 21080, the purpose of this initial study is to analyze the potential environmental impacts of the project, to determine whether the project would have a significant adverse environmental impact requiring preparation of and Environmental Impact Report, or whether adverse impacts may be mitigated below a level of significance with features incorporated into a project and imposition of mitigation measures.

It is noted that the environmental setting for this project and a range of potential environmental impacts of development and use of land in the City of Reedley Sphere of Influence were described in the Program Environmental Impact Report (PEIR) certified in 2014.

Environmental factors checked below would be potentially affected by this project, although none of the impacts would be potentially significant with application of project-specific mitigation measures:

____ Aesthetics	____ Agriculture and Forestry Resources	____ Air Quality
____ Biological Resources	____ Cultural Resources	____ Geology /Soils
____ Greenhouse Gas Emissions	____ Hazards & Hazardous Materials	____ Hydrology/Water Quality
____ Land Use/Planning	____ Mineral Resources	____ Noise
____ Population /Housing	____ Public Services	____ Recreation
____ Transportation/Traffic	____ Utilities/Service Systems	____ Mandatory Findings of Significance

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation:

☒ I find that, although some aspects of this activities that would be allowed subsequent to the proposed project could have some adverse effects on the environment, those effects would not result in a significant adverse effect because revisions in the project have been made and project-specific mitigation measures will be applied, as agreed to by the project proponent. I further find that the project will not have additional significant adverse effects on the environment beyond those identified in the City of Reedley, certified Program Environmental Impact Report, prepared for the Reedley General Plan Update 2030.

Therefore, A NEGATIVE DECLARATION will be prepared.

x _____ 2/11/2015

Kevin E. Fabino, Director — February 11, 2015
Community Development Department

EVALUATION OF ADDITIONAL ENVIRONMENTAL IMPACTS:

1. For purposes of this Initial Study, the following answers have the corresponding meanings:

   a. "No Impact" means the subsequent project will not cause any additional significant effect related to the threshold under consideration which was not previously examined in the PEIR.

   b. "Less Than Significant Impact" means there is an impact related to the threshold under consideration that was not previously examined in the PEIR, but that impact is less than significant;

   c. "Less Than Significant with Mitigation Incorporation" means there is a potentially significant impact related to the threshold under consideration that was not previously examined in the PEIR, however, with the mitigation incorporated into the project, the impact is less than significant.

d. "Potentially Significant Impact" means there is an additional potentially significant effect related to the threshold under consideration that was not previously examined in the PEIR.

2. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

3. All 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.

4. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

5. "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section XVII, "Earlier Analyses," may be cross-referenced).

6. Earlier analyses may be used where, pursuant to the tiering, PEIR or MIER, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:

   a. Earlier Analysis Used. Identify and state where they are available for review.

   b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in the PEIR or another earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

   c. Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

7. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

8. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

9. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

10. The explanation of each issue should identify:

a. The significance criteria or threshold, if any, used to evaluate each question; and

b. The mitigation measure identified, if any, to reduce the impact to less than significance.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
I. AESTHETICS -- Would the project:				
a) Have a substantial adverse effect on a scenic vista?			X	
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?			X	
c) Substantially degrade the existing visual character or quality of the site and its surroundings?			X	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			X	

The project would not have a significant effect on scenic vistas or scenic resources in the City of Reedley. The subject property does not include any scenic resources such as trees, rock outcropping, or historic structures. The subject territory will not damage any scenic resources nor will it degrade the visual character or quality of the site and its surroundings. Furthermore, the project will not create a new source of substantial light or glare which would affect day or night time views in the project area, given that during the entitlement process, staff will ensure that lights are located in areas that will minimize light sources.

As a result, the project will have a less than significant impact on aesthetics. The project will be subject to the aesthetics mitigation measures identified in the PEIR. Conditions of Approval will be applied to ensure that the project is aesthetically appealing and will be further refined during the entitlement process.

Therefore, no project-specific mitigation for aesthetics impacts is required beyond the mitigation measures related to potential aesthetic impacts set forth in the PEIR.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
II. AGRICULTURE AND FORESTRY RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information complied by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:			X	
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?				X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources 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))?				X
d) Result in the loss of forest land or conversion of forest land to non-forest use?				X
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?				X

The project area is generally surrounded by existing residential development (Palm Village) to the north, fallow farm land to the east, active agricultural activities to the south and west. The Reedley Cemetery is also directly west of the subject property. It should be noted that Floral Avenue is the jurisdictional boundary between the County of Fresno and County of Tulare. Therefore, the project itself will not cause any premature conversation of agricultural lands or cause other tertiary impacts to agricultural lands. The subject site and surrounding property are not subject to contracts under the Williamson Act.

The project would not adversely affect agricultural or forestry resources. Approval of this mixed use project would constitute infill development which would prevent potential cumulative consumption of agricultural land for additional residential/commercial development in the City of Reedley.

Mitigation Measures

1. The proposed project incorporates and implements as applicable PEIR mitigation measures relating to agricultural land preservation (AG-1 & AG-2), as identified in the attached Exhibit B, Mitigation Monitoring Checklist for Final Environmental Impact Report (SCH No. 2010031106) & Reedley General Plan 2030, dated February 18, 2014.

Therefore, no project-specific mitigation for forestry impacts is required.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
III. AIR QUALITY AND GLOBAL CLIMATE CHANGE - Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan (*e.g.*, by having potential emissions of regulated criterion pollutants which exceed the San Joaquin Valley Air Pollution Control Districts (SJVAPCD) adopted thresholds for these pollutants)?			X	
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?			X	
c) 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 (including releasing emissions which exceed quantitative thresholds for ozone precursors)?			X	
d) Expose sensitive receptors to substantial pollutant concentrations?			X	

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Create objectionable odors affecting a substantial number of people?			X	

Environmental and Regulatory Setting Regarding Air Quality

The project is located in Fresno County and within the San Joaquin Valley Air Basin (SJVAB). This region has had chronic non-attainment of federal and state clean air standards for ozone/oxidants and particulate matter due to a combination of topography and climate. The San Joaquin Valley (Valley) is hemmed in on three sides by mountain ranges, with prevailing winds carrying pollutants and pollutant precursors from urbanized areas to the north (and in turn contributing pollutants and precursors to downwind air basins). The Mediterranean climate of this region, with a high number of sunny days and little or no measurable precipitation for several months of the year, fosters photochemical reactions in the atmosphere, creating ozone and particulate matter. Some air pollutants are fairly consistent throughout the year and are changeable from day to day and even hour to hour, due to complex interactions of topography, climate, and weather.

Regional factors affect the accumulation and dispersion of air pollutants within the SJVAPD. The SJVAPD is approximately 250 miles long and averages 35 miles wide, and is the second largest air basin in the state. The SJVAPD is defined by the Sierra Nevada in the east (8,000 to 14,000 feet in elevation), the Coast Ranges in the west (averaging 3,000 feet in elevation), and the Tehachapi mountains in the south (6,000 to 8,000 feet in elevation). The Valley is basically flat with a slight downward gradient to the northwest. The Valley opens to the sea at the Carquinez Straits where the San Joaquin-Sacramento Delta empties into San Francisco Bay. The Valley, thus, could be considered a "bowl" open only to the north.

Summertime wind speed and direction data indicate that the Valley's air mass moves from the north end of the Valley and flows in a south-southeasterly direction through the Valley, through the Tehachapi Pass, into the Southeast Desert Air Basin.

During the winter, average high temperatures are in the 50s and the average daily low temperature is 45°F. Temperatures below freezing are unusual, but highs in the 30s and 40s can occur on days with persistent fog and low cloudiness. Wintertime wind speed and direction data indicate that prevailing winds flow occasionally reverse, with wind originating from the south end of the Valley and blowing in a north-northwesterly direction. While the Valley generally experiences light winds (less than 10 mph), more disturbed weather conditions with stronger ground level winds can generate fugitive dust and exacerbate particulate matter pollution. Winter also predisposes the SJVAPD to inversion layers, where warm air in the upper atmosphere caps cold air at lower elevations, with little or no normal convection to mix the air mass. Inversions can exist at the surface or at any height above the ground, and tend to act as a lid on the Valley, holding in the pollutants that are generated here.

Occurrences of high barometric pressure at any time of the year tend to cause the Valley atmosphere to stagnate and allow pollutants to concentrate. These factors create a climate conducive to elevated particulate matter (PM 10 and PM 2.5) concentrations and accumulations of carbon monoxide (CO).

Valley air quality has adverse impacts on human health, a situation rendered more serious due to the elevated proportion of sensitive persons (children and the elderly) in the local population. Childhood and adult asthma is prevalent and there is a high level of asthma mortality in the region. Outdoor recreation is often contraindicated, which has secondary cardiopulmonary effects from lack of physical activity.

The San Joaquin Valley Air Pollution Control District (SJVAPCD) is the local regional jurisdictional entity charged with attainment planning, rulemaking, rule enforcement, and monitoring under Federal and State Clean Air Acts and Clean Air Act Amendments. The regional SJVAPD has provided a means to undertake regional climatology studies for understanding transport and evolution of air pollutants, and a comprehensive approach to reducing air pollution in the entire Valley.

The SJVAPCD has promulgated a series of air quality attainment plans pursuant to requirements of Federal and state Clean Air Acts, complementing the efforts of the California Air Resources Board. These plans include a range of strategies to improve air quality through land use planning and transportation control measures, vehicle inspection programs, industrial point source permit controls, emission offsets, incentive programs to replace high-polluting equipment/vehicles with newer/cleaner technologies, and even regulations aimed at reducing the amount of pollutants transported in the Valley from the coastal (Bay) area. SJVAPCD Rulemaking efforts have focused on cost-effective technologies and measures which have aimed to reduce the most pollutants at the least cost on a regional basis.

Through these attainment plans and implementing regulations (e.g., Rules), the SJVAPCD has reduced emissions of pollutants and pollutants precursors overall and has achieved attainment of some national ambient air quality standards. However, ozone/oxidant air pollutant is a refractive problem. The SJVAPCD has a current designation of Extreme Non-Attainment. Full attainment is not projected until year 2024.

The Reedley General Plan Update 2030 and certified Program Environmental Impact Report, contains significant City goals, objectives, policies and mitigation measures to reduce potential air pollution and reduce emissions of greenhouse gases. While the PEIR was certified and adoption with an over-riding consideration for the intractable regional air pollution problems, policies of the General Plan, PEIR mitigation measures and conditions of approval will be applied to the project.

SJVAPCD Rules provide the main strategy for attaining National and State Ambient Clean Air Standards. Some SJVAPCD Rules would apply to aspects of using the subject property for the requested uses; for example, tenant activities, may involve applications of architectural coatings, use of mobile equipment, boilers, bakery and grill facilities, etc. that generate the emissions of air pollutants.

The project will not occur at a scale of which the potential to contribute substantially to existing or projected air quality violations, impacts, or increases of criteria pollutants for which the San Joaquin Valley region is under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors). The proposed project is not proposing a use which will create objectionable odors.

The City of Reedley wishes to develop the recently purchased 19 acres (APN: 365-181-23) of land located at the northeast corner of Reed and Floral Avenues, by constructing and operating a Fire Department training facility and recharge/ponding basin as public facilities. It should also be noted that the newly proposed project would further reducing potential development impact by eliminating the approved construction of approximately 45 single family dwelling units and 56 multiple family dwelling units. The project has been conditioned to comply with any required SJVAPCD Rules; therefore, no further mitigation is required to ensure a less than significant impact to the environment.

Therefore, the project would have a less than significant impact on air quality or global climate change.

Mitigation Measures

1. The proposed project incorporates and implements as applicable PEIR mitigation measures relating to air quality (AQ-1 & AQ-2), as identified in the attached Exhibit B, Mitigation Monitoring

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
IV. BIOLOGICAL RESOURCES – Would the project:				
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 project would not adversely habitat, wetlands, plants or wildlife, migratory routes, conservation plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?			X	
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 U.S. Fish and Wildlife Service?			X	
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				X
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?				X
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X

Because this project is located on an infill site surrounded by existing development, the project would not have any impact on any protected habitat, wetlands, plants or wildlife, migratory routes, conservation plans, or other biological resources because no known resources of this type exist on the premises. The project has no vegetation or wetlands to provide habitat.

Mitigation Measures

1. The proposed project incorporates and implements as applicable PEIR mitigation measures relating to biological resources (BIO-1), as identified in the attached Exhibit B, Mitigation Monitoring Checklist for Final Environmental Impact Report (SCH No. 2010031106) & Reedley General Plan Update 2030, dated February 18, 2014.

Therefore, no project-specific mitigation for biological impacts is required.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
V. CULTURAL RESOURCES -- Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?				X
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?			X	
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?			X	
d) Disturb any human remains, including those interred outside of formal cemeteries?			X	

There are no structures which exist on or within the immediate vicinity of the site that are listed on, or considered to be eligible for the National, State or Local Register of Historic Places, and the subject site is not within either a designated or proposed historic district. As such, this project will have no impacts on any historical resources.

There is no evidence that cultural resources of any type (including historical, archaeological, paleontological, or unique geologic features) exist within the subject territory. Past record searches for the region have not revealed the likelihood of cultural resources on the subject property or in its immediate vicinity. However, because of the slight possibility of hidden archeological or paleontological resources that may be uncovered during excavation required for this development, the project will adhere to the protocols established in CEQA and the PEIR to address delayed discovery of such resources.

Mitigation Measures

1. The proposed project incorporates and implements as applicable PEIR mitigation measures relating to cultural resources (CR-1 – CR-4), as identified in the attached Exhibit B, Mitigation Monitoring Checklist for Final Environmental Impact Report (SCH No. 2010031106) & Reedley General Plan Update 2030, dated February 18, 2014.

Therefore, no project-specific mitigation for cultural impacts is required.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VI. GEOLOGY AND SOILS -- Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:			X	
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.			X	
ii) Strong seismic ground shaking?			X	
iii) Seismic-related ground failure, including liquefaction?			X	
iv) Landslides?			X	
b) Result in substantial soil erosion or the loss of topsoil?			X	
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 off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			X	
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?			X	

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?			X	

The City of Reedley and the surrounding County of Fresno area has no known active earthquake faults, and is not in any Alquist-Priolo Special Studies Zone. The immediate Fresno area has extremely low seismic activity levels, although shaking may be felt from earthquakes whose epicenter lie to the east, west, and south. Known major faults are over 50 miles away and include the San Andreas Fault, Coalinga area blind thrust fault(s), the Long Valley, Owens Valley, and White Wolf/Tehachapi fault systems. The most serious threat to Reedley from a major earthquake in the Eastern Sierra would be flooding that could be caused by damage to dams on the upper reaches of the San Joaquin River.

Mitigation Measures

1. The proposed project incorporates and implements as applicable PEIR mitigation measures relating to geology and soils (GEO 1 – GEO 4), as identified in the attached Exhibit B, Mitigation Monitoring Checklist for Final Environmental Impact Report (SCH No. 2010031106) & Reedley General Plan Update 2030, dated February 18, 2014.

Therefore, no project-specific mitigation for geology and soils impacts is required.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VII. GREENHOUSE GAS EMISSIONS -- Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X	

Background

When sunlight strikes the Earth's surface, some of it is reflected back into space as infrared radiation. When the net amount of solar infrared energy reaching Earth's surface is about the same as the amount of energy radiated back into space, the average ambient temperature of the Earth's surface should remain more or less constant.

Global climate change (colloquially referred to as "global warming") is the term coined to describe very widespread climate change characterized by a rise in the Earth's ambient average temperatures with concomitant disturbances in weather patterns and resulting alteration of oceanic and terrestrial environs and biota. The predominant opinion within the scientific community is that global climate change is occurring, and that it is being caused and/or accelerated by human activities, primarily the generation of "greenhouse gases" (GHG).

GHGs are gases having properties that absorb and emit radiation within the thermal infrared range, and that would cause thermal energy (heat) to be trapped the earth's atmosphere. It is believed that increased levels of GHGs in the atmosphere can disturb the thermal equilibrium of the earth when natural carbon cycle processes (such as photosynthesis) are unable to absorb sufficient quantities of carbon dioxide and other GHGs in comparison with the amount of GHGs being emitted. It is believed that a combination of factors related to human activities, such as deforestation, emissions of GHG into the atmosphere from carbon fuel combustion, etc. are causing climate change.

Some GHGs occur naturally and are emitted to the atmosphere through both natural processes and human activities. Other GHGs are created and emitted solely through human activities. Water vapor is the most predominant GHG, and is primarily a natural occurrence: approximately 85% of the water vapor in the atmosphere is created by evaporation from the oceans. The major anthropogenic GHGs (those that enter the atmosphere because of human activities) are carbon dioxide, methane, nitrous oxide and fluorinated gases.

GHGs were not generally thought of as traditional air pollutants because their impacts are global and diffuse in nature, while the criteria air pollutants and air toxins directly affect the health of people and other living things at ground level in the general region of their release to the atmosphere. However, it has been realized that GHGs and associated climate change could also drastically affect the health of populations not only in the U.S., but around the world through sea level rise that displaces populations, causes economic and infrastructure damage, disrupts agriculture, increases heat-related illnesses, exacerbates effects of criteria air pollutants, spreads infectious diseases through proliferation of mosquitoes and other vectors carrying "tropical" diseases into temperate climate zones, and alters/endangers natural flora and fauna in terrestrial and aquatic environments. One oft-cited example of a predicted change in global climate is that the Sierra snowpack could be reduced to as little as 20% of its historic levels, a dire consequence since it is estimated that over 70% of California's population relies on this "frozen reservoir" for its water supply.

The State of California has formally acknowledged these risks and has tasked state and local governments with working toward reduction of potential global climate change. The Governor issued Executive Order No. S-03-05, and subsequently signed Assembly Bill (AB) 32, the Global Warming Solutions Act of 2006, which was codified as Health & Safety Code Section 38501 *et seq.*

There are, at this time, no "attainment" concentration standards established by the federal or state government for GHGs (although several of the GHGs are regulated as precursors to criteria pollutants regulated by the federal and California Clean Air Acts). However, the State has codified a mandate to reduce GHG emissions to 1990 levels by the year 2020. In order to roll back GHG emissions to 1990 levels, a reduction of 174 million metric tons of CO2e would need to be achieved statewide—against the background of California's general population increase and the need for ongoing land and economic development. The combination of the need to reduce and the need to grow equate to a need to reduce per capita GHG emissions by some 290% from the "business as usual" scenario of continuing the former rate of escalated GHG emissions overtime.

It has been recognized that new development projects would potentially add GHG emissions and could exacerbate global climate change problems. In order to standardize evaluation of projects, Senate Bill 97 (codified as Public Resources Code Sections 21083.05 and 21097) requires the State Resources

Agency to adopt guidelines for addressing climate change in environmental analysis pursuant to the California Environmental Quality Act (CEQA). The California Air Pollution Control Officers Association (CAPCOA) produced a comprehensive publication on this topic in August of 2010 titled *Quantifying Greenhouse Gas Mitigation Measures*. The Report provides methods for quantifying emission reductions from a specified list of mitigation measures, primarily focused on project-level mitigation. This document is intended to further support the efforts of local governments to address the impacts of GHG emissions in their environmental review of projects and in their planning efforts.

In order to standardize global climate change assessments within the San Joaquin Valley Air Basin, the SJVAPCD adopted a protocol for evaluating land use projects; the 2009 Guidance for Valley Land Use Agencies in Addressing GHG Emission Impacts for new project under CEQA. The District determined that the most appropriate assessment criteria would be oriented to performance based standards to streamline the CEQA process for determining significance of project impacts, rather than numerical modeling of GHG emissions and emission reductions. Projects meeting the Best Performance Standards ("BPS") established by the SJVAPCD would be determined to have a less than significant cumulative impact on global climate change. If projects could not demonstrate compliance with BPS, then a quantification of GHG emissions and demonstration of a 29% reduction in GHG emissions below the "business as usual" level will be required to determine that a project would have a less than significant cumulative impact.

In February 2008, the City Council authorized the reorganization of territory, a general plan amendment, a change of zone, tentative tract map and conditional use permit applications related to the "Lakewood" Subdivision Project. The original "project" proposed for the subject has been amended to include the groundwater recharge facility, fire training facility, and commercial business area, as described in the above Description of Project. The result of the newly proposed project would significantly reducing potential Greenhouse Gas Emissions and development impact by eliminating the construction of approximately 45 single family dwelling units and 56 multiple family dwelling units.

The proposed commercial building structures are proposed to be designed utilizing universal design elements. This includes Energy Star® appliances, no VOC paints, low emitting flooring, radiant barrier roof sheathing, high efficiency windows, energy efficient lighting exceeding Title 24 standards by 40% to achieve a Build it Green certification®. The incorporation of these features will reduce the project impacts on greenhouse gas emissions to less than significance.

Mitigation Measures

1. The proposed project incorporates and implements as applicable PEIR mitigation measures relating to greenhouse gas emissions (GHC-1), as identified in the attached Exhibit B, Mitigation Monitoring Checklist for Final Environmental Impact Report (SCH No. 2010031106) & Reedley General Plan Update 2030, dated February 18, 2014.

Therefore, no project-specific mitigation for greenhouse gas emissions impacts is required.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VIII. HAZARDS AND HAZARDOUS MATERIAL -- Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
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?			X	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			X	
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, would it create a significant hazard to the public or the environment?				X
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?			X	
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?			X	
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			X	
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?			X	

Hazardous Materials

The subject property is not on the CalEPA list of contained sites, and residential properties are not permitted to engage in industrial or commercial activities which would involve the use, transport, store, and dispose of hazardous materials (outside of those approved for household cleaning and yard & garden pest control). Because the above-noted regulation relating to toxic and hazardous materials is a matter of law, the environmental assessment can rely on compliance without the need for specific mitigation.

Hazardous Facilities

The subject property is not located in any airport safety area or directly adjacent to any freight rail lines. Urban areas have overhead and buried power, gas, rail and communication utility lines. Regulations require that contractors verify precise locations of these lines and avoid damaging them during construction activities; again, environmental assessment can rely on compliance without specific additional mitigation.

Therefore, no project-specific mitigation for hazardous materials and hazardous facilities impacts is required.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
IX. HYDROLOGY AND WATER QUALITY -- Would the project:				
a) Violate any water quality standards or waste discharge requirements?			X	
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?			X	
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?			X	

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?			X	
e) 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?			X	
f) Otherwise substantially degrade water quality?			X	
g) 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?			X	
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?			X	
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?			X	
j) Inundation by seiche, tsunami, or mudflow?			X	

Water Supply, Water Treatment and Delivery Maintenance

The City of Reedley lies directly over the Kings Basin from which the City extracts its domestic water supply. The Kings Basin is a large groundwater subbasin located within the southern part of the San Joaquin Valley Basin, in the Central Valley of California. The groundwater basin covers an area of 1,530 square miles.

The City of Reedley depends entirely on groundwater pumping from the Kings Basin. The topography of the Reedley area is relatively flat, and the primary slopes within the SOI are those found within the Kings River corridor. Subsurface lateral movement of runoff from the Sierra Nevada Mountains to the east and some general surface runoff in creeks, irrigation ditches and open space, percolation ponds and the Kings River are all a source of replenishment of the groundwater table. The City's groundwater supply is pumped from wells located entirely on the eastern side of the Kings River. The City does not pump or operate any groundwater wells on the westerly side of the Kings River.

The City has historically provided domestic water supply solely through groundwater extraction. The City operates six active water wells and three water storage towers. It is common practice for the City to drill its water production wells at depths greater than 800-feet to ensure sufficient supply and meet State Water Quality standards. This is because water quality in the Kings Basin is generally very good and groundwater quality in the Reedley vicinity is also generally good. In the City of Reedley 2011 Water Quality Report, the City reported that after testing for over 100 constituents, the City's groundwater supply met all health related standards established by the California Department of Public Health, and the U.S. Environmental Protection Agency.

The City of Reedley produced from 2003-2007, 11,474,563,400 gallons of water for public consumption. During the same period the average Annual Daily Per Capita Water Use (gpcd) was 290 gpcd (2010 Urban Water Management Plan, Table 3-3, Base Daily Per Capita Water Use – 5-Year Range). In 2008, the City used 1,959,531,000 gallons of water (City of Reedley, 2008 Water Quality Report). In 2010 the City used 1,538,500,000 gallons of water (City of Reedley, 2010 Water Quality Report), and in 2011, the City used 1,450,120,000 gallons of water (City of Reedley, 2011 Water Quality Report). As such, from 2008 to 2011, the City experienced a significant reduction in annual groundwater extraction of approximately 1,563 acre-feet. The projected per capita water use from 2008 to 2011 dropped to "180 gpcd" (Urban Water Management Plan, 3.2.2 Projected Water Deliveries, Page 3-6).

The 2010 Urban Water Management Plan (2013) states the following:

> "The City plans to achieve compliance with the water use targets through water conservation, including metering with commodity rates. The recent implementation of metering and use of commodity rates resulted in a significant reduction in per capita use, from approximately 249 gallons per capita per day (gpcd) in 2006 to 180 gpcd in 2011. The City adopted a tiered rate structure which became effective May 1, 2010. The inclining block structure encourages conservation and discourages waste of potable water supplies by charging higher prices from excessive water uses. (HDR, page 3-10)

This 28% reduction in gpcd exceeds the State mandated 20% reduction by 2020, pursuant to Senate Bill X7-7, also known as the 20x2020 Plan. Upon review of the City of Reedley, 2014 monthly residential water billing there appears to be a continued downward trend of residential consumption of water.

Through the Reedley Municipal Code (RMC) the City has implemented regulations for the conservation of potable water. Pursuant to RMC, Water Conservation, Section 8-1-12(A), the goals of this section are to minimize water use and reduce unnecessary use of potable water supplies. This section of the code provides a definition of "waste of water", irrigation design guidelines, watering schedules and the enforcement process and penalties.

The GPU goals, policies, RMC and supporting plans (UWMP) represent an effort to effectively manage a valued resource. To effectively manage this finite resource the GPU includes numerous goals and policies promoting public education, transparency, conservation and collaboration with other governmental agencies. Implementation of all of these water polices will not wholly mitigate the critical overdraft of the Kings Basin. However, the collective Public Utilities Goals and Policies were specifically designed as a comprehensive set of tools to ensure the avoidance of a critical overdraft and ensure the City's diligent oversight, management and use of a finite water resource.

Therefore, it was reasonably concluded that the project would have minimal, if any impact to the City's water delivery system.

Wastewater Management

The City currently operates its own wastewater treatment plant (WWTP) located at 1701 West Huntsman Avenue, Reedley, California. The WWTP Phase 1 project was recently completed which expanded the plant's capacity to 5.0 million gallons per day (mgd) and constructed new percolation ponds. The waste water plant has also been designed to readily expand to a total capacity of 7.0 mgd. At total plant build-out the plant could accommodate the anticipated growth for the next 20 years. The plant is currently operating at approximately 2.3 mgd and based upon a review of capacity and expertise of the City in operating such a plan, it was concluded that the addition of 55 multiple family units would not exceed the total capacity of 5.0 mgd.

Additionally the WWTP site contains three additional stormwater basins. According to the City of Reedley, Waste Water Treatment Plant Draft Environmental Impact Report (2006), "New percolation ponds (approximately 20 acres total) will be constructed within the WWTP boundary, and will enable the plant to continue to provide 100 percent effluent reclamation via percolation" (Page 2-7). It is also noteworthy that part of the City's permit for the WWTP is that the City is required to discharge effluent reclamation waters between October and May, into three specific ponding basins for recharge purposes. According to WWTP records, the five-year average of effluent discharge used for percolation purposes is 704.4 million gallons; and, in 2012, 654.0 million gallons were discharged into these percolation ponds for groundwater recharge.

According to orders and permits issued by the California Water Quality Control Board for the City's WWTP, certain limits have been placed on discharge flows to percolation ponds and the Kings River. The WWTP is limited to a monthly average discharge flow of 3.5 million gallons per day (mgd) of waste water to approximately 39 acres of percolation ponds. The City is also limited to a monthly average discharge flow of 1.75 mgd of waste water into the Kings River. According to the Alta Irrigation District's Amended Groundwater Management Plan (2010), "effluent discharge by the City of Reedley ('Agency') from its sewer treatment plant into the Kings River should not be considered to be the prohibited exportation of groundwater, if such effluent recharges or benefits underground supplies available to landowners in the District".

Drainage, Stormwater Management and Flood Control

Storm water flows into street collection systems and enters the storm drain inlets where it is conveyed through sub-surface drainage piping to one of several storm water retention basins located throughout the City of Reedley. The design of the storm drainage collection system is based upon the peak flow that the pipeline collection system can carry and the topographic slope (or gradient) available in the area. The design of a storm water retention basin is based upon the total volume of runoff that the retention basin must be capable of storing. The estimate of peak flow and total runoff volumes includes calculations utilizing hydrological principals.

The City has ten drainage zones, nine permanent storm water retention basins, underground storm drains, storm drain inlets, a drainage ditch, and a pump station distributed throughout the City. For example, the Buttonwillow Irrigation Ditch is located on the east side of the City. Storm drains also carry water to one of three retention basins. The Camacho Park Retention Basin is located at the northeast corner of North Avenue and Columbia. Another retention basin is located at the end of Hemlock Avenue and Curtis Avenue, adjacent to the Reedley Parkway. Both of these retention basins are designed to use gravity to fill with water. Storm water is collected in these basins and percolates through the soil or evaporates into the air. The third retention basin is located at the intersection of Washington Avenue and Carolyn Lane. Storm water from this basin is pumped to an irrigation canal. See Figure 3.2 - Map of Retention Basin Sites. In addition, the Waste Water Treatment Plant is a significant source of groundwater recharge, as previously discussed above in the Public Utilities - Waste Water section.

There are also two well-defined areas in the City of Reedley that collect stormwater runoff, which flows directly to Alta Irrigation District (AID) facilities. The northern area is generally bound by Parlier, Frankwood, Manning and Hollywood Avenues. The second area is generally bound by North, East, and Dinuba Avenues. The two areas described above consist of approximately 20 acres of land. The amount of annual flow to the AID facility could be calculated based upon the annual rainfall level.

The storm drain runoff from this 20 acre area is an indirect source of groundwater recharge for AID. The collected stormwater runoff drains into irrigation ditches and canals which are an excellent opportunity for groundwater recharge. Any runoff not absorbed through seepage is available to AID for further recharge or delivery to their customers, which in turn reduces the potential need for drawing more water from the Basin for remaining service needs.

The National Pollutant Discharge Elimination System (NPDES) program controls and reduces pollutants to water bodies from point and non-point discharges. The NPDES Phase II Storm Water Program requires separate municipal storm sewer systems to obtain a permit and develop a storm water management program designed to prevent harmful pollutants from being washed by storm water runoff into local water bodies. The program must include public education, public participation and involvement, illicit discharge detection and elimination, construction site runoff control, post-construction runoff control and pollution prevention, and good housekeeping.

The City's Stormwater Management Implementation Plan (Starr Engineering 2007), represents the five-year management strategy for controlling the discharge of pollutants to the "maximum extent practicable" in stormwater runoff from the City urban area during the first NPDES stormwater permit term. The plan was prepared in support of the City's application for a Municipal Stormwater (MS4) Permit to the Central Valley Regional Water Quality Control Board. The plan includes information on federal, state, and local storm water quality regulations, stormwater quality control strategies and programs to be implemented in Reedley, storm water quality monitoring and assessment, and plan implementation requirements. The City is currently in compliance with all State Stormwater regulations and in the process of updating its Storm Drainage Master Planning Report. It is anticipated that the Master Plan will be complete during the early part of 2014.

The Reedley Municipal Code, Stormwater Management Section 8-5-1, sets forth the local governing regulations for implementing stormwater quality management strategies consistent with its General Construction permit from the Central Valley Regional Water Quality Control Board. The regulations are applicable to all storm water generated on any developed or undeveloped urban land within the City or conveyed by the public storm drain system. The critical component of the regulations is as follows:

> All persons engaged in activities which will or may reasonably be expected to result in pollutants entering the public storm drain system shall undertake best management practices (BMPs) to minimize such pollutants, shall provide protection from accidental discharge of pollutants to the public storm drain system and comply with cleanup and notification requirements of this chapter. Such measures shall include the requirements imposed by federal, state, county, or local authorities. BMPs are site specific and are described in the documents "Storm Water Best Management Practice Handbook: Construction"; "Storm Water Best Management Practice Handbook: New Development And Redevelopment"; "Storm Water Best Management Practice Handbook: Industrial And Commercial"; "Storm Water Best Management Practice Handbook: Municipal"; or other guidance documents available from EPA and/or RWQCB. (Reedley Municipal Code, Section 8-5-1)

To support these and other storm drainage facilities the City has created and implemented an impact fee program (Update of Development Impact Fee, dated January 17, 2005). The current drainage system is comprised of street gutters and underground pipes that convey the storm event runoff to detention basins, irrigation canals and the Kings River. $11,721,700 of the total cost constructing and maintaining the drainage system has been allocated to new development projects and is being spread to the various land uses in proportion to their need for storm water runoff capacity based on the following table of storm drainage runoff coefficients (Update of Development Impact Fee, dated January 17, 2005).The development impact fee is now being charged and collected at the time a building permit is issued.

The City's recent purchased acreage for the specific purpose of increasing groundwater recharge capacity to further reduce its consumptive use. The City has consulted with Kenneth D. Schmidt and Associates who has concluded that the recharge facility would reduce the existing water deficiency of approximately 1,000 acre-feet per year in the City by about 10 percent. Therefore, the expected 100 acre foot reduction in consumptive use over the project's build-out will significantly reduce the city's overall consumptive use.

Based on a review of the project size and location, the project will not substantially alter the existing drainage pattern or cause drainage capacities to be exceeded. It is not located in a 100 year flood hazard area, nor does it propose structures within such an area. Given its location and existing infrastructure, the project does not expose people or structures to a significant risk of flooding or inundation.

Based on a review of the project size and location, the project will not substantially alter the existing drainage pattern or cause drainage capacities to be exceeded. It is not located in a 100 year flood hazard area, nor does it propose structures within such an area. Given its location and existing infrastructure, the project does not expose people or structures to a significant risk of flooding or inundation.

Mitigation Measures

1. The proposed project incorporates and implements as applicable PEIR mitigation measures relating to hydrology and water quality (HYD-2), as identified in the attached Exhibit B, Mitigation Monitoring Checklist for Final Environmental Impact Report (SCH No. 2010031106) & Reedley General Plan Update 2030, dated February 18, 2014.

Therefore, no project-specific mitigation for hydrology and water quality impacts is required.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
X. LAND USE AND PLANNING - Would the project:				
a) Physically divide an established community?			X	

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?			X	
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?			X	

On February 25, 2014, the City Council approved the Reedley General Plan Update 2030 (GPU) and certified the environmental analysis. As much as the Council's affirmation was the culmination of a very long process, their action also initiated the next steps toward Reedley's future. The GPU goals and policies provide an overall direction for decision-making on development proposals and the day-to-day activities of the City's elected officials and staff. The GPU also provides developers of future proposed projects a sense of certainty regarding the City's development expectation. Implementation of the GPU's goals and policies will stimulate and cause a positive, broad reaching effect on the surrounding agricultural industries, the quality of life for its citizenry, delivery of public utilities, and impacts to the community's social and economic vitality throughout the entirety of the planning horizon (2030).

The overall guiding land use principles described in the General Plan are designed to provide an overall direction to assist decision-makers in determining the appropriateness of a request to changing either a planned land use or zone district designation. Those guiding principles are described in detailed statements of goals and polices outlined in the approved GPU (GPU, 2.3 Land Use Element Guiding Principles). Below are the applicable policy statements:

(a) Plan for urban growth in a manner that minimizes impacts on agriculture and the consumption of agricultural land.

(b) Establish a pattern of urban development which provides for the economically efficient provision of urban services with particular emphasis on sewer, water and storm drainage infrastructure.

(c) Provide transitions between various land uses and intensities using high quality design.

There are specific Land Use Element goals and policies, which when applied, would further indicate the appropriateness of the request. In this case, these goals and policies further support the general plan and zone district reclassification, as well as, the potential future development of the commercial area. Below are those directly applicable policy statements:

LU 2.7.23 Future commercial development in the planning area shall be well designed to respect neighborhood scale and traditional architectural design. Toward that end, commercial development will be reviewed utilizing the following design standards:

(a) Parking space requirements shall be minimized for commercial developments. Parking lots should be segmented to minimize the impact of parking on the streetscape. In particular, parking should be located to the rear or to the side of commercial and office buildings.

(b) Incorporate interface design standards (e.g.; setbacks, fencing) into each residential and commercial zone district to ensure compatibility.

(c) Commercial development shall be designed to facilitate pedestrian and bicycle access and function, featuring outdoor seating, pedestrian plazas and wide, shade-covered walkways.

(d) Landscaping, particularly shade trees and drought tolerant plants, shall be maximized in all commercial developments.

LU 2.7.24 Ensure that all commercial land uses are developed and maintained in a manner complementary to and compatible with adjacent residential land uses, to minimize interface problems with the surrounding environment, and to be compatible with public facilities and services. As part of the City's project review process, major emphasis will be given to site and building design in order to ensure and/or preserve functionality and community aesthetics.

(a) Development projects shall appropriately interface with adjacent properties.

(b) Shopping Centers shall embrace a unified building, landscaping and signage design.

(c) Building facades with visible sides of buildings shall not develop with featureless, "blank walls".

(d) Adequate screen roof-mounted mechanical equipment, and ensure that such equipment adhere to noise standard set forth in the General Plan Noise Element.

LU 2.7.25 Off-street parking for commercial areas shall be designed to adequately support surrounding land use pattern. Off-street parking areas shall also include landscaping to provide shading for at least 50 percent of the surfaced area within 10 years from planting.

LU 2.7.26 Encourage efficient use of land by allowing a percentage of compact car parking spaces.

LU 2.7.27 Planned unit developments shall be permitted in all commercial designations.

LU 2.7.28 Encourage continued efforts to improve the appearance of the commercial areas including the commercial corridor along 11th Street.

There are also specific Circulation Element (3.10 Public Utilities) goals and policies, which when applied, would further indicate the appropriateness of the request. In this case, these goals and policies further support the general plan and zone district reclassification, as well as, the potential future development of the commercial area. Below are those directly applicable policy statements:

CIR 3.10D The City shall reduce by 15% its consumptive use by 2030

CIR 3.10.19A The City shall prepare and present to the City Council for consideration of adoption a comprehensive set of policies to ensure an adequate city-wide program for the recharge of ground water to support the growth and development patterns proposed within this GPU. These policies shall set performance standards for sustainable

management of Reedley's use of groundwater and promote efforts to increase groundwater recharge. The policies, including those set forth below, shall be adopted such that their provisions are implemented by the deadlines set forth in the proposed policies. If the policy does not contain a specific deadline for adoption or implementation, it shall be considered for adoption within twelve (12) months of the GPU's adoption. After the adoption of the GPU, the Community Development Department shall provide an annual report to the City Council describing progress made toward the development, adoption and overall implementation of these policies.

The staff analysis supporting each policy shall include a discussion of the following: (1) How the policy would help to reduce consumptive use; (2) Whether and how the policy would assist in the City's efforts to recharge the underground aquifer; (3) How the policy would be integrated into the entitlement process; and, (4) How the policy would be enforced through the regulatory environment. The policies shall include the following:

a) The City shall develop and implement a public education component that addresses various topics related to the consumptive use of groundwater as well as efforts to recharge the underground aquifer and shall include periodic reports to the City Council and the public regarding its progress in implementing the policies.

b) The City shall work cooperatively with land owners, local and regional water agencies, and irrigation districts which rely upon the Kings Basin as a source of water to identify and implement infrastructure projects and other programs that serve to reduce the use of groundwater and/or facilitate the recharge of the aquifer.

c) The City shall work cooperatively with the irrigation districts to develop and implement new strategies to expand upon current efforts directed toward groundwater recharge. These strategies may include:

    1) Exploring the feasibility of joint water banking.

    2) Exploring opportunities to jointly participate in studies that will be used to facilitate new or expand wastewater recycling and reclamation opportunities.

d) Develop a methodology for early consultation (CEQA Section §21080.3) with the irrigation districts as part of the environmental review process when an entitlement application that involves annexing new land into the City is submitted. The comments received from the District will be fundamental to the development of conditions of approval applied to said projects. This process could be developed and implemented within one year after the adoption of the GPU.

e) On an on-going basis, the City shall strive to work with the irrigation districts to identify the most suitable locations for storm water basins based on soil type, elevation, and other factors.

f) The City shall continue to work with the Upper Kings Basin Integrated Regional Water Management Authority in developing a strong coalition of water agencies, cities, counties and environmental groups to address local water issues.

g) The City shall continue to work with the Kings River Conservation District to identify projects that would directly and efficiently increase groundwater recharge and to identify funding sources for said project, with the goal of submitting a grant application to the District for such a project by January 15, 2015.

h) Within one (1) year of the adoption of the GPU, the City Council shall complete a thorough review of the City's development impact fee program and shall consider the adoption of a comprehensive update of the various fees included in the program.

1) This review shall include, but not be limited to, Storm Drainage, Water Distribution, Groundwater Recharge, Water Supply/Holding and Waste Water Collection and Treatment.

2) Within each topic area, the review shall include the analysis of existing conditions, proposed new development, need necessitated by future development and proportional cost attributed to land use development.

i) By 2020, the City shall prepare an updated Groundwater Pumping, Recharge, and Consumptive Use Analysis report using the same methodology as the 2013 report. Part of this report will include policies, recommendations, and implementation measures. The analysis and recommendations shall be presented to the City Council for its consideration.

j) All annual reports, prepared by the Public Works Department related to water quality, water supply and delivery, and groundwater recharge shall be presented to the City Council for its consideration of adoptions.

k) The City shall continue to strive to develop and implement best management practices, strategies, in compliance with State law, and regulatory permits/requirements related to water quality and supply and groundwater recharge and report annually to the California Urban Water Conservation Council on its progress in development and implementing said practices.

l) The Public Works Department shall prepare an annual report that identifies, at a minimum, the amount of water used to irrigate the open space and the projected amount of groundwater recharge that has occurred. The City shall use industry standards to establish a formula to calculate the balancing of production to groundwater recharge.

Moreover, there are also specific Safety Element (5.3 Fire Hazards) goals and policies, which when applied, would further indicate the appropriateness of the request. In this case, these goals and policies further support the general plan and zone district reclassification, as well as, the potential future development of the commercial area. Below are those directly applicable policy statements:

SE 5.3.1 Monitor water supply to insure adequacy for fire protection.

SE 5.3.2 Continue to provide adequate fire flow as a suppression measure.

SE 5.3.3 Continue to provide fire department training programs.

SE 5.3.4 Continue to review land use development proposals for fire safety considerations.

SE 5.3.8 Continue to implement the Community Facilities District to ensure additional staff and equipment to adequately service new development.

SE 5.3.9 Provide public safety education and awareness and ensure fire code compliance.

SE 5.3.10 Pursue funding opportunities and options for capital projects to repair, renovate and expand facilities and provide additional stations.

In order to approve future development projects, each project must be substantially consistent with the GPU goals and policies. To ensure that future projects do not significantly affect the environment the City's implementation of the GPU goals and policies will serve as a mitigation tool for avoiding or reducing project-specific and cumulative environmental effects of resulting from buildout of the City pursuant to the GPU. The mitigation measures themselves are designed to fill "gaps" that may exist between the level of impact avoidance or reduction provided by implementation of GPU goals and policies, and the level of impact avoidance or reduction needed to mitigate significant impacts to a "less than significant level".

These policies and mitigation measures were designed as an enforceable commitment and not merely adopted to be disregarded as a formality, pursuant to Resolution No. 2014-015. Within this Resolution, the Findings of Fact states:

"To the extent that these findings conclude that various mitigation measures outlined in the Final EIR are feasible and have not been modified, superseded or withdrawn, the City hereby binds itself to implement these measures. These findings, in other words, are not merely informational, but rather constitute a binding set of obligations that will come into effect when the City Council adopts a resolution approving the Project."

On March 25, 2014, the City Council approved Resolution No. 2014-020, which approved the Reedley General Plan 2030 Update-Work/Implementation Plan (WIP). The purpose of this Plan is to outline the timelines of new policies and legislation necessary to move toward full implementation of the GPU. The WIP lists the new policies to be undertaken, timing of initiation and anticipated completion, responsible Department, and potential funding source. For the WIP, staff reviewed all of the GPU policies and selected only polices which were time sensitive and specifically state implementation within one year from the adoption of the GPU. Therefore, each proposed policies and/or proposed legislative action will require consideration and approval by the City Council over the duration of the 2014-2015 Plan period.

It should be also noted that there are many policies which will be implemented on an ongoing basis and are relevant and part of the evaluation of any future entitlement submitted for approval.

The WIP was also developed because it may take several years to develop the new policies as well as implementation of the various annual reviews that are required. The WIP will may also serve as a performance based report card for Council, as City staff is required to prepare an annual report "describing progress made toward the development, adoption and implementation of these policies" (e.g., GPU-CIR 3.10.18, CIR 3.10.19A, COSP 4.3.3).

Therefore, the appropriateness of the proposed project has been examined with respect to its consistency with guiding land use principles, goals and policies of the Reedley General Plan Update 2030 and regulatory standards set forth in the Reedley Municipal Code and its compatibility with surrounding existing or proposed uses. These factors have been evaluated as described above. Upon consideration of this evaluation, it can be concluded that the General Plan Amendment Application No. 2014-01 and Rezone Application No. 2014-02 is appropriate for the subject property. Based upon this analysis, staff has determined that this project is consistent will all applicable goals, policies and objectives in the GPU and any applicable regulations

Therefore, no project-specific mitigation for land use impacts is required.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XI. MINERAL RESOURCES -- Would the project:				
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?				X
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?				X

The subject site is not located in an area designated for mineral resource preservation or recovery, and there are no mining or mineral extraction being proposed.

Therefore, no project-specific mitigation for mineral resource impacts is required.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XII. NOISE -- Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			X	
b) Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?			X	
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?			X	
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?			X	

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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 expose people residing or working in the project area to excessive noise levels?			X	
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?			X	

Noise is an important factor which can influence the quality of life in the City of Reedley. Such exposure to excessive noise levels can adversely affect human health. Therefore, we must recognize the interrelationship of the noise element to land use, housing, circulation and open space. The purpose of the General Plan Noise Element is to identify noise sources that exist within the City and proposed Planning Area. The Noise Element also establishes goals and policies to minimize potential adverse impacts from transportation and stationary noise to sensitive land uses such as residences, schools, churches and hospitals.

The methods used in the preparation of the Noise Element are defined by California Government Code Section 65302 (f) and the Guidelines for the Preparation and Contents of Noise Elements of the General Plan, adopted and published by the California Office of Noise Control (ONC). The ONC Guidelines provide definitions related to major noise sources, noise-sensitive uses (receptors), and identifies the types of major sources to be quantified. The current adopted guidelines give local governments' flexibility in identifying local levels of concern, in identifying sensitive uses, and in tailoring the noise element to local conditions.

A noise assessment was completed in Reedley in 2010 as part of the general plan update. Through that study it was determined that there are four major sources of community noise within the Planning Area: traffic on major local roadways, rail operations on the San Joaquin Valley Railroad (SJVRR), commercial/industrial facilities and aircraft operations at the Reedley Municipal Airport. Due to Reedley's location in a major agricultural area, noise from farming activities is also a concern.

According to the Government Code and ONC Guidelines, noise exposure information should be developed in terms of the Day-Night Average Level (DNL) or Community Noise Equivalent Level (CNEL) for transportation related noise sources. Analytical noise modeling techniques are typically used to measure major noise sources (traffic and railroads) within the study area. The CNEL descriptor was developed for the quantification of aircraft noise and used to measure noise sources at the Reedley Municipal Airport. These noise sources are then quantified for evaluating their impacts on sensitive receivers and land uses. This noise element was prepared in accordance with State law, ONC and an Environmental Noise Assessment, prepared by Brown-Buntin Associates, Inc.

Noise sensitive land uses identified in the Government Code and applicable in the City of Reedley would be residential development, schools, hospitals, churches and libraries. Sensitive noise sources and receivers are listed in Table 6-1 - Noise Sensitive Receivers Reference and further illustrated on Figure 6.1 - Noise Sensitive Receivers Map (GPU, Pages 166 & 167).

Noise is generally defined as "unwanted sound", which is a subjective determination of measureable physical phenomena. Ambient noise levels are a major determinant of "quality of life". Noise levels not only affect the utility and enjoyment of property, they directly affect property values and affect human health.

The City Noise Element establishes a land use compatibility criterion of 60dB DNL for exterior noise levels in outdoor activity areas of new residential developments. Outdoor activity areas generally include backyards of single family residences and patios and common open space areas in multi-family developments. The intent of the exterior noise level requirement is to provide an acceptable noise environment for outdoor activities and recreation. Furthermore, the Noise Element also requires that interior noise levels attributable to exterior noise sources not exceed 45 dB DNL. The intent of the interior noise level standard is to provide an acceptable noise environment for indoor communication and sleep.

Table 6.1.2-A – Allowable City-Wide Noise Exposure

ALLOWABLE TRANSPORTATION SOURCE NOISE EXPOSURE		
	Noise Sensitive Land Uses	**New Transportation Noise Sources**
Indoor	45	45
Outdoor	60	60
1. This table is applicable to noise sources created by either new development and/or new transportation projects. 2. Based on an evaluation of the existing condition and proposed project, the Community Development Director may allow exterior exposure up to 65 dB DNL where practical application of construction practices has been used to mitigate exterior noise exposure.		

Table 6.1.2-B - Allowable Noise Exposure

ALLOWABLE STATIONARY SOURCE NOISE EXPOSURE		
	Daytime (7:00 a.m. to 10:00 p.m.)	**Nighttime (10:00 p.m. to 7 a.m.)**
Hourly Leq, dBA	55	50
Maximum Level, dBA	70	65
1. As determined within outdoor activity areas of existing or planned noise-sensitive uses, if outdoor activity area locations are unknown, the allowable noise exposure shall be determined at the property line of the noise sensitive use. 2. Based on an evaluation of the existing condition and proposed project, the Community Development Director may allow exterior exposure up to 65 dB DNL where practical application of construction practices has been used to mitigate exterior noise exposure.		

The City of Reedley is bisected, in part, by the Exeter Branch of the San Joaquin Valley Railroad (formerly Southern Pacific Railroad). The rail line is located on a northwest-southeast corridor through the center of Reedley. The community's major industrial belt is concentrated on both sides of the rail corridor, both through the central core and through the southeastern quadrant of the Planning Area. This combined rail and industrial corridor is the principal noise generator within Reedley. The corridor's impact on residential uses and on sensitive receivers is minimized, however, due to the attenuation provided by the existing Central Business and Service Commercial uses located immediately northeast of the tracks and by the Service Commercial strip located along the southwest side of "I" Street.

The project is located in proximity to an active railroad line. The project is not located within an airport land use plan or within two miles of an airport or private airstrip.

Mitigation Measures

1. The proposed project incorporates and implements as applicable PEIR mitigation measures relating to noise (N-1), as identified in the attached Exhibit B, Mitigation Monitoring Checklist for Final Environmental Impact Report (SCH No. 2010031106) & Reedley General Plan Update 2030, dated February 18, 2014. Prior to approval of the Site Plan Review application, the applicant will be required to provide evidence of compliance with allowable noise exposure (GPU, Table 6.1.2-B-Allowable Noise Exposure, Page 170) and all other applicable Noise Element Policies, (GPU, Chapter Six, Noise Element, Page 165)

Therefore, no project-specific mitigation for noise impacts is required.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIII. POPULATION AND HOUSING -- Would the project:				
a) Induce substantial 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)?			X	
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?			X	
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?			X	

On February 11, 2014, the City Council adopted the 2008-2015 Housing Element, The Housing Element is intended to provide citizens, public officials, and the general public with an understanding of the housing needs in the community and set forth an integrated set of policies and programs aimed at the attainment of defined goals to meet those needs.

According to California Government Code Section 65581, it is the intent of the Legislature in enacting Housing Element Law:

(a) To assure that counties and cities recognize their responsibilities in contributing to the attainment of the State housing goal

(b) To assure that counties and cities will prepare and implement housing elements that, along with federal and state programs, will move toward attainment of the state housing goal

(c) To recognize that each locality is best capable of determining what efforts are required by it to contribute to the attainment of the state housing goal, provided such a determination is compatible with the state housing goal and regional housing needs

(d) To ensure that each local government cooperates with other local governments in order to address regional housing needs

The Housing Element was prepared pursuant to Sections 65580 through 65589 of the California Government Code and contains a statement of goals, policies, objectives and programs for the development of housing in the community. State housing law mandates that local governments adequately plan to meet the existing and projected housing needs of all economic segments of the community. The law acknowledges that, in order for the private market to adequately address housing needs and demand, local governments must adopt land use plans and regulatory systems that provide opportunities for, and do not unduly constrain, housing development.

The approved Housing Element was submitted to the HCD for their review on December 6, 2013. HCD did provide written findings which outline areas which if adjusted, or if further clarification was provided, the Element would be in statutory compliance. On January 24 and February 3, 2014 staff provided additional revisions to the HCD comments. Staff has worked with HCD staff over the past months and made the required clarifications.

On February 4, 2014 the City of Reedley received a letter from the HCD indicating that the City of Reedley 2008-2015 Housing Element meets the statutory requirements of State housing element law.

The General Plan Amendment No. 2014-01 and Rezone Application No. 2014-02, will have no impact to the population and/or housing opportunities in the City of Reedley.

Therefore, no project-specific mitigation for population and housing impacts is required.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIV. PUBLIC SERVICES --				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, 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 public services:				

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Fire protection?			X	
Police protection?			X	
Drainage and flood control?			X	
Parks?			X	
Schools?			X	
Other public services?			X	

The project provides for additional construction and thus would add a small increment of service demand for fire protection, wastewater treatment, police services, drainage/flood control, parks, schools, libraries, and other public services. Project conditions of approval and applying development impact fees to the project serve to mitigate any incremental impact caused by the project.

Therefore, no project-specific mitigation for public service impacts is required.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XV. RECREATION --				
a) Would the project 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?			X	
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?			X	

The proposed project does not remove any existing recreational facility; and adds a small increment of service demand for recreational facilities. Project conditions of approval and applying development impact fees to the project serve to mitigate any incremental impact caused by the project.

Therefore, no project-specific mitigation for recreation impacts is required.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVI. TRANSPORTATION/TRAFFIC -- Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths and mass transit?			X	
b) Conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures or other standards established by the county congestion management agency for designated roads or highways?			X	
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that result in substantial safety risks?			X	
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X	
e) Result in inadequate emergency access?			X	
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?			X	

Reedley's surface transportation system is composed of numerous city streets, which, in some cases, connect to county roads on the peripheral of the City. Other system modalities include public transit system, fixed route transit services, para transit services, general aviation and freight rail services. Where service is available, public transportation is utilized primarily by a transit-dependent population; i.e., the elderly, students, low-income residents and the physically handicapped. These segments of the population generally have limited access to automobiles. Implementation of the Reedley General Plan Circulation Element will improve the existing regional transportation and circulation system.

The Circulation Element identifies a hierarchy of roads based upon their intended function and projected travel levels. The City's surface transportation system of streets and highways is based on a functional classification system providing four levels of service: major arterials, arterials, collectors, and local roads. The hierarchy of roadways is listed and briefly described below in Table 3-1 -Roadway Classifications.

Major Arterial roadways are typically designed with four through lanes, two transition/right-turn lanes and are divided by a raised median providing left-turn lanes. Major Arterial roadways are intended to provide a high capacity in selected high volume corridors. Major arterial roadways are designed with required right-of-way, as described in the City of Reedley, Standard Plans and Specifications.

Table 3-1-Roadway Classifications

Facility Type	Functional Emphasis
Freeway/Highway	Mobility with no direct land access and access limited to interchanges.
Expressway	Mobility with more frequent access to "arterial" but no direct land access.
Arterial	Mobility with access to "collectors", some "local" streets and major traffic generators.
Collector	Connects "local" streets to "arterials", also provides access to adjacent land uses; balances mobility and access. May be "major" or "minor" collector streets.
Local	Access to adjacent land uses only; no mobility function.
Alley	Access to adjacent land use only, no mobility function.

Arterial roadways are typically designed with four through lanes and two shoulder/transition lanes and can be divided or undivided by a median. Arterial roadways provide connection to collector streets and access to major traffic generators. Arterial roadways are designed with required right-of-way, as described in the City of Reedley, Standard Plans and Specifications.

Collector roadways are typically designed with four through lanes and two parking/transition lanes and provide connection between arterial streets to local streets. Collector streets can provide some limited access to private properties. Collector roadways are designed with required right-of-way as described in the City of Reedley, Standard Plans and Specifications.

Local streets are typically designed for either industrial or residential carrying capacity. Local streets are intended exclusively to provide direct access to properties and designed to discourage through traffic between major streets. Typically designed for either industrial or residential carrying capacity, these street cross-sections can be found in the City of Reedley, Standard Plans and Specifications. However, local streets are typically not planned by the General Plan 2030 Update, Land Use and/or Circulation Elements, but existing local streets may be shown on exhibits for informational purposes.

The City has also developed surface transportation standards for alleys, frontage roads, secondary and emergency/maintenance access road standards. These standards can be found in the City of Reedley, Standard Plans and Specifications.

Level of Service

"Level of Service" (LOS) is a description of the ability of a street segment or intersection to accommodate levels of traffic demand. 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 (See Table 3-2 - Level of Service Description). LOS A, typically represents unrestricted free flow of traffic and excellent comfort for motorists, while LOS F,

which represents highly congested forced flow conditions where traffic exceeds the capacities of streets. The adopted LOS in the General Plan 2030, Circulation Element is LOS C, was adopted.

Table 3-2- Level of Service Description

LOS	Conditions	Description	Intersections		
			Signalized	Unsignalized	All-Way Stop
A	Free Flow	Very slight delay. Progression is very favorable, with turning movements easily made.	≤10.0	≤10.0	≤10.0
B	Stable Operation	Good progression and/or short cycle lengths. Vehicle platooned are formed. Many drivers begin to fell somewhat restricted within groups of vehicles.	>10 and ≤20.0	>10 and ≤15.0	>10 and ≤15.0
C	Stable Operation	Higher delays resulting from fair progression and/or longer cycle lengths. Back-ups may develop behind turning vehicles. The number of vehicles stopping is significant and drivers feel somewhat restricted.	>20 and ≤35.0	>15 and ≤25.0	>15 and ≤25.0
D	Approaching Unstable	The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volume-to-capacity ratios.	>35 and ≤55.0	>25 and ≤35.0	>25 and ≤35.0
E	Unstable Operations	Generally considered to be unacceptable to most drivers. Jammed conditions. Back-ups from other locations restrict or prevent movement. May also occur at high volume-to-capacity ratios.	>55 and ≤80.0	>35 and ≤50.0	>35 and ≤50.0
F	Forced Flow	Generally considered to be unacceptable to most drivers. Often occurs with over saturation. Jammed conditions. May also occur at high volume-to-capacity ratios. There are many individual cycle failures. Poor progression and long cycle lengths.	>80.0	>50.0	>50.0

Sources: Highway Capacity Manual 2000

The City does require Traffic Impact Studies for new development projects which have a significant impact based upon the number of vehicle trips generated by the project, location of the project relative to the existing circulation system, and actual or assumed level-of-service of surrounding streets or intersection. The General Plan policy is stated below:

CIR 3.2.28 Development resulting in any of the following shall be required, as part of the special permit approval process, to have a licensed engineer complete a traffic impacts study. The scope of that study shall be determined by the City Engineer and paid for by the developer.

(a) 500 vehicle trips per day; or
(b) 250 a.m. or p.m. peak hour trips; or
(c) 25 Percent increase to existing traffic conditions from the development project.

The proposed project does not meet any of these above referenced threshold, therefore a Traffic Impact Study was not required.

Therefore, no project-specific mitigation for traffic impacts is required.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVII. UTILITIES AND SERVICE SYSTEMS -- Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?			X	
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?			X	
e) 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?			X	
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			X	

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
g) Comply with federal, state, and local statutes and regulations related to solid waste?			X	

The City of Reedley, General Plan Update 2030 (approved February 2014), Urban Water Management Plan (approved September 2013) and Integrated Master Plan for Potable Water, Sanitary Sewer, and Storm Drainage Systems (approved May 2014) demonstrate the City has an adequate water supply to support urban growth for future decades, including the small increment of growth that may be created by the this proposed development project.

The proposed development project is required to connect to the water, sewage collection, wastewater treatment, and storm drainage systems. The small increment of additional service demand will be *de minimis* and well within the available capacities of each of the public utility systems.

Therefore, no project-specific mitigation for utilities and service system impacts is required.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVIII. MANDATORY FINDINGS OF SIGNIFICANCE –				
a) Does the project have the potential to 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, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?			X	
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?			X	

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			X	

In summary, given the preceding analysis, conditions of approval applied to the project and Program Environmental Impact Report (SCH No. 2010031106), Mitigation Monitoring Checklist, being incorporated into, the Rezone and Site Plan applications, it may be concluded that the proposed development project:

- does not have environmental impacts which will cause substantial adverse effects on human beings, either directly nor indirectly.
- does not have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish/wildlife or native plant species (or cause their population to drop below self-sustaining levels), does not threaten to eliminate a native plant or animal community, and does not threaten or restrict the range of a rare or endangered plant or animal.
- does not eliminate important examples of elements of California history or prehistory.
- does not have impacts which would be cumulatively considerable even though individually limited.

Therefore, there are no mandatory findings of significance and the preparation of an Mitigated Negative Declaration or an Environmental Impact Report is warranted for this project.

Attachments:

1. Vicinity Map
2. Existing Planned Land Use Designation, General Plan 2030
3. Proposed Planned Land Use Designation, General Plan Application No. 2014-01
4. Existing Zone District Designations (Ordinance No. 2007-06)
5. Proposed Reclassification of Zone District Designations
6. 3-Acre Parcel - Conceptual Site Plan
7. Kenneth D. Schmidt and Associates, Letter dated September 30, 2014

Exhibit A: City of Reedley, General Plan Land Use Map (As adopted by City Council Resolution No. 2014-018)

Exhibit B: Mitigation Monitoring Checklist for Final Environmental Impact Report (SCH No. 2010031106) & Reedley General Plan Update 2030, dated February 18, 2014.

VICINITY MAP

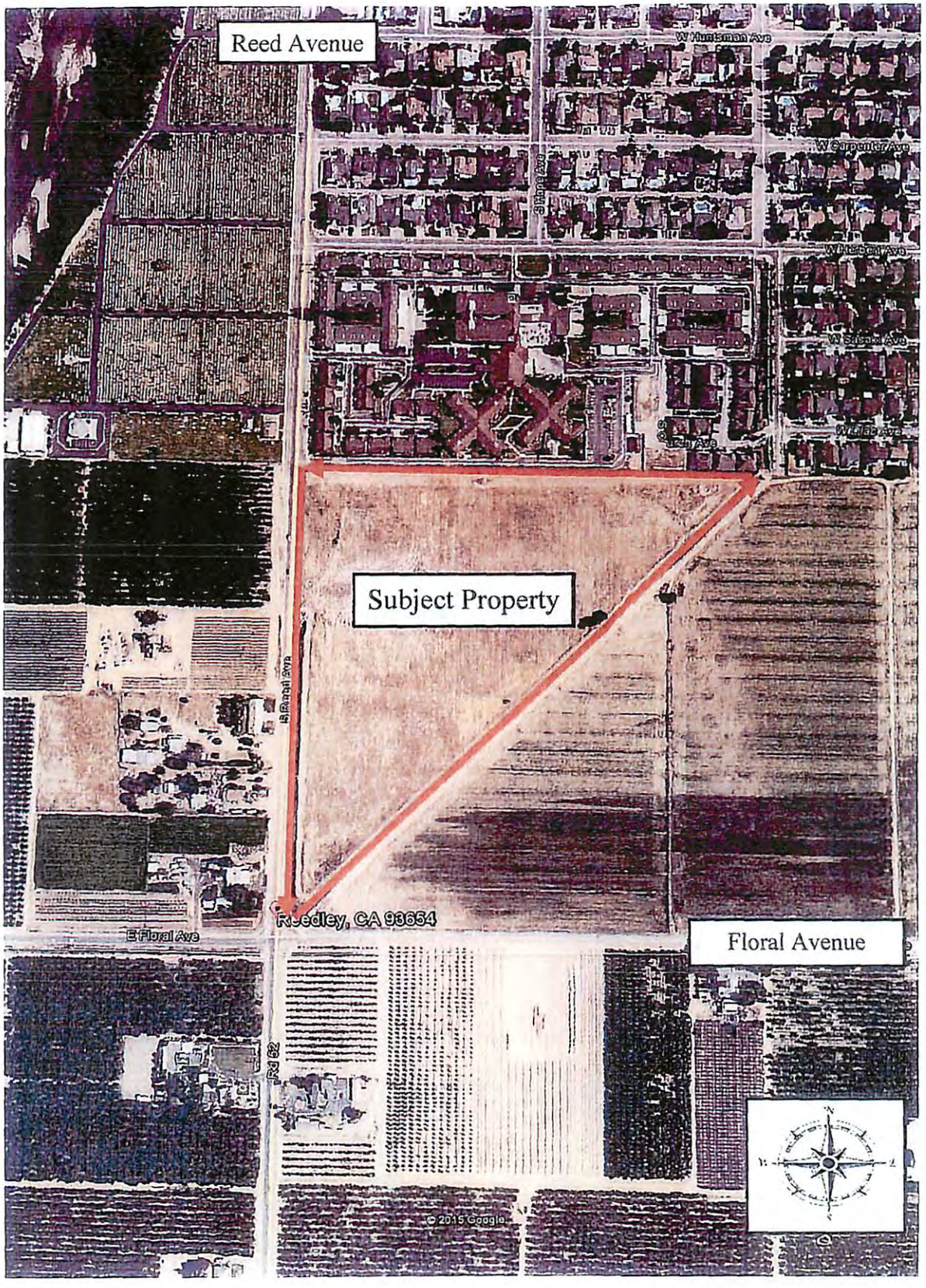
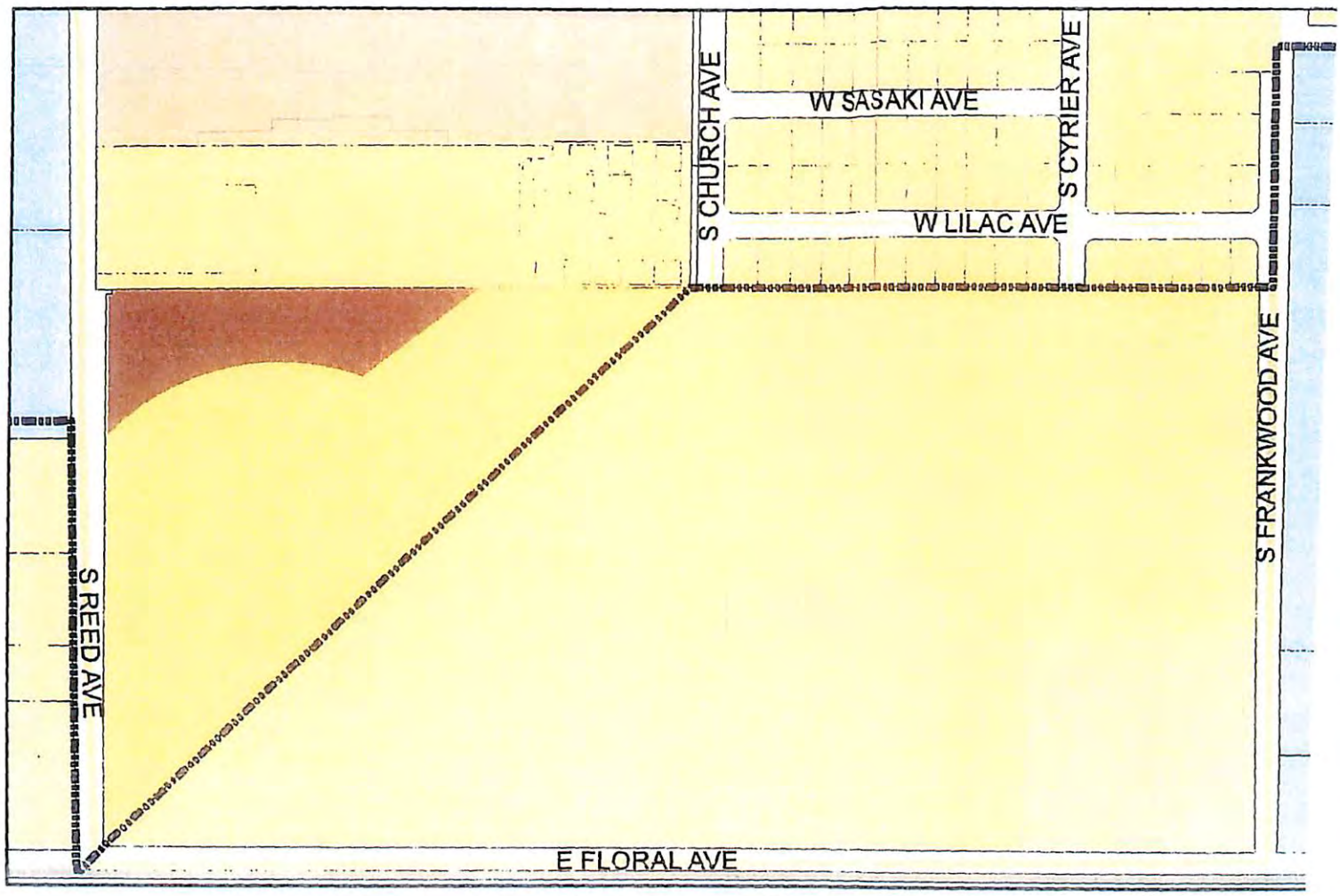


Exhibit A
Existing Planned Land Use Designations
Land Use Map, GPU 2030
General Plan Amendment Application No. 2014-01



Legend

City Limits

Sphere of Influence

GPU 2030 Street Class

(Per Figure 3.1 Circulation Diagram, page 57)

Arterial Street

Collector Street

Local Street

GPU 2030 Planned Land Use Designations

(Per City Council Resolution No. 2014-015)

Low Density Residential (4-8 du/acre)

Medium Density Residential (8-15 du/acre)

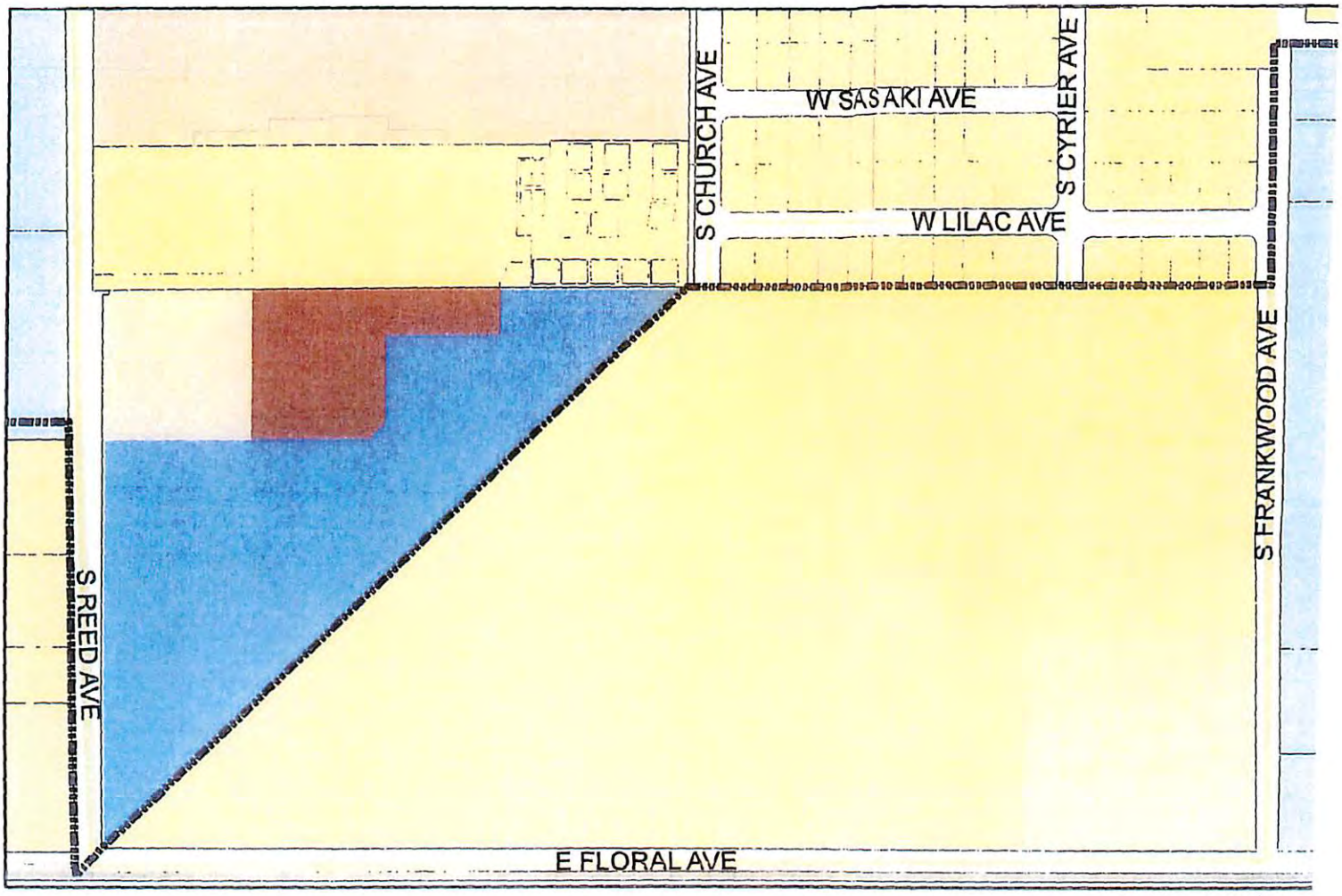
High Density Residential (15-29 du/acre)

Open Space

Public/Institutional Facility

Service Commercial

Exhibit B
Proposed Planned Land Use Designations
Land Use Map, GPU 2030
General Plan Amendment Application No. 2014-01



0 225 450 900 Feet

Legend

City Limits

Sphere of Influence

GPU 2030 Street Class

(Per Figure 3.1 Circulation Diagram, page 57)

Arterial Street

Collector Street

Local Street

GPU 2030 Planned Land Use Designations

(Per City Council Resolution No. 2014-015)

Low Density Residential (4-8 du/acre)

Medium Density Residential (8-15 du/acre)

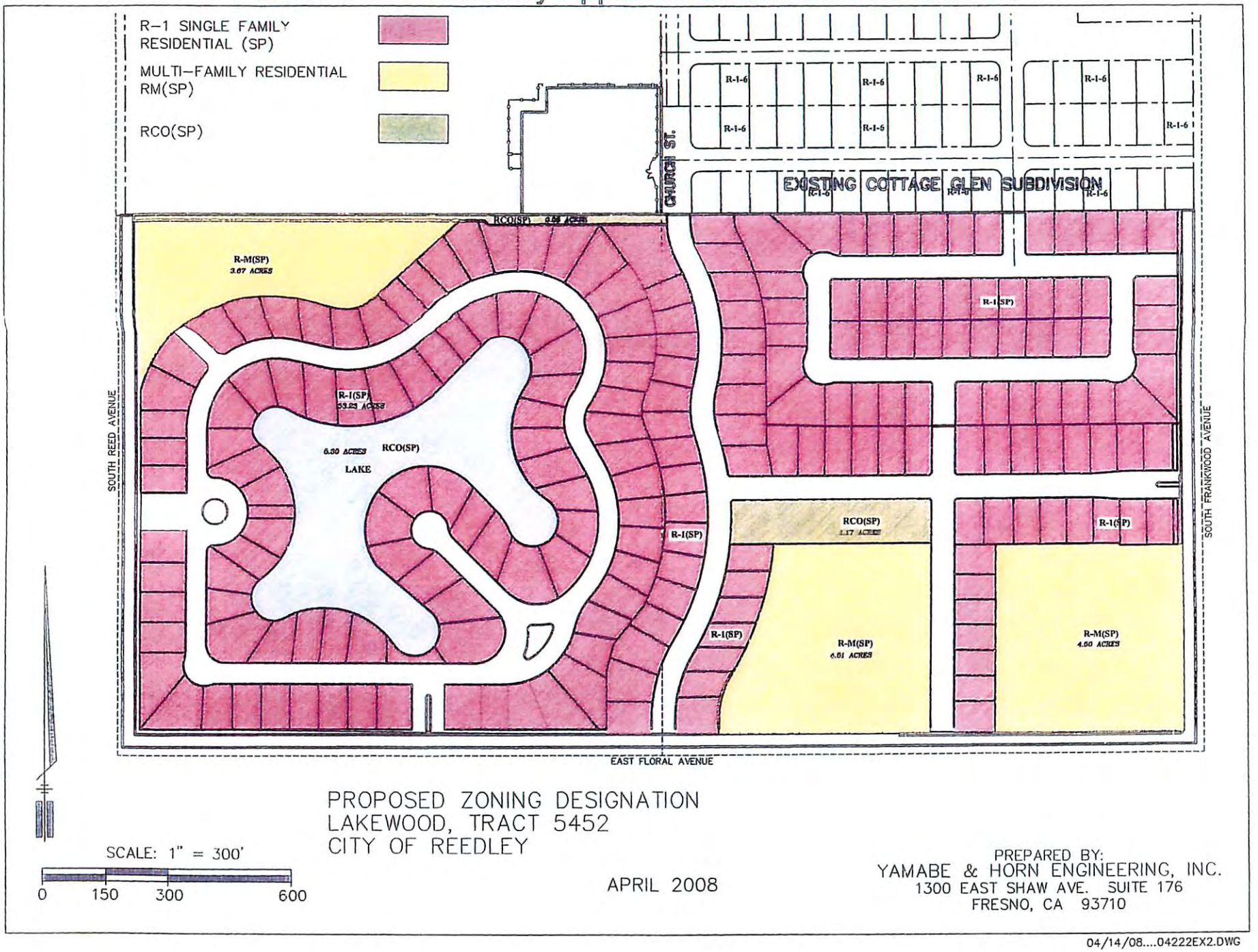
High Density Residential (15-29 du/acre)

Open Space

Public/Institutional Facility

Service Commercial

Exhibit C: Previously Approved Ordinance No. 2007-06



PROPOSED ZONING DESIGNATION
LAKEWOOD, TRACT 5452
CITY OF REEDLEY

SCALE: 1" = 300'

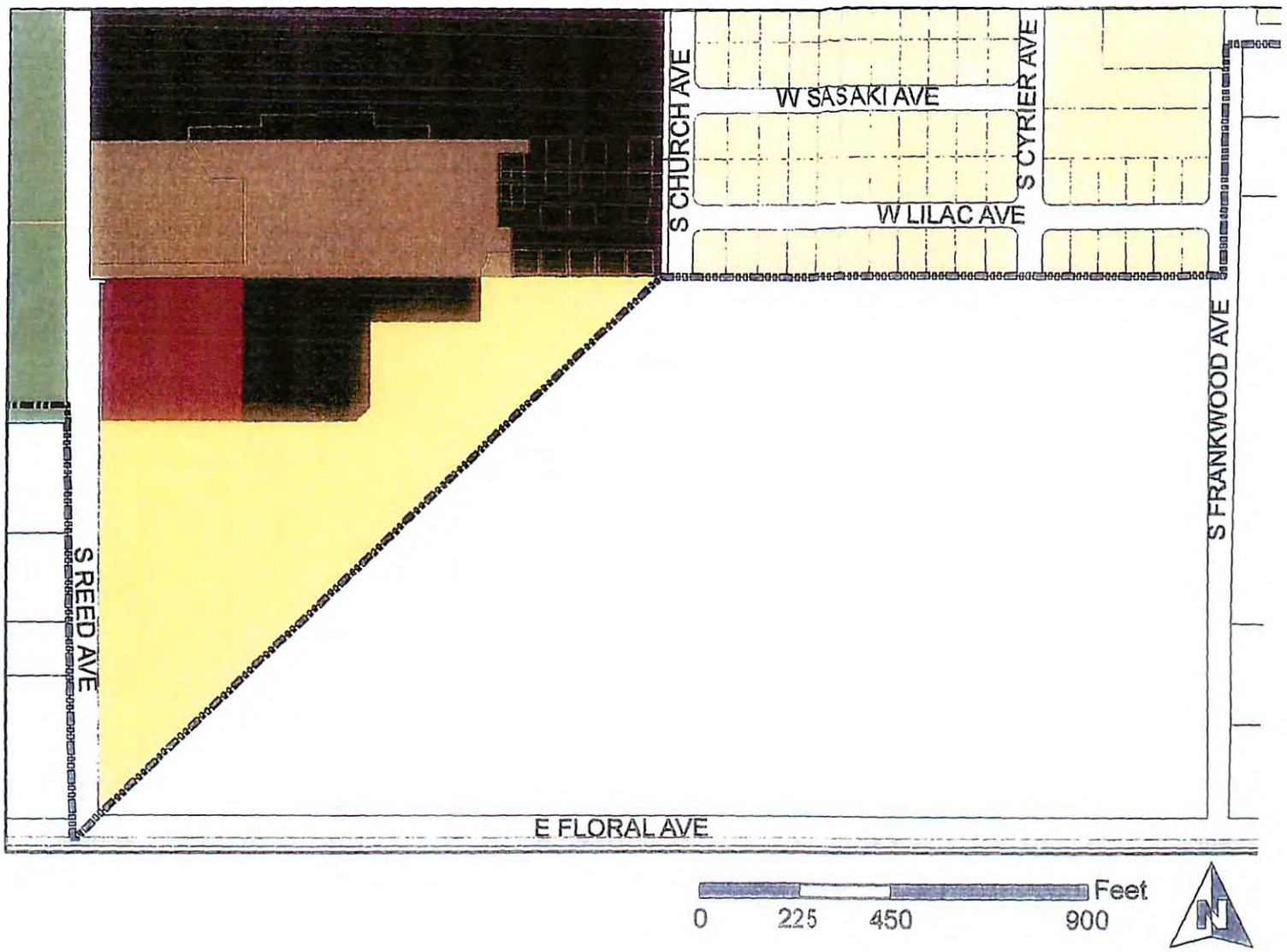
0 150 300 600

APRIL 2008

PREPARED BY:
YAMABE & HORN ENGINEERING, INC.
1300 EAST SHAW AVE. SUITE 176
FRESNO, CA 93710

04/14/08....04222EX2.DWG

Exhibit D
Proposed Zoning Designations
Rezone Application No. 2014-02



Legend

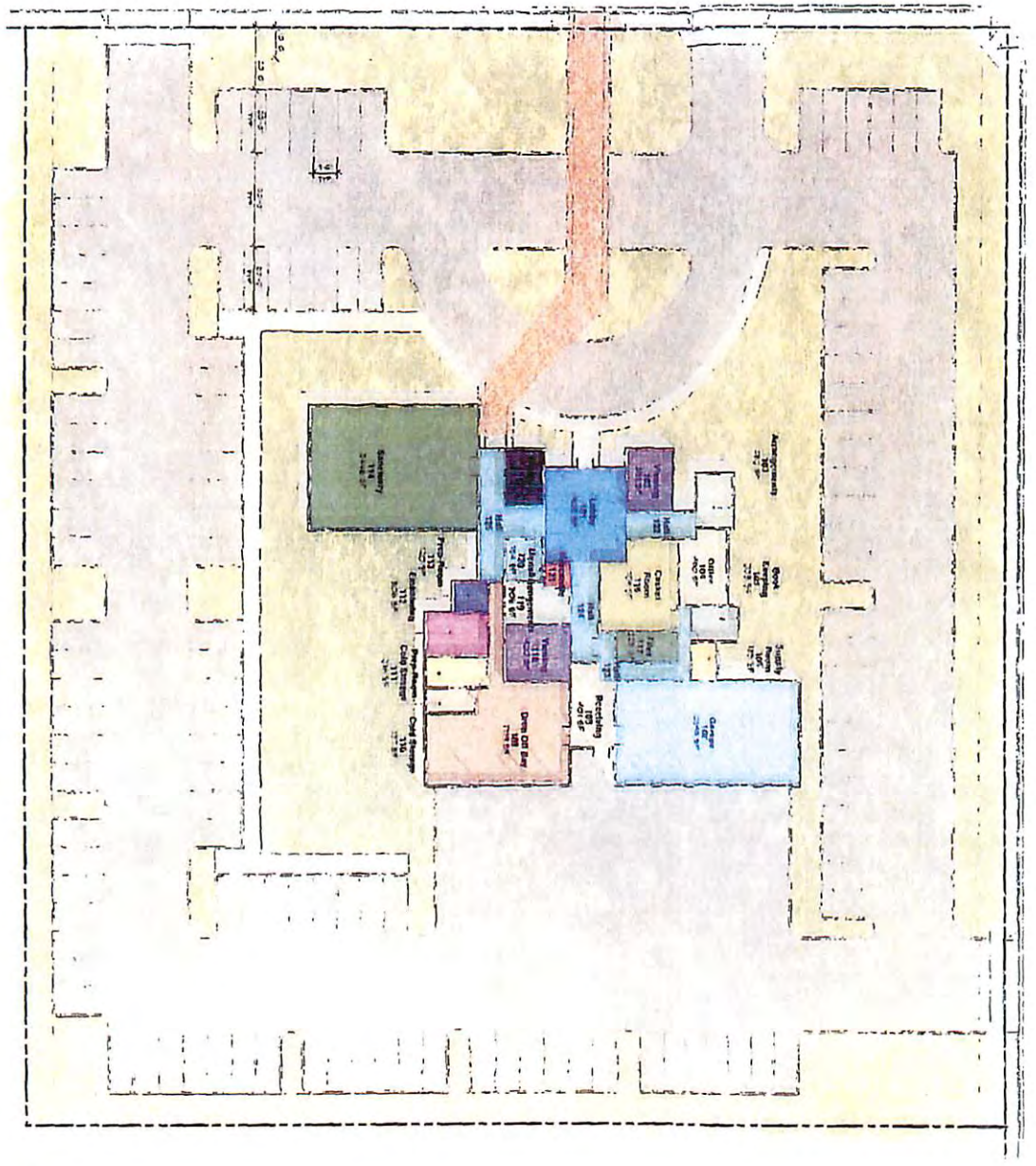
City Limits

Sphere of Influence

Zoning Designation

- R-1(SP) One Family Residential
- R-1-6 One Family Residential
- RCO Resource Conservation and Open Space
- RM-2 Multiple Family Residential
- RM-3 Multiple Family Residential

EXHIBIT E
CONCEPTUAL SITE PLAN



Room Legend

Arrangements
Book Keeping
Casket Room
Cold Storage
Drop Off Bay
Embalming
Files
Garage
Hall
Lobby
Mens
Mercantile
Office
Prep-Room
Prep-Room Cold Storage
Receiving
Sanctuary
Supply Room
Viewing
Womens

KENNETH D. SCHMIDT AND ASSOCIATES
GROUNDWATER QUALITY CONSULTANTS
600 WEST SHAW, SUITE 250
FRESNO, CALIFORNIA 93704
TELEPHONE (559) 224-4412

September 30, 2014

Mr. Kevin E. Fabino
Community Development Director
City of Reedley
1733 Ninth Street
Reedley, CA 93654

Re: Urban Storm Runoff Basin

Dear Kevin:

The purpose of this letter is to discuss the usefulness of developing a basin for recharge of urban storm runoff in the City. Presently there is a 283-acre area in the south part of Reedley that drains to the Kings River. Experience indicates that about 40 percent of the rainfall falling on this area would end up entering the storm runoff basin. This amounts to about 110 acre-feet per year. A small amount of the water would be lost to evaporation. The net recharge expected would be about 105 acre-feet per year.

Soil borings have been done on lands in the southwest quarter of the southeast quarter of Section 34 (east of Reed Avenue and north of Floral Avenue). These borings indicate favorable conditions for a storm basin. For two of the borings northwest of the canal (No. 4 and 5), the deposits above a depth of 33 feet were indicated to be similar to those at the WWTF ponds west of the river. Coarse-grained deposits are predominant above this depth. A storm basin could be excavated to a depth of at least 10 to 20 feet deep. For a nine-acre site, assuming most of the storm runoff would be during November-April, the infiltration rate to handle this would need to be about 12 feet over a 180-day period, or only about 0.07 foot per day, which should be readily obtainable. This would reduce the existing water deficient of about 1,000 acre-feet per year in the City by about 10 percent. Development of desert landscaping in the future, or other means of decreasing the consumptive use, and recharge of storm runoff at this and other basins could substantially reduce this deficient.

Please call me if you have any questions.

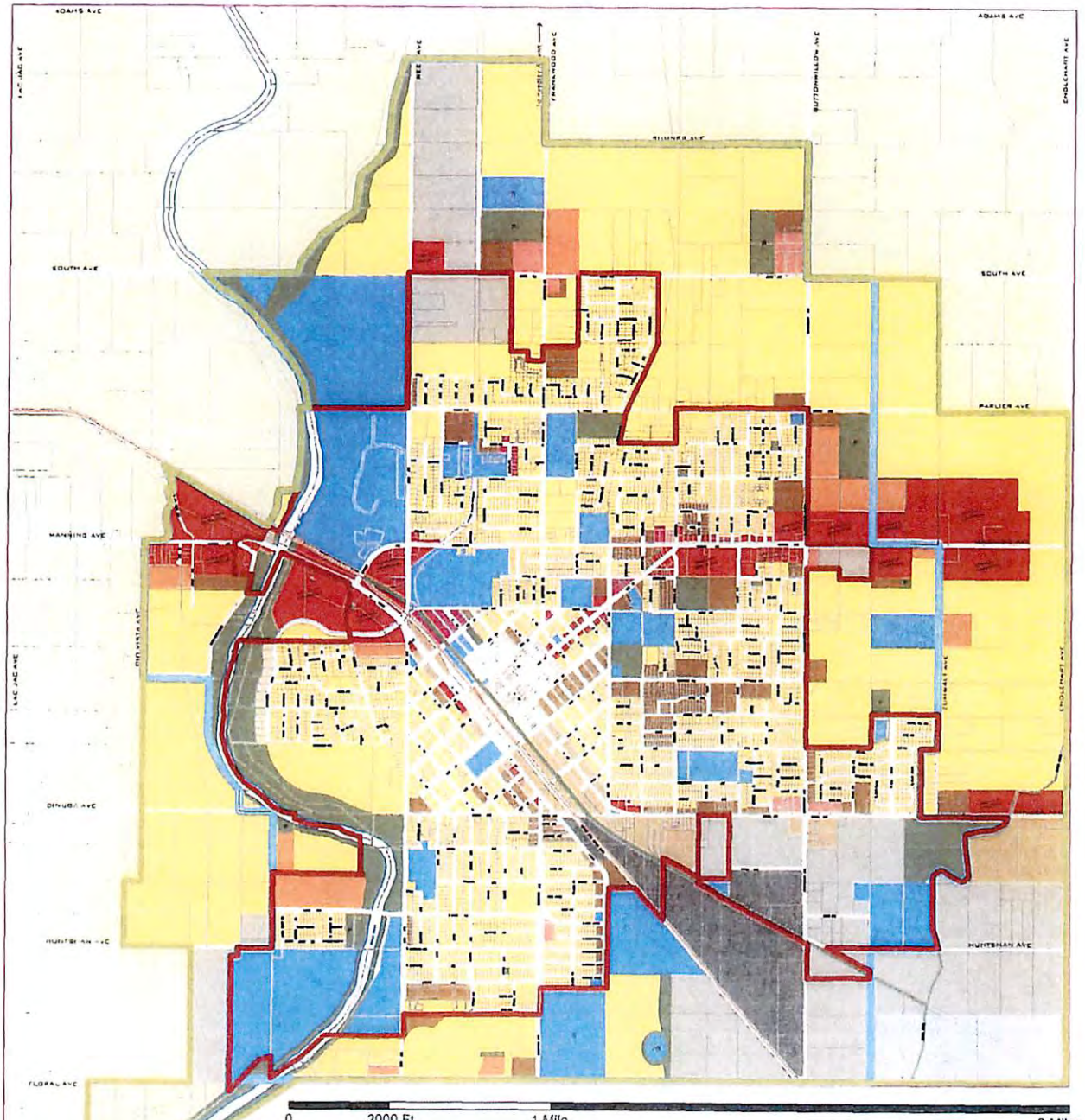
Sincerely yours,

Kenneth D. Schmidt

KDS/cl

CITY OF REEDLEY
GENERAL PLAN LAND USE MAP

(AS ADOPTED BY CITY COUNCIL RESOLUTION NO. 2014-018, DATED FEBRUARY 25, 2014)



Reedley Airport: Approximately 15,400 Ft. (2.9 Miles) North from the intersection of Frankwood and South Avenue's.

Last Updated: 2-28-14 KP

Mitigation Monitoring And Reporting Program

For

Final Environmental Impact Report (State Clearinghouse No. 2010031106)

&

Reedley General Plan 2030 Update

February 18, 2014

City of Reedley
Community Development Department
1733 Ninth Street, City Hall
Reedley, California 93654
(559) 637-4200

MITIGATION MONITORING AND REPORTING PROGRAM

The following Mitigation Monitoring and Reporting Program (MMRP) for the Reedley General Plan 2030 Update (GPU) project has been prepared pursuant to CEQA Guidelines, Section 15097 and Public Resources Code, Section 21081.6. This MMRP lists applicable mitigation measures from the Final Environmental Impact Report for the project. The appropriate timing of implementation and responsible party are identified to ensure proper enforcement of the mitigation measures from the EIR to reduce project impacts to less than significant levels.

Because the Environmental Impact Report (EIR) is programmatic in nature (CEQA Guidelines, Section 15168), the goals and policies contained in the proposed GPU serve as the primary means of avoiding or reducing impacts identified for each environmental topic evaluated. Once the proposed GPU is adopted by the City, all future development projects must be substantially consistent with the proposed GPU and its policies. Consequently, the City's implementation of the GPU policies would serve as a mitigation tool for avoiding or reducing project-specific and cumulative environmental effects of resulting from buildout of the City pursuant to the GPU. Implementation of many of the proposed policies would serve to avoid or significantly reduce and lessen the environmental effects of new development. See Draft Program EIR, Table S-1, Significant Impacts and Mitigation Measure Summary (Pg. S-3) and Recirculated Draft Program EIR, Table S-1, Significant Impacts and Mitigation Measure Summary (Page S-5).

This programmatic level EIR references GPU policy implementation as the primary tool by which potential environmental impacts of buildout of the SOI will be avoided or reduced. The GPU policies were applies to a level of less than significant level and are not explicitly identified as mitigation measures within this MMRP.

Where proposed GPU goals and policies may not serve to reduce a significant impact to a less than significant level, mitigation measures are proposed for that purpose. Where the GPU policies may not serve to adequately mitigate significant impacts to a less than significant level, mitigation measures are identified. The City may rely on General Plan policies to mitigate environmental impacts under CEQA (See Napa Citizens for Honest Gov't v. Napa County Board of Supervisors (2001) 91 Cal.App 4th). Therefore, these mitigation measures were designed as an enforceable commitment and not merely adopted to be disregarded. The Mitigation Measures themselves are designed to fill "gaps" that may exist between the level of impact avoidance or reduction provided by implementation of GPU goals and policies, and the level of impact avoidance or reduction needed to mitigate significant impacts to a less than significant level. In this case, both GPU policies and additional mitigation measures were included in the reporting program.

The following MMRP identifies the entity responsible for verifying that the mitigation measures for the project are performed. The City of Reedley, as lead agency, will also be responsible for providing a date that each mitigation measure is verified as completed. The MMRP provides a comment/verification date column for the responsible entity to provide notes and remarks and provide a date the measure was completed. The timing of implementing the mitigation measures in the MMRP is identified in each measure.

The performance of the mitigation measures is the responsibility of the project applicant. The project applicant is responsible to provide evidence to the City of Reedley that the mitigation measures are performed and completed. The City of Reedley, as lead agency, will be responsible for ensuring that implementation of all mitigation measures occurs in accordance with this program.

Impact	Mitigation Measure	Timing of Implementation	Responsible Agency/Department	Comment/Verification Date
	2.2 Agricultural Resources			
Impact AG-1: Conversion of approximately 2,983 acres of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use.	Land Use Policies:			
	LU 2.5.1: In areas outside the city limits, the City shall encourage Fresno County to: a) Maintain an exclusive agricultural zone district. b) Maintain a minimum permitted lot size for agricultural land which ensures that the land can be used for commercial agricultural purposes.	LU 2.5.1: Ongoing	City of Reedley, County of Fresno & Local Area Formation Commission	
	LU 2.5.2: New development will only be approved in sequential fashion contiguous to existing development to ensure orderly extension of municipal services and unnecessary conversion of agricultural lands. Development standards shall incorporate measures to preserve and protect agricultural land as set forth in Policies LU 2.5.1 through LU 2.5.18 and COSP 4.3.1 through 4.3.4.	LU 2.5.2: Ongoing	City of Reedley, County of Fresno & Local Area Formation Commission	
	LU 2.5.3: The City shall oppose formation of new land conservation contracts on land adjacent to the City's boundaries. The City shall also work with owners of land within the SOI who wish to file for non-renewal of Williamson Act contracts in advance of urban development.	LU 2.5.3: Ongoing	City of Reedley	
	LU 2.5.4: Within one year of the adoption of the GPU, the City shall adopt a right-to-farm ordinance which will require purchasers of residential, industrial and/or commercial properties within close proximity to existing agricultural uses to acknowledge that their land borders, or is in close proximity to, agricultural land and will endure the potential impacts of that interface. The goal of this proposed ordinance is to promote and protect existing agriculture operations, allowing farmers/ ranchers to conduct operations when urban land	LU 2.5.4: Within one year of the adoption of the GPU.	City of Reedley, County of Fresno & Local Area Formation Commission	

uses extend into natural resource areas or are side-by-side, and, address the subject of frequent nuisance complaints. This Ordinance shall be implemented through a right-to-farm covenant to be recorded against the dominant and subordinate properties		
LU 2.5.5: The City shall discourage the development of peninsulas of urban development into agricultural lands.	LU 2.5.5: Ongoing	City of Reedley
LU 2.5.6: In cooperation with Fresno County, Fresno Local Agency Formation Commission (LAFCO), community and agricultural industry stakeholders, the City shall adopt and maintain a SOI consistent with the goals and policies of this GPU. The sphere of influence shall serve the mutual interest of the County and City by preserving agricultural uses from incompatible or unplanned urban uses.	LU 2.5.6: Ongoing	City of Reedley, County of Fresno & Local Area Formation Commission
LU 2.5.7: Require contiguous development within the SOI unless it can be demonstrated that the development of contiguous property is infeasible. An analysis of the fiscal impacts on public utilities including water, surface transportation, and service shall be required as part of the application to annex new territory into the City.	LU 2.5.7: Ongoing	City of Reedley, County of Fresno & Local Area Formation Commission
LU 2.5.8: The City shall not support annexing land for residential development until at least eighty (80%) percent of the existing residentially designated land inside the city limits is developed	LU 2.5.8: Ongoing	City of Reedley, County of Fresno & Local Area Formation Commission
LU 2.5.9: Work with Fresno County and Fresno LAFCO to maintain agricultural designations in areas outside the Reedley SOI.	LU 2.5.9: Ongoing	City of Reedley, County of Fresno & Local Area Formation Commission

LU 2.5.10: Continue to maintain a Memorandum of Understanding (MOU) with Fresno County which clearly sets forth the following: a) The County shall not approve any discretionary development permit for new urban development within the City's SOI unless that development has first been referred to the City b) That the development is orderly. c) County shall require development standards of the City of Reedley, when development is within the existing SOI. d) The City application for the annexation of any new territory be consistent with the Cortese-Knox Act. e) City initiated annexation shall have development eminent, with at least fifty (50) percent of the proposed area having an approved site plan and/or tentative map.	LU 2.5.10: Ongoing	City of Reedley, County of Fresno
LU 2.5.11: The Plan should foster the establishment of a concentrated urban development pattern, with land outside the planned urban area being designated exclusively for Agriculture.	LU 2.5.11: Ongoing	City of Reedley
LU 2.5.12: New urban development should occur in an orderly manner with initial development occurring on the available undeveloped properties within the City's limits which would be considered in-fill, by-passed parcels or in parcels in close proximity to the urban core, places of employment and established neighborhoods	LU 2.5.12: Ongoing	City of Reedley

LU 2.5.13: The City should promote and provide urban services to development within the City as a means of controlling and directing growth.	LU 2.5.13: Ongoing	City of Reedley
LU 2.5.14: Initial development shall incorporate the necessary infrastructure to accommodate future development for the surrounding area consistent with the goals and objectives of the GPU. Reimbursement agreements or other mechanisms may be provided to the developer as a means to share the equitable burden of costs.	LU 2.5.14: Ongoing	City of Reedley
LU 2.5.15: Provide transitional design between land use types and high quality urban uses.	LU 2.5.15: Ongoing	City of Reedley
LU 2.5.16: The City shall encourage in-fill projects that incorporate pedestrian-oriented design	LU 2.5.16: Ongoing	City of Reedley
LU 2.5.17: The City shall propose plan areas and zone districts that can accommodate mixed use planning that will provide a combination of residential, commercial services and employment opportunities all within close proximity.	LU 2.5.17: Ongoing	City of Reedley
LU 2.5.18: From the adoption date of this GPU, the City shall annex a maximum of five hundred (500) acres from within the existing SOI (@1,797-acres). Only when a Farmland Preservation Program is adopted for implementation shall the City propose additional lands for orderly annexation. The Farmland Preservation Program is discussed in great detail in Section 4.3 Agriculture	LU 2.5.18: From the adoption date of this GPU, the City shall annex a maximum of five hundred (500) acres from within the existing SOI (@1,797-acres).	City of Reedley, County of Fresno & Local Area Formation Commission
<u>Agriculture Policies</u>:		
COSP4.3.1: Support the efforts of the County of Fresno and agricultural and community stakeholders to preserve and protect farmlands outside the centralized core of the City.	COSP4.3.1: Ongoing	City of Reedley

	COSP4.3.2: Maintain a 20-acre minimum parcel size for agriculturally designated parcels to encourage viable agricultural operations and to prevent parcelization into rural residential or ranchette developments.	COSP4.3.2: Ongoing	City of Reedley, County of Fresno
	COSP4.3.3: The City shall prepare and adopt a Farmland Preservation Plan (FPP). This plan shall include a set of policies, standards and measures to avoid the unnecessary conversion of agricultural lands. For each policy, standard or measure, the plan shall include a discussion of the following: (1) How the policy would minimize a potential detrimental effect caused by urban development; (2) Whether and how the policy would assist in avoiding the premature conversion of Prime Farmland, Unique Farmland or Farmland of Statewide Importance; (3) How the policy, standard or measure would be integrated into the entitlement process; and, (4) How the policy, standard or measure would be enforced through the regulatory environment. The FPP shall include the following policies: a) The City shall protect agriculturally designated areas, and direct urban growth away from productive agricultural lands into urbanized or underdeveloped portions of the City. b) The City shall collaborate with the Fresno County Local Area Formation Commission (LAFCo), Fresno County and land owners to encourage minimum parcel sizes of 20 acres or more for land designated for agriculture and/or evidence of commercial agricultural use prior to entering into new Williamson Act contracts.	COSP4.3.3: See LU2.5.18. The City shall prepare and deliver to the City Council an annual report FPP, describing progress made toward the preparation, adoption and implementation of the final FPP	City of Reedley, County of Fresno & Local Area Formation Commission

c) The City shall not protest the renewal of Williamson Act Contracts with regard to land located within the City's SOI, but not adjacent or in close proximity to the City's current boundary, where the land's minimum parcel size is at least 20 acres and the land owner has provided evidence satisfactory to the City that the land is currently being used for commercial agricultural operations.

d) The City shall support the efforts of public, private, and non-profit organizations to preserve Prime Farmland, Unique Farmland or Farmland of Statewide Importance located in Fresno County through the dedication of conservation easements and the preservation of range land held as environmental mitigation

e) The City shall encourage the installation of solar and wind energy production facilities in agricultural areas so long as they do not result in a tax burden to Fresno County, do not result in permanent water transfers from productive agricultural land, do not hinder agricultural operations on adjacent land, or do not require cancellation of Williamson Act contracts. In addition, these facilities should include dedications of agricultural land and habitat mitigation, measures to control erosion, and assurances for financing decommissioning activities.

f) The City shall actively collaborate with landowners, cities, state and federal agencies, colleges, universities, stakeholders, and community-based organizations to continue to expand agricultural preservation in the surrounding Fresno County area.

g) The City shall discourage public agencies from locating facilities, especially schools, in existing agricultural areas.

	h) The City shall encourage the voluntary merger of antiquated subdivision lots that conflict with adjacent agricultural uses. The FPP shall include the following implementation measures: a) A provision designating the Community Development Department as the department responsible for the preparation and implementation of the FPP, once adopted and directing the Department to prepare annual reports to the City Council describing progress made toward the preparation, adoption and implementation of the final FPP b) The creation of a community outreach program to encourage current agricultural land owners' continued participation in programs that preserve farmland, including the Williamson Act, conservation easements, and USDA-funded conservation practices. c) Amend the Reedley Municipal Code within 12 months of adoption of the GPU to provide at least for the following: 1) Amend the zoning ordinance to require a minimum 100-foot buffer between new residential development and existing agricultural operations, and to establish design/maintenance guidelines for developers and property owners. The 100-foot buffer will create an appropriate transitional space between urban and agricultural land uses so as to facilitate continued agricultural operations. 2) Amend Chapter 10-6A, the Residential Estate (RE) District section, which is intended to provide living areas that combine both the urban and rural setting, to add provisions to prevent premature	c) Amend the Reedley Municipal Code within 12 months of adoption of the GPU	City of Reedley

conversion of agricultural land, which could cause incompatible land uses and potential conflicts. 3) Amend the subdivision ordinance to facilitate the voluntary merger of antiquated subdivision lots that conflict with adjacent agricultural uses. 4) Amend the zoning ordinance to include provisions requiring that environmental review expressly analyze the potential for a proposed entitlement or permit to create incompatibilities with agricultural uses through traffic generation, groundwater contamination, storm-water drainage disposal and/or the deterioration of air quality. d) The City shall manage extension of public utilities and infrastructure to avoid extending them into agricultural areas before those areas are committed to conversion of urban uses.			
COSP 4.3.4: In conjunction with the preparation, adoption and implementation of the Farmland Preservation Plan described in Policy COSP 4.3.3, the City shall develop and consider the adoption of a program that shall require new development within the SOI to fund farmland preservation efforts. The goal of this program is to preserve designated Prime Farmland, Unique Farmland, and Farmland of Statewide Importance (together "Farmland") that otherwise runs the risk of being converted to urbanized development. This program shall act as a mitigation program in response to the necessary agricultural land conversion that occurs as a result of the City's expansion into its SOI. The City shall not support the annexation of lands in excess of a total of 500 acres within the City's existing SOI until this program, or a program that accomplishes the same goals, has been adopted and other actions and approvals necessary to the implementation of the program have been completed. Among other	COSP 4.3.4: See LU2.5.18 The City shall not support the annexation of lands in excess of a total of 500 acres within the City's existing SOI until this program, or a program that accomplishes the same goals, has been adopted and other actions and approvals necessary to the implementation of the program have been completed.	City of Reedley, County of Fresno & Local Area Formation Commission	

provisions, the program shall include the following evaluation and performance requirements:

a) Program Goal: As Prime Farmland, Unique Farmland, and Farmland of Statewide Importance within the City's SOI is converted to urban uses, secure the permanent preservation of other Prime Farmland, Unique Farmland, and Farmland of Statewide Importance within Fresno County on a 1 for 1 basis.

b) Evaluation Process: To accomplish the program goal, as part of the entitlement application process Farmland proposed for conversion will be evaluated using the Land Evaluation and Site Assessment (LESA) model issued by the California Department of Conservation. The LESA model provides an analytical approach for rating the relative quality of land resources based upon specific factors, such as soils, site acreage, water availability, and surrounding land uses. The LESA model worksheets are provided in Appendix A, Evaluation and Site Assessment (LESA) Model, California Department of Conservation

c) Fee Program: The City shall develop and adopt a fee program consistent with the requirements of the Mitigation Fee Act that will require applicants seeking to annex Farmland within the City's SOI to pay a fee to the City of Reedley equivalent to the cost of preserving Important Farmland on a 1 to 1 basis with land converted to urban uses. The City shall use the fees to fund an irrevocable instrument (e.g. an easement) to permanently preserve farmlands via a Trust for Farmland Funds Disbursements.

d) Alternative to Payment of Fee: As an alternative to the payment of the fee described in subsection (c), applicant shall provide documentation

	satisfactory to the City that demonstrates that applicant has entered into a binding agreement with one or more property owners or a third-party organization acceptable to the City of Reedley (e.g. the Sequoia Riverlands Trust) to permanently preserve farmland equivalent in acreage to the Farmland proposed for annexation into the City. The agreement shall identify an irrevocable instrument that will be recorded against the preserved property. e) This program will also involve the City maintaining a current list of organizations and owners of Farmland that can facilitate the acquisition of conservation easements so as not to unduly delay the annexation of the land into the City and completion of the proposed development.		
Impact AG-2: Conflict with Existing Zoning or Williamson Act contracts existing on land within the proposed expanded SOI	<u>Land Use Policies</u>: LU 2.5.1: In areas outside the city limits, the City shall encourage Fresno County to: a) Maintain an exclusive agricultural zone district. b) Maintain a minimum permitted lot size for agricultural land which ensures that the land can be used for commercial agricultural purposes.	LU 2.5.1: Ongoing	City of Reedley, County of Fresno & Local Area Formation Commission
	LU 2.5.2: New development will only be approved in sequential fashion contiguous to existing development to ensure orderly extension of municipal services and unnecessary conversion of agricultural lands. Development standards shall incorporate measures to preserve and protect agricultural land as set forth in Policies LU 2.5.1 through LU 2.5.18 and COSP 4.3.1 through 4.3.4.	LU 2.5.2: Ongoing	City of Reedley, County of Fresno & Local Area Formation Commission
	LU 2.5.4: Within one year of the adoption of the GPU, the City shall adopt a right-to-farm ordinance which will require purchasers of residential, industrial and/or commercial properties within close proximity to existing agricultural uses to	LU 2.5.4: Within one year of the adoption of the GPU.	City of Reedley

	acknowledge that their land borders, or is in close proximity to, agricultural land and will endure the potential impacts of that interface. The goal of this proposed ordinance is to promote and protect existing agriculture operations, allowing farmers/ ranchers to conduct operations when urban land uses extend into natural resource areas or are side-by-side, and, address the subject of frequent nuisance complaints. This Ordinance shall be implemented through a right-to-farm covenant to be recorded against the dominant and subordinate properties		
	LU 2.5.7: Require contiguous development within the SOI unless it can be demonstrated that the development of contiguous property is infeasible. An analysis of the fiscal impacts on public utilities including water, surface transportation, and service shall be required as part of the application to annex new territory into the City.	LU 2.5.7: Ongoing	City of Reedley, County of Fresno & Local Area Formation Commission
	LU 2.5.8: The City shall not support annexing land for residential development until at least eighty (80%) percent of the existing residentially designated land inside the city limits is developed.	LU 2.5.8: Ongoing	City of Reedley
	LU 2.5.9: Work with Fresno County and Fresno LAFCO to maintain agricultural designations in areas outside the Reedley SOI.	LU 2.5.9: Ongoing	City of Reedley, County of Fresno & Local Area Formation Commission
	LU 2.5.11: The Plan should foster the establishment of a concentrated urban development pattern, with land outside the planned urban area being designated exclusively for Agriculture.	LU 2.5.11: Ongoing	City of Reedley
	LU 2.5.12: New urban development should occur in an orderly manner with initial development occurring on the available undeveloped properties within the City's limits which would be considered	LU 2.5.12: Ongoing	City of Reedley

	in-fill, by-passed parcels or in parcels in close proximity to the urban core, places of employment and established neighborhoods. Agriculture Policies: COSP 4.3.2: Maintain a 20-acre minimum parcel size for agriculturally designated parcels to encourage viable agricultural operations and to prevent parcelization into rural residential or ranchette developments	COSP 4.3.2: Ongoing	City of Reedley
	2.3 Air Quality		
Impact AQ-1: Conflict with air quality management plans for the San Joaquin Valley Air Basin	The proposed GPU contains a multitude of goals and policies that would directly and indirectly reduce of avoid air emissions. Many goals and policies are modeled on those recommended by the SJVAPCD for reducing air emissions from new development. The goals and policies are found through the Land Use; Circulation; and Conservation, Open Space, Parks and Recreation Elements of the GPU.	Prior to issuance of building permits, during construction and operational activities.	City of Reedley
Impact AQ-2: Cumulatively considerable increase in criteria pollutants (ozone and PM10) for which the air basin is in non-attainment.	See AQ-1	See above	City of Reedley
	2.4 Biological Resources		
BIO-1: Substantial adverse effects on special-status species.	COSP4.13C: As feasible, preserve native vegetation and protected wildlife, habitat areas, and vegetation, through avoidance, impact mitigation, and habitat enhancement.	COSP4.13C: Ongoing	City of Reedley
	COSP4.13.4: As part of the environmental review of new development projects	COSP4.13.4: Ongoing as development is	City of Reedley

	(a) Biological studies shall be prepared to assess habitat value when determined appropriate by the Community Development Department. (b) Mitigation shall be applied to assure that degradation of habitat or impacts to sensitive species is reduced or eliminated. (c) Input will be sought from agencies and individuals with expertise in biological resources, including the California Department of Fish and Game, California Water Quality Control Board, U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, and U.S. Environmental Protection Agency.	proposed	
	COSP4.13.16: Require preservation of contiguous areas in excess of the 100-year flood plain as merited by special circumstances. Special circumstances may include sensitive wildlife or vegetation. wetland habitat, oak woodland areas, slope or topographical considerations, and recreation opportunities	COSP4.13.16 Ongoing as development is proposed.	City of Reedley
BIO-1: Substantial adverse effects on special-status species.	BIO-1. Where review of a proposed project or activity identifies potential impacts on special-status plant species [including but not limited to brittlescale (*Atriplex depressa*), California satintail (*Imperata brevifolia*). Earlimart orache (*Atriplex erecticaulis*), lesser saltscale (*Atriplex minuscula*), recurved larkspur (*Delphinium recurvatum*), San Joaquin adobe sunburst (*Pseudobahia peirsonii*), and/or spiny-sepaled button-celery (*Eryngium spinosepalum*)] due to the presence of suitable habitat, then the City shall require that the special-status species with potential to occur on a project site be evaluated. Focused surveys conducted in accordance with current CDFG and CNPS rare plant survey protocols may be required if suitable habitat is present and would be impacted. If special-status plants occur on a site and could be	Prior to approval of an entitlement application, with oversight during the pre-construction phase of any project.	City of Reedley

	significantly impacted by a proposed project, then appropriate avoidance or mitigation shall be provided in coordination with federal or state regulatory agencies as needed to reduce the impact to a less than significant level.		
BIO-1: Substantial adverse effects on special-status species.	BIO-2: Where review of a proposed project or activity identifies potential impacts on special-status animal species due to the presence of suitable habitat, then the City shall require that the special-status species with potential to occur on a project site be evaluated. Such species include but are not limited to: invertebrates [Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), vernal pool fairy shrimp (*Branchinecta lynchi*), and vernal pool tadpole shrimp (*Lepidurus packardi*)], reptiles and amphibians [California tiger salamander (*Ambystoma californiense*), western pond turtle (*Emys marmorata*), and western spadefoot (*Spea hammondii*)], birds [burrowing owl (*Athene cunicularia*), Swainson's hawk (*Buteo swainsoni*), and western yellow-billed cuckoo (*Coccyzus americanus occidentalis*)], and mammals [pallid bat (*Antrozous pallidus*), San Joaquin kit fox (*Vulpes macrotis mutica*), and western mastiff bat (*Eumops perotis californicus*)]. Focused surveys conducted in accordance with current CDFG and USFWS survey protocols may be required if suitable habitat is present and would be impacted. If special-status animals occur on a site and could be significantly impacted by a proposed project, then appropriate avoidance or mitigation shall be provided in coordination with federal or state regulatory agencies as needed to reduce the impact to a less than significant level.	Prior to approval of an entitlement application, with oversight during the pre-construction phase of any project.	City of Reedley
BIO-1: Substantial adverse effects on special-status species.	BIO-3. If construction activities are planned to occur with 250 feet of mature trees or shrubs during the nesting bird season (February 1 to August 31). a qualified biologist shall conduct a pre-construction survey for nesting birds to ensure that no nests would be disturbed during project construction. This	Prior to approval of an entitlement application, with oversight during the pre-construction phase of any	City of Reedley

	survey shall be conducted no more than seven days prior to the initiation of disturbance activities during the early part of the breeding season (February through April) and no more than 30 days prior to the initiation of these activities during the late part of the breeding season (May through August). If no active nests are present within 250 feet of construction, then activities can proceed as scheduled. However, if an active nest is detected during the survey within 250 feet of construction, then the establishment of a protective construction-free buffer zone from each active nest (typically 250 feet for raptors and 50-100 feet for other species) would be required until the juvenile bird(s) have fledged, unless the biologist determines that construction activity would not impact the active nest(s). The buffer zone shall be clearly delineated or fenced to prevent disturbance to nesting birds.	project.	
	2.5 Climate Change/Greenhouse Gases		
GHG-1: Generate GHGs that may have a significant impact on the environment or conflict with an applicable plan, policy or regulation adopted to reduce GHG emissions.	COSP4.11.2: The City will establish a Climate Action Plan[2] which will include measures to reduce GHG emissions from municipal, business and community activities by at least 15% by 2020 compared to "business as usual" (including any reductions required by ARB under AB 32) by July 2015	COSP4.11.2: July 2015	City of Reedley
GHG-1: Generate GHGs that may have a significant impact on the environment or conflict with an applicable plan, policy or regulation adopted to reduce GHG emissions.	GHG-1. Until such time as the City adopts a Climate Action Plan, the City shall review and require all future development projects to be consistent with the GHG emissions impact analysis and mitigation framework developed by the SJVAPCD as part of its Climate Change Action Plan. Future projects which are not exempt from review under the Climate Change Action Plan framework shall demonstrate that GHG emissions reduction measures have been included in the project design to reduce total emissions by 29	The City shall within two years after the adoption of the GPU, adopt a Climate Action Plan.	City of Reedley

	percent or the SJVAPCD emissions reduction threshold in effect at the time environmental review is being conducted for individual projects.		
	2.9 Hydrology and Water Quality		
HYD-2: Substantially deplete groundwater supplies or interfere with groundwater recharge	Water Service Policies: CIR 3.10.1: The City shall adopt the 2010 Urban Water Management Plan in accordance with California Water Code, Division 6, by January 2014; a) The Plan shall be prepared in accordance with Article 1, Sections 10620-10621. b) The contents of this Plan shall be consistent with Article 2. Contents of Plans, Sections 10630-10634. c) The implementation of the Plan shall be in accordance with Article 3. Adoption and Implementation of Plans, Sections 10640-10645. d) After the adoption of the 2010 Urban Water Management Plan, the City shall prepare and adopt the 2015 Urban Water Management Plan, pursuant to the California Water Code, Division 6. e) Should the Plan expire at any time, pursuant to State Law, the City shall not support the approval of unincorporated territory, General Plan, zone change and/or tentative tract map entitlement applications	CIR 3.10.1: Completed	City of Reedley
	CIR 3.10.2: The City shall identify capital facilities necessary to maintain service in the City of Reedley as the City expands.	CIR 3.10.2: Annual review by the City Council	City of Reedley
	CIR 3.10.3: The City Council shall annually review and adopt updates of development impact fees,	CIR 3.10.3: Annual review by City	City of Reedley

	water connection charges, and volume-based monthly service charges to ensure that adequate funds are collected to operate and maintain existing facilities and to construct new facilities for delivery monitoring, and storage.	council.	
	CIR 3.10.4: The City shall actively support efforts to expand surface water supply and storage that benefits the City. These efforts should include, but not be limited to, coordination with Irrigation Districts for water banking, and WWTP effluent recycling and percolation.	CIR 3.10.4: Ongoing	City of Reedley
	CIR 3.10.5: The City shall require that necessary water supply infrastructure is available prior to constructing new development, and approve development entitlements only when there is assurance of a dependable and adequate water supply that will serve the development.	CIR 3.10.5: At time of entitlement approval and prior to issuance of a building permit.	City of Reedley
	CIR 3.10.6: Any development project which meets the definition of a "water-demand project", pursuant to the CEQA Guidelines, Section 15155, shall be required to prepare a "water assessment" in accordance with Water Code Sections10910 & 10915. The City Council shall formally consider approval of the assessment within the time period required by applicable law and prior to the approval of any development entitlements for the development project.	CIR 3.10.6: Pursuant to proposed project compliance with CEQA Guidelines.	City of Reedley
	CIR 3.10.7: The City shall cooperate with surrounding water management authorities and irrigation districts to develop a comprehensive water management and recharge program which addresses the long-term stabilization of the Kings Basin and the transfer of excess WWTP effluent recycled water for use by the districts for recharge or use by their constituents	CIR 3.10.7: Ongoing	City of Reedley

CIR 3.10.8: Through the entitlement process described in the RMC, the City shall require as a condition of approval that new development will be required to install water meters which meet the City's standards.	CIR 3.10.8: Prior to issuance of a building permit.	City of Reedley
CIR 3.10.9: The City shall encourage and cooperate with the private sector, as appropriate, to incorporate alternative methods of water reuse into new development, such as reclaimed water from irrigation, landscaping and purple pipe systems	CIR 3.10.9: Ongoing	City of Reedley
CIR 3.10.10A: The City Council shall initiate the preparation and then consider adoption of a performance based Water Conservation Program ("WCP") that addresses water consumption to help ensure an adequate water supply to accommodate the projected growth and development patterns proposed within this GPU. The policies and implementation measures contained in the WCP shall set performance standards for sustainable management of Reedley's water production. The WCP, or a similar program that accomplishes the goals set forth below, shall be adopted and in effect prior to the implementation deadlines set forth in any of the policies set forth below. For each policy, standard and implementation measure identified below for inclusion in the WCP there shall be a discussion of the following: (1) How the policy, standard or implementation measure shall reduce per capita potable water consumption; (2) Whether and how the policy, standard or implementation measure would be integrated into the development entitlement process; and (3) how the policy, standard or implementation measure would be enforced through the regulatory environment.	CIR 3.10.10A: The WCP, or a similar program that accomplishes the goals set forth below, shall be adopted and in effect prior to the implementation deadlines set forth in any of the policies set forth below.	City of Reedley

	The policies listed below have been assigned a date of anticipated implementation or completion. Those dates were determined by operational necessity and compliance, complexity of task and staffing capacity. GOAL: To reduce per capita potable water consumption by an additional twenty (20) percent by the year 2020 COMPLIANCE MONITORING AND REPORTING: After the adoption of the WCP, the Community Development Department shall provide an annual report to the City Council progress made toward overall implementation of the WCP. The WCP shall include the following policies and implementation measures:		
	a) The WCP shall include a public education component that addresses various topics related to groundwater production, consumption, recharge and recycling. The public education activities listed below will occur annually at various times throughout the year:	a) Ongoing	City of Reedley
	1) The annual water quality report, prepared by the Public Works Department, which includes statistics related to annual water consumption, discharge and containment, shall be presented to the City Council for its consideration of approval. After Council approval, the report shall be submitted to the State Department of Water Resources.	1) Annual review by the City Council.	City of Reedley
	2) The Public Works Department shall prepare an annual report that identifies, at a minimum, the amount of water used to irrigate the open space and the projected amount of groundwater recharge that has occurred. The City shall use industry standards to establish a formula to calculate the	2) Annual review by City Council.	City of Reedley

	balancing of production to groundwater recharge.		
	3) All water quality reports prepared by the Public Works Department that are required by the Regional Water Quality Board shall be presented to the City Council for its consideration of approval.	3) Annual review by City Council.	City of Reedley
	4) The City shall develop publications and other forms of communication to City water customers to inform them regarding the City's efforts to reduce water consumption and ways the customers can assist with achieving the City's goals.	4) Ongoing	City of Reedley
	b) By March 2014, City Council shall consider the adoption of a water utility plan to implement a city-wide public water system through the year 2030. The implementation of this plan will assist the City in identifying locations for future delivery and recharge infrastructure. The Plan will serve as a basis for the development of impact fees necessary for implementation of the plan.	b) March 2014	City of Reedley
	c) Within one (1) year of the adoption of the GPU, the City Council shall complete a thorough review of the City's development impact fee program and shall consider the adoption of a comprehensive update of the various fees included in the program.	c) Within one (1) year of the adoption of the GPU	City of Reedley
	1) This review shall include, but not be limited to, Storm Drainage, Water Distribution, Groundwater Recharge, Water Supply/Holding and Waste Water Collection and Treatment.		
	2) Within each topic area, the review shall include the analysis of existing conditions, proposed new development, need necessitated by future development and proportional cost attributed to land use development.		

	d) Within one (1) year of the adoption of the GPU, the City Council shall consider the amendment of RMC, Section 8-1-12 and other relevant provisions of the RMC related to Water Conservation, to include additional water conservation provisions and implementation measures to assist in implementing the provisions of Senate Bill No. 407 and State Building Code provisions related to water conserving plumbing fixtures and fittings, so as to meet or exceed a twenty (20) percent reduction in water consumption. Specific requirements added to the RMC would include, at a minimum, the following: 1) Shower head fixtures and fittings shall be designed and installed so that they will not exceed a water supply flow rate of 1.75 gallons per minute. 2) Faucets at kitchens, lavatories, wet bars, laundry sinks, or other similar use fixtures shall be Water Sense labeled and installed so that they will not exceed a water supply flow rate of 1.5 gallons per minute. 3) Toilet fixtures and fittings shall have an average consumption that does not exceed 1.1 gallons of water per flush. 4) New residential dwellings that are equipped with clothes washers shall install washers that are ENERGY STAR qualified. 5) The water pressure in a single family home shall not exceed 60 pounds per square inch (psi), with no detectable water leaks. Multifamily and midrise projects are exempt from the water pressure testing criterion but shall meet the requirements as stated in 1) through 4) above (Source: U.S. Green Building Council).	d) Within one (1) year of the adoption of the GPU.	City of Reedley

	e) The City shall strive to implement best management practices ("BMP") developed by the California Urban Water Conservation Council and provide annual reports to the City Council and the California Urban Water Conservation Council regarding its progress in implementing the BMP. f) The City shall consider the adoption of a Water Efficient Landscaping Ordinance that is as effective as, or more effective than, the Model Water Efficient Landscape Ordinance adopted by the California Department of Water Resources. The Ordinance shall contain applicability, definitions, provisions for new construction or rehabilitated landscapes, application requirements, water efficient landscape and certification. To further reduce outdoor water consumption, encourage water efficient landscaping practices through the reduction of turf grass by at least 40% and increasing the amount of plants that are native or adapted to the region by at least 25% (Source: U.S. Green Building Council).	e) Ongoing	City of Reedley
	g) The City shall work with utility service providers such as PG&E who have rebate programs available to City's water customers to inform customers of the programs and to encourage them to utilize the programs to replace current water consuming appliances with water conserving appliances that are Energy Star rated.	g) Ongoing	City of Reedley
	h) The City shall measure irrigation water used for parks/open space through the installation of standard water meters on all large park/open space areas, which may be creditable for recharge purposes. The installation of the meters will be completed within one year after the adoption of the GPU	h) Ongoing	City of Reedley

	i) The City shall systematically replace failing irrigation controllers at City parks, median islands and other City facilities with landscape irrigation systems with irrigation controllers equipped with, at a minimum, rain and evapotranspiration sensors, with the goal of reducing water used for landscape irrigation by twenty (20) percent to forty (40) percent, as supported by studies performed in the industry. This replacement program shall commence when the GPU is adopted.	i) Ongoing	City of Reedley
	j) The City shall work cooperatively with land owners, local and regional water agencies, and irrigation districts which rely upon the Kings Basin as a source of water to identify and implement infrastructure projects and other programs that serve to reduce the use of groundwater and/or facilitate the recharge of the aquifer.	j) Ongoing	City of Reedley
	k) The City shall continue to work with the Upper Kings Basin Integrated Regional Water Management Authority in developing a strong coalition of water agencies, cities, counties and environmental groups to address local water issues.	k) Ongoing	City of Reedley
	CIR 3.10.10B: As part of the City's formulation of its annual budget, City staff shall identify a list of capital facilities improvement projects, with proposed budgetary allocations, necessary to implement further reductions in water consumption and/or maintain service.	CIR 3.10.10B: Ongoing	City of Reedley
	<u>Waste Water Policies</u>:		
	CIR 3.10.11: By March 2014, City Council shall adopt a Waste Water Master Plan to address collection and treatment system. The implementation of this plan will assist the City in identifying general locations for future	CIR 3.10.11: By March 2014.	City of Reedley

infrastructure. The Plan will also be vital to the development of impact fees which are necessary for implementation.		
CIR 3.10.12: The master plan will include analysis of the treatment needs as well as collector system disposal measures and funding mechanisms.	CIR 3.10.13: By March 2014.	City of Reedley
CIR 3.10.13: The City shall acquire adequate land to be used for reclamation purposes.	CIR 3.10.13: By 2018.	City of Reedley
CIR 3.10.14: The City shall periodically review and update development impact fees, wastewater connection charges, and monthly service charges to ensure that adequate funds are collected to operate and maintain existing facilities and to construct new facilities.	CIR 3.10.14: City Council review on a three-year ongoing cycle.	City of Reedley
Storm Water Policies:		
CIR 3.10.18: The City shall prepare and present to the City Council for consideration of adoption of a comprehensive set of policies to ensure an adequate storm water drainage system to support the growth and development patterns proposed within this GPU. These policies shall set performance standards for sustainable management of Reedley's storm water drainage system. The policies, including those set forth below, shall be adopted such that their provisions are implemented by the deadlines set forth in the proposed policies. If the policy does not contain a specific deadline for its implementation, it shall be considered for adoption within twelve (12) months of the GPU's adoption. After the adoption of the GPU, the Community Development Department shall provide an annual report to the City Council describing progress made toward the development, adoption and overall implementation of these policies.	CIR 3.10.18: Within twelve month of the adoption.	City of Reedley

The staff analysis supporting each policy shall include a discussion of the following: (1) How the policy would minimize potential detrimental effect caused by the percolation of storm water; (2) Whether and how the policy would assist in the City's efforts to recharge the underground aquifer; (3) How the policy would be integrated into the entitlement process; and, (4) How the policy would be enforced through the regulatory environment. The policies shall include the following:		
a) The City shall develop and implement a public education component that addresses various topics related to collection and disposal of storm water and shall include periodic reports to the City Council and the public regarding its progress in implementing the policies. Specifically, this component shall include the following actions by the City Council:	a) Ongoing	City of Reedley
1) All legally required storm drainage reports prepared by the Public Works Department shall be presented to the City Council for consideration of adoption.	1) Annual review by the City Council	City of Reedley
2) All legally required National Pollutant Discharge Elimination System (NPDES) program reports, prepared by the Public Works Department shall be presented to the City Council for consideration of adoption.	2) Annual review by the City Council.	City of Reedley
3) By March 2014, City Council shall consider the adoption of the Storm Drain Master Plan. The plan will assist the City in identifying locations for future infrastructure and ground water recharge opportunities. The Plan will also serve as basis for the development of updates to the impact fees which are necessary for implementation.	3) March 2014	City of Reedley

b) The City shall develop standard operating procedures for vegetation management in storm water basins to ensure the basins structure and capacity is not compromised. The formal procedure shall be adopted within eighteen months after the adoption of the GPU	b) Ongoing	City of Reedley
c) The City shall develop standard operating procedures for storm water measurement and for recording water levels in the basins. These procedures shall be adopted within eighteen months after the adoption of the GPU.	c) Ongoing	City of Reedley
d) The City shall develop standard operating procedures for documentation of interceptor monitoring and clean-out. The formal procedures shall be adopted within eighteen months after the adoption of the GPU.	d) Ongoing	City of Reedley
e) The City shall develop standard operating procedures for the bottom ripping of all storm water basins to ensure continual and optimal percolation. The procedures shall be adopted within eighteen months after the adoption of the GPU.	e) Ongoing	City of Reedley
f) As the City collects storm drainage development impact fees, and those fees become available, the City shall install measuring devices (e.g. flow meters, visually marked measuring poles) on drain inlets to measure storm events, which will be used to quantify Reedley's efforts to increase groundwater recharge	f) Ongoing	City of Reedley
g) On an on-going basis, the City shall strive to work with the irrigation districts to identify the most suitable locations for storm water basins based on soil type, elevation, and other factors.	g) Ongoing	City of Reedley

	CIR 3.10.18B: As part of the City's formulation of its annual budget, City staff shall identify a list of capital facility improvement projects, with proposed budgetary allocations, necessary to increase the use of collected storm water for the City's groundwater recharge efforts	CIR 3.10.18B: Annual review by City Council.	City of Reedley
	CIR 3.10.19A: The City shall prepare and present to the City Council for consideration of adoption a comprehensive set of policies to ensure an adequate city-wide program for the recharge of ground water to support the growth and development patterns proposed within this GPU. These policies shall set performance standards for sustainable management of Reedley's use of groundwater and promote efforts to increase groundwater recharge. The policies, including those set forth below, shall be adopted such that their provisions are implemented by the deadlines set forth in the proposed policies. If the policy does not contain a specific deadline for adoption or implementation, it shall be considered for adoption within twelve (12) months of the GPU's adoption. After the adoption of the GPU, the Community Development Department shall provide an annual report to the City Council describing progress made toward the development, adoption and overall implementation of these policies. The staff analysis supporting each policy shall include a discussion of the following: (1) How the policy would help to reduce consumptive use; (2) Whether and how the policy would assist in the City's efforts to recharge the underground aquifer; (3) How the policy would be integrated into the entitlement process; and, (4) How the policy would be enforced through the regulatory environment. The policies shall include the following:	CIR 3.10.19A: Within twelve (12) months of the GPU's adoption.	City of Reedley

	a) The City shall develop and implement a public education component that addresses various topics related to the consumptive use of groundwater as well as efforts to recharge the underground aquifer and shall include periodic reports to the City Council and the public regarding its progress in implementing the policies	a) Ongoing	City of Reedley
	b) The City shall work cooperatively with land owners, local and regional water agencies, and irrigation districts which rely upon the Kings Basin as a source of water to identify and implement infrastructure projects and other programs that serve to reduce the use of groundwater and/or facilitate the recharge of the aquifer.	b) Ongoing	City of Reedley
	c) The City shall work cooperatively with the irrigation districts to develop and implement new strategies to expand upon current efforts directed toward groundwater recharge. These strategies may include: 1) Exploring the feasibility of joint water banking. 2) Exploring opportunities to jointly participate in studies that will be used to facilitate new or expand wastewater recycling and reclamation opportunities.	c) Ongoing	City of Reedley
	d) Develop a methodology for early consultation (CEQA Section §21080.3) with the irrigation districts as part of the environmental review process when an entitlement application that involves annexing new land into the City is submitted. The comments received from the District will be fundamental to the development of conditions of approval applied to said projects. This process could be developed and implemented within one year after the adoption of the GPU.	d) Within one year after the adoption of the GPU.	City of Reedley

	e) On an on-going basis, the City shall strive to work with the irrigation districts to identify the most suitable locations for storm water basins based on soil type, elevation, and other factors.	e) Ongoing	City of Reedley
	f) The City shall continue to work with the Upper Kings Basin Integrated Regional Water Management Authority in developing a strong coalition of water agencies, cities, counties and environmental groups to address local water issues.	f) Ongoing	City of Reedley
	g) The City shall continue to work with the Kings River Conservation District to identify projects that would directly and efficiently increase groundwater recharge and to identify funding sources for said project, with the goal of submitting a grant application to the District for such a project by January 15, 2015.	g) By January 15, 2015.	City of Reedley
	h) Within one (1) year of the adoption of the GPU, the City Council shall complete a thorough review of the City's development impact fee program and shall consider the adoption of a comprehensive update of the various fees included in the program.	h) Within one year after the adoption of the GPU.	City of Reedley
	1) This review shall include, but not be limited to, Storm Drainage, Water Distribution, Groundwater Recharge, Water Supply/Holding and Waste Water Collection and Treatment.		
	2) Within each topic area, the review shall include the analysis of existing conditions, proposed new development, need necessitated by future development and proportional cost attributed to land use development.		
	i) By 2020, the City shall prepare an updated Groundwater Pumping, Recharge, and Consumptive Use Analysis report using the same	i) To be completed by the end of 2020.	City of Reedley

	methodology as the 2013 report. Part of this report will include policies, recommendations, and implementation measures. The analysis and recommendations shall be presented to the City Council for its consideration.		
	j) All annual reports, prepared by the Public Works Department related to water quality, water supply and delivery, and groundwater recharge shall be presented to the City Council for its consideration of adoptions.	j) Ongoing	City of Reedley
	k) The City shall continue to strive to develop and implement best management practices, strategies, in compliance with State law, and regulatory permits/requirements related to water quality and supply and groundwater recharge and report annually to the California Urban Water Conservation Council on its progress in development and implementing said practices.	k) Annual Reporting	City of Reedley
	l) The Public Works Department shall prepare an annual report that identifies, at a minimum, the amount of water used to irrigate the open space and the projected amount of groundwater recharge that has occurred. The City shall use industry standards to establish a formula to calculate the balancing of production to groundwater recharge.	l) Ongoing	City of Reedley
	CIR 3.10.20B: As part of the City's formulation of its annual budget, City staff shall identify a capital facility improvement projects, with proposed budgetary allocations, necessary to implement the City's groundwater recharge efforts.	CIR 3.10.20B Annual review by City Council.	City of Reedley
	<u>Natural Resources Policies</u>:		
	COSP4.2.3 Protect areas of groundwater recharge from land uses and disposal methods which would degrade water sources.	COSP4.2.3: Ongoing	City of Reedley

	COSP4.2.4 Provide public sewer service to new urban development as a means of protecting groundwater resources	COSP4.2.4: At time of entitlement approval and prior to issuance of a building permit.	City of Reedley
	COSP4.2.5: To protect human health the City groundwater resources will be monitored on a regular basis to test for bacteriological and toxic chemical components.	COSP4.2.5: Ongoing	City of Reedley
	COSP4.2.6: Promote activities which combine storm-water control and water recharge	COSP4.2.6: Ongoing	City of Reedley
	COSP4.2.7: The City will enhance groundwater recharge supply by requiring the installation of detention/retention ponds in new growth areas.	COSP4.2.7: Ongoing	City of Reedley
	COSP4.2.10: Continue to encourage water conservation.	COSP4.2.10: Ongoing	City of Reedley
HYD-2: Substantially deplete groundwater supplies or interfere with groundwater recharge.	HYD-1. The City will update its Urban Water Master Plan or prepare a separate water supply plan to identify how the City will avoid or substantially reduce the impacts of increased demand for groundwater resources on groundwater depletion and overdraft of the Kings Basin resulting from implementation of the proposed GPU. The plan should include, but may not be limited to the following components. (a) Inventory of existing water demands, supplies, and providers, water use efficiency, recycling, transfers, and conjunctive use. (b) Analysis of future water demands based on general plan land use at buildout.	City Council has approved the 2010-2015 Urban Water Management Plan.	City of Reedley

	(c) Assessment of future opportunities for enhanced water use conservation (which could include an update of the City's water conservation ordinance), recycling of water, water transfers, conjunctive use of groundwater and surface water, additional storage or water development projects, and other potential increases in water entitlements and supply. (d) Assessment of any shortfalls in future water demands based on wet, normal, dry, and multiple dry year types and contingency plans for drought conditions. (e) Identification of alternative water sources that will be utilized as needed to supplement groundwater extraction as the City's only source of urban water supply in order to avoid or substantially reduce impacts from overdraft of the Kings Basin.			
	2.10 Noise			
N-1: Noise levels from transportation sources, potentially stationary sources, and potentially railroad sources in excess of noise standards.	NE 6.1.3: Areas subject to a DNL greater than 60 dBA are identified as noise impact zones. As part of the special permit process the proposed development project will be required to have an acoustical analysis prepared by a licensed engineer. The report should also include practical and reasonable mitigation measures.	Ongoing as development is proposed.	City of Reedley	
	NE 6.1.5: Design of all proposed development should incorporate features necessary to minimize adverse noise impacts, while also minimizing effects on surrounding land uses.	Ongoing as development is proposed.	City of Reedley	
	NE 6.1.6: Land use and transportation planning should include analysis of the potentially adverse noise levels associated with various design and use alternatives.	Ongoing as development is proposed.	City of Reedley	

	NE 6.1.7: The design of proposed transportation facility should incorporate feasible measures to diminish potential increases in noise levels. NE 6.1.8: To relieve excessive noise generation associated with various modes of transportation, the City should: a) designate truck routes where appropriate (see Circulation Element). b) Limit vehicle speed where appropriate. c) Adoption of State Noise Insulation Standards (California Code of Regulations, Title 24) and Chapter 35 of the Uniform Building Code (UBC) concerning interior noise exposure for new single, multi-family housing, hotels and motels. d) Encourage appropriate authorities to stringently enforce California Motor Vehicle Code standards relating to noise emission levels and muffler systems. e) Maintain awareness of State and Federal standards or legislation relating to noise and lend support or criticism as appropriate. NE 6.1.9: The City should cooperate with Fresno County to adopt compatible noise control programs. NE 6.1.10: The City should develop noise contours for the following facilities: a) Major roads classified in the Circulation Element of the General Plan. b) Stationary facilities which emit noise levels greater than DNL of 60 dBA.	Ongoing as development is proposed. Ongoing, and as development is proposed.	City of Reedley City of Reedley	

N-1: Noise levels from transportation sources, potentially stationary sources, and potentially railroad sources in excess of noise standards.	N-1. The City will minimize to the degree practicable the impact of transportation-related noise. Transportation noise sources include roadways, railroads and aircraft operations. Transportation noise shall be minimized as follows: (a) Noise-Sensitive Land Uses: New development of noise-sensitive land uses shall not be permitted in areas exposed to existing or projected future noise levels from transportation noise sources exceeding 60 dB DNL within outdoor activity areas unless appropriate noise mitigation measures have been incorporated into the final project design. An exterior exposure of up to 65 dB DNL within outdoor activity areas may be allowed if a good-faith effort has been made to mitigate exterior noise exposure using a practical application of available noise mitigation measures and interior noise exposure due to exterior sources will not exceed 45 dB DNL. (b) New Transportation Noise Sources: Noise created by new transportation noise sources, including roadway improvement projects, shall be mitigated so as not to exceed 60 dB DNL within outdoor activity areas and 45 dB DNL within interior living spaces of existing or planned noise-sensitive land uses	Prior to approval of an entitlement application, with mitigation as necessary to reduce impacts to a less than significant level.	City of Reedley, County of Fresno & Local Area Formation Commission Community Development Department	
N-1: Noise levels from transportation sources, potentially stationary sources, and potentially railroad sources in excess of noise standards.	N-2. The City will minimize to the degree practicable the impact of stationary noise sources. Stationary noise sources include industrial and commercial facilities, agricultural operations and vehicle movements on private property. Stationary noise shall be minimized as follows: (a) Noise-Sensitive Land Uses: The development of new noise-sensitive land uses shall not be permitted in areas where noise levels from existing stationary noises sources may exceed the noise level standards shown in Table 6.1.2-B of the proposed GPU within outdoor activity areas.	Prior to approval of an entitlement application, with mitigation as necessary to reduce impacts to a less than significant level.	City of Reedley	

	(b) New Stationary Noise Sources: Noise created by proposed stationary noise sources, or existing stationary noise sources which undergo modifications that may increase noise levels, shall be mitigated so as not to exceed the noise level standards shown in Table 6.1.2-B of the proposed GPU within outdoor activity areas of existing or planned noise-sensitive land uses.			
N-1: Noise levels from transportation sources, potentially stationary sources, and potentially railroad sources in excess of noise standards.	N-3. Maintain a citywide noise environment that achieves noise goals through development review and post-development monitoring by implementing the following actions: (a) Development Review: The City will review new public and private development proposals to determine conformance with the policies and implementing actions of the Noise Element. (b) Acoustical Analysis Required (Transportation Noise Sources): At the discretion of the Community Development Department or where the development of a project may result in noise-sensitive land uses being exposed to existing or projected future transportation noise levels exceeding 60 dB DNL (or CNEL), an acoustical analysis shall be required early in the review process so that noise mitigation may be included in the project design. For development not subject to environmental review, the requirements for an acoustical analysis shall be implemented prior to the issuance of a building permit. Areas of the city potentially exposed to noise from transportation sources in excess of 60 dB DNL (or CNEL) may be determined by reference to Table 16, Generalized Traffic Noise Exposure Reedley 2020 General Plan Update Future Conditions, for traffic noise. For railroad noise, it is assumed that areas closer than 200 feet from the track may be exposed to 60 dB DNL or above.	Prior to approval of an entitlement application, with mitigation as necessary to reduce impacts to a less than significant level.	City of Reedley	

	When required, an acoustical analysis shall include identification and quantification of noise sources that may affect the proposed use, or that may result from the proposed use, for existing and foreseeable future conditions. Noise levels shall be quantified in terms of the DNL (CNEL for aircraft noise) and shall include consideration of site-specific conditions that could affect noise exposure at the location or locations of interest. (c) Acoustical Analysis Required (Stationary Noise Sources): Where, at the discretion of the Community Development Department, the development of a project may result in noise-sensitive land uses being exposed to noise from existing or future stationary sources exceeding the daytime or nighttime standards shown in Table 6.1.2-B of the proposed GPU, an acoustical analysis shall be required. The acoustical analysis should be required early in the review process so that noise mitigation may be included in the project design. For development not subject to environmental review, the requirements for an acoustical analysis shall be implemented prior to the issuance of a building permit. When required, an acoustical analysis shall include identification and quantification of noise sources that may affect the proposed use, or that may result from the proposed use, for existing and foreseeable future conditions. Noise levels shall be quantified in terms of the noise level descriptors utilized in 6.1.2-B and shall include consideration of site-specific conditions that could affect noise exposure at the location or locations of interest.		

	(d) Compliance Monitoring: The City shall develop and employ procedures to monitor compliance with the policies of the Noise Element after completion of projects where noise mitigation measures have been required.			
2.13 Utilities				
UTIL-3: Have sufficient water supply available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed.	See HYD-1 and HYD-2.	See above.	Community Development, Engineering and Public Works Departments	

REEDLEY PLANNING COMMISSION

ITEM NO: 3

DATE: March 5, 2015

TITLE: Consideration and Support for Initiating a City-wide Change of Zone Application

SUBMITTED: Kevin E. Fabino, Director
Community Development Department

RECOMMENDATION

Staff recommends that the Planning Commission through Resolution 2015-03 take the following actions:

1. PLANNING COMMISSION has considered and supports the initiation of a city-wide Change of Zone Application.

2. RECOMMEND TO THE CITY COUNCIL authorization to initiate a city-wide Change of Zone Application.

EXECUTIVE SUMMARY

Over the past several years, the state has hindered the City's ability to provide the private sector economic incentives to help offset or reduce the cost of development. One such example is the elimination of the Redevelopment Agency (RDA). Over the past two General Plan cycles the City's vision has changed, along with planned land use designations, but there was no assistance provided to land owners to reset the underlying zone district designations. As required by law, the City had made a commitment to changing zone district designations on certain properties to meet the State required Regional Housing Numbers Allocation (RHNA). Recently, staff has received requests from several different land owners interested in changing the zone district designations to facilitate potential development projects. We have also had requests related to the pre-zoning of land in anticipation of future annexation into the City. From an economic development standpoint, the Department and City on the whole has tried to help land owners and developers to better position their property.

The above described, coupled with a variety of other economic variables, may have caused challenges which could impede development.

Therefore, City staff is recommending authorization to initiate a city-wide rezone application. The idea is to process a single change of zoning application which reclassifies a significant number of parcels to be consistent with the General Plan, meet State requirements, minimize future development constraints and anticipate future development opportunities through annexations. Staff has already identified a significant amount of parcels (@600-650) which fall into one of the applicable categories. See Exhibit A, Proposed City-Wide Change of Zone Map.

If the City Council were to initiate such a city-wide application, land owner participation is strictly voluntary and at no cost to the land owner. At a minimum each land owner would receive a letter offering a complete explanation of the purpose and process of this change of zone program, and each affected land owner would receive a Public Hearing Notice for both the Planning Commission and City Council meetings. Should the City Council authorize the initiation of a city-wide rezone application, the application would follow the standardized process and require Planning Commission approval, with final approval by the City Council.

Staff has conducted community outreach to interested parties, private land owners and local realtors. The response has been positive and there is support of such an undertaking.

Therefore, staff is recommending the Planning Commission support and recommend to the City Council the authorization of a city-wide change of zone application.

PROJECT DESCRIPTION/BACKGROUND

Over the past several years, the state has hindered the City's ability to provide the private sector economic incentives to help offset or reduce the cost of development. One such example is the elimination of the Redevelopment Agency (RDA). Over the past two General Plan cycles the City's vision has changed, along with planned land use designations, but there was no assistance provided to land owners to reset the underlying zone district designations. As required by law, the City had made a commitment to changing zone district designations on certain properties to meet the State required Regional Housing Numbers Allocation (RHNA). Recently, staff has received requests from several different land owners interested in changing the zone district designation to facilitate potential development projects. We have also had request related to the pre-zoning of land in anticipation of future annexation into the City. From an economic development standpoint, the Department and City on the whole, has tried to help land owners and developers to better position their property.

Over the past 30 years the City's General Plan has changed planned land use designations, but never reset the underlying zone district designations, which has created inconsistencies between planned land use designations and zone district classifications. Where there is conflict a project cannot be approved because each project must be consistent with the General Plan, goals and policies, and Reedley Municipal Code. To resolve this conflict the City has historically required Project proponents to file a change of zone application to align the planned land use designation and zone district classification. The processing of multiple entitlement applications (General Plan Amendment and Change of Zone Applications), coupled with a site plan review, or conditional use permit, may extend the approval process from 4-5 weeks to 4-5 months. The developer does incur additional costs of preparing additional entitlement applications. This is also compounded by the additional City application fees, which are typically in excess of $5,500.

Community Development Department staff tries to encourage concurrent processing of the various entitlement applications. This is more efficient for staff and can eliminate significant redundancy of processing tasks. However, even with concurrently processing an application, it still typically takes 60-70 man-hours and 4-5 months, from acceptance of the application through approval by the City Council and filing of the Notice of Determination.

The City has made commitments to rezoning and pre-zoning certain properties to meet the State Mandated Regional Housing Number Allocation (RHNA). By the City taking such action, we could attribute 1,137 units to satisfying unmet needs from the 3rd and 4th Housing Element cycles. This would end the overburdening of significant unit counts to future cycles (5th cycle).

From an economic development standpoint, the Department and City on the whole, has tried to help land owners and developers to better position their property. We have had several land owners expressing interest in changing the zone district designation of their parcel(s). We were recently approached by a land owner in the vicinity of "I" and 8th Streets wanting to match potential leasee's proposed land uses with what was allowable under the existing zone district classification. It was finally determined that in order to accommodate the potential leasee's proposal a change of zone application would be required. We were also approached by another land owner whose property is in the vicinity of Buttonwillow and Dinuba Avenues. Again, the current zone district designation was a limiting factor for the land owner's intent for future development. We have other similar situations which have occurred and none of those projects ever moved forward.

In light of these cumulative situations, staff has reached out to local realtors. As we conceptually described what we are trying to achieve, the realtors shared several stories. One realtor stated, "This is long overdue. Over the years we have had zoning troubles in the downtown area and it would be great if it were finally cleaned up." The local realtors we spoke with were very supportive of the City initiating a city-wide change of zone application.

Staff also reached out to land owners who are adjacent to the current City boundaries. We explained our goals with the intent of participation being strictly voluntary and that their property could be pre-zoned for preparation of future annexation into the City. In this case the land owner could save up to four to six months of entitlement processing and be one step closer to annexation into the City. This would positively position the land for future development and the land owner would be taking the necessary step in making their property more attractive in the market place. Again, we received support from this land owner who also expressed wanting to participate, should the Council initiate such an application.

Staff has already identified a significant amount of parcels (@600-650) which fall into one of the above described categories. The preliminary outreach to members of our community has been received well, with some eager to participate.

Should the Planning Commission and City Council authorize the initiation of a city-wide rezone application, the application would follow the standard process. Staff would send a letter to each prospective land owner explaining the impact to their property and request their consent. Again, participation is strictly voluntary and at no cost to the land owner. A request for comments from other trust and responsible agencies would also be sent out. Each affected land owner would also receive a Public Hearing Notice for both the Planning Commission and City Council. Approval of the application will require consideration by the Planning Commission, with a recommendation to the City Council. Thereafter, the City Council will take final action on the city-wide Change of Zone Application.

FISCAL IMPACT

If a city-wide Change of Zone Application is authorized, the private sector could be relieved of approximately $3,437,500.00 in City application fees. The City could also be relieved of 43,750 man-hours (21 years) of staff time needed to process each individual entitlement application.

ATTACHMENTS & EXHIBITS

1. Resolution No. 2015-03

Exhibit A: Proposed City-Wide Change of Zone Map

RESOLUTION NO. 2015-03

A RESOLUTION OF THE CITY OF REEDLEY PLANNING COMMISSION RECOMMENDING THAT THE CITY COUNCIL AUTHORIZE THE INITIATION OF A CITY-WIDE CHANGE OF ZONE APPLICATION

WHEREAS, over the past several years, the state has hindered the City's ability to provide the private sector economic incentives to help offset or reduce the cost of development (e.g. elimination of the Redevelopment Agency (RDA); and

WHEREAS, over the past 30 years the City's General Plan has changed planned land use designations, but never reset the underlying zone district designations, which has created inconsistencies between planned land use designations and zone district classifications. Where there is an inconsistency a project cannot be approved because each project must be consistent with the General Plan, goals and policies, and Reedley Municipal Code; and

WHEREAS, the City had made a commitment to changing zone district designations on certain properties to meet the State required Regional Housing Numbers Allocation (RHNA); and

WHEREAS, staff has received requests from several different land owners interested in changing the zone district designations to facilitate potential development projects; and

WHEREAS, staff has received requests related to the pre-zoning of land in anticipation of future annexation into the City; and

WHEREAS, staff also reached out to land owners and realtors explaining the goals and intent, which were well received; and

WHEREAS, land owner participation would be strictly voluntary and at no cost to the land owner; and

WHEREAS, the City of Reedley Planning Commission, at the regular meeting on March 5, 2015, held a public hearing, received a written staff report, invited public comment, and independently deliberated.

NOW, THEREFORE, BE IT RESOLVED that the City of Reedley Planning Commission, using their independent judgment, hereby recommends to the City Council the initiation of a city-wide Change of Zone application based on the following:

1. The above recitals are true and correct; and

2. The Planning Commissions FINDS that a city-wide Change of Zone application would eliminate may inconsistencies between the land use designation and zone district classification, which prevent development and create by-passed parcels; and

3. The Planning Commissions FINDS that a city-wide Change of Zone application would fulfill the City's commitment to achieving the State required Regional Housing Numbers Allocation (RHNA); and

4. The Planning Commissions FINDS that a city-wide Change of Zone application would provide land owners to participate voluntarily and at no cost; and

5. The Planning Commissions FINDS that a city-wide Change of Zone application would create an economic incentive for the private sector by relief from City application fees, which are estimated at $3,437,500.00; and

6. The Planning Commissions FINDS that a city-wide Change of Zone application would relieve the City of approximately 43,750 man-hours (21 years) of staff time needed to process each individual entitlement application over the next several years; and

7. This resolution is effective immediately upon adoption.

This foregoing resolution is hereby approved and adopted at a regular meeting of the Reedley Planning Commission, in the City of Reedley, held on the 5th day of March, 2015, by the following vote:

AYES:

NOES:

ABSTAIN:

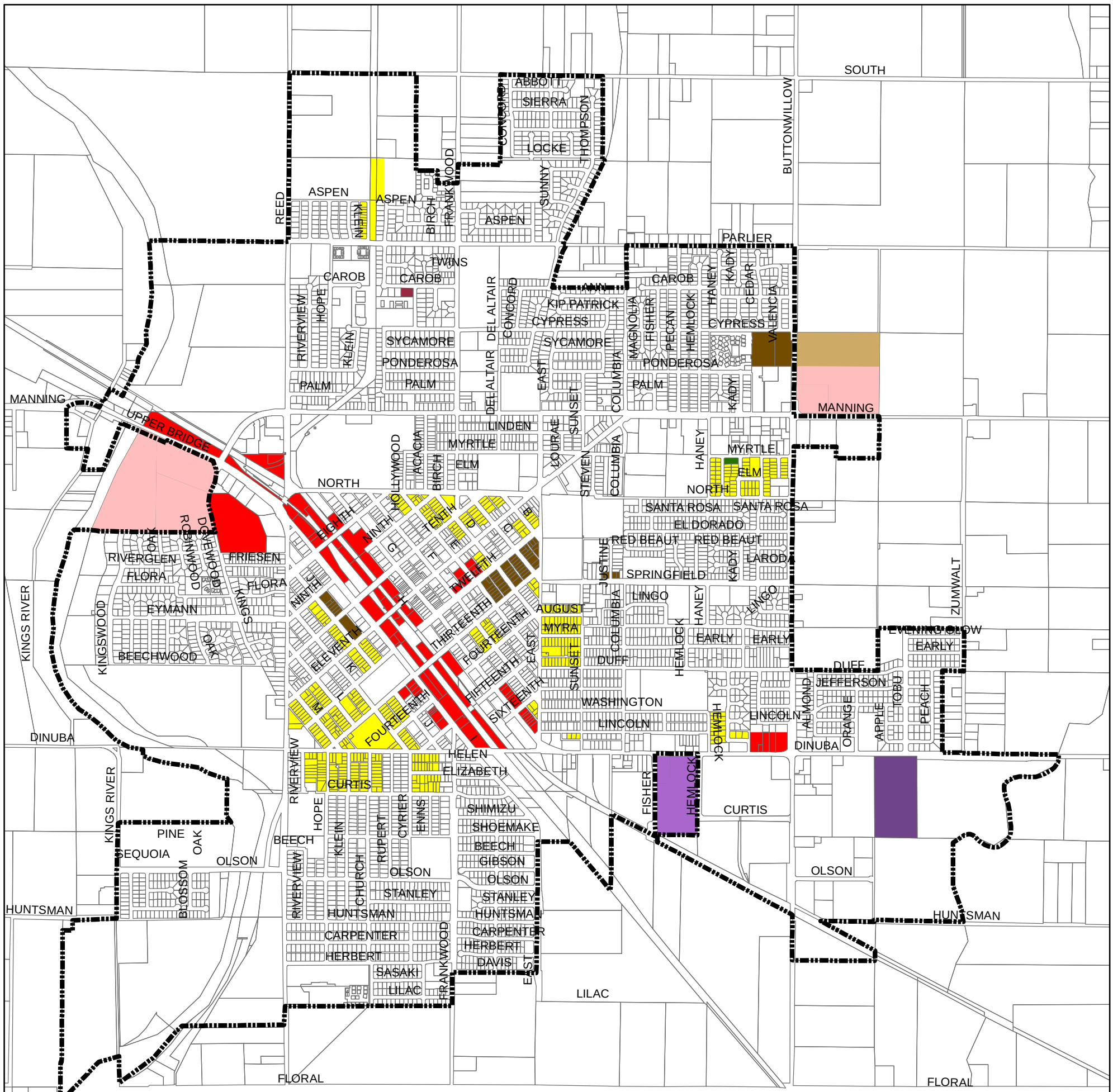
ABSENT:

Alberto Custodio, Chairman
City of Reedley Planning Commission

ATTEST:

Kevin E. Fabino, Secretary

Exhibit A
Proposed City-wide Change of Zone Map



Legend

City Limits

Proposed Change of Zone

Properties to be Rezoned

- Rezone to Commercial
- Rezone to ML
- Rezone to PO
- Rezone to R-1
- Rezone to RCO
- Rezone to RM-2

Properties to be Prezoned

- Prezone to Commercial
- Prezone to ML
- Prezone to RM-3

Date: March 5, 2015

REEDLEY PLANNING COMMISSION

ITEM NO: 4

DATE: March 5, 2015

TITLE: Consideration of Conditional Use Permit Application No. 2014-05, "Vesting" Tentative Tract Map No. 6096, dated December 17, 2014, and Environmental Assessment No. 2014-21, dated February 11, 2015, related to the proposed Kings River Village, Mixed-Use Project

SUBMITTED: Kevin E. Fabino, Director
Community Development Department

RECOMMENDATION

Staff recommends that the Planning Commission take the following actions:

1. Through Resolution No. 2015-04, RECOMMEND TO THE CITY COUNCIL APPROVAL, the Environmental Assessment No. 2014-21, a Mitigated Negative Declaration (MND), dated February 11, 2015, for the proposed conditional use permit and tentative tract map applications.

2. Through Resolution No. 2015-04, RECOMMEND TO THE CITY COUNCIL APPROVAL of Conditional Use Permit Application No. 2014-05, authorizing a mixed use project, pursuant to the Reedley Municipal Code, §10-13-9, Mixed Use. Proposed are 341 residential dwelling units of various types, a combination of office and commercial/retail (@155,030 sq. ft.), and the Kings River Village, Master Development Guidelines, dated December 17, 2014.

3. Through Resolution No. 2015-05, APPROVE the Vesting Tentative Map No. 6096, dated December 17, 2014, authorizing the subdivision of land pursuant to the Subdivision Map Act.

EXECUTIVE SUMMARY

The Kings River Community Partners, LLC ("Applicant") proposes to construct a ±38.7-acre mixed use community known as Kings River Village (the "Village" or "KRV") in four phases. The Village will mix residential types, medical and professional office, commercial/retail, and recreational land uses. Proposed are 341 residential dwelling units of various types. Also proposed is a combination of office and commercial/retail spaces of approximately 155,030 sq. ft.

The proposed project is consistent with the General Plan, guiding principles, and Land Use Element goals and policies. The proposed project is also consistent with the Reedley Municipal Code, §10-13-9,

Mixed Use. The Subdivision Map Act (California Government Code Section 66400 et. seq.) findings can be made to approve the "Vesting" Tentative Tract Map No. 6096.

Therefore, staff is recommending the Planning Commission recommend to the City Council the approval of the Mitigated Negative Declaration, dated February 11, 2015 and Conditional Use Permit Application No. 2014-05, and approve the "Vesting" Tentative Tract Map No. 6096, dated December 17, 2014.

PROJECT DESCRIPTION/BACKGROUND

The City of Reedley initiated Environmental Assessment No. 2014-21 for the purpose of assessing the environmental effects of Vesting Tentative Tract Map No. 6096 and Conditional Use Permit Application No. 2014-05, which requests authorization to construct a phased mixed use project, integrating various residential types, commercial/retail office and open space/recreational land uses. The proposed Kings River Village project is consistent with the Reedley General Plan 2030, Reedley Municipal Code (RMC), UR (*Urban Reserve*) Zone District, ML (*Light Industrial*) Zone District and RMC, Section 10-13-9, Mixed Use.

The project site is located in the southeastern sector of the City of Reedley. The project site consists of three contiguous parcels (APN: 370-024-20, 370-024-21 and 370-024-24). The ±38.7 gross acres are fallow and bound by existing residential development to the north, existing recreational facilities to the east, to the west is an existing commercial storage facility and to the south is a planned public facility. The Vesting Tentative Subdivision Map No. 6096 is requesting authorization to subdivide the property for residential and commercial uses. The Conditional Use Permit Application No. 2014-05 is requesting authorization of a mixed-use project, pursuant to RMC, §10-13-9, Mixed Use.

The Kings River Community Partners, LLC ("Applicant") proposes to construct a ±38.7-acre mixed use community known as Kings River Village (the "Village" or "KRV"). The Village will mix residential types, medical and professional office, commercial/retail, and recreational land uses. Proposed are 341 residential dwelling units of various types. Also proposed is a combination of office and commercial/retail spaces of approximately 155,030 sq. ft. The applicant is proposing to build the Village in four phases.

The proposed residential density range for each of the housing types will exceed the required density ranges, pursuant to the RMC, §10-13-9 and is consistent with the Reedley's General Plan 2030, Land Use Element. Additional description of the project's features and attributes are set forth in more detail below. Final Project requirements will be included in the development conditions of the Vesting Tentative Subdivision Map, the Conditional Use Permit, the Community Design Guidelines, and the proposed Development Agreement.

Residential Uses: In accordance with RMC, §10-13-9, the Project promotes smart growth through compact infill development. The average residential density has been calculated and exceeds the minimum 20 dwelling units per acre requirement for all proposed residential housing types and styles to accommodate a wide spectrum of socio-economic levels. The anticipated mix of housing consists of: seven live/work units, 64 detached single-family homes, 70 single-family attached fee simple units ("town homes") with 40 units configured as two units with one common wall ("duplexes") and 30 units configured as attached by one or two common vertical walls with no common horizontal walls ("triplexes"), 120 apartments, and 80 independent (non-assisted care) senior living residences.

The Village is proposing seven live/work units will consist of 17,500 square feet of live/work space configured as a two to three bedroom unit upstairs, and space for either a commercial, professional or residential use below.

The 64 single-family detached homes are anticipated to be two-story, three and four bedroom units of 1,500 to 2,100 square feet each.

The 70 attached town homes are also planned to be two-story units ranging from 1,200 to 1,800 square feet each.

The 120 two-story garden apartment units, to be constructed as part of Phase Four, are anticipated to be 650 square feet each for the one-bedroom units, 900 square feet each for the two bedroom units and 1,100 square feet each for the three bedroom units. Most of these units will be two or three bedrooms.

The 80 senior living residences will average 750 square feet each, and will be constructed during Phase Three.

Commercial/Retail and Professional Office Uses: The "Village" proposes 106,900 square feet of medical and professional office space, and 48,130 square feet of commercial/retail space (including a 12,000 square foot grocery store). With the exception of the proposed grocery store, all Project retail space includes second-floor office above. The combined office and commercial/retail space is approximately 155,030 sq. ft. The medical and professional office space would be constructed as follows: 85,500 in Phase One, and 21,400 square feet in Phase Three. With respect to the commercial/retail space, 27,500 square feet will be constructed in Phase One and 20,630 square feet will be constructed in Phase Three. These uses would be supported by the Project's 990 proposed parking spaces (286 built in Phase One, 265 in Phase Two, 264 in Phase Three and 175 in Phase Four) and a transit center providing car-free access to the Kings River area, the Rail Trail, Downtown Reedley, Reedley College, public schools, and other employment areas.

Project commercial, retail and professional use buildings will emphasize an architecturally unified building forms, neighborhood scale, interesting urban elevations, parking lots hidden from main streets, and buffered residential areas from the Dinuba arterial. The retail areas of the Project are designed to complement and not replace Reedley's downtown retail area and to function as a commercial activity node for the Village community. Village office and retail uses will prioritize walkability with shade-covered promenades and plazas. The walk-friendly design will encourage a "park-once" strategy for visitors not arriving by transit and a walkable orientation for residents, all of which will reduce traffic, parking congestion and long-term impacts to air quality.

Open Space and Recreation Features: The proposed Village Green Park (±3-acres) is centrally located on the project site and it is proposed to be constructed as part of Phase Two. The Park is designed to provide active and passive recreation for residents and visitors. Park improvements will include a running track, barbeque area, gazebo, and barbeque/picnic area, a play area for toddlers, fountain, and dedicated spaces for a Farmers' Market and/or community garden. The Village Green Park will be maintained by Home Owners' Association fees; it is included in Phase Two to facilitate receipt of sufficient funds to maintain the park from primarily residential end users.

In addition to the park, the Village will offer two pools and two community centers, to be funded and maintained through a private assessment mechanism. Another common green area within the Village will create a place-making center space for the senior independent living neighborhood. Residents will have a comfortable sidewalk looping the green, which may be planted with a rose garden and extensive other flowering plants and trees. The small internal mini park within the apartment complex is intended to be a meeting spot with tables and chairs for apartment residents. For larger gatherings the apartments are immediately across Raspberry Road from the large Village Green Park.

The Project is immediately adjacent to the Reedley Sports Park, a 50-acre facility that, at full build out, will include a wide variety of playing fields. Connections will be made along South Peach Avenue to permit residents to walk or ride bicycles directly into the Sports Park, again helping to reduce vehicle miles traveled ("VMT") and greenhouse gas ("GHG") emissions. In addition, Reedley's Rail Trail project and its connecting pedestrian/bike trail system will be linked to the Project to encourage walking and biking across and into downtown Reedley and the Kings River recreation area.

Transit Center: The Village has been designed to accommodate conventional parking and traffic demands without the need for a Transit Center. Therefore, it is not an essential element of the Village that a Transit Center be built and operated. However, one of the project goals is to incorporate a Transit Oriented Development component with a project specific goal of 15% of Village residents living *and* working within the Village, and another 15% living in the Village and utilizing an integrated, embedded transit center, as opposed to private vehicles, to get to and from work. The Master Developer has independently committed to work with the Fresno County Rural Transit Authority (FCRTA) to find revenue sources for the construction and operation of the transit center through grants and transportation funding. Neither this process nor the funding will involve the City. Busses would enter and leave the Village on Dinuba Avenue, and proceed from/to Dinuba Avenue along a wide north-south local street to/from a dedicated, half circle bus driveway at the transit center where passengers, bikes and bags would be loaded and unloaded.

The transit center is also expected to provide access for Kings Canyon Unified School District busses, as well as para-transit vans. The availability of public transportation within the Village will encourage use of public transit by those both able and unable to drive, which will result in a reduction of automobile vehicle miles traveled when compared with business-as-usual development, as well as a potential reduction of ownership and use of private vehicles.

Project Phasing and Build-out Schedule: Applicant proposed to build the Village in four phases, as set forth below, each consisting of a "quadrant" of the approximately square, overall project. Phase One is approximately 7.64 acres; Phase Two is approximately 15.69 acres; Phase Three is approximately 9.20 acres; and Phase Four is approximately 5.67 acres (see Vesting Tentative Subdivision Map, Phasing Plan, Page 5 of 9). Note, however, that the construction phases are not necessarily listed in the order of construction, and can be implemented in a variety of configurations.

Phase One: Phase One includes Lots 1 through 7 consisting of office, retail, medical and parking uses as well as the live/work units. Phase One will construct approximately 85,500 square feet of medical/office space, approximately 27,500 square feet of neighborhood serving retail, and 17,500 square feet of live/work space (seven live/work units). The retail component includes area for a medium-sized neighborhood grocery store. Other retail spaces will be targeted, to the extent possible, for underserved goods and services as identified in Reedley's retail leakage study (Buxton, 2010.) In order to support the uses constructed during Phase One, this phase includes the proposed installation of 286 parking spaces.

Phase Two: Phase Two includes Out Lots A and B, and Lots 19 through 161, consisting of single-family residential homes in courtyard and town home configurations in the southeast quadrant of the Project. This quadrant includes 64 detached courtyard cluster residential homes and the 70 attached residential town homes. In order to support these uses, Phase Two includes the proposed installation of 265 parking spaces. All homes are sited for one-car garages substantially out of view from public streets, utilizing courtyards. As noted above, Applicant also proposes to construct The Village Green Park and Transit Center as part of the Phase Two construction.

Phase Three: Phase Three includes Lots 8 through 14, consisting of office, retail, and senior independent living uses in the northwest quadrant of the Project. Phase Three will construct a mixed-use neighborhood consisting of approximately 21,400 square feet of second-floor office, 20,630 square feet of retail, and 80 single-story senior independent living homes age-restricted for residents over the age of 55. The senior independent living homes will be supported by a small common clubhouse, a small outdoor recreation and seating area and a small pool. In order to support the uses constructed in Phase Three, this phase includes the proposed installation of 264 parking spaces.

Phase Four: Phase Four includes Lots 15 through 18 in the southwest quadrant of the site. This quadrant will construct 120 two-story garden apartment units, a common facility clubhouse, a small pool, and a small, centrally located passive park area. In order to support the uses constructed in Phase Four, this phase includes the proposed installation of 175 parking spaces.

BORDERING PROPERTY INFORMATION

	Planned Land Use	Existing Zoning	Existing Land Use
North	Low Density Residential Planned Land Use & High Density Residential Planned Land Use	R-1 (One-Family Residential) zone district & RM-2 (Multiple-Family Residential) zone district	Existing residential development
East	Open Space Planned Land Use	RCO (Resources Cons. & Open Space) zone district	Reedley Regional Sports Park
South	Light Industrial Planned Land Use & Public Facilities	ML (Light Industrial) zone district & RCO (Resources Cons. & Open Space) zone district	Existing Industrial development & ponding basin
West	Commercial Service Planned Land Use & Light Industrial Planned Land Use	ML (Light Industrial) zone district	Existing Commercial & Industrial development

LAND USE

The City has actively been involved in the San Joaquin Valley Blueprint planning process since 2006. In 2010, the San Joaquin Valley Blueprint Council adopted 12 Growth Principles, which were incorporated into the process of updating the Reedley General Plan. These Growth Principles as well as goals and the policies within the General Plan Update are used to determine project consistency. The Kings River Village is consistent with the following San Joaquin Valley Blueprint Smart Growth Principles:

1. Create a range of housing opportunities and choices.

2. Create walkable neighborhoods.

3. Foster distinctive, attractive communities with a strong sense of place.

4. Make development decisions predictable, fair, and cost-effective.

5. Mix land uses.

6. Preserve open space, farmland, natural beauty, and critical environmental areas.

7. Provide a variety of transportation choices.

8. Strengthen and direct development towards existing communities.

9. Take advantage of compact building design.

10. Enhance the economic vitality of the region.

11. Support actions that encourage environmental resource management.

On February 25, 2014, the City Council approved the Reedley General Plan Update 2030 (GPU) and certified the environmental analysis. The GPU goals and policies provide an overall direction for decision-making on development proposals and the day-to-day activities of the City's elected officials and staff. The GPU also provides developers of future proposed projects a sense of certainty regarding the City's development expectation. Implementation of the GPU's goals and policies will stimulate and cause a positive, broad reaching effect on the surrounding agricultural industries, the quality of life for its citizenry, delivery of public utilities, and impacts to the community's social and economic vitality throughout the entirety of the planning horizon (2030).

The overall guiding land use principles described in the General Plan are designed to provide an overall direction to assist decision-makers in determining the appropriateness of a request to changing either a planned land use or zone district designation. Those guiding principles are described in detailed statements of goals and polices outlined in the approved GPU (GPU, 2.3 Land Use Element Guiding Principles). The Project as proposed achieves all of the City's Land Use Element Guiding Principles in the General Plan 2030. These principles, and the ways in which the Project satisfies them, are as follows:

(a) Protect the agricultural economic base of the Reedley area by encouraging the preservation of the maximum feasible amount of productive and potentially productive agricultural land. *The Project is within City boundaries on regularly disturbed, essentially vacant land zoned industrial/mixed use and that does not currently support any agriculture. Additionally, approximately 50% of the project sits on land that is designated for priority development as a by-passed parcel in Reedley's General Plan 2030 (LU2.5E). Thus, the project will not result in any impacts to agriculture.*

(b) Plan for urban growth in a manner that minimizes impacts on agriculture and the consumption of agricultural land. *The Project is within City boundaries on highly disturbed, fallow land with light industrial and urban reserve zone district classifications and does not currently support any agriculture. Thus, the project will not result in any impacts to agriculture.*

(c) Increase residential densities to reduce the impacts related to loss of agricultural lands. *The Project achieved a residential density of greater than 20 dwelling units/per, to meet the requirements of* RMC, Section 10-13-9, Mixed Use. *With this higher density range there will be a decreasing demand for conversation of unnecessary productive agricultural lands.*

(d) Establish a pattern of urban development which provides for the economically efficient

provision of urban services with particular emphasis on sewer, water and storm drainage infrastructure. *The Project is served at its perimeter boundaries by existing sewer and water infrastructure with sufficient capacity to accommodate the Project. Storm drainage will be sustainably reclaimed through a dedicated retention basin and harvesting of rainwater for irrigation. Project wastewater will be sent to the City sewer system. Groundwater recharge will result from the use of pervious pavement in the park, minimization of paved asphalt areas that have a high runoff co-efficient and infiltration of winter rains in excess of storage capacity. The Project will also incorporate existing public bus services through a public/private partnership with the FCRTA and Kings Canyon Unified School District.*

(e) Seek a balanced and compatible land use pattern which accommodates projected population growth and encourages alternative transportation such as walking, bicycling or transit. *The Project includes an internal jobs/housing balance and includes walking, bicycling and transit priorities including a transit center and a compact, mixed-use composition, to encourage alternative transportation.*

(f) Provide transitions between various land uses and intensities using high quality design. *The Project is utilizing a Vesting Tentative Subdivision Map with a unified architectural design incorporated into the Project Conditions of Approval and the implementation of the King River Village, Master Development Guidelines, dated December 17, 2014.*

(g) Integrate land use planning, transportation planning, and air quality planning to make the most efficient use of public resources. *The Project includes a commitment to a balanced mix of uses, walkable streets, renewable resource energy features, storm water reclamation, water conservation, and transit. The Project includes energy and water-saving features and avoids all impacts to land currently used for agriculture or zoned for agricultural uses. The Project includes features to integrate existing mass transit services through the collaborative efforts of the FCRTA and the Kings Canyon Unified School District.*

(h) Development in the planning area shall occur in a fashion that protects and enhances air quality and water quality. *The Project will enhance air quality through aggressive measures to reduce auto dependency for residents and visitors alike. The Project, as an employment center will reduce the length of vehicle trips for local residents. One project goal is for 20% of the employment to come from residents who reside within the Village.*

(i) Public open space shall be made an integral part of new development in the planning area. *The Project immediately adjoins Reedley's 50-acre sports park and further includes a ±3-acre Village Green Park for active and passive community use, two common green areas for the use of the associated units, two pools, and multiple community courtyards.*

Moreover there are also specific Land Use Element goals and policies, which when applied, would further indicate the appropriateness of the request. In this case, these goals and policies further support a mixed use project, as well as, the potential future approval of the conditional use permit and vesting tentative tract map applications. Below are those directly applicable policy statements:

LU 2.4.2 Develop well-designed and landscaped major gateways or entrances to the City at the following locations:

(d) East Dinuba Avenue

LU 2.5.12: New urban development should occur in an orderly manner with initial development occurring on the available undeveloped properties within the City's limits which would be considered in-fill, by-passed parcels or in parcels in close proximity to the urban core, places of employment and established neighborhoods.

LU 2.5.13: The City should promote and provide urban services to development within the City as a means of controlling and directing growth.

LU 2.5.15: Provide transitional design between land use types and high quality urban uses.

LU 2.5.16: The City shall encourage in-fill projects that incorporate pedestrian-oriented design.

LU 2.5.17: The City shall propose plan areas and zone districts that can accommodate mixed use planning that will provide a combination of residential, commercial services and employment opportunities all within close proximity.

LU 2.7.3 Guide new development into compact neighborhoods around commercial centers, public open space and schools.

LU 2.7.6 Ensure that residential development occurs in areas that have sufficient infrastructure to accommodate the density of residential development being proposed.

LU 2.7.7 Residential development shall be designed in a manner so that new development is well connected to the surrounding area and to encourage pedestrian and bicycle transportation.

LU 2.7.8 Provide incentives for development, such as reduced lot size, setbacks, and narrower street widths for developments, and include amenities such as front porches, increased front yard landscaping, and reduced dominance of the front yard by garages and driveways.

LU 2.7.9 New subdivisions shall annex into or form a landscape and lighting district to maintain public improvements including but not limited to walls, street trees and lighting.

LU 2.7.16 Multiple-family developments shall be designed with the following features:

(a) Units fronting on streets shall have entryways that face the public street with doorways and windows.

(b) Units shall include details that add to the appeal of buildings, such as painted trim, shutters, and arbors.

LU 2.7.18 Multiple-family residential projects shall include provisions to ensure the safety and security of residents, the maintenance of buildings and landscaped areas, and effective and responsible management.

LU 2.7.21 Mixing of residential uses, densities and lot sizes shall be encouraged, while maintaining traditional neighborhood values and emphasizing concepts for livable, walkable neighborhoods.

LU 2.7.23 Future commercial development in the planning area shall be well designed to respect neighborhood scale and traditional architectural design. Toward that end, commercial development will be reviewed utilizing the following design standards:

(a) Parking space requirements shall be minimized for commercial developments. Parking lots should be segmented to minimize the impact of parking on the streetscape. In particular, parking should be located to the rear or to the side of commercial and office buildings.

(b) Incorporate interface design standards (e.g.; setbacks, fencing) into each residential and commercial zone district to ensure compatibility.

(c) Commercial development shall be designed to facilitate pedestrian and bicycle access and function, featuring outdoor seating, pedestrian plazas and wide, shade-covered walkways.

(d) Landscaping, particularly shade trees and drought tolerant plants, shall be maximized in all commercial developments.

LU 2.7.24 Ensure that all commercial land uses are developed and maintained in a manner complementary to and compatible with adjacent residential land uses, to minimize interface problems with the surrounding environment, and to be compatible with public facilities and services. As part of the City's project review process, major emphasis will be given to site and building design in order to ensure and/or preserve functionality and community aesthetics.

(a) Development projects shall appropriately interface with adjacent properties.

(b) Shopping Centers shall embrace a unified building, landscaping and signage design.

(c) Building facades with visible sides of buildings shall not develop with featureless, "blank walls".

(d) Adequate screen roof-mounted mechanical equipment, and ensure that such equipment adhere to noise standard set forth in the General Plan Noise Element.

LU 2.7.25 Off-street parking for commercial areas shall be designed to adequately support surrounding land use pattern. Off-street parking areas shall also include landscaping to provide shading for at least 50 percent of the surfaced area within 10 years from planting.

LU 2.7.26 Encourage efficient use of land by allowing a percentage of compact car parking spaces.

In order to approve future development projects, each project must be substantially consistent with the GPU goals and policies. To ensure that future projects do not significantly affect the environment the City's implementation of the GPU goals and policies will serve as a mitigation tool for avoiding or reducing project-specific and cumulative environmental effects of resulting from build out of the City pursuant to the GPU. The mitigation measures themselves are designed to fill "gaps" that may exist between the level of impact avoidance or reduction provided by implementation of GPU goals and policies, and the level of impact avoidance or reduction needed to mitigate significant impacts to a "less than significant level".

These policies and mitigation measures were designed as an enforceable commitment and not merely adopted to be disregarded as a formality, pursuant to Resolution No. 2014-015. Within this Resolution, the Findings of Fact states:

"To the extent that these findings conclude that various mitigation measures outlined in the Final EIR are feasible and have not been modified, superseded or withdrawn, the City hereby binds itself to implement these measures. These findings, in other words, are not merely informational, but rather constitute a binding set of obligations that will come into effect when the City Council adopts a resolution approving the Project."

On March 11, 2014, the City Council approved Resolution No. 2014-020, which approved the Reedley General Plan 2030 Update-Work/Implementation Plan (WIP). The purpose of this Plan is to outline the timelines of new policies and legislation necessary to move toward full implementation of the GPU. The WIP lists the new policies to be undertaken, timing of initiation and anticipated completion, responsible Department, and potential funding source. For the WIP, staff reviewed all of the GPU policies and selected only polices which were time sensitive and specifically state implementation within one year from the adoption of the GPU. Therefore, each proposed policies and/or proposed legislative action will require consideration and approval by the City Council over the duration of the 2014-2015 Plan period.

It should be also noted that there are many policies which will be implemented on an ongoing basis and are relevant and part of the evaluation of any future entitlement submitted for approval.

The WIP was also developed because it may take several years to develop the new policies as well as implementation of the various annual reviews that are required. The WIP will may also serve as a performance based report card for Council, as City staff is required to prepare an annual report "describing progress made toward the development, adoption and implementation of these policies" (e.g., GPU-CIR 3.10.18, CIR 3.10.19A, COSP 4.3.3).

The subject property is located within the boundaries of the GPU. The proposed Kings River Village is consistent with the San Joaquin Valley Blueprint Council adopted 12 Growth Principles and recently adopted General Plan 2030, Land Use Element, as described above. The Kings River Village is also consistent with the RMC zone district designation and the applicant has appropriately filed a conditional use application, also described at length above. Therefore, this project is consistent with the required Findings, set forth in the Reedley Municipal Code and State law (Subdivision Map Act, California Government Code Section 66400 et. seq.).

Project Consistency With Reedley Municipal Code

In order to approve future development projects, each project must be substantially consistent with the Reedley Municipal Code. The legislative intent of RMC, §10-13-9 is to encourage more dense and orderly development of urban uses. Developments are consistent with this intent when they include gathering places where residents may interact, work, and obtain goods and services in the same general location and emphasize pedestrian activities and linkages, priority transit routes and facilities to serve the development. The statute makes clear that the inclusion of these attributes is intended to reduce the number of vehicular miles traveled by promoting alternative modes of transportation, including pedestrian pathways, bicycling pathways, and public transportation. To accomplish these goals, the statute sets minimum density requirements and permits mixed use development. The statute defines "mixed use" as,

> "A concept and/or design that is a finite development project within whose boundaries residential uses are introduced and fully integrated with office, commercial and light industrial land uses, designed to offer more intensification and concentration of urban uses, and promote a walkable environment in a locale where residential uses are in

close proximity to places of employment and commerce."

As shown below, the Project satisfies each of the requisite elements and Findings set forth in RMC, §10-13-9.C.1.b(1) through §10-13-9.C.1.b(5)1.

1. The project shall be a minimum of four (4) acres. (RMC, §10-13-9.C.1.b(1).) As noted above, the Project is 38.2 acres. Therefore, the Project is well in excess of this minimum area requirement.

2. The integration of a residential use must be developed have a residential planned land use density of 20 units per acre (based on the Project's 38.7 acres). (RMC, §10-13-9.C.1.b(2)) The each proposed residential exceeds the required minimum residential density of 20 units/per acre, with and overall density exceeding 23 units per acre.

3. The subject property shall not share a common property line on two (2) or more sides with a designated heavy industrial zone district. (RMC, §10-13-9.C.1.b(3)) There are no heavy industrial zoned properties adjoining the Project. Therefore, this element is satisfied.

4. The project shall be architecturally unified throughout the entire site and compatible with surrounding development. (RMC, §10-13-9.C.1.b(4)) As specified in the Master Development Guidelines, the various product types within the mixed use Village consistently embrace a culturally authentic design respecting rural archetypes while introducing a more urban appearance. The proposed architecture is compatible with the Village Commons affordable housing project immediately to the north. All other surrounding development is light industrial.

5. A project may be phased over time, however, each phase shall contain an integration of a minimum of two (2) of the mix of uses. (RMC, §10-13-9.C.1.b(5)) Three of the Village's four phases include creation of multiple uses. Phase One will include commercial/retail, office, and residential uses. Phase Two will include residential, recreational, and transit uses. Phase Three will include the senior living and commercial/retail uses. Phase Four will include only residential uses but will be immediately adjacent to Phase Three and its mix of uses and will integrate with the uses developed in Phases One through Three. At all times following the first stage of development, the Project will include a minimum of two or more uses.

Mixed use developments must also satisfy the development standards set forth in RMC, §10-13-9.D.1 through §10-13-9.D.4, which the Project does as follows:

1. The development standards of the underlying zone district shall generally guide the development of the subject property. (Reedley Municipal Code § 10-13-9.D.1) As noted above, the Project will satisfy every element required for the requirements of the RMC.

2. The mix of residential use with permitted office/commercial/industrial uses shall occur both in the horizontal and vertical axes except that the director may waive the requirement for a vertical mix of use, if the design of the project, or the inclusion of a residential component to an existing development illustrates performance standards that meet the intent of the section by providing an integrated, well designed network of pedestrian pathways connecting the places of residences with places of work, commerce, and open space areas. (RMC, §10-13-9.D.2.) Phases One, Two and Three of the Village will include a mix of use types both in the horizontal and vertical axes.

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1 Only sections Reedley Municipal Code § 10-13-9.C.1.b(1) through 10-13-9.C.1.b(5) are discussed herein, as Reedley Municipal Code § 10-13-9.C.1.b(6) through 10-13-9.C.1.b(9) set forth affirmative obligations on the part of the City, and therefore are not relevant to the evaluation of the Project's consistency with Reedley Municipal Code § 10-13-9.

3. Each building within a mixed use development project shall have a minimum of two (2) stories. Notwithstanding the foregoing, any use for seniors' independent or congregate care living shall be permitted to limit their buildings to one story conditioned upon architectural compatibility with the remainder of the two-story buildings in the mixed use development project. (RMC, §10-13-9.D.3.) With the exception of the senior independent living units, which are proposed as one story, each of the buildings in the Project are proposed to have at least two stories. The architectural theme of the senior living units is fully compatible will all other adjoining uses within the Village and consistent with the Kings River Village, Master Design Guidelines, dated December 17, 2014.

4. If modifications to the development standards are proposed, the applicant is required to provide supporting evidence for the modification of the general standards, which shall be submitted with the project application. (Ord. 2014-001, 5-13-2014 & RMC, §10-13-9.D.4.) The Kings River Village, Master Design Guidelines, dated December 17, 2014, clearly articulates a process to be followed should the Master Developer determine a need to make modifications or adjust land uses.

The proposed Kings River Village project is consistent with the RMC, the UR (*Urban Reserve*) Zone District (RMC, §10-5), ML (*Light Industrial*) Zone District (RMC, §10-9A) and RMC, §10-13-9, Mixed Use.

The 19.72-acre easterly portion of the project site is classified as UR (*Urban Reserve) zone* district (APN: 370-024-24) and has been fallow for at least ten years, has been by-passed for development, and continues to be reserved for future development. To minimize potential premature development of lands, the granting of a conditional use permit in lieu of requiring a change of zone may occur prior to actual development (RMC §10-5-1(B)). Therefore, the Kings River Village has submitted a conditional use permit, in accordance with RMC §10-5-3.

The remaining westerly portion of the subject property area is classified with a ML (*Light Industrial*) Zone District designation (APN: 370-024-20 & 370-024-21). Because the Kings River Village project is a mixed use project, the applicant has submitted the required conditional use permit to satisfy the requirements of the RMC.

Tentative Tract Map Findings ("Vesting" Tentative Tract Map No. 6096)

The Subdivision Map Act (California Government Code Section 66410 et. seq.) requires that a proposed subdivision not be approved unless the map, together with its design and improvements, is found to be consistent with the General Plan (Government Code §66474 & §66474.2) (Finding No. 1 below).

State law further provides that the proposed subdivision map be denied if any one of the Finding Nos. 2 - 5 below is made in the negative. In addition, State law requires that a subdivision be found to provide for future passive and natural heating or cooling opportunities in the subdivision development (Finding No. 6 below).

1. The proposed subdivision map, together with its design and improvements, is consistent with the Reedley General Plan Update 2030. Pursuant to Title 11 (Subdivision Ordinance) of the RMC, the subdivision design meets the zoning ordinance criteria for development in the existing zone district classifications.

2. This site is physically suitable for the proposed type and density of development, because conditions of approval prepared will ensure adequate access and drainage on and off the site; and, that development shall occur in accordance with adopted standards, goals, objectives, and policies for development in the City of Reedley.

3. The proposed subdivision design and improvement is not likely to cause substantial and considerable damage to the natural environment, including fish, wildlife or their habitat, because all agricultural uses on the subject property have been discontinued and the site is located within an area, which has been predominantly developed with urban uses. The subject property remains primarily fallow without trees, vegetation, or irrigation to sustain and attract wildlife; or, provide a suitable habitat to species other than vermin.

4. The proposed subdivision design and improvements are not likely to cause serious public health and safety problems because the conditions of approval have shown and will ensure that the subdivision conforms to city health and safety standards, specifications, and policies.

5. The proposed subdivision design will not conflict with public easements within or through the site, because the project design and conditions of approval will assure noninterference with any existing or proposed easements on the subject property.

6. The design of the subdivision provides, to the extent feasible, for future passive and natural heating or cooling opportunities in the subdivision, because of the appropriate use and placement of landscaping plant materials and because of the orientation of the proposed lots, which will permit alignment of structures in an east-west direction for southern exposure. Furthermore, the design of the subdivision to provide for future passive and natural cooling opportunities will not result in reducing allowable densities or the percentages of lots, which may be occupied by building and/or structures.

The subdivision map, subject to the recommended conditions of approval, complies with the design and property development standards of the Zoning Ordinance and local Subdivision Ordinance. Based upon the plans and information submitted by the applicant and the recommended conditions of project approval, staff has determined that these findings can be made.

Therefore, the appropriateness of the proposed project has been examined with respect to its consistency with guiding land use principles, goals and policies of the Reedley General Plan Update 2030 and regulatory standards set forth in the Reedley Municipal Code and its compatibility with surrounding existing or proposed uses. These factors have been evaluated as described above. Upon consideration of this evaluation, it can be concluded that Conditional Use Permit Application No. 2014-05 and "Vesting" Tentative Map No. 6096 are appropriate for the subject property. Based upon this analysis, staff has determined that this project is consistent will all applicable goals, policies and objectives in the GPU and any applicable regulations.

ENVIRONMENTAL REVIEW

The City of Reedley has conducted an environmental analysis for the above-described project. The project has been determined to be a subsequent project that is not fully within the scope of the certified Program Environmental Impact Report (SCH No. 2010031106) prepared for the Reedley General Plan 2030 Update (GPU). Therefore, the City of Reedley, as the lead agency, proposes to adopt a Mitigated Negative Declaration for this project. See the attached Property Vicinity Map below.

The completed environmental impact checklist, its associated narrative, and any proposed mitigation measure(s) reflect applicable comments of responsible and trustee agencies, as well as research and analysis conducted to examine the interrelationship between the proposed project and the physical environment. The information contained in the project application and its related environmental assessment application, responses to requests for comment, checklist and initial study narrative combine to form the record indicating that an initial study has been completed in compliance with the California Environmental Quality Act and the CEQA Guidelines.

All new development activity and many non-physical projects contribute directly or indirectly toward cumulative impacts on the physical environment. It has been determined that the incremental effect contributed by this project toward cumulative impacts is not considered substantial or significant in itself, and/or that cumulative impacts accruing from this project may be mitigated to less than significant with application of feasible mitigation measures.

For some categories of potential impacts, the checklist may indicate that a specific adverse environmental effect has been identified which is of sufficient magnitude to be of concern. Such an effect may be inherent in nature and magnitude of the project. The completed environmental checklist form indicated whether an impact would be less than significant, or less than significant with mitigation. Effects so rated are not sufficient in themselves to require the preparation of an Environmental Impact Report, and have been mitigated to the extent feasible.

The subject properties are located in close proximity to the urban core of the City of Reedley. The Dinuba Avenue corridor leads directly into the central business district and other major centers of commerce in the City. Thus, the Project will not divide an existing community or reduce the availability of existing housing. The project would not adversely affect agricultural or forestry resources.

Project specific mitigation has been applied and the Project will comply with all applicable air quality rules and regulations and will be conditioned, through the Project conditions of approval, to comply with San Joaquin Valley Air Pollution Control District Rule 9510 (the Indirect Source Review Rule).

Long-term impacts to air will be further mitigated because of the pedestrian nature of Kings River Village, as opposed to a traditional project of comparable size. Specifically, the immediate access to grocery, retail, professional services, transportation, and recreation all within the residential community will result in far fewer vehicle miles traveled per resident on daily, weekly, monthly, and annual bases than in other sprawling, residential-only developments.

The multiple family residential buildings are proposed to be designed as two-story structures and all units will incorporate universal design elements. The Project also seeks to promote a high level of energy efficient design and construction. The installation of Energy-Star appliances, dual glazed low-E windows, high efficiency insulation, zoned HVAC, natural ventilation, passive solar heating and cooling, VOC-free materials, and other design elements will make the Project energy efficient and sustainable. Design of all residential units and commercial/office buildings will be oriented as favorably as possible to support the rooftop solar systems.

The Village Green Park and transit center will feature rooftop solar wherever possible with the goal to become a net zero energy park and transit facility. The park and transit center will also use high efficiency lighting. Also, electric vehicle charging stations may be installed at the transit center and are expected to be included in the MOU with FCRT with respect to operations and maintenance. The City will have no responsibility for electric vehicle charging costs and maintenance.

The Project adjoins and is immediately west of Reedley's Sports Park, a 50-acre facility that, at build out, will include a wide variety of playing fields. Connections will be made along South Peach Avenue to permit residents to walk or ride bicycles directly into the Sports Park, again helping to reduce vehicle miles traveled ("VMT") and greenhouse gas ("GHG") emissions. The incorporation of these features throughout the project will reduce the project impacts on greenhouse gas emissions to less than significance.

The project is not located on a site which is included on any of the lists enumerated under Section 65962.5 of the Government Code including, but not limited to, lists of hazardous waste facilities, land designated as hazardous waste property, hazardous waste disposal sites and others, and the

information in the Hazardous Waste and Substance Statement required under subdivision (f) of that Section.

The City did an initial assessment of the potential water impacts of the project. After evaluating the worst case scenario and discounting the City's immediate efforts to implement the General Plan policies that would further reduce its consumptive use, and/or applying any building standards related to low flow fixtures, it was concluded the project would have a less than significant impact.

In a worst case scenario the City presumed that each dwelling unit, irrespective of housing type consumed 180 gpcd. Therefore, the project's annual consumption would be approximately 54 acre feet per year. Pursuant to the Consumptive Use report in the General Plan and relied upon in the Programmatic EIR the City has a current deficit of approximately 1,000 acre feet. Therefore, without considering any other variables as described above, or other water reduction efforts made to reduce the consumptive use in the City, the addition of 54 acre feet would increase the annual deficit by .054 percent. Therefore, it was reasonably concluded that the project would have minimal, if any impact to the City's water delivery system.

The project will provide for anticipated growth (GPU, Land Use, Section 2.1, Page 18) and anticipated development consistent with the regulatory environment. Although future development will be phased and intensifying the use of the currently undeveloped site, there is no significant distinction between the existing and proposed land use designations, which are identified in the GPU. Additionally, all future development applications must have consistency between the planned land use designation and corresponding zone district (GPU Planned Land Use and Zoning District Consistency Matrix (GPU, Table 2-4, Page 30). Properties within the vicinity of the subject territory have been developed and continue to develop at the intensity and scale designated by the GPU. Therefore, the proposed project will not directly or indirectly induce substantial population growth in the area, nor will it displace substantial number of people or housing.

The City also did a worst case scenario evaluation of the residential population increase that could be a result of the project. The applicant has proposed a phased project over a minimum period of five years. If the average (higher) calculation for the average family size of 3.84 persons (United States Census Bureau, American Fact Finder) was multiplied times the total number of proposed residential dwelling units (341) it would arrive at the potential total population increase. The result could be a potential increase of approximately 1,310 persons to the Reedley community.

This would not exceed any single year forecast as presented in the GPU, Table 2-2 Population Forecast, or any projection over a several year period. This is also assuming that all of the residential dwelling units were constructed at the same time and made available to the general public at the same time, and all of the residents came from outside Reedley and no current residents would occupy any of the proposed 341.

A more realistic scenario would include 20 new single family residential starts in one year and 50 multiple family dwelling units. The result could be a potential increase of approximately 270 persons to the Reedley community. Again, assuming no residents of Reedley occupied these new dwelling units.

In either the worst case scenario or the phased, more realistic scenario, the potential increase in population would not exceed either the historic population data or population forecast that is currently represented in the General Plan Update (GPU, Table 2-1-Historic Population Date, Page 18 & Table 2-2 Population Forecast, Page 19).

It should also be noted that there are a total of 341 dwelling units within the Project, which does not exceed the 500 dwelling unit threshold set by CEQA § 15155. Therefore the Project is not considered to be a water-demand project.

The City did require the applicant prepare a Traffic Impact Study (TIS) for the Kings River Village project. Because the proposed project exceeded these thresholds (GPU Policy CIR 3.2.28) a Traffic Impact Study was prepared under the direction of the City Engineer. After consultation with the traffic consultant, the City Engineer shall have the authority, based upon his/her professional judgment, to apply, modify and incorporate mitigation measures to ensure the surface transportation systems operate at an acceptable LOS, as required by the Reedley General Plan Update 2030. The City's General Plan Goal CIR 3.2B: "Maintain a level of service (LOS) of "C" or better, as the established threshold of significance.

In consultation with the City Engineer, the consultant identified and studied the following intersections for analysis in the Kings River Village, Traffic Impact Study, dated December 11, 2014 ("TIS"):

1. Dinuba Avenue at Zumwalt Avenue
2. Dinuba Avenue at Project Driveway
3. Dinuba Avenue at Buttonwillow Avenue
4. Dinuba Avenue at I Street
5. Dinuba Avenue at Frankwood Avenue
6. I Street at Frankwood Avenue

The study locations were based on the Project's trip distribution (using trip traces provided by FCOG) and through consultation with the City of Reedley. The following study time periods included in the analysis were:

- AM Peak Hour (highest 1 hour period between 7-9 AM)
- PM Peak Hour (highest 1 hour period between 4-6 PM)

The following analysis scenarios were analyzed based on City of Reedley guidelines and in consultation with City staff:

- Existing
- 2019 Plus Approved Projects (Without Project)
- 2019 Plus Approved Projects Plus Project (Phases 1 & 2)
- 2021 Plus Approved Projects Plus Project (All Phases)
- 2035 Plus Project (All Phases)

The years 2019 and 2021 were chosen based on the potential build out years of certain phases of the Project. The projected completion date for Phases 1 and 2 is 2019, while 2021 is the projected completion of Phases 3 and 4. The years 2019 and 2021 represent the significant construction phase years used to determine the timing of potential roadway improvements. The year 2035 is the proposed build out year of the City's General Plan, and represents the cumulative analysis year. A 2035 No Project scenario was not included because that scenario was analyzed in the PEIR and the Project is consistent with the General Plan land use designation.

The TIS (at Table 3, Page 8) shows the levels of service (LOS) for the study intersections for the various scenarios. The LOS methodology, calculations, and thresholds are also discussed in further detail in the TIS Appendix A, section A.7. Intersections with movements currently, or projected, to operate below the City of Reedley adopted level of service standard are shown shaded in the TIS at Table 3. The LOS and

delay are shaded if either the AM or PM peak hour, or both, fall below the appropriate adopted LOS standard. The two-way stop controlled (TWSC) intersection levels of service are representative of the intersection's approach with the worst LOS and delay. The signalized and all-way stop controlled (AWSC) intersection LOS is representative of the whole intersection. Individual intersection movements or approaches at signalized and AWSC intersections may operate above or below the intersection level of service or delay shown in this report.

The TIS indicates that traffic generated by the project will contribute to or create traffic impacts at four locations:

1. The project's primary entrance on Dinuba Avenue;
2. The roundabout at Dinuba and Buttonwillow Avenues; and
3. The collection of intersections at Dinuba Avenue at Frankwood Avenue, Dinuba Avenue at I
4. Street and Frankwood Avenue at I Street.

It should be noted that the Village project is not the only project that will affect traffic operations at these locations. The Traffic Impact Study determined this project's share of the impacts at these three locations. The traffic impacts contributed to or created by this project are also likely to occur at different times and are expected to take different forms. Table 1, below, describes the form of the likely impacts, when the impact is likely to be created and the percentage of the cost of the improvements for which the Kings River Village project would be responsible.

TABLE 1: IMPACT AND MITIGATION SUMMARY (FROM TIS, PAGE 1)

Location	Recommended Improvement	Year Needed	KRV Proportionate Share
Project Entrance at Dinuba Avenue	Install a traffic signal or roundabout	2015	100%
Dinuba/Buttonwillow Roundabout	Open second circulating lane (internal) in existing roundabout	2035	43.3%
Dinuba & I Street, Frankwood & I Street Dinuba & Frankwood	1. All-way stop at Dinuba & I St.	2019	21.9%
	2. Restrict all left turns at Dinuba & I St.	2021	21.9%
	3. Frankwood & I St. – make NB Frankwood and SB I St. the primary movement and NB I would stop at Frankwood	2021	21.9%
	4. Install roundabout at Dinuba & Frankwood	2021	21.9%

The TIS indicates that the Dinuba Avenue at Buttonwillow Avenue roundabout is likely to operate at an acceptable level of service for nearly 20 years before modifications are needed. The study also indicates that the three intersections at Dinuba at I Street, Frankwood at I Street and Dinuba at Frankwood need near-term improvements with or without this project and that a roundabout that consolidates all three intersections in some fashion is the appropriate improvement to maintain long-term acceptable levels of service.

COST SHARING, NEEDED IMPROVEMENTS:

KRV Project Main Entrance at Dinuba Avenue

The Kings River Village project creates 100% of the impacts on Dinuba Avenue, at the Project drive entrances, therefore it is appropriate and required that the project pay for 100% of the costs of the required improvements with the initial phase of the project.

Cost Sharing Per Trip Generation by Project Phasing for "Off-site" Improvements

Table 2 represents the proportionate share that each phase of the Kings River Village project creates at the Dinuba and Buttonwillow roundabout and the future roundabout at the Dinuba and I Streets, Frankwood and I and Dinuba and Frankwood area.

TABLE 2: PROJECT PROPORTIONATE SHARE BY PHASE (FROM TIS, PAGE 2)

Phase	Land Use Type	Daily Trips[1]	Proportionate Share
One	Office	1,522	
	Retail	2,513	
	Residential	35	
	Phase 1 Total	**4,070**	**56.5%**
Two	Residential	760	
	Phase 2 Total	**760**	**10.5%**
Three	Office	304	
	Retail	1,203	
	Residential	304	
	Phase 3 Total	**1,782**	**24.7%**
Four	Residential	597	
	Phase 4 Total	**597**	**8.3%**

[1] *Daily trips based on New Trips plus Pass-By Trips per use*

Second Circulating Lane, Existing Roundabout, Dinuba / Buttonwillow Avenues

It is anticipated that the Kings River Village project will contribute 43.3% of the future (minus existing) traffic at the intersection of Dinuba Avenue at Buttonwillow Avenue. The project should therefore contribute 43.3% of the cost to open the second circulating lane within the existing roundabout, which is currently estimated at $100,000, though a detailed engineer's estimate will be needed to determine actual cost of this project. As each phase of the Village project is developed, that phase should contribute a share consistent with the above table at the time of development in the form of an additional impact fee to the Kings River Village project.

Roundabout at Dinuba and I, Frankwood and I, and Dinuba and Frankwood

It is anticipated that the project will contribute 21.9% of the future (minus existing) traffic at the intersection of Dinuba Avenue at Buttonwillow Avenue. The project should therefore contribute 21.9% of the cost to the recommended improvements, which are currently estimated at $2.25 million; though a detailed engineer's estimate will be needed to determine actual cost of this project. As each phase of the Kings River Village project is developed, that phase should contribute a share of the cost for the roundabout improvement consistent with the above table at the time of development in the form of an additional impact fee to the Kings River Village project.

The initial study has concluded that the proposed project will not result in any adverse effects which fall within the "Mandatory Findings of Significance" contained in Section 15065 of the State CEQA Guidelines.

With the project specific mitigation imposed, there is no substantial evidence in the record that this project may have additional significant direct, indirect or cumulative effects on the environment that are significant and that were not identified and analyzed in the certified Program Environmental Impact Report prepared for the Reedley General Plan Update 2030. After conducting a review of the adequacy

of the Program Environmental Impact Report (SCH No. 2010031106) pursuant to Public Resources Code Section 21083.3, as the lead agency, finds that no substantial changes have occurred with respect to circumstances under which the Program Environmental Impact Report (SCH No. 2010031106) was certified, and that no new information which was not known and could not have been know at the time that the Program Environmental Impact Report (SCH No. 2010031106) was certified, has become available.

The City of Reedley has conducted an environmental analysis for the above-described project, contained in this initial study. The City of Reedley, as the Lead Agency, proposes to adopt a Mitigated Negative Declaration for this project. This Mitigated Negative Declaration is tiered from the certified Program Environmental Impact Report (SCH No. 2010031106) (PEIR) prepared for the Reedley General Plan Update 2030 (GPU). The project has been determined to be a subsequent project that is not fully within the scope of the certified Program Environmental Impact Report prepared for the GPU. Pursuant to Public Resources Code §21083.3 and California Environmental Quality Act (CEQA Guidelines) §15168, this project has been evaluated with respect to each item on the attached environmental checklist to determine whether this project may cause any additional significant effect on the environment which was not previously examined in the Program Environmental Impact Report (SCH No. 2010031106).

PUBLIC NOTICING

Pursuant to the California Environmental Quality Act (CEQA Guidelines) the Notice of Intent (Negative Declaration) for Environmental Assessment No. 2014-21 was filed with the Clerk of Fresno County on February 11, 2015. The filing of this document begins a 20-day comment period. On February 12, 2015, the Notice of Intent was published in the Reedley Exponent.

Pursuant to the Government Code Section 65091 (Planning and Zoning Law) and Reedley Municipal Code, §10-22, it is required that a notice be sent to surrounding property owners. See Attachment 3.

FISCAL IMPACT

The project applicant has paid all entitlement application fees.

ATTACHMENTS & EXHIBITS

1. Resolution No. 2015-04, RECOMMEND TO THE CITY COUNCIL APPROVAL, the Environmental Assessment No. 2014-21, a Mitigated Negative Declaration (MND), dated February 11, 2015, and Conditional Use Permit Application No. 2014-05
2. Resolution No. 2015-05, approving "Vesting" Tentative Map No. 6096, dated December 17, 2014
3. Vicinity Map
4. Public Noticing Mapping
5. Kings River Village "Site Plan, dated December 17, 2014
6. "Vesting" Tentative React Map No. 6096

Exhibit A: Conditions of Approval, dated March 5, 2015, for Conditional Use Permit Application No. 2014-05 and "Vesting" Tentative Map No. 6096, dated December 17, 2014

Exhibit B: Environmental Assessment No. 2014-21, a Mitigated Negative Declaration (MND), dated February 11, 2015, for the proposed conditional use permit and tentative tract map application

Attachment 1

Resolution No. 2015-04

RECOMMEND TO THE CITY COUNCIL APPROVAL, the Mitigated Negative Declaration (MND), dated February 11, 2015 and Conditional Use Permit Application No. 2014-05

RESOLUTION NO. 2015-04

A RESOLUTION OF THE CITY OF REEDLEY PLANNING COMMISSION RECOMMENDING TO THE CITY COUNCIL APPROVAL OF ENVIRONMENTAL ASSESSMENT NO. 2014-21, DATED FEBRUARY 11, 2015, FOR CONDITIONAL USE PERMIT APPLICATION NO. 2014-05, RELATED TO THE PROPOSED KINGS RIVER VILLAGE, MIXED-USE PROJECT

WHEREAS, the Kings River Community Partners, LLC ("Applicant") filed Conditional Use Permit Application No. 2014-05, which proposes to construct a mixed use community known as Kings River Village (the "Village" or "KRV") in four phases. The Village will mix residential types, medical and professional office, commercial/retail, and recreational land uses. Proposed are 341 residential dwelling units of various types. Also proposed is a combination of office and commercial/retail spaces of approximately 155,030 sq. ft.; and

WHEREAS, the applicant has proposed the Kings River Village, Master Development Guidelines to ensure that the project and its future phases are developed under a unified design; and

WHEREAS, the project site is located in the southeastern sector of the City of Reedley and consists of three contiguous parcels (APN: 370-024-20, 370-024-21 and 370-024-24). The ±38.7 gross acres are fallow and bound by existing residential development to the north, existing recreational facilities to the east, to the west is an existing commercial storage facility and to the south is a planned public facility; and

WHEREAS, the proposed project is consistent with the intent to include gathering places where residents may interact, work, and obtain goods and services in the same general location and emphasize pedestrian activities and linkages, priority transit routes and facilities to serve the development; and

WHEREAS, the project incorporates attributes intending to reduce the number of vehicular miles traveled by promoting alternative modes of transportation, including pedestrian pathways, bicycling pathways, and public transportation; and

WHEREAS, the proposed project is consistent with the San Joaquin Valley Blueprint, Smart Growth Principles, and

WHEREAS, the proposed project is consistent with the Reedley General Plan Update 2030 (GPU) guiding principles, and Land Use Element; and

WHEREAS, the proposed project is also consistent with the Reedley Municipal Code, §10-13-9, Mixed Use, in all aspects; and

WHEREAS, the Community Development Department staff consulted with responsible and trustee agencies (City Departments and external agencies) regarding the general plan and rezone applications, then prepared an initial study using Appendix G Checklist from the California Quality Act (CEQA) Guidelines; and

WHEREAS, the City of Reedley, as the Lead Agency, proposes the adoption of a Mitigated Negative Declaration for this project; and

WHEREAS, this Mitigated Negative Declaration is tiered from the certified Program Environmental Impact Report (SCH No. 2010031106) (PEIR) prepared for the Reedley General Plan Update 2030 (GPU); and

WHEREAS, with the project specific mitigation imposed, there is no substantial evidence in the record that this project may have additional significant direct, indirect or cumulative effects on the environment that are significant and that were not identified and analyzed in the certified Program Environmental Impact Report prepared for the Reedley General Plan Update 2030; and

WHEREAS, after conducting a review of the adequacy of the Program Environmental Impact Report (SCH No. 2010031106) pursuant to Public Resources Code Section 21083.3, as the lead agency, finds that no substantial changes have occurred with respect to circumstances under which the Program Environmental Impact Report (SCH No. 2010031106) was certified, and that no new information which was not known and could not have been know at the time that the Program Environmental Impact

WHEREAS, the environmental assessment resulted in a proposed finding of a Mitigated Negative Declaration, and a Notice of Intent was filed with the Fresno County Clerk, on February 11, 2015, which began the required 20-day comment period; and

WHEREAS, that same Notice of Intent appeared in the Reedley Exponent on February 12, 2015; and

WHEREAS, pursuant to the Government Code Section 65091 (Planning and Zoning Law) and Reedley Municipal Code, it is required that a Notice of Public Hearing be sent to surrounding property owners. The City of Reedley, Community Development Department has mailed such a Notice on February 20, 2015; and

WHEREAS, no public comments or appeals regarding the proposed environmental finding or project have been received to date; and

WHEREAS, the City of Reedley Planning Commission, at the regular meeting on March 5, 2015, held a duly noticed public hearing, received a written staff report, invited public comment, and independently deliberated.

NOW, THEREFORE, BE IT RESOLVED that the City of Reedley Planning Commission, using their independent judgment, hereby recommends to the City Council approval of the Environmental Assessment No. 2014-21, dated February 11, 2015 and Conditional Use Permit Application No. 2014-05 based on the following:

1. The above recitals are true and correct; and

2. The Planning Commission FINDS, the project is consistent with the intent to include gathering places where residents may interact, work, and obtain goods and services in the same general location and emphasize pedestrian activities and linkages, priority transit routes and facilities to serve the development; and

3. The Planning Commission FINDS, the project incorporates attributes intending to reduce the number of vehicular miles traveled by promoting alternative modes of transportation, including pedestrian pathways, bicycling pathways, and public transportation; and

4. The Planning commission FINDS, the proposed project is consistent with the San Joaquin Valley Blueprint, Smart Growth Principles, and

5. The Planning Commission FINDS, the project is consistent with the Reedley General Plan Update 2030 (GPU) guiding principles, and Land Use Element; and

6. The Planning Commission FINDS, the proposed project is also consistent with the Reedley Municipal Code, §10-13-9, Mixed Use, in all aspects; and

7. The appropriateness of the proposed project has been examined with respect to its consistency with guiding land use principles, goals and policies of the Reedley General Plan Update 2030 and regulatory standards set forth in the Reedley Municipal Code and its compatibility with surrounding existing or proposed uses; and

8. After consultation with responsible and trustee agencies staff prepared an initial study using the Appendix G checklist from the California Quality Act (CEQA) Guidelines; and

9. The City of Reedley, as the Lead Agency, proposes to adopt Environmental Assessment No. 2014-21, a Mitigated Negative Declaration, dated February 11, 2014, for this project. This Mitigated Negative Declaration is tiered from the certified Program Environmental Impact Report (SCH No. 2010031106) (PEIR) prepared for the Reedley General Plan Update 2030 (GPU).

10. The project is not located on a site which is included on any of the lists enumerated under Section 65962.5 of the Government Code including, but not limited to, lists of hazardous waste

facilities, land designated as hazardous waste property, hazardous waste disposal sites and others, and the information in the Hazardous Waste and Substance Statement required under subdivision (f) of that Section; and

11. The Planning Commission FINDS, with the project specific mitigation imposed, there is no substantial evidence in the record that this project may have additional significant direct, indirect or cumulative effects on the environment that are significant and that were not identified and analyzed in the certified Program Environmental Impact Report prepared for the Reedley General Plan Update 2030.

12. The Planning Commission FINDS all applicable mitigation measures of the Program Environmental Impact Report (SCH No. 2010031106), Mitigation Monitoring Checklist, have been applied to the project necessary to assure that the project will not cause significant adverse cumulative impacts, growth inducing impacts, and irreversible significant effects beyond those identified by the PEIR.

13. The Planning Commission FINDS, that after conducting a review of the adequacy of the Program Environmental Impact Report (SCH No. 2010031106) pursuant to Public Resources Code Section 21083.3. The City as the lead agency, finds that no substantial changes have occurred with respect to circumstances under which the Program Environmental Impact Report (SCH No. 2010031106) was certified, and that no new information which was not known and could not have been known at the time that the Program Environmental Impact Report (SCH No. 2010031106) was certified, has become available.

14. This resolution is effective immediately upon adoption.

This foregoing resolution is hereby approved and adopted at a regular meeting of the Reedley Planning Commission, in the City of Reedley, held on the 5th day of March, 2015, by the following vote:

AYES:

NOES:

ABSTAIN:

ABSENT:

_____
Alberto Custodio, Chairman
City of Reedley Planning Commission

ATTEST:

_____
Kevin E. Fabino, Secretary

RESOLUTION NO. 2015-05

A RESOLUTION OF THE CITY OF REEDLEY PLANNING COMMISSION APPROVING "VESTING" TENTATIVE TRACT MAP NO. 6096, DATED FEBRUARY 11, 2015, RELATED TO THE PROPOSED KINGS RIVER VILLAGE, MIXED-USE PROJECT

WHEREAS, the Kings River Community Partners, LLC ("Applicant") filed "Vesting" Tentative Tract Map No. 6096, for the purpose of subdividing the land to facilitate the Kings River Village mixed-use project; and

WHEREAS, the applicant has proposed the Kings River Village, Master Development Guidelines to ensure that the project and its future phases are developed under a unified design; and

WHEREAS, the project site is located in the southeastern sector of the City of Reedley and consists of three contiguous parcels (APN: 370-024-20, 370-024-21 and 370-024-24). The ±38.7 gross acres are fallow and bound by existing residential development to the north, existing recreational facilities to the east, to the west is an existing commercial storage facility and to the south is a planned public facility; and

WHEREAS, the proposed project is consistent with the San Joaquin Valley Blueprint, Smart Growth Principles, and

WHEREAS, the proposed project is consistent with the Reedley General Plan Update 2030 (GPU) guiding principles, and Land Use Element; and

WHEREAS, the project is consistent with the Reedley Municipal Code, Title 11 and the Subdivision Map Act (Government Code Section §66410 et. Seq.); and

WHEREAS, the Community Development Department staff consulted with responsible and trustee agencies (City Departments and external agencies) regarding the general plan and rezone applications, then prepared an initial study using Appendix G Checklist from the California Quality Act (CEQA) Guidelines; and

WHEREAS, the City of Reedley, as the Lead Agency, proposes the adoption of a Mitigated Negative Declaration for this project; and

WHEREAS, this Mitigated Negative Declaration is tiered from the certified Program Environmental Impact Report (SCH No. 2010031106) (PEIR) prepared for the Reedley General Plan Update 2030 (GPU); and

WHEREAS, with the project specific mitigation imposed, there is no substantial evidence in the record that this project may have additional significant direct, indirect or cumulative effects on the environment that are significant and that were not identified and analyzed in the certified Program Environmental Impact Report prepared for the Reedley General Plan Update 2030; and

WHEREAS, after conducting a review of the adequacy of the Program Environmental Impact Report (SCH No. 2010031106) pursuant to Public Resources Code Section 21083.3, as the lead agency, finds that no substantial changes have occurred with respect to circumstances under which the Program Environmental Impact Report (SCH No. 2010031106) was certified, and that no new information which was not known and could not have been known at the time that the Program Environmental Impact

WHEREAS, the environmental assessment resulted in a proposed finding of a Mitigated Negative Declaration, and a Notice of Intent was filed with the Fresno County Clerk, on February 11, 2015, which began the required 20-day comment period; and

WHEREAS, that same Notice of Intent appeared in the Reedley Exponent on February 12, 2015; and

WHEREAS, pursuant to the Government Code Section 65091 (Planning and Zoning Law) and Reedley Municipal Code, it is required that a Notice of Public Hearing be sent to surrounding property owners. The City of Reedley, Community Development Department has mailed such a Notice on February 20, 2015; and

WHEREAS, no public comments or appeals regarding the proposed environmental finding or project have been received to date; and

WHEREAS, the City of Reedley Planning Commission, at the regular meeting on March 5, 2015, held a duly noticed public hearing, received a written staff report, invited public comment, and independently deliberated.

NOW, THEREFORE, BE IT RESOLVED that the City of Reedley Planning Commission, using their independent judgment, hereby approves the "Vesting" Tentative Map No. 6096, dated February 17, 2015, related to the proposed Kings River Village, Mixed Use Project, based on the following:

1. The above recitals are true and correct; and

2. The Planning commission FINDS, the proposed project is consistent with the San Joaquin Valley Blueprint, Smart Growth Principles, and

5. The Planning Commission FINDS, the project is consistent with the Reedley General Plan Update 2030 (GPU) guiding principles, and Land Use Element; and

6. The Planning Commission FINDS, the proposed project is also consistent with the Reedley Municipal Code, §10-13-9, Mixed Use, in all aspects; and

7. The appropriateness of the proposed project has been examined with respect to its consistency with guiding land use principles, goals and policies of the Reedley General Plan Update 2030 and regulatory standards set forth in the Reedley Municipal Code and its compatibility with surrounding existing or proposed uses; and

8. The Planning Commission FINDS, the proposed project is also consistent with the Subdivision Map Act (California Government Code Section 66410 et. seq.) which requires that a proposed subdivision not be approved unless the map, together with its design and improvements, is found to be consistent with the General Plan (Government Code §66474 & §66474.2); and

9. After consultation with responsible and trustee agencies staff prepared an initial study using the Appendix G checklist from the California Quality Act (CEQA) Guidelines; and

10. The City of Reedley, as the Lead Agency, proposes to adopt Environmental Assessment No. 2014-21, a Mitigated Negative Declaration, dated February 11, 2014, for this project. This Mitigated Negative Declaration is tiered from the certified Program Environmental Impact Report (SCH No. 2010031106) (PEIR) prepared for the Reedley General Plan Update 2030 (GPU).

11. The project is not located on a site which is included on any of the lists enumerated under Section 65962.5 of the Government Code including, but not limited to, lists of hazardous waste facilities, land designated as hazardous waste property, hazardous waste disposal sites and others, and the information in the Hazardous Waste and Substance Statement required under subdivision (f) of that Section; and

12. The Planning Commission FINDS, with the project specific mitigation imposed, there is no substantial evidence in the record that this project may have additional significant direct, indirect or cumulative effects on the environment that are significant and that were not identified and analyzed in the certified Program Environmental Impact Report prepared for the Reedley General Plan Update 2030.

13. The Planning Commission FINDS all applicable mitigation measures of the Program Environmental Impact Report (SCH No. 2010031106), Mitigation Monitoring Checklist, have been applied to the project necessary to assure that the project will not cause significant adverse cumulative impacts, growth inducing impacts, and irreversible significant effects beyond those identified by the PEIR.

14. The Planning Commission FINDS, that after conducting a review of the adequacy of the Program Environmental Impact Report (SCH No. 2010031106) pursuant to Public Resources Code Section 21083.3, as the lead agency, finds that no substantial changes have occurred with respect to circumstances under which the Program Environmental Impact Report (SCH No. 2010031106) was certified, and that no new information which was not known and could not have been known at the time that the Program Environmental Impact Report (SCH No. 2010031106) was certified, has become available.

15. This resolution is effective immediately upon adoption.

This foregoing resolution is hereby approved and adopted at a regular meeting of the Reedley Planning Commission, in the City of Reedley, held on the 5th day of March, 2015, by the following vote:

AYES:

NOES:

ABSTAIN:

ABSENT:

Alberto Custodio, Chairman
City of Reedley Planning Commission

ATTEST:

Kevin E. Fabino, Secretary

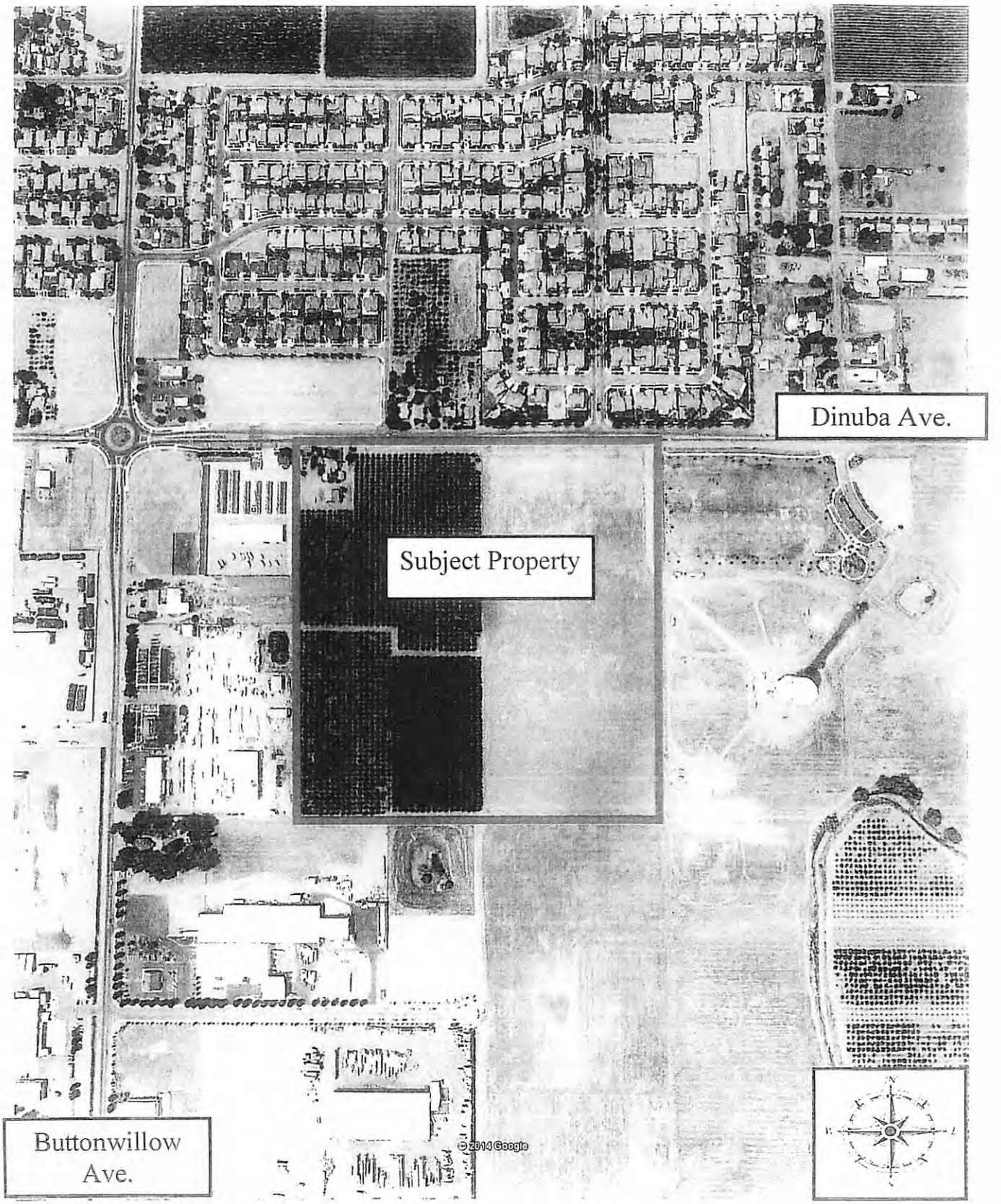
Attachment 2

Resolution No. 2015-05
Approving "Vesting" Tentative Map No. 6096, dated December 17, 2014

Attachment 3

Vicinity Map

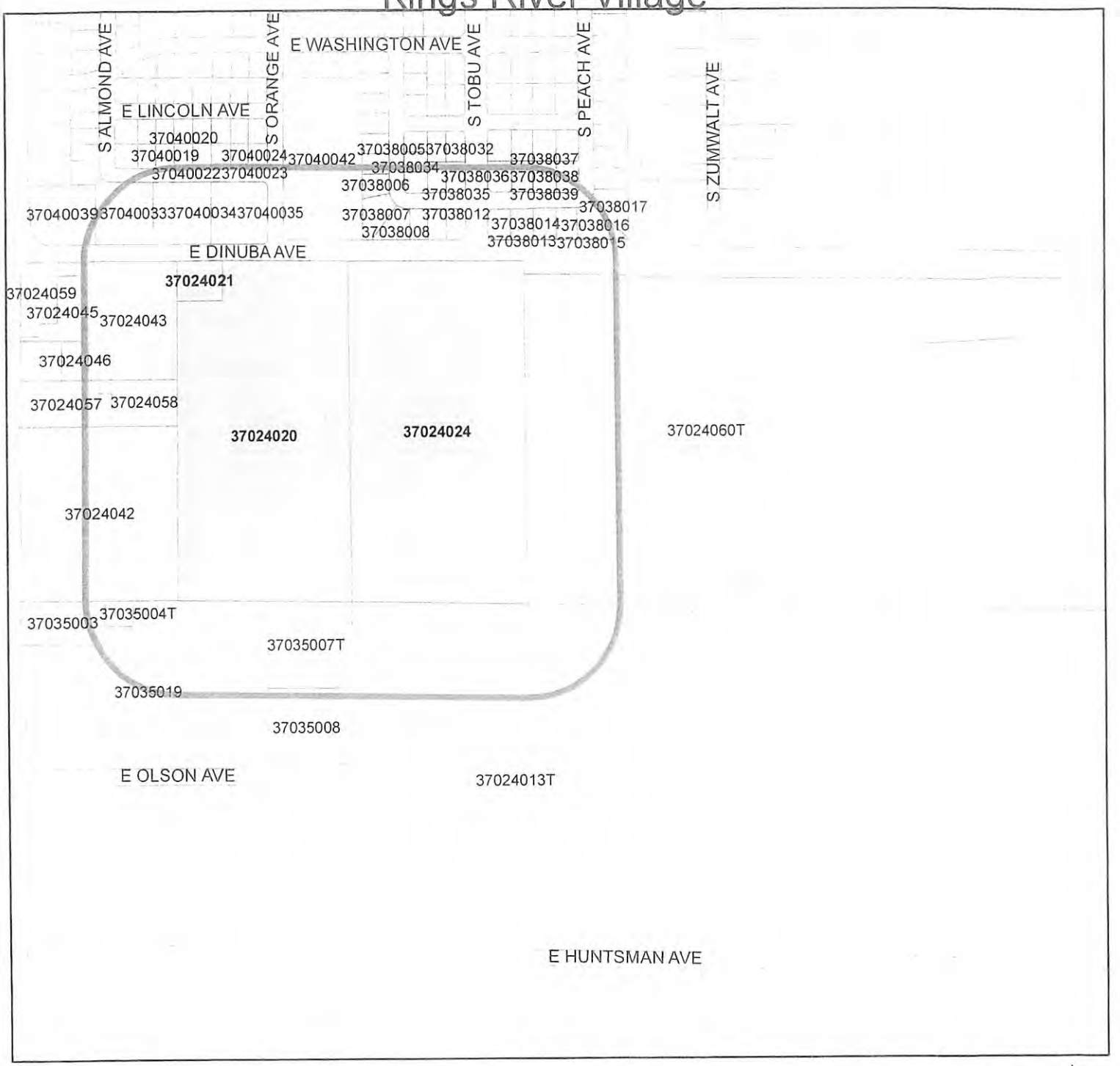
VICINITY MAP



Attachment 4

Public Noticing Mapping

Tentative Tract Map Application No. 6096
CUP Application No. 2014-05
Kings River Village



0 350 700 1,400 Feet

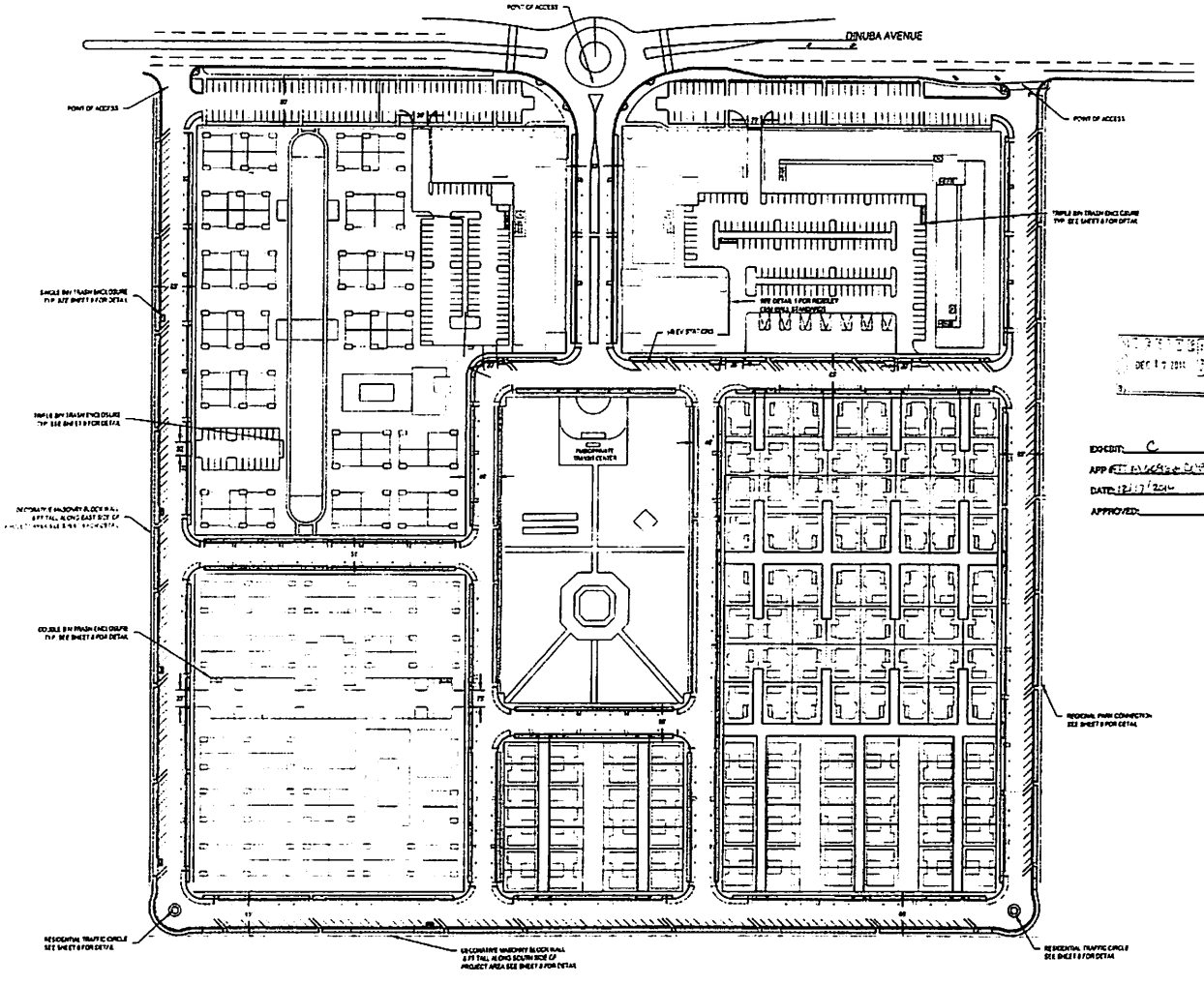
N

Legend

- 350' Buffer
- Surrounding Properties
- Project Location

Attachment 5

Kings River Village "Site Plan,
dated December 17, 2014



KINGS RIVER VILLAGE

SITE PLAN

RESIDENTIAL	OWNERS WILL MOVE CITY PROVIDED BINS TO STREET FOR PICKUP AND STORE OUT OF SITE DURING THE WEEK.
RETAIL:	TRASH ENCLOSURES WITH PRIVATE DRIVEWAY AND PARKING LOT
APARTMENTS:	TRASH ENCLOSURES WITH PRIVATE DRIVEWAY AND PARKING LOT

- SINGLE BIN TRASH ENCLOSURES
- DOUBLE BIN TRASH ENCLOSURES
- TRIPLE BIN TRASH ENCLOSURES
- EXISTING PAVEMENT
- PROPOSED PAVEMENT
- PARCEL LINES
- RED CURB
- RESIDENTIAL ONE-FAMILY DWELLING LAND USE
- RESIDENTIAL MULTI-FAMILY DWELLING LAND USE
- RESIDENTIAL HOUSING FOR ELDERLY LAND USE
- COMMERCIAL RETAIL SERVICE LAND USE
- HEALTH USE MEDICAL OFFICES LAND USE

EDITED: C

APPROVED:

NOTE

1. FIRE HYDRANTS TO BE APPROVED BY CITY FIRE DEPARTMENT
2. FIRE HYDRANTS SHALL BE SPACED 300' ALONG ALL STREET FRONTAGES
3. CITY STANDARD HISTORIC STREETLIGHT BT-24F WITH LED BULB IS TO BE USED THROUGH OUT DEVELOPMENT

NORTH

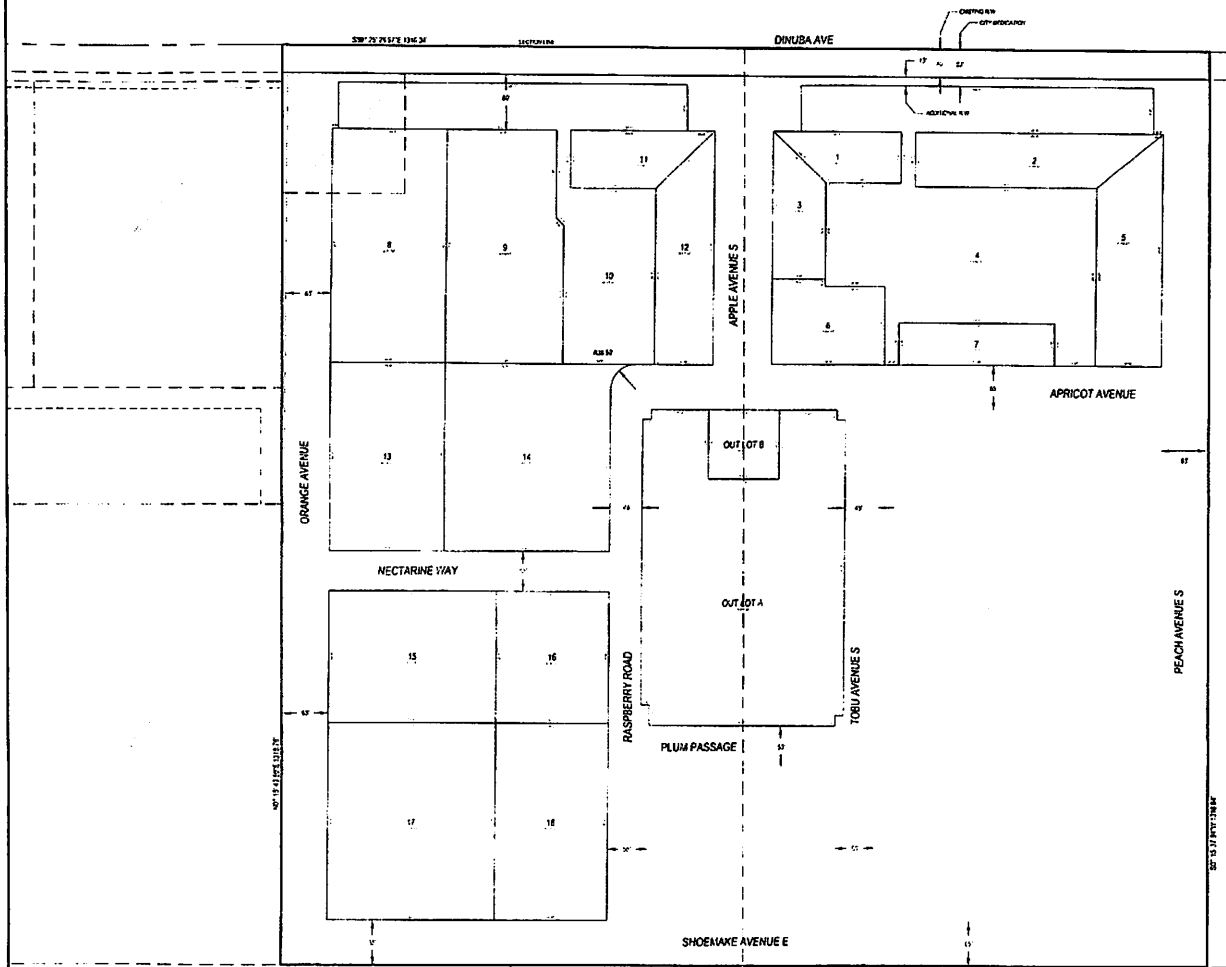
CRAIG M. HARTMAN, PE
02/2015

CURT JOHANSEN
KINGS RIVER COMMUNITY
PARTNERS, LLC

PREPARED BY
4CREEKS

Attachment 6

"Vesting" Tentative React Map No. 6096



DEC 1 7 2014

SHEET: A
APP: TPM 6096 CUP 2014-05
DATE: 12/17/2014
APPROVED:

KINGS RIVER VILLAGE

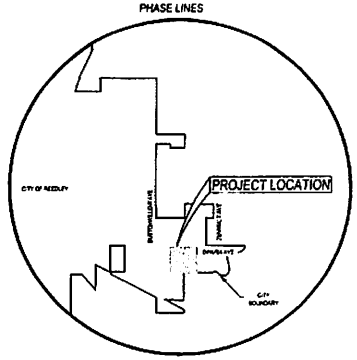
VESTING TENTATIVE SUBDIVISION MAP TRACT # 6096

A PORTION OF THE NW 1/4 OF SECTION 26, TOWNSHIP 15 SOUTH, RANGE 23 EAST, M.D.B. & M., IN THE CITY OF REEDLEY, FRESNO COUNTY, STATE OF CALIFORNIA.

ADDRESS	20076 E. DINUBA AVENUE, REEDLEY, CA
APN	370-024-20, 370-024-21, 370-024-24
GROSS ACREAGE:	38.64 AC
FLOOD ZONE:	ZONE X
ZONING (EXISTING):	ML
ZONING (PROPOSED):	ML
ELECTRICITY:	PACIFIC GAS & ELECTRIC
WATER:	CITY OF REEDLEY
SEWER:	CITY OF REEDLEY
TELEPHONE:	AT&T
REFUSE:	CITY OF REEDLEY
NATURAL GAS:	PACIFIC GAS & ELECTRIC
EXISTING USE:	VACANT
PROPOSED USE:	MIXED USE
OWNER'S NAME:	KEN AND JANET ENNS (370-024-20, 370-024-21) REEDLEY COMM. CHRISTIAN FELLOWSHIP (370-024-24)
APPLICANT:	KINGS RIVER COMMUNITY PARTNERS, LLC

LEGEND:

- PROJECT BOUNDARY
- EXISTING PARCEL BOUNDARY
- LOT LINES
- PHASE LINES



VICINITY MAP

SCALE 1"=1/2 MILE

STREETS TO BE DEDICATED TO THE CITY OF REEDLEY INCLUDE APPLE AVE S, APRICOT AVENUE, CHERRY CROSS, ALMOND ALLEY, RASPBERRY ROAD, TOBU AVENUE S, ORANGE AVENUE, PEACH AVENUE S, AND SHOEMAKE AVENUE E.

ALL DEDICATIONS WILL BE DONE AS THE PHASE IS DEVELOPED FOR EACH PARCEL.

PARCEL 4 IS A COMMON ACCESS EASEMENT IN FAVOR OF PARCELS 1, 2, 3, 5, 6 & 7

PARCEL 18 IS A COMMON ACCESS EASEMENT IN FAVOR OF PARCELS 8, 9, 11, 12, 13, & 14

PREPARED BY:
CRAIG M. HARTMAN, PE
02/2015

PREPARED FOR:
CURT JOHANSEN
KINGS RIVER COMMUNITY PARTNERS, LLC

PREPARED BY
4CREEKS
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Exhibit A

Conditions of Approval, dated March 5, 2015, for Conditional Use Permit Application No. 2014-05 and "Vesting" Tentative Map No. 6096, dated December 17, 2014

CITY OF REEDLEY
COMMUNITY DEVELOPMENT DEPARTMENT

VESTING TENTATIVE MAP NO. 6096
AND
CONDITIONAL USE PERMIT APPLICATION NO. 2014-05

CONDITIONS OF APPROVAL
MARCH 5, 2015

All tentative maps are subject to the applicable provisions of the State Subdivision Map Act, Fresno Municipal Code (FMC), City policies, and City of Reedley Standard Specifications and Standard Plans. The following specific conditions are applicable to this vesting tentative map and conditional use permit applications:

NOTICE TO PROJECT APPLICANT

In accordance with the provisions of Government Code Section 66020(d)(1), the imposition of fees, dedication, reservations or exactions for this project are subject to protest by the project applicant at the time of approval or conditional approval of the development or within 90 days after the date of imposition of fees, dedications, reservation, or exactions imposed on the development project.

This notice does not apply to those fees, dedications, reservations, or exactions which were previously imposed and duly noticed; or, where no notice was previously required under the provisions of Government Code Section 66020(d)(1) in effect before January 1, 1997.

PART A- GENERAL CONDITIONS AND REQUIREMENTS

1. Please note that this project may be subject to a variety of discretionary conditions of approval. These include conditions based on adopted City plans and policies, those determined through site plan review and environmental assessments essential to mitigate adverse effects on the environment including the health, safety, and welfare of the community, and recommended conditions for development that are essential to health, safety, and welfare, but would, on the whole, enhance the project and its relationship to the neighborhood and environment.

2. All discretionary conditions of approval will ultimately be deemed mandatory unless appealed verbally or in writing to the City of Reedley, Community Development Department, in accordance with RMC §10-18-20.

3. Approval of this tentative tract map and special permit shall be considered null and void in the event of failure by the applicant and/or the authorized representative, architect, engineer, or designer to disclose and delineate all facts and information relating to the subject property and the proposed development including, but not limited to, the following:

a) All existing and proposed improvements including but not limited to buildings and structures, signs and their uses, trees, walls, driveways, outdoor storage, and open land use areas on the subject property and all of the preceding which are located on adjoining property and may encroach on the subject property; and

b) All public and private easements, rights-of-way and any actual or potential prescriptive easements or uses of the subject property; and

c) Existing and proposed grade differentials between the subject property and adjoining property zoned or planned for commercial use.

4. Approval of this tentative tract map and special permit may become null and void in the event that development is not completed in accordance with all the conditions and requirements imposed on this special permit, the Zoning Ordinance, and all City Standards and Specifications. The City of Reedley shall not assume responsibility for any deletions or omissions resulting from the special permit review process or for additions or alterations to construction plans not specifically submitted and reviewed and approved pursuant to this special permit or subsequent amendments or revisions.

5. Transfer all red line notes, etc., shown on the approved "Vesting" Tentative Tract Map No. 6096 exhibits and Master Design Guidelines. CORRECTED EXHIBITS SHALL BE SUBMITTED TO THE COMMUNITY DEVELOPMENT DEPARTMENT PRIOR TO SUBMITTAL OF A BUILDING PERMIT APPLICATION, FOR REVIEW AND APPROVAL. THE APPROVED CORRECTED EXHIBITS SHALL THEN BE INCORPORATED INTO THE CONSTRUCTION DRAWINGS.

6. No uses of land, buildings, or structures shall be permitted other than those specifically approved pursuant to this tentative tract map and special permit.

7. Development shall take place in accordance with all city, county, state and federal laws and regulations.

8. Upon conditional approval of Vesting Tentative Tract Map No. 6096 and Conditional Use Permit Application No. 2014-05, the subdivider may prepare a Final Map, in accordance with the approved tentative map.

9. At the time of Final Map submittal, the subdivider shall submit engineered construction plans to the City of Reedley, Community Development Department for a Master grading, public sanitary sewer system, public water system, street lighting system, public streets, and storm drainage, including other technical reports and engineered plans as necessary to construct the required public improvements and work and applicable processing fees.

10. Engineered construction plans shall be approved by the City prior to the approval of the Final Map. If, at the time of Final Map approval, such plans have not been approved, the subdivider shall provide performance security in an amount established by the City to guarantee the completion of plans.

11. Public utilities easements, as necessary, shall be shown on the Final Map and dedicated to the City of Reedley. Public utility easements beyond the limits of the Final Map, but required as a condition of development, shall be acquired at the subdivider's cost and shall be dedicated by separate instrument at the time of Final Map approval. The relocation of existing utilities necessitated by the required public improvements shall be paid for by the subdivider. The subdivider is responsible to contact the appropriate utility company for information.

12. Comply with the conditions, policies and standards set forth in the City of Reedley Municipal Code (RMC), Title 11, "Subdivision Regulations," and City of Reedley, Standard Specifications, 2008 Edition, and any amendments thereto.

13. The subdivider shall pay applicable fees for, but not limited to, plan checks for street improvements and other grading and construction; street signs, water and sewer service, and inspections in accordance with the City of Reedley Master Fee Schedule and any amendments, modifications, or additions thereto; and in accordance with the requirements of State law as related to vesting tentative maps.

14. The subdivider shall furnish to the City acceptable security to guarantee the construction of the off-site street improvements in accordance with all applicable provisions of the RMC and the Subdivision Map Act. The subdivider shall complete all the public improvements prior to the approval of the Final Map by the City. If, at the time of Final Map approval, any public improvements have not been completed and accepted in accordance with the standards of the City, the subdivider may elect to enter into an agreement with the City to thereafter guarantee the completion of the improvements.

15. As a condition of Final Map approval, the subdivider shall furnish to the City a subdivision guarantee listing all parties having any right, title or interest and the nature of their interest per State law.

16. GENERAL INFORMATION:

    a) Contact the United States Postal Service for the location and type of mailboxes to be installed in this subdivision.

        1. It is recommended that at least 6 months prior to the first occupancy, the Developer shall contact the local United States Postal Service representative to complete a Mode of Delivery Agreement for New Construction. The Mode of Delivery Agreement must have a District approval signature to be valid. In addition to completing the Agreement, the Developer shall provide a final map (with address details) to the local USPS representative. The Developer shall, at their own expense, procure, construct and install all mail receptacle facilities for each location as specified and approved by the USPS.

        2) The developer/owner shall obtain any and all permits required for the removal or demolition of any existing building or structure located within the subdivision boundaries.

3) The developer/owner shall also obtain any and all permits required for the proper abandonment/closure of any existing water well, septic tank/leach field or cesspool, and irrigation pipeline on the subject property. All such permits shall be obtained prior to commencement of tract grading work, in accordance with Chapter 13 of the FMC.

17. If archaeological and/or animal fossil material is encountered during project surveying, grading, excavating, or construction, work shall stop immediately.

a) If there are suspected human remains, the Fresno County Coroner shall be immediately contacted (business hours: (559) 268-0109; after hours the contact phone number is (559) 488-3111 for the Fresno County Sheriff's Department). If remains or other archaeological material is possibly Native American in origin, the Native American Heritage Commission (phone number (916) 653-4082) shall be immediately contacted, and the California Archaeological Inventory/Southern San Joaquin Valley Information Center (phone number (805) 644-2289) shall be contacted to obtain a referral list of recognized archaeologists.

b) If animal fossils are uncovered, the Museum of Paleontology at the University of California, Berkeley shall be contacted to obtain a referral list of recognized paleontologists. An assessment shall be conducted by a paleontologist; if the paleontologist determines the material to be significant, a recommendation shall be made to the City as to any further site investigation or preservation measures.

18. Apportionment of Special Assessment: If, as part of this subdivision, a division will be made of any lot or parcel of land upon which there is an unpaid special assessment levied under any State or local law, including a division into condominium interest as defined in Section 783 of the Civil Code, the developer/owner shall file a written application with the City of Reedley, Community Development Department requesting apportionment of the unpaid portion of the assessment or pay off such assessment in full.

If the subdivider elects to apportion the assessment, the application shall contain the following information:

a) A full description of each assessed lot, parcel or interest to be divided and of how such lot, parcel or interest will be divided;

b) A request that the Engineer apportion the amount remaining unpaid on the assessment in accordance with applicable law; and

c) Written consent of the owner(s) of each such lot, parcel, or interest to the requested apportionment.

19. The application shall be filed prior to the approval of the Final Map(s) by the City and shall be accompanied by a fee in an amount specified in the Master Fee Resolution for each separate lot, parcel, or interest into which the original assessed lot, parcel or interest is to be divided. The fee shall be in an amount sufficient to pay all costs of the City and the Engineer of Work responsible for determining the initial assessment in making the requested apportionment.

PART B – City of Reedley Departmental Requirements

Community Development Department – Planning Division:

20. Vesting Tentative Map No. 6096 is conditionally approved by the Planning Commission and contingent upon the City Council's final approval of Conditional Use Permit Application No. 2014-05.

21. Development shall take place in conformance with the Reedley General Plan 2030, Land Use Element, Commercial and Residential Planned Land Use Designation goals and policies.

22. Development shall take place in accordance with the Reedley Municipal Code, Chapter 10, Zoning Regulations.

23. Development shall take place in accordance with Exhibits A, B, C, D, E, F, G, H, I, and O, dated December 17, 2014.

24. Development shall take place in accordance with the "Kings River Village" Master Development Guidelines, dated December 17, 2014.

25. The redlined "Vesting" Tentative Tract Map No. 6096 exhibits and Master Design Guidelines, once correct, will be the first order of determining applicable standards. Second order of applicable standards will be the City's Standard and Specifications, dated January 2007 (update 1/11/2008).

26. The Master Design Guidelines are to guide the construction of the physical environment, while relying upon the established standards, underlying and unified architectural thematic, design constraints, methodology and organization of the development.

    a) The Master Design Guidelines contain a process, which will be strictly followed pertaining to any proposed change in land use or modification of the Guidelines.

27. Development shall take place in accordance with General Plan Policy LU 2.7.24, to ensure that all commercial land uses are developed and maintained in a manner complementary to and compatible with adjacent residential land uses, to minimize interface problems with the surrounding environment, and to be compatible with public facilities and services. As part of the City's project review process, major emphasis will be given to site and building design in order to ensure and/or preserve functionality and community aesthetics.

    a) Development projects shall appropriately interface with adjacent properties.

    b) Shopping Centers shall embrace a unified building, landscaping and signage design.

    c) Building facades with visible sides of buildings shall not develop with featureless, "blank walls".

d) Adequate screen roof-mounted mechanical equipment, and ensure that such equipment adhere to noise standard set forth in the General Plan Noise Element.

28. Development shall take place in accordance with General Plan Policy LU 2.7.25, which states; "Off-street parking areas shall also include landscaping to provide shading for at least 50 percent of the surfaced area within 10 years from planting."

29. Development is required to construct a fence along the southern and eastern boundaries of the site.

a) Construct a solid seven (7') foot solid masonry wall (at finished grade of proposed site) within the limits of the project site along the southerly boundary of the project site and extending northerly one-hundred (100') along the easterly boundary (Adjacent to Reedley Sports Park) . During construction of the required fence anti-graffiti barrier coating shall be applied to the required fence.

b) Construct a seven (7') wrought iron decorative fence (at finished grade of proposed site) within the limits of the project site along the easterly boundary of the project site, except for one-hundred (100') from the southerly most point (Adjacent to the existing water well site). Proposed opening will be substantial conformance with Exhibit C, dated December 17, 2014.

c) Provide a corner cut-off area at all entryways and intersections, where walls or fences are required, in accordance with Section 11-5-1(G) of the RMC. Corner cut-offs are established to provide an unobstructed view for vehicular and pedestrian traffic approaching an intersection. They are a triangular area formed by the property lines and a diagonal line adjoining points on the property lines, measured a specific distance from the point of their intersection. At the intersections of streets, this distance is 30 feet. The corner cut-off area shall be landscaped (including an irrigation system).

d) Construction plans for required walls showing architectural appearance and location of all walls shall be submitted to the Community Development Department Director for review prior to Final Map approval.

30. Landscaping & Open Space:

a) Development shall provide a minimum 10-foot wide landscape buffer area (and irrigation system) along the northern property line, a designated major street (Dinuba Avenue, Vesting Tentative Tract Map No. 6096).

b) All yards (including private) and areas designated for open space purposes shall be landscaped and maintained.

c) All yards and landscaped areas located adjacent to street frontage shall be provided automatic irrigation systems.

d) All yards (including private) and areas designated for open space purposes shall comply with the water efficient landscape standards, in accordance with Section 8-1-14 of the RMC.

e) The subdivider is required to provide street trees on all public street frontages and for the dedication of planting and buffer landscape easements as determined by the Community Development Department. Street trees shall be planted at the minimum rate of one tree for each 60 feet of street frontage. The subdivider is required to provide irrigation for all street trees. The irrigation system shall comply with Section 8-1-14 of the RMC and AB 1881 Model Water Efficient Landscape Ordinance.

31. Any changes to the Exhibit C, Site Plan, dated December 17, 2014, shall be submitted as an amendment to Conditional Use Permit 2014-05. Contact the Community Development Director at (559) 637-4200 for more information.

Community Development Department – Building Division:

32. A complete submittal for a building permit would include, but not limited to, a building permit application, 3 copies of a comprehensive set of civil and construction documents, compliant with the State Building Code in effect at the time of application.

33. An estimate of the Development Impact Fees has been developed based upon the square footage and units described on the Exhibit A (Vesting Tentative Map No. 6096), Exhibit C (Conditional Use Permit Application No. 2014-05 (Site Plan) and Exhibit O (Operational Statement), dated December 17, 2014. See Attachment.

The Development Impact Fees provided for this project are only an estimate and subject to change based upon the square footage, residential type and number of dwelling unit, submitted as part of the building permit application.

The developer may also contact the Community Development Department, Building Division to request an estimate of building permit fees. At the time of request, the developer must provide at a minimum a site plan, floor plan and estimated building valuation.

Community Development Department – Engineering Division:

34. The subdivision of real property shall occur in accordance with the Subdivision Map Act (Government Code §66410 - §66499.58).

35. The subdivider shall furnish to the City acceptable security to guarantee the construction of the off-site street improvements in accordance with all applicable provisions of the RMC and the State Subdivision Map Act.

36. Prior to the commencement of the first Phase of Development the Developer shall submit for approval Master Utility Plans (grading, public sanitary sewer system, public water system, street lighting system, public streets, and storm drainage) including other technical reports and engineered plans as necessary to construct the required public improvements.

An engineer, licensed in the State of California, shall prepare the Plan(s), which are at the owner's expense.

37. Access to and from the proposed project site shall:

    a) There shall be vehicular access from a dedicated and improved street, alley or recorded private access to off-street parking facilities on the property requiring off-street parking.

    b) There shall be pedestrian access from a dedicated and improved street, alley or recorded private access to property used for residential purposes.

    c) There shall be an adequate paved turning area on lots facing on and having access to either Collector or Arterial Streets as identified on the Circulation Element of the Fresno General Plan, to permit motor vehicles to turn around on-site before moving forward into the street.

    d) If vehicular access is by way of a driveway parallel with a side lot line, it shall be not less than 10 feet in width, extending from a dedicated and improved street, alley, or recorded private access to the building site, and used for both pedestrian and vehicular access.

38. Open street cuts are not permitted; all utility connections must be bored.

39. All survey monuments within the area of construction shall be preserved and if disturbed, shall be reset by a licensed land surveyor of the State of California.

40. Comply with all of the requirements stipulated within the attached Engineering Division memorandum dated January 29, 2015.

Public Works Department:

41. Development shall connect to the City of Reedley water system.

42. Development shall connect to the City of Reedley sewer system.

43. Development shall take solid waste services through the City of Reedley, pursuant to the RMC.

44. Comply with all of the requirements stipulated within the attached Department of Public Works Department comments dated January 23, 2015.

Reedley Fire Department:

45. Fire hydrant shall be installed throughout the project site at 300 feet maximum spacing. On-site fire hydrants shall be installed in accordance with the City of Reedley Standard Specifications and Standard Plan W-1. All proposed fire hydrant locations shall be shown and noted on the construction improvement plans.

46. Comply with all of the requirements stipulated within the attached Reedley Fire Department, memorandum dated January 20, 2015.

Maintenance Obligations:

47. The long term maintenance of both public and private space is the ultimate responsibility of the owner/developer. The Developer may elect to either voluntarily annex, or create a Lighting and Landscaping Maintenance District or choose to establish a Home Owner's Association. See Condition 46 and Condition 47 for details related to each of the methodologies.

48. Comply with all the requirements stipulated within the attached Community Development Department, Engineering Division memorandum regarding Communities Facilities District (CFD) and Lighting and Landscaping Maintenance District (LLMD), January 29, 2015; and, the following:

    a) If the owner/developer chooses to be annexed into the City's LLMD for maintenance purposes, then an Annexation Request Package shall be submitted to the Administrative Services Department Director for review, processing, and approval.

    b) Construction plans for all features to be maintained by a LLMD for a final map shall be included in the final map submission to the Community Development Department for processing. Where applicable, this shall include a Street Tree Location and Street Tree Species (by street) map. Landscaping plans shall contain actual tree and plant counts by species and include the areas (in square feet) of turf, shrubs and trees, and sidewalks or other paved areas within all landscaped areas.

        - NOTE: The City of Reedley will not be responsible for the maintenance of any outlots if they are not included into the LLMD. If the outlots are to be included into the LLMD, the Department of Public Works will require that landscape and irrigation plans be submitted with landscape buffer plans for approval prior to inclusion into the LLMD.

    c) Proceedings to place the Final Map into a LLMD shall not commence until the Final Map has been annexed into the City of Reedley Lighting and Landscaping Maintenance District, and the Final Map, Lighting and Landscaping Maintenance District and Street Construction Plans are considered to be technically correct.

    d) If the developer/subdivider elects to petition for annexation into the City's LLMD, he/she shall be required to provide the City of Reedley, Community Development Department, with copies of signed acknowledgments from each purchaser of a lot within the subdivision, attesting to the purchaser's understanding that the lot will have an annual maintenance assessment and that he/she is aware of the estimated amount of the assessment. The developer/subdivider shall execute and record a covenant on each lot providing notice that the subject property is subject to annual payment of the LLMD Facilities District assessment.

49. Should the City Council or owner/developer choose not to include all of the maintenance items or certain items listed above in the LLMD, then the property owner/developer shall be responsible for establishing a Home Owners' Association (HOA) or other property based management mechanism which provides for the maintenance of these items in a manner which provides appropriate security and is deemed acceptable to the City of Reedley.

a) The subdivider shall establish a Home Owners' Association (or other approved mechanism) to perform the above listed maintenance responsibilities pursuant to a formal agreement with the City of Reedley. The agreement with the City described herein, shall among other things, specify level of effort and frequency, insurance requirements, traffic control, and inspection of provided services.

- NOTE: Should the owner/developer elect to establish a HOA to perform maintenance obligations and assure that said obligations are met, then the owner/developer may include such other items as are deemed appropriate and necessary for the sustainability of the subdivision and its amenities within the responsibilities of the association.

b) The proposed Declaration of Covenants, Conditions, and Restrictions (CC&Rs) and the proposed instruments for the home owners association shall be submitted to the Community Development Department for review three weeks prior to final map approval. Said documents shall be recorded with the final map or alternatively submit recorded documents or documents for recording prior to final acceptance of subdivision improvements. Said documents shall include assignment of responsibility to the homeowners association for landscaping and other provisions, for preparation of CC&Rs.

PART D – MISCELLANEOUS

50. Kings Canyon Unified School District: Development shall comply with the memorandum from the Kings Canyon Unified School District, dated January 26, 2015. Evidence of payment from the School District is required prior to the issuance of a City of Reedley building permit. Contact the K.C.U.S.D. at 675 W. Manning Avenue, Reedley, CA 93654, (559) 305-7024.

51. San Joaquin Valley Air Pollution Control District: Development shall comply with the memorandum from the San Joaquin Valley Air Pollution Control District, dated January 21, 2015. Contact the San Joaquin Valley Air Pollution Control District at 1990 East Gettysburg Avenue, Fresno, CA 93726, (559-230-6000).

52. Alta Irrigation District: If Development elects to connect to the Traver Ditch, development shall comply with comment provided by the District, dated January 14, 2014.

53. Fresno County Rural Transit Agency: Development shall comply with the memorandum from the Fresno County Rural Transit Agency, dated January 27, 2015. Contact Moses Sites, FCRTA General Manager, Fresno County Rural Transit Agency, 2035 Tulare Street, Suite 201, Fresno, CA 93721, (559) 233-6789.

54. Consolidated Mosquito Abatement District: Development shall comply with the memorandum from the Consolidated Mosquito Abatement District, dated January 14, 2015. Contact Mark Amorino, Operations Manager, Consolidated Mosquito Abatement District, P.O. Box 278, Selma, CA 93662, at (559) 896-1085.

55. *Fresno County Impact Fees*: Satisfy the Fresno County Facilities Impact Fee obligation. Provide County Facilities Impact Fee receipt from the County Public Works and Planning Department (559-488-3496) as proof of payment or exemption prior to the issuance of building permits.

    a) The requirement to pay this fee is currently suspended by Fresno County. However, payment of this fee will be required if the fee has been reinstated at the time of issuance of building permits for this project.

56. Fresno County Regional Transportation Mitigation Fee Joint Powers Agency: Satisfy the Fresno County Regional Transportation Mitigation Fee (RTMF), as required by the RTMF Joint Powers Agency (559-233-4148). The RTMF Informational Summary and the Record of Payment forms are available at the Development and Resource Management Department public counter.

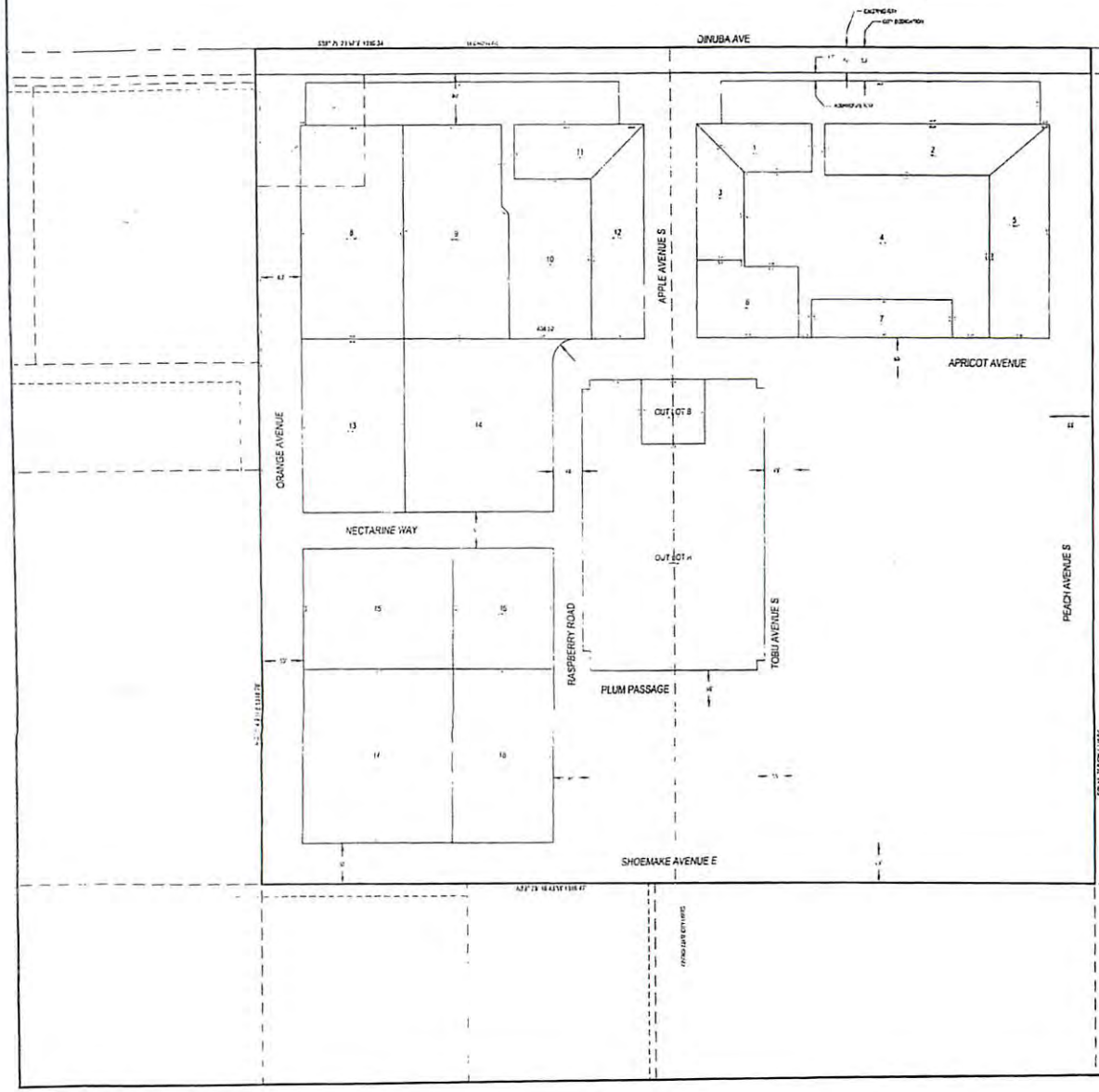
    a) The completed Record of Payment of the RTMF form of the must be submitted to the City prior to the issuance of building permits. Prior to issuance of the Certificate of Occupancy, the Record of Payment of the RTMF form must be signed indicating the Disposition of RTMF by the RTMF JPA.

    b) See attached Informational Summary, Regional Transpiration Mitigation Fee and Record of Payment of Regional Transportation Mitigation Fee

Enclosures:

"Vesting Tentative Tract Map No. 6096, Exhibit A, B, C, D, E, F, G, H, I, and O, dated December 17, 2014 (redlined)
Master Design Guidelines, dated December 17, 2014 (redlined)

Attachment 1: Plan Check and Building Permit Fee Estimate
Attachment 2: Community Development Department, Engineering Division memorandum dated January 29, 2015
Attachment 3: Public Works, comments dated January 23, 2015
Attachment 4: Reedley Fire Department memorandum dated January 20, 2015
Attachment 5: Kings Canyon Unified School District memorandum dated January 26, 2015
Attachment 6: San Joaquin Valley Air Pollution Control District, memorandum dated January 21, 2015.
Attachment 7: Alta Irrigation District, comment dated January 14, 2015.
Attachment 8: Fresno County Rural Transit Agency memorandum dated January 27, 2015
Attachment 9: Consolidated Mosquito District memorandum dated January 14, 2015
Attachment 10: Fresno County Regional transportation Mitigation Fee Joint Powers, Informational Summary and Record of Payment



KINGS RIVER VILLAGE

VESTING TENTATIVE SUBDIVISION MAP

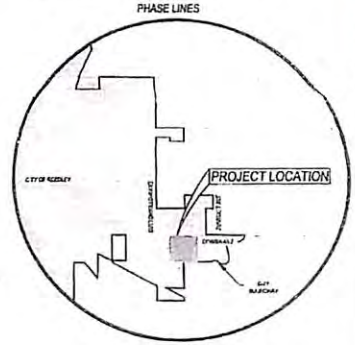
TRACT # 6096

A PORTION OF THE NW 1/4 OF SECTION 28, TOWNSHIP 15 SOUTH, RANGE 23 EAST, M.D.B. & M. IN THE CITY OF REEDLEY, FRESNO COUNTY, STATE OF CALIFORNIA

ADDRESS	20076 E. DINUBA AVENUE, REEDLEY, CA
APN	370-024-20, 370-024-21, 370-024-24
GROSS ACREAGE:	38.64 AC
FLOOD ZONE:	ZONE X
ZONING (EXISTING):	ML
ZONING (PROPOSED):	ML
ELECTRICITY:	PACIFIC GAS & ELECTRIC
WATER:	CITY OF REEDLEY
SEWER:	CITY OF REEDLEY
TELEPHONE:	AT&T
REFUSE:	CITY OF REEDLEY
NATURAL GAS:	PACIFIC GAS & ELECTRIC
EXISTING USE:	VACANT
PROPOSED USE:	MIXED USE
OWNER'S NAME:	KEN AND JANET ENNS (370-024-20, 370-024-21) REEDLEY COMM. CHRISTIAN FELLOWSHIP (370-024-24)
APPLICANT:	KINGS RIVER COMMUNITY PARTNERS, LLC

LEGEND:

- PROJECT BOUNDARY
- EXISTING PARCEL BOUNDARY
- LOT LINES
- PHASE LINES



VICINITY MAP

STREETS TO BE DEDICATED TO THE CITY OF REEDLEY INCLUDE APPLE AVE S, APRICOT AVENUE, CHERRY CIRCLE, ALVINO ALLEY, RASPBERRY ROAD, TOBIU AVENUE S, ORANGE AVENUE, PEACH AVENUE S, AND SHOEMAKE AVENUE E.

ALL DEDICATIONS WILL BE DONE AS THE PHASE IS DEVELOPED FOR EACH PARCEL.

PARCEL 4 IS A COMMON ACCESS EASEMENT IN FAVOR OF PARCELS 1, 2, 3, 5 & 7

PARCEL 10 IS A COMMON ACCESS EASEMENT IN FAVOR OF PARCELS 8, 9, 11, 12, 13, & 14.

PREPARED BY
CRAIG M. HARTMAN, PE
02/2015

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CURT JOHANSEN
KINGS RIVER COMMUNITY PARTNERS, LLC

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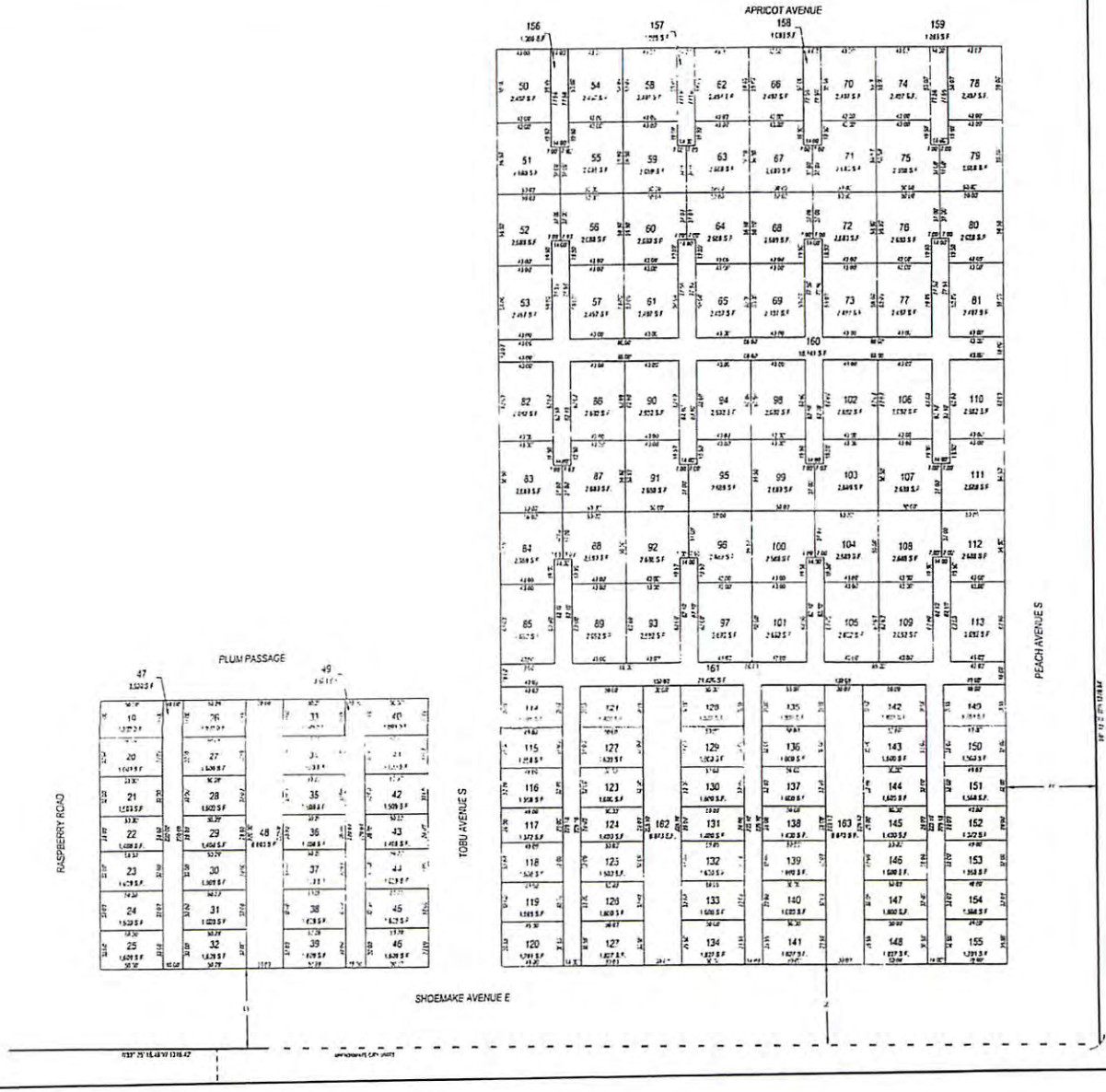
FEB. 2015 2 of 9



KINGS RIVER VILLAGE

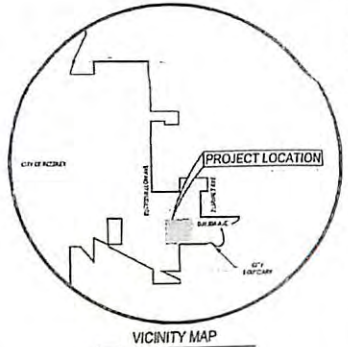
VESTING TENTATIVE SUBDIVISION MAP

A PORTION OF THE NW 1/4 OF SECTION 28, TOWNSHIP 15 SOUTH, RANGE 23 EAST, M.D.B. & M., IN THE CITY OF REEDLEY, FRESNO COUNTY, STATE OF CALIFORNIA

LEGEND:

- SUBDIVISION BOUNDARY
- EXISTING PARCEL BOUNDARY
- LOT LINES
- CENTER LINES

LOTS 47, 48, 49, 156, 157, 158, 159, 160, 161, 162 & 163 WITHIN THE SUBDIVISION ARE TO BE DEDICATED TO THE HOME OWNERS ASSOCIATION



VICINITY MAP

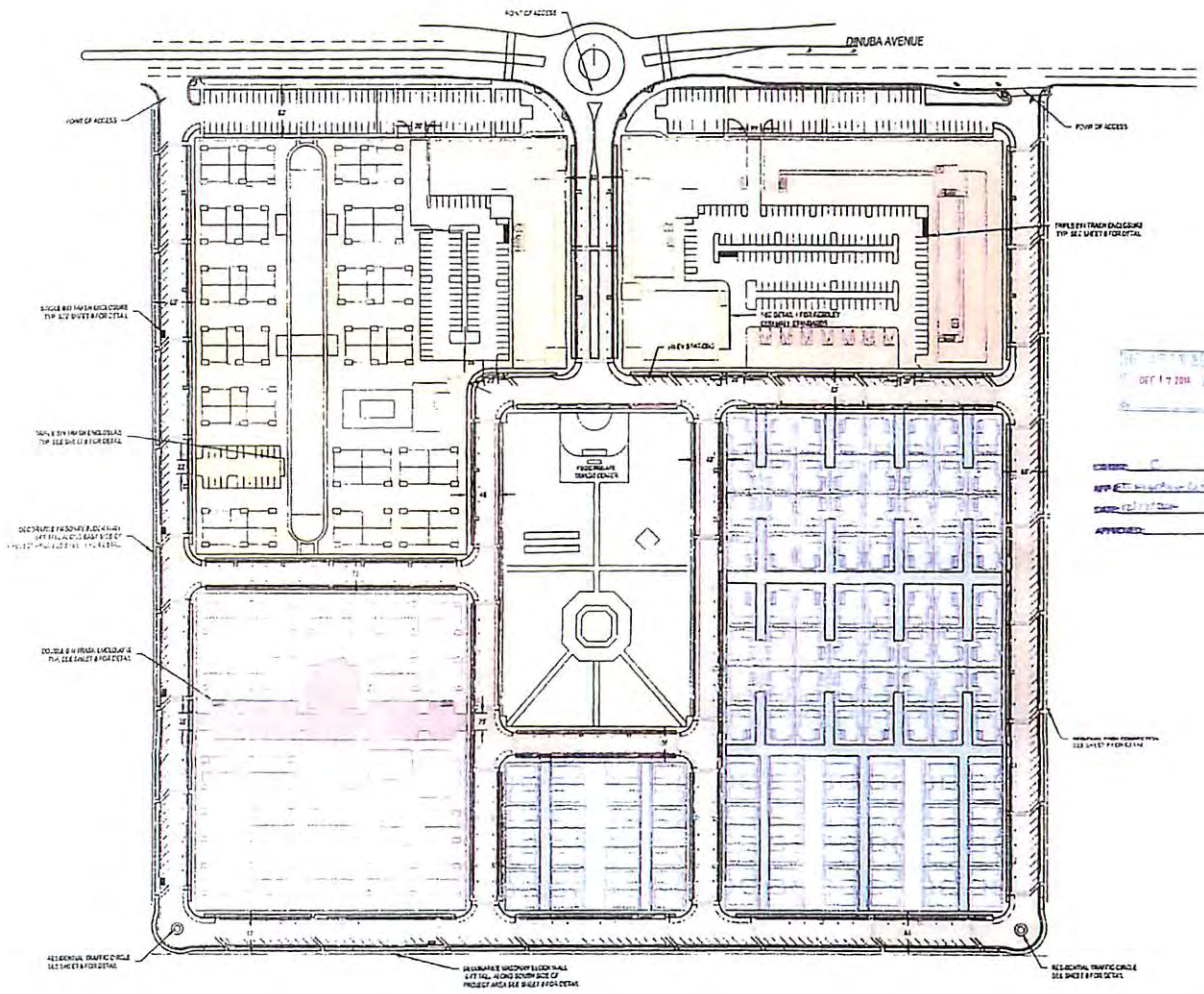
SCALE: 1"=1,000'

PREPARED BY:
CRAIG M. HARTMAN, PE
02/2015

OWNER(S):
CURT JOHANSEN
KINGS RIVER COMMUNITY PARTNERS, LLC

4CREEKS

321 S. SIERRA ST., STE. A
P.O. BOX 755
VISALIA, CA 93291
TEL: 559.625.0700
FAX: 559.625.0240



KINGS RIVER VILLAGE

SITE PLAN

RESIDENTIAL:	OWNERS WILL MOVE CITY PROVIDED BINS TO STREET FOR PICKUP AND STORE OUT OF SITE DURING THE WEEK.
RETAIL:	TRASH ENCLOSURES WITH PRIVATE DRIVEWAY AND PARKING LOT
APARTMENTS:	TRASH ENCLOSURES WITH PRIVATE DRIVEWAY AND PARKING LOT

- SINGLE BIN TRASH ENCLOSURES
- DOUBLE BIN TRASH ENCLOSURES
- TRIPLE BIN TRASH ENCLOSURES
- EXISTING PAVEMENT
- PROPOSED PAVEMENT
- PARCEL LINES
- RED CURB
- RESIDENTIAL ONE-FAMILY DWELLING LAND USE
- RESIDENTIAL MULTI-FAMILY DWELLING LAND USE
- RESIDENTIAL HOUSING FOR ELDERLY LAND USE
- COMMERCIAL RETAIL SERVICE LAND USE
- HEALTH USE MEDICAL OFFICES LAND USE

NOTE

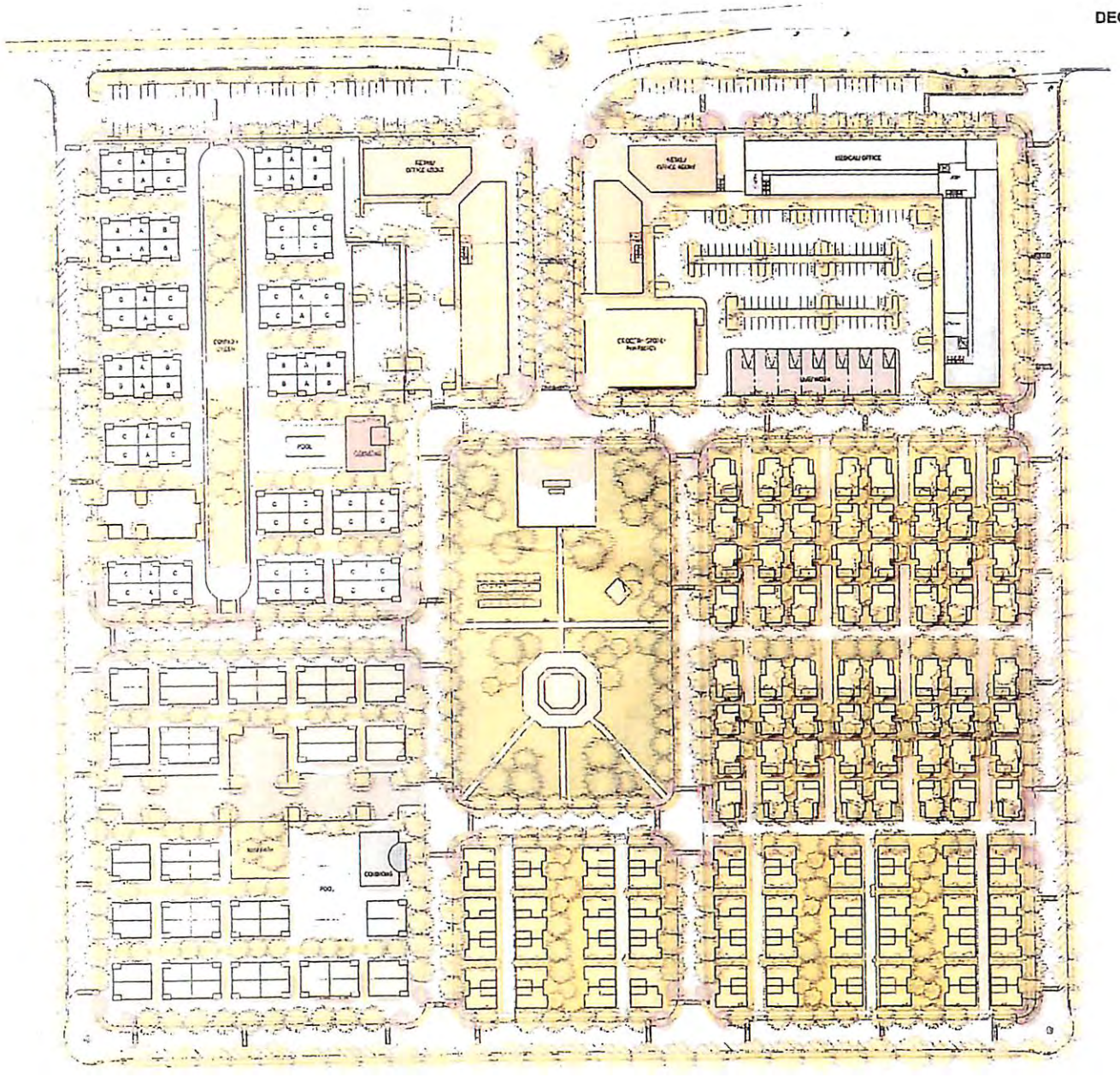
1. FIRE HYDRANTS TO BE APPROVED BY CITY FIRE DEPARTMENT
2. FIRE HYDRANTS SHALL BE SPACED 700' ALONG ALL STREET FRONTAGES
3. CITY STANDARD HISTORIC STREETLIGHT SI-24E WITH LED BULB IS TO BE USED THROUGH OUT DEVELOPMENT

NORTH

PREPARED BY:
CRAIG M. HARTMAN, PE
02/2015

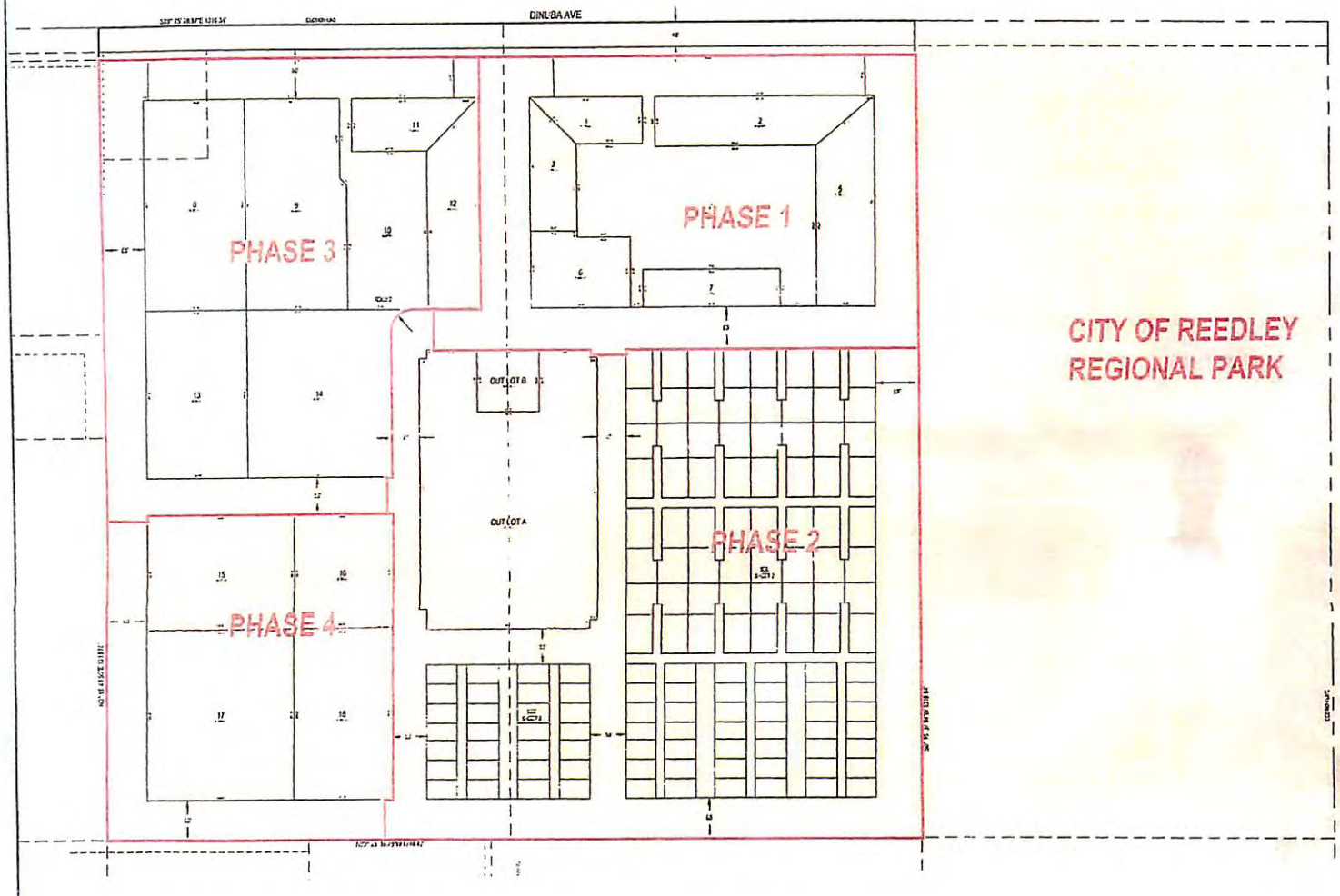
REVISIONS:
CURT JOHANSEN
KINGS RIVER COMMUNITY
PARTNERS, LLC

PREPARED BY:
4CREEKS



DEC 17 2014

EXHIBIT: D
APP#: ITEM 6(B) & CUP 70-14(C)
DATE: 12/17/2014
APPROVED:



KINGS RIVER VILLAGE

PHASING PLAN

PHASE 1 (7.64 AC.) : LOTS (1-7)
PHASE 2 (15.69 AC.) : LOTS (OUT LOTS A & B, 19-161)
PHASE 3 (9.20 AC.) : LOTS (8-14)
PHASE 4 (5.67 AC.) : LOTS (15-18)

TOTAL: 163 LOTS

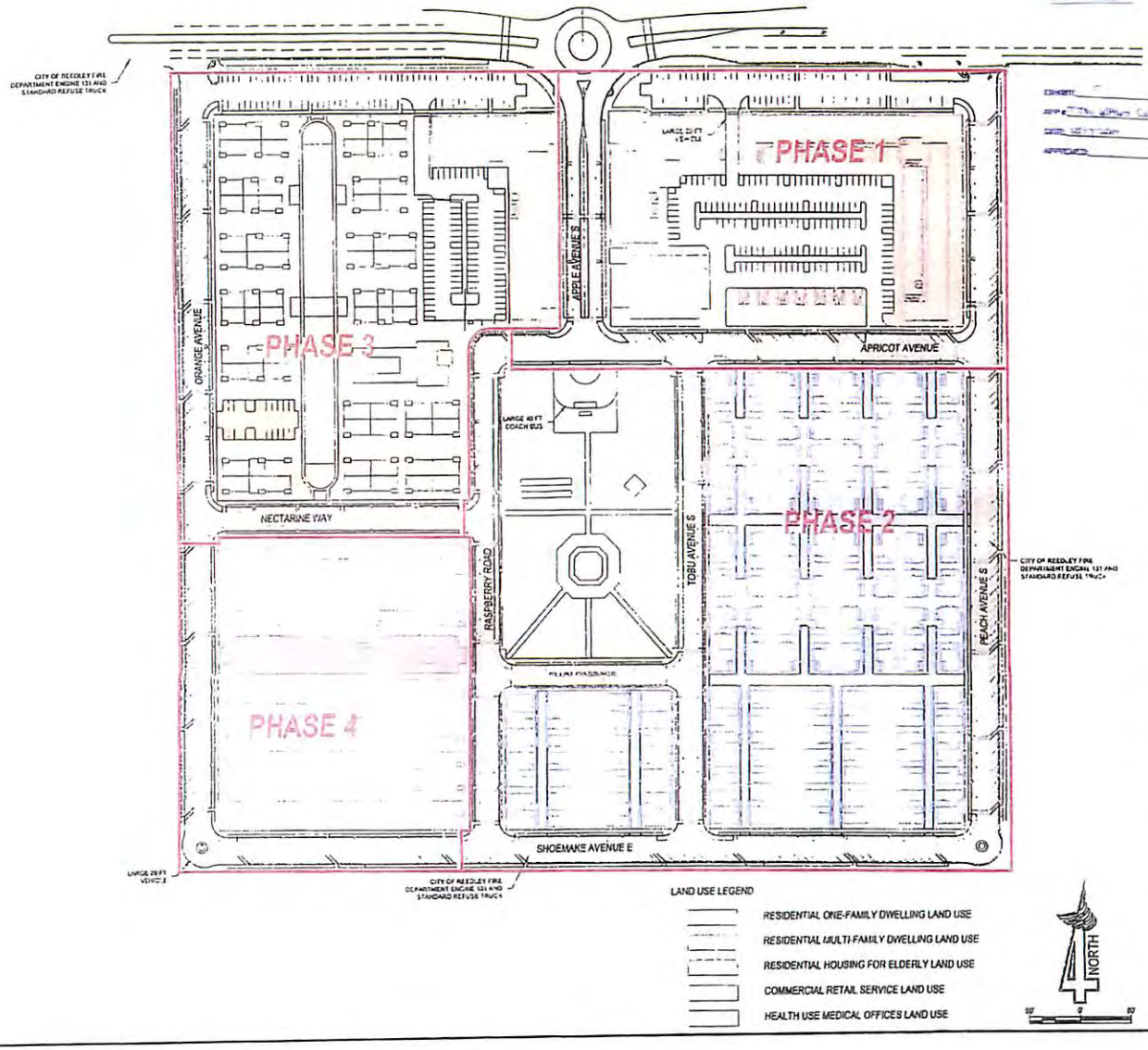
NOTE
PHASES SHOWN MAY BE SUBJECT TO MARKET ADJUSTMENT.

EXHIBIT: C
APP
DATE: 12/17/2014
APPROVED:

PREPARED BY
CRAIG M. HARTMAN, PE
02/2015

PREPARED FOR
CURT JOHANSEN
KINGS RIVER COMMUNITY
PARTNERS, LLC

REVISED BY
4CREEKS



KINGS RIVER VILLAGE

PARKING ANALYSIS

LAND USE	PHASE 1 REQ.	PHASE 1 PROP.	PHASE 2 REQ.	PHASE 2 PROP.
RESIDENTIAL ONE-FAMILY DWELLING 2 SPACES / UNIT	0	0	270	265
RESIDENTIAL MULTI-FAMILY DWELLING 1.5 SPACES / UNIT	0	0	0	0
RESIDENTIAL HOUSING FOR ELDERLY 1.5 SPACES / UNIT	0	0	0	0
COMMERCIAL RETAIL SERVICE 3 SPACES / 1000 SF	151	146	0	0
HEALTH USE MEDICAL OFFICES 1 SPACES / 400 SF	142	140	0	0

LAND USE	PHASE 3 REQ.	PHASE 3 PROP.	PHASE 4 REQ.	PHASE 4 PROP.
RESIDENTIAL ONE-FAMILY DWELLING 2 SPACES / UNIT	0	0	0	0
RESIDENTIAL MULTI-FAMILY DWELLING 1.5 SPACES / UNIT	0	0	180	175
RESIDENTIAL HOUSING FOR ELDERLY 1.5 SPACES / UNIT	120	125	0	0
COMMERCIAL RETAIL SERVICE 3 SPACES / 1000 SF	152	159	0	0
HEALTH USE MEDICAL OFFICES 1 SPACES / 400 SF	0	0	0	0

LAND USE	CITY REQ	PROPOSED
RESIDENTIAL ONE-FAMILY DWELLING 2 SPACES / UNIT	270	265
RESIDENTIAL MULTI-FAMILY DWELLING 1.5 SPACES / UNIT	180	175
RESIDENTIAL HOUSING FOR ELDERLY 1.5 SPACES / UNIT	120	115
COMMERCIAL RETAIL SERVICE 3 SPACES / 1000 SF	303	295
HEALTH USE MEDICAL OFFICES 1 SPACES / 400 SF	142	140
TOTAL	1015	990

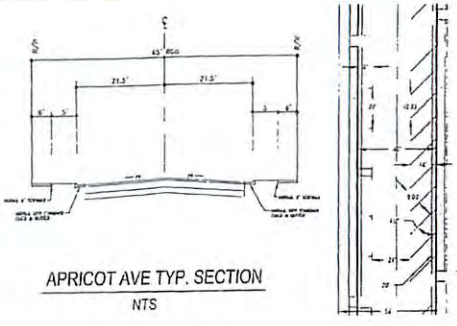
CRAIG M. HARTMAN, PE
02/2015

CURT JOHANSEN
KINGS RIVER COMMUNITY PARTNERS, LLC

PREPARED BY
4CREEKS

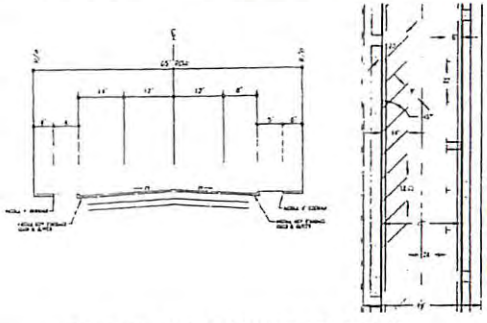
KINGS RIVER VILLAGE

TYPICAL CROSS-SECTIONS



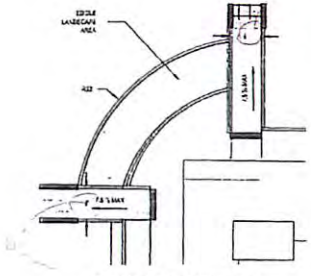
APRICOT AVE TYP. SECTION

NTS



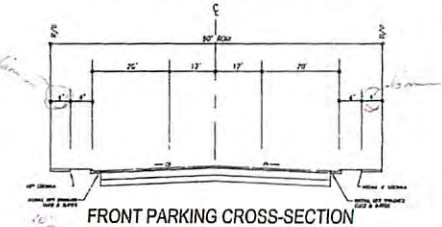
PEACH, SHOEMAKE & ORANGE TYP. SECTION

NTS



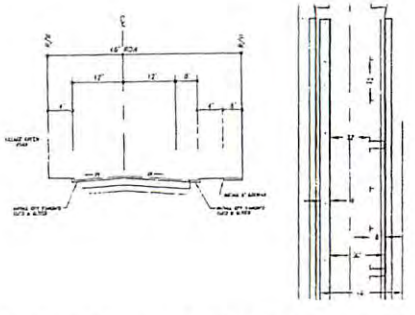
CORNER DETAIL TYP.

SCALE - 1:10



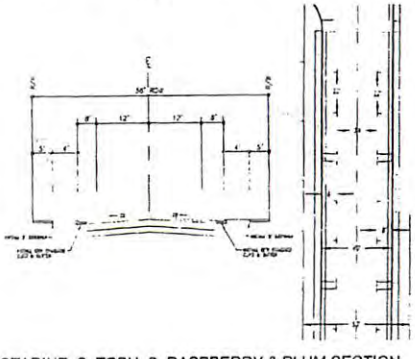
FRONT PARKING CROSS-SECTION

NTS



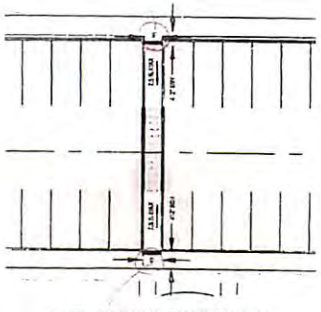
N. TOBU & N. RASPBERRY ADJACENT TO PARK SECTION

NTS



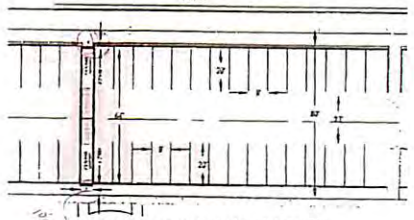
NECTARINE, S. TOBU, S. RASPBERRY & PLUM SECTION

NTS



TYP. CROSSWALK SECTION

NTS



FRONT PARKING TYP. SECTION

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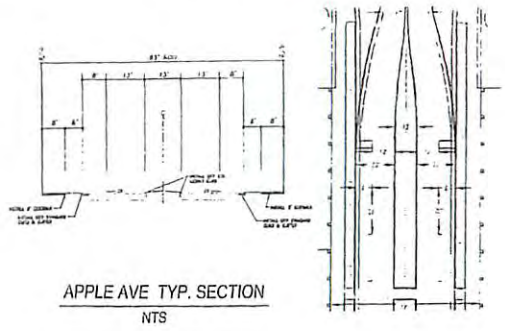
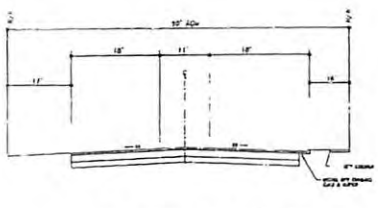


APPLE AVE TYP. SECTION

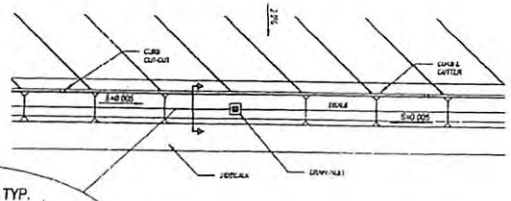
NTS

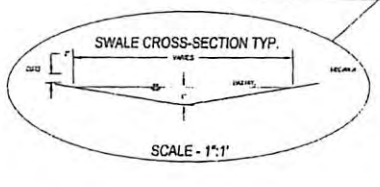


DINUBA AVENUE TYP. SECTION

NTS

* NOTE, TO FOLLOW CITY OF REEDLEY STANDARDS AS PROVIDED BY CITY





SCALE - 1":1'

LANDSCAPE SWALE DETAIL TYP.

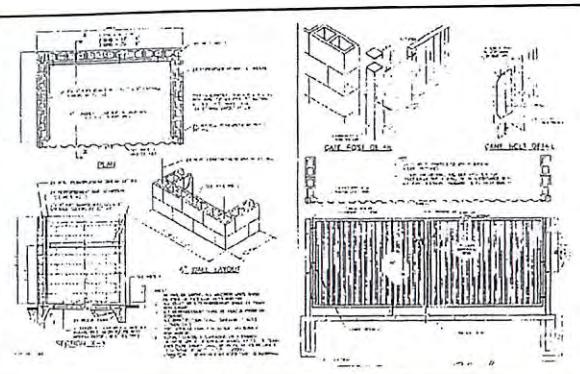
SCALE - 1:10

PREPARED BY
CRAIG M. HARTMAN, PE
02/2015

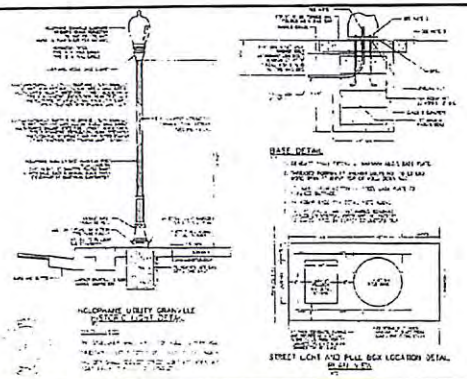
PREPARED BY
CURT JOHANSEN
KINGS RIVER COMMUNITY
PARTNERS, LLC

PREPARED BY
4CREEKS

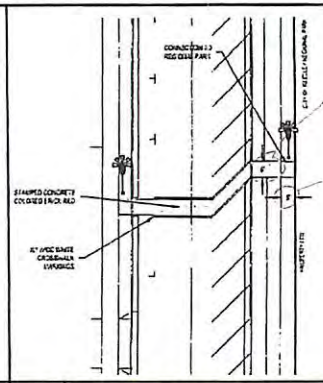
KINGS RIVER VILLAGE
DETAIL SHEET



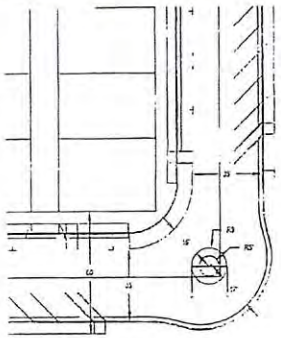
1 CITY STANDARD ST-13A&B TRASH ENCLOSURE DETAIL



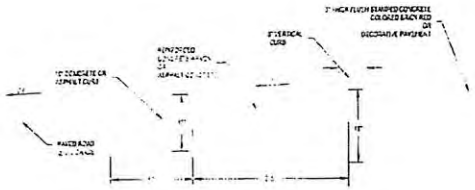
2 CITY STANDARD ST-24E HISTORIC STREETLIGHT W/ LED BULB



3 REGIONAL PARK CONNECTION DETAIL



4 RESIDENTIAL TRAFFIC CIRCLE PLAN VIEW



5 SECTION A-A CIRCLE CURB DETAIL

10 Angled Green Screen Trellis Fence Panel

6 GREEN SCREEN TRELLIS FENCE PANEL DETAIL

7

8

9

DATE

APPROVED

PREPARED BY
CRAIG M. HARTMAN, PE
02/2015

PREPARED FOR
CURT JOHANSEN
KINGS RIVER COMMUNITY PARTNERS, LLC

(PREPARED BY)
4CREEKS
324 S. SANTA FE, STE. A
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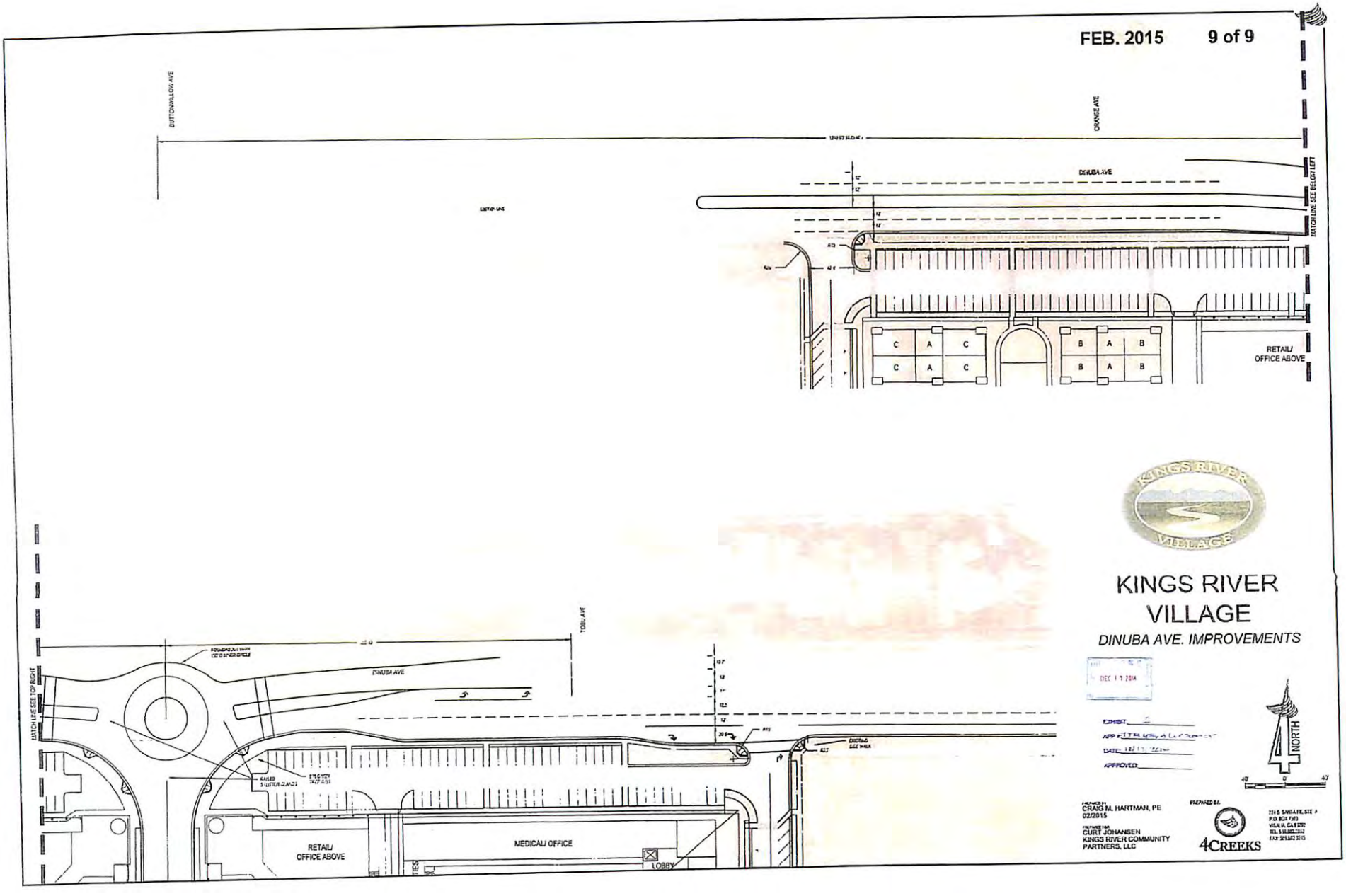
TEL 559.802.3130
FAX 559.802.3275



KINGS RIVER VILLAGE

KINGS RIVER VILLAGE

DINUBA AVE. IMPROVEMENTS

DEC 19 2014

EXHIBIT 2

APP # SITE PLAN REVIEW

DATE: 12/17/2014

APPROVED:

CRAIG M. HARTMAN, PE
02/2015

CURT JOHANSEN
KINGS RIVER COMMUNITY
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PREPARED BY:
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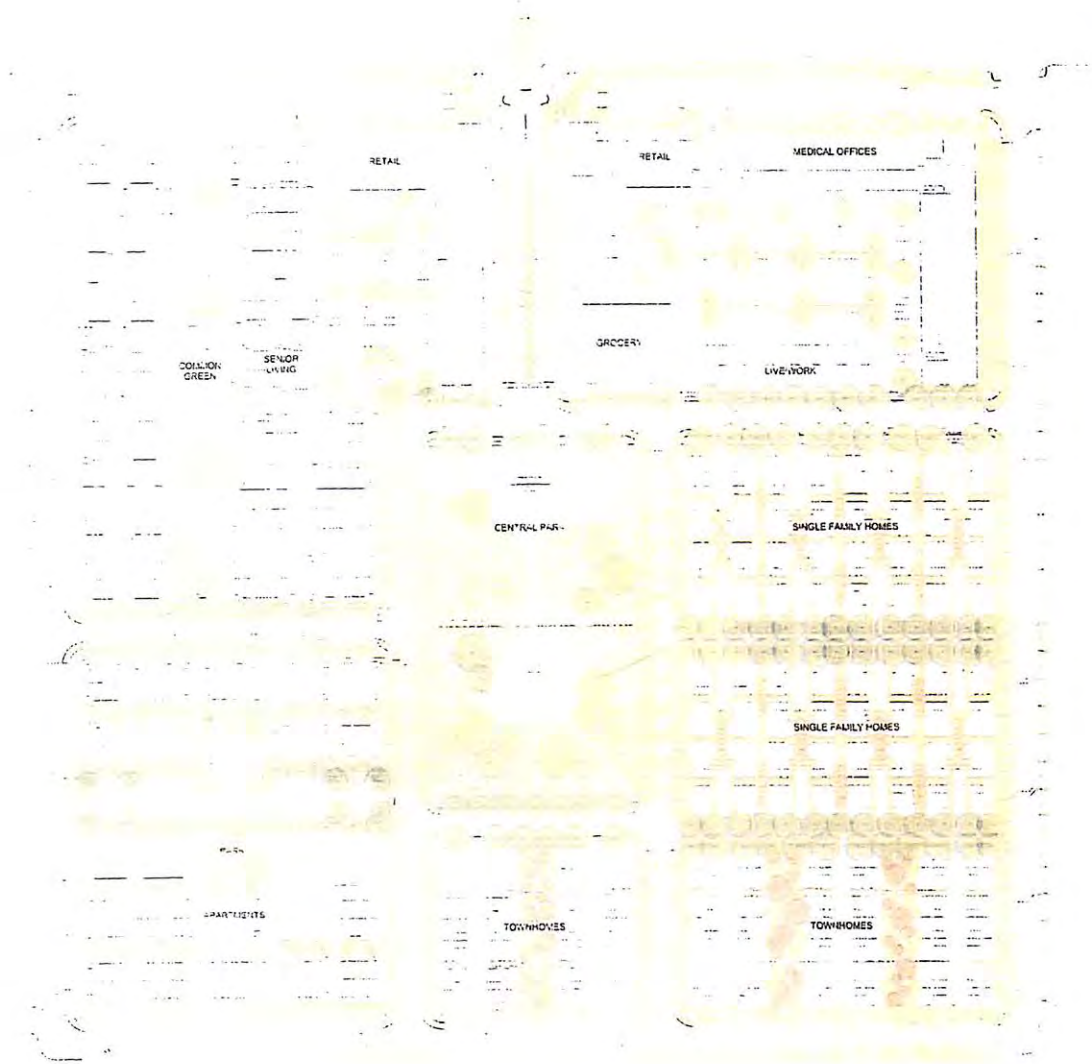


PLANT LEGEND

SHADE TREES

Scientific Name	Common Name
Acer rubrum	Red Maple
Pistacia chinensis	Chinese Pistache
Platanus x acerifolia	London Plane Tree
Ulmus parvifolia	Chinese Elm
Zelkova serrata	Sawleaf Zelkova
Quercus rubra	Red Oak
Platanus racemosa	California Sycamore
Magnolia grandiflora	Southern Magnolia
Quercus virginiana	Southern Live Oak

**All shade trees require a 6' wide minimum planting strip along drive lanes and parking areas.*

ORNAMENTAL TREES - EDIBLES

Scientific Name	Common Name
Citrus aurantiifolia	Mexican Thornless Lime
Feijoa sellowiana	Pineapple Guava
Pistacia	Pistachio
Olea europaea	Olive
Prunus persica	Nectarine
Citrus x sinensis	Orange
Citrus reticulata	Tangerine
Prunus persica	Peach
Diospyros virginiana	Persimmon
Ficus carica	Black Jack Fig
Prunus salicina	Japanese Plum
Prunus cerasus	Cherry
Malus	Apple
Punica granatum	Pomegranate
Prunus persica	Nectarine
Citrus x meyeri	Meyer Lemon
Prunus armeniaca	Apricot
Pyrus pyrifolia	Pear
Eriobotrya japonica	Loquat
Cydonia oblonga	Quince

SHRUBS - EDIBLE/HABITAT

Scientific Name	Common Name
Rosmarinus officinalis	Rosemary
Punica granatum 'Nana'	Dwarf Pomegranate
Ceratostigma plumbaginoides	Dwarf Plumbago
Fortunella margarita 'Nagami'	Dwarf Kumquat
Buddleja davidii	Butterfly Bush
Nandina domestica	Heavenly Bamboo

GROUNDCOVER - EDIBLE/HABITAT

Scientific Name	Common Name
Mentha	Mint
Thymus serpyllum	Creeping Thyme
Fragaria vesca	Alpine Strawberry
Gaultheria procumbens	Wintergreen
Origanum vulgare	Oregano
Vinca minor	Periwinkle

TURF

Scientific Name	Common Name
Festuca spp	Tall Fescue

RECEIVED
DEC 12 2014
EXHIBIT
APP #
DATE
APPROVED

KINGS RIVER VILLAGE

Concept Planting / Water Plan

SCALE: 1" = 80'

landscape architecture and planning
sacramento | santa rosa | san francisco

November 21 2014

RECEIVED
DEC 17 2014
By

EXHIBIT: O

APP #: TTM 6096 & CUP 2014-05

DATE: 12/17/2014

APPROVED:

PROJECT DESCRIPTION:

Kings River Community Partners, LLC ("Applicant") proposes to construct a ~~38.2-acre mixed~~ use community known as Kings River Village (the "Village") within the City of Reedley. The Village will mix residential, medical office, retail, professional, and recreational uses and will increase Reedley's residential and commercial densities consistently with Reedley Municipal Code § 10-13-9 and the Land Use Element Guiding Principles of Reedley's General Plan 2030. Specific anticipated Project features and attributes for each type of use, and the transit center, are set forth in more detail below. Final Project requirements will be included in the development conditions of the Vesting Tentative Subdivision Map, the Conditional Use Permit and the Community Design Guidelines.

Anticipated Specifics of Each Kind of Use

Residential Uses

In accordance with Reedley Municipal Code § 10-13-9, the Project promotes smart growth through compact infill development. Average residential density is high (at least 20 units per acre), and include a range of housing types and styles to accommodate a wide spectrum of socio-economic levels. The anticipated mix of housing consists of: seven live/work units, 64 detached single-family homes, 70 single-family attached fee simple units ("town homes") with 40 units configured as two units with one common wall ("duplexes") and 30 units configured as attached by one or two common vertical walls with no common horizontal walls ("triplexes"), 120 apartments, and 80 independent (non-assisted care) senior living residences.

The Village's anticipated seven live/work units will consist of 17,500 square feet of live/work space configured as a two to three bedroom unit upstairs, and space for either a commercial, professional or residential use below. These units will be constructed during Phase One.

The 64 single-family detached homes are anticipated to be two-story, three and four bedroom units of 1,500 to 2,100 square feet each. These units will be constructed as part of Phase Two.

The 70 attached town homes are also planned to be two-story units ranging from 1,200 to 1,800 square feet each and will all be constructed during Phase Two.

The 120 two-story garden apartment units, to be constructed as part of Phase Four, are anticipated to be 650 square feet each for the one-bedroom units, 900 square feet each for the two bedroom units and 1,100 square feet each for the three bedroom units. Most of these units will be two or three bedrooms.

The 80 senior living residences will average 750 square feet each, and will be constructed during Phase Three.

There are a total of 341 dwelling units within the Project, which does not exceed the 500 dwelling unit threshold set by CEQA § 15155. Therefore the Project is not considered to be a water-demand project.

Commercial, Retail and Professional Uses

The Village will contribute 106,900 square feet of medical and office space and 48,130 square feet of retail space (including a 12,000 square foot grocery store) to Reedley's offerings (total 155,030 sq. ft.).

The medical and office space would be constructed as follows: 85,500 in Phase One, and 21,400 square feet in Phase Three. With respect to the retail space, 27,500 square feet will be constructed in Phase One and 20,630 square feet will be constructed in Phase Three. These uses would be supported by the Project's 990 proposed parking spaces (286 built in Phase One, 265 in Phase Two, 264 in Phase Three and 175 in Phase Four) and a transit center providing car-free access to Kings River area, the Rail Trail, Downtown Reedley, Reedley College, public schools, and other employment areas. Project commercial, retail and professional use buildings will emphasize architecturally compatible building forms, neighborhood scale, interesting urban elevations, parking lots hidden from main streets, and buffered residential areas from the Dinuba arterial. The retail areas of the Project are designed to supplement, but not replace, Reedley's downtown retail area and to function as a commercial activity node for the Village community. Village office and retail uses will prioritize walkability with shade-covered promenades and plazas. The walk-friendly design will encourage a "park-once" strategy for visitors not arriving by transit and a walkable and bicycle friendly orientation for residents, all of which will reduce traffic, parking congestion and long-term impacts to air quality. With the exception of the proposed grocery store, all Project retail space includes second-floor office above.

Open Space, Recreation and Community Features

The nearly three-acre central Village Green Park will be constructed as part of Phase Two and will provide active and passive recreation for residents and visitors. Improvements to the park may include a running track, barbeque area, gazebo, barbeque/picnic area, a play area for toddlers, fountain, and dedicated spaces for a Farmers' Market and/or community garden. As the Village Green Park will be maintained by Home Owners' Association fees, it is included in Phase Two to facilitate receipt of sufficient funds to maintain the park from primarily residential end users.

In addition to the park, the Village will offer two pools and two community centers, also funded and maintained by private assessment. The common green creates a place-making center space for the senior independent living neighborhood. Residents will have a comfortable sidewalk looping the green, which may be planted with a rose garden and extensive other flowering plants and trees. The small internal mini park within the apartment complex is intended to be a meeting spot with tables and chairs for apartment residents. For larger gatherings the apartments are immediately across Raspberry Road from the large Village Green Park.

The Project adjoins and is immediately west of Reedley's Sports Park, a 50-acre facility that, at build out, will include a wide variety of playing fields. Connections will be made along South Peach Avenue to permit residents to walk or ride bicycles directly into the Sports Park, again helping to reduce vehicle miles traveled ("VMT") and greenhouse gas ("GHG") emissions. In addition, Reedley's Rail Trail project and its connecting pedestrian/bike trail system will be linked to the Project to encourage hiking and biking across and into downtown Reedley and the Kings River recreation area.

Transit Center

The Village has been designed to accommodate conventional parking and traffic demands without the need for a Transit Center. Therefore, it is not an essential element of the Village that a Transit Center be built and operated. However, the Village aspires to become a Transit Oriented Development with a goal of 15% of Village residents living *and* working within the Village, and another 15% living in the Village and utilizing an integrated, embedded transit center, as opposed to private vehicles, to get to and from work. It is intended that the Master Developer will work with the Fresno County Rural

Transit Authority (FCRTA) to find revenue sources for the construction and operation of the transit center through grants and transportation funding. (Neither this process nor the funding will involve the City.) Busses would enter and leave the Village on Dinuba Avenue, and proceed from/to Dinuba Avenue along a wide north-south local street to/from a dedicated, half circle bus driveway at the transit center where passengers, bikes and bags would be loaded and unloaded.

The transit center is also expected to provide access to Kings Canyon Unified School District busses, as well as para-transit vans. The availability of public transportation within the Village will encourage use of public transit by those both able and unable to drive, which will result in a reduction of automobile vehicle miles traveled when compared with business-as-usual development, as well as potentially a reduction of ownership and use of private vehicles.

Anticipated Project Build-out Phasing and Configuration

Applicant anticipates building the Village in four phases, as set forth below, each consisting of a "quadrant" of the approximately square, overall project. Phase One is approximately 7.64 acres; Phase Two is approximately 15.69 acres; Phase Three is approximately 9.20 acres; and Phase Four is approximately 5.67 acres (see Vesting Tentative Subdivision Map, Phasing Plan). Note, however, that the construction phases are not necessarily listed in the order of construction, and can be implemented in a variety of configurations.

Phase One

Phase One includes Lots 1 through 7 consisting of office, retail, medical and parking uses as well as the live/work units. Phase One will construct approximately 85,500 square feet of medical/office space, approximately 27,500 square feet of neighborhood serving retail, and 17,500 square feet of live/work space (seven live/work units). The retail component includes area for a medium-sized neighborhood grocery store. Other retail spaces will be targeted, to the extent possible, for underserved goods and services as identified in Reedley's retail leakage study (Buxton, 2010.) In order to support the uses constructed during Phase One, this phase includes the proposed installation of 286 parking spaces.

Phase Two

Phase Two includes Out Lots A and B, and Lots 19 through 161, consisting of single-family residential homes in courtyard and town home configurations in the southeast quadrant of the Project. This quadrant includes 64 detached courtyard cluster residential homes and the 70 attached residential town homes. In order to support these uses, Phase Two includes the proposed installation of 265 parking spaces. All homes are sited for one-car garages substantially out of view from public streets, utilizing courtyards. As noted above, Applicant also proposes to construct The Village Green Park and Transit Center as part of the Phase Two construction.

Phase Three

Phase Three includes Lots 8 through 14, consisting of office, retail, and senior independent living uses in the northwest quadrant of the Project. Phase Three will construct a mixed-use neighborhood consisting of approximately 21,400 square feet of second-floor office, 20,630 square feet of retail, and 80 single-story senior independent living homes age-restricted for residents over the age of 55. The

senior independent living homes will be supported by a small common clubhouse, a small outdoor recreation and seating area and a small pool. In order to support the uses constructed in Phase Three, this phase includes the proposed installation of 264 parking spaces.

Phase Four

Phase Four includes Lots 15 through 18 in the southwest quadrant of the site. This quadrant will construct 120 two-story garden apartment units, a common facility clubhouse, a small pool, and a small, centrally located passive park area. In order to support the uses constructed in Phase Four, this phase includes the proposed installation of 175 parking spaces.

Project Setting/Site

Site and Site Attributes

The Kings River Village site is in the southeastern sector of Reedley, on the south side of Dinuba Avenue, approximately 0.2 miles to the east of Buttonwillow Avenue. The area is zoned "ML," which allows for mixed use under Reedley Municipal Code § 10-13-9, discussed extensively below. Therefore, the Project is consistent with applicable zoning requirements. None of this area is Prime Farmland, Unique Farmland, Farmland of Statewide Significance, zoned for agricultural use, or subject to a Williamson Act Contract. Historically, the western portion of the site was used for farming stone fruit, but all of the trees have been removed, as they were at the end of their productive life. Currently, the western portion of the site consists of nothing more than disturbed ground and a small house of no historical significance.

There is no known threatened or endangered plant or animal species, or migratory fish or wildlife species on the site. Nor is there any wetland, riparian or other sensitive habitats on the site. The proposed development will not interfere with a tree preservation policy or ordinance, or conflict with any habitat conservation or natural community conservation plan. The site is highly disturbed and does not contain any known archeological resources, mineral resources, forest resources, or significant historical or paleontological resources. Nor does the site contain any known unique geologic features or human remains. The site is not within the rupture of a known earthquake fault, nor subject to strong seismic ground shaking. The site is not within a floodplain or tsunami zone.

Surrounding Uses

A self-storage facility is to the immediate west of the site. Continuing east from the Project approximately six miles is the town of Dinuba. A wholesale nursery facility sits to the immediate southwest of the site. Immediately to the south is approximately 50 acres of land, jointly owned by the City of Reedley and the Kings Canyon Unified School District, which includes a storm drain pond, undeveloped area and some space in use for industrial/light industrial purposes. This land is to be developed as the Central Valley Transportation Center. To the east of the site is the approximately 50-acre Reedley Sports Park. To the north, across Dinuba Avenue, is the publicly funded, 60-unit affordable housing project, Kings River Commons. To the northeast is a subdivision consisting of single-family homes. Thus, the Project will not divide an existing community or reduce the availability of existing housing.

Specific, Anticipated Project Design Features and Attributes

Hydrology and Water

The Village will conserve potable water and achieve minimal water consumption and maximize water conservation through a variety of mechanisms. In partnership with the City of Reedley and the Kings Canyon Unified School District, the Project will include construction of an unlined retention basin on the School District property immediately south of the site. The retention basin will provide approximately 14 acre-feet of water storage. The retention basin will be constructed along with Phase One, as its spoils will be used for surcharge on-site and to make the facility immediately available for Project use. The anticipated 23,000 cubic yards of soil removed during excavation of the retention basin will be used for necessary fill during construction of the Village. The retention basin will be fed by rainwater, in addition to stormwater runoff from the Village that will pass through bioswales prior to entering piping to the basin. It is the City's goal to tie both ponding basins to the Traver Ditch, whereby Alta Irrigation District can convey water to maximize ground water recharge. The bioswales will be located in landscaped strips along public streets will filter the water as it transitions to underground pipes that will transport the stormwater from the Village to the retention basin. These features mitigate sediments from entering the retention basin. The Village Green Park eliminates the need for individual yards to plant lawns and thereby reduces the Project's water demand to below what would be required by traditional mixed-use developments of comparable size and composition.

Water conservation will also be achieved by requiring builders to meet all low-flow fixture requirements under the California Building Code 2013 (CBC), and by requiring builders to exceed CBC minimums through the use of computerized weather-sensitive irrigation, water efficient landscaping practices through the reduction of turf grass by at least 40% and increasing the amount of plants that are native or adapted to the region by at least 25%, water-efficient washing machines and dishwashers, and plumb-ready laterals to permit individual homeowners to install home grey water recycling systems for irrigation. Applicant also plans to encourage builders to plumb rainwater into grey water recycling systems consisting of appropriately small underground tanks associated with, and located within the private property footprint of, the single-family attached and detached residential living units. These tanks will be managed by the homeowner's association. Ideally, these systems would pay for themselves over time by allowing the capture of rainwater during the wet months to be stored for use to water plants associated with the same units during the dry season, effectively reducing homeowner's water costs while conserving potable supply.

The combined result of the water-saving features Applicant plans to build is that use of City potable water for the Village's landscape strip irrigation will be minimal and the Village's consumptive use will be less than that anticipated by Reedley's General Plan 2030 and analyzed in the associated FEIR. A Water Service Assessment is unnecessary because the Village is not a "project" under California Water Code § 10912.

Traffic and Parking

In addition to the transit center discussed above, additional Village features will minimize vehicle miles traveled and therefore long-term impacts to traffic and air quality. Specifically, street trees for shade and edible landscaping (stone fruit and berries) for picking by pedestrians will flank the Village's walkways to encourage inter-Village travel though non-vehicular means. Other anticipated design elements to reduce traffic impacts and thus impacts to air quality include calming/shared

parking roadway designs known as complete streets (e.g., narrowed widths, smaller turning radii, textured pedestrian pavements, efficient emergency vehicle access) and the compact, mixed-use nature of the Project.

The Project density and combination of shared-parking uses results in a reduction of necessary parking supply in order to meet overall parking peak demand. For example, senior independent living residents typically reduce vehicle miles traveled, as without children in the home the need for daily trips are significantly diminished. Many seniors eventually discontinue car ownership when they are conveniently served by transit, as they will be in Kings River Village. Senior living retirement couples rarely maintain more than one vehicle as the need for multiple automobiles is substantially removed. In the single-family residential neighborhoods, while sufficient parking is available for two cars per home, the Project is intended to appeal to young families and single apartment dwellers that value the transit option. The Project Information Center will educate potential residents on the potential cost savings to them of reducing down to one family car, all made possible through active community programs enabling transit passes, ride-sharing databanks for residents to use with work/shopping/school trips, bike-friendly services including rentals/sharing and connectivity to key Reedley locations, and para-transit services. Overall, even with an aggressive campaign to offer cost-effective options to conventional VMT, the Project includes approximately 990 total parking spaces.

Public Safety

The Village's design will discourage crime by consisting of gridded streets (no dead ends) to allow for multiple points for fire and police to access to each residence and business. The Project includes three points of ingress/egress at Dinuba Avenue and an emergency vehicle access roadway at the eastern boundary of the community. No single residence or business will be more than 100 feet from an access point. Long, unobstructed lines of site along streets and from parks and community gathering places follows the "eyes on the streets" concept proven to reduce crime by allowing residents to assist in policing the Village by allowing them to see, and report, any suspicious or dangerous behavior or conditions. Crime will also be discouraged through the provision of adequate lighting in the central park, though this lighting will be shielded so as to avoid light pollution and obscuring of the night sky. Lighting in the central park will be paid for through a privately funded, special assessment HOA for landscaping and lighting that will eliminate City expense and responsibility for the park's landscaping and lighting. (The City will have responsibility to provide roadway, landscaping and lighting maintenance along Village streets because of the public nature of these roadways. But as specified in the Master Development Guidelines, the narrower width of the Village streets will keep the roadway and lighting requirements and associated costs of these areas below that of conventional streets.)

Village public health and safety will be enhanced by a looped water system so that each phase has a minimum two points of connection with the City's water main such that the fire suppression and response system will meet or exceed City requirements for fire flows, while ensuring a constant potable water system that meets or exceeds State Drinking Water Standards.

Aesthetics

The Project will be subject to development conditions of the Vesting Tentative Subdivision Map, the Conditional Use Permit and the Community Design Guidelines that obligate the Project to achieve high standards of architectural design and compatibility in building forms and neighborhood scale, along with interesting urban elevations, parking lots hidden from main streets, and buffered residential

areas from the Dinuba arterial. Project visual design will be consistent with other construction within the City of Reedley and final design will be consistent with the Vesting Tentative Subdivision Map and Conditional Use Permit Conditions of Approval, and the Community Design Guidelines. Currently, the Applicant anticipates and intends that Project aesthetic-enhancing design features will include at a minimum, front porches and reduced dominance of garages through the use of courtyards and screening for trashcans and rubbish generated by the commercial uses. The 286 parking spaces constructed in Phase One will be hidden from arterial view with structures and extensive use of street trees and hedge landscaping. The goal is for a unified architectural theme to be predominant through the commercial and office buildings and structures. Other aesthetic considerations in design will take into account the climatological, cultural, communitarian, and historical references. Design Guidelines will inform all vertical development interests with respect to these considerations, including the priority of a pedestrian-friendly environment for all Project residents and visitors.

Energy

The Project seeks to promote a high level of energy efficient design and construction. Builders will be strongly encouraged to include photovoltaic solar cells on all structures, whether commercial or residential. Design of all residential units and commercial/office buildings will be oriented as favorably as possible to support the rooftop solar systems. The Village Green Park and transit center will feature rooftop solar wherever possible with the goal to become a net zero energy park and transit facility. The park and transit center will also use high efficiency lighting. The installation of Energy-Star appliances, dual glazed low-E windows, high efficiency insulation, zoned HVAC, natural ventilation, passive solar heating and cooling, VOC-free materials, and other design elements will make the Project energy efficient and sustainable. Electric vehicle charging stations may be installed at the transit center and are expected to be included in the MOU with FCRT with respect to operations and maintenance. The City will have no responsibility for electric vehicle charging costs and maintenance.

Air Quality

Although minimal short-term impacts to air are anticipated during construction, requirements to minimizing idling, use of water for dust suppression and other best practices will be implemented. Also, Project guidelines will incorporate strong encouragement for the use of indigenous materials that will reduce vehicle emissions and therefore carbon impacts in sourcing of materials during construction.

Long-term impacts to air will be further mitigated because of the pedestrian nature of Kings River Village, as opposed to a traditional project of comparable size. Specifically, the immediate access grocery, retail, professional services, transportation, and recreation all within the residential community will result in far fewer vehicle miles traveled per resident on daily, weekly, monthly, and annual bases than in other sprawling, residential-only developments. Also, Village construction will follow the California Building Code in all respects, and Project guidelines will incorporate recommendations for builders to avoid VOCs (volatile organic carbons) in construction materials and encourage toxic-free building. Finally, the Project will comply with all applicable air quality rules and regulations and will be conditioned, through the Project conditions of approval, to comply with San Joaquin Valley Air Pollution Control District Rule 9510 (the Indirect Source Review Rule).

Project Consistency With Reedley Municipal Code § 10-13-9

The legislative intent of Reedley Municipal Code § 10-13-9 is to encourage more dense and orderly development of urban uses. Developments are consistent with this intent when they include gathering places where residents may interact, work, and obtain goods and services in the same general location and emphasize pedestrian activities and linkages, priority transit routes and facilities to serve the development. The statute makes clear that the inclusion of these attributes is intended to reduce the number of vehicular miles traveled by promoting alternative modes of transportation, including pedestrian pathways, bicycling pathways, and public transportation. To accomplish these goals, the statute sets minimum density requirements and permits mixed use development. The statute defines "mixed use" as,

> A concept and/or design that is a finite development project within whose boundaries residential uses are introduced and fully integrated with office, commercial and light industrial land uses, designed to offer more intensification and concentration of urban uses, and promote a walkable environment in a locale where residential uses are in close proximity to places of employment and commerce.

The Project location is zoned "ML," which permits mixed use projects provided they permit the following findings set forth in Reedley Municipal Code § 10-13-9.C.1.b(1) through § 10-13-9.C.1.b(5)[1]. As shown below, the Project satisfies each of the requisite elements:

> The project shall be a minimum of four (4) acres. (Reedley Municipal Code § 10-13-9.C.1.b(1).) As noted above, the Project is 38.2 acres. Therefore, the Project is well in excess of this minimum area requirement.
>
> The integration of a residential use must be developed have a residential planned land use density of 20 units per acre (based on the Project's 38.2 acres). (Reedley Municipal Code § 10-13-9.C.1.b(2).) The overall Village residential density averages 21 units per acre, in excess of the minimum requirement.
>
> The subject property shall not share a common property line on two (2) or more sides with a designated heavy industrial zone district. (Reedley Municipal Code § 10-13-9.C.1.b(3).) There are no heavy industrial zoned properties adjoining the Project. Therefore, this element is satisfied.
>
> The project shall be architecturally unified throughout the entire site and compatible with surrounding development. (Reedley Municipal Code § 10-13-9.C.1.b(4).) As specified in the Master Development Guidelines, the various product types within the mixed use Village consistently embrace a culturally authentic design respecting rural archetypes while introducing a more urban appearance. The proposed architecture is compatible with the Village Commons affordable housing project immediately to the north. All other surrounding development is light industrial.

[1] Only sections Reedley Municipal Code § 10-13-9.C.1.b(1) through 10-13-9.C.1.b(5) are discussed herein, as Reedley Municipal Code § 10-13-9.C.1.b(6) through 10-13-9.C.1.b(9) set forth affirmative obligations on the part of the City, and therefore are not relevant to the evaluation of the Project's consistency with Reedley Municipal Code § 10-13-9.

A project may be phased over time, however, each phase shall contain an integration of a minimum of two (2) of the mix of uses. (Reedley Municipal Code § 10-13-9.C.1.b(5).) Three of the Village's four phases include creation of multiple uses. Phase One includes retail, medical office, professional service, and residential uses. Phase Two includes residential, recreational, and transit uses. Phase Three includes senior living, retail, and professional service uses. Phase Four includes only residential uses but will be immediately adjacent to Phase Three and its mix of uses and will integrate with the uses developed in Phases One through Three. At all times following the first stage of development, the Project will include a minimum of two or more uses.

Mixed use developments must also satisfy the development standards set forth in Reedley Municipal Code § 10-13-9.D.1 through 10-13-9.D.4, which the Project does as follows:

The development standards of the underlying zone district shall generally guide the development of the subject property. (Reedley Municipal Code § 10-13-9.D.1) As noted above, the site is zoned "ML" and the Project will satisfy every element required for mixed use in a "ML" zone.

The mix of residential use with permitted office/commercial/industrial uses shall occur both in the horizontal and vertical axes except that the director may waive the requirement for a vertical mix of use, if the design of the project, or the inclusion of a residential component to an existing development illustrates performance standards that meet the intent of the section by providing an integrated, well designed network of pedestrian pathways connecting the places of residences with places of work, commerce, and open space areas. (Reedley Municipal Code § 10-13-9.D.2.) Phases One and Three of the Village will include a mix of use types both in the horizontal and vertical axes.

Each building within a mixed use development project shall have a minimum of two (2) stories. Notwithstanding the foregoing, any use for seniors' independent or congregate care living shall be permitted to limit their buildings to one story conditioned upon architectural compatibility with the remainder of the two-story buildings in the mixed use development project. (Reedley Municipal Code § 10-13-9.D.3.) With the exception of the senior independent living units, which are proposed as one story, each of the buildings in the Project are proposed to have at least two stories. The architectural theme of the senior living units is fully compatible will all other adjoining uses within the Village.

If modifications to the development standards are proposed, the applicant is required to provide supporting evidence for the modification of the general standards, which shall be submitted with the project application. (Ord. 2014-001, 5-13-2014). (Reedley Municipal Code § 10-13-9.D.4.) The Master Developer shall remain the Applicant throughout build out for the purposes of any proposed modifications to the development standards.

Project Consistency With Reedley's Land Use Element Guiding Principles As Set Forth in Reedley's General Plan 2030

The Project as proposed achieves all of the City's Land Use Element Guiding Principles in the General Plan 2030. These principles, and the ways in which the Project satisfies them, are as follows:

(a) Protect the agricultural economic base of the Reedley area by encouraging the preservation of the maximum feasible amount of productive and potentially productive agricultural land. *The Project is within City boundaries on highly disturbed, essentially vacant land zoned industrial/mixed use and that does not currently support any agriculture. Additionally, approximate 50% of the project sits on land that is designated for priority development as a by-passed parcel in Reedley's General Plan 2030 (LU2.5E). Thus, the project will not result in any impacts to agriculture.*

(b) Plan for urban growth in a manner that minimizes impacts on agriculture and the consumption of agricultural land. *The Project is within City boundaries on highly disturbed, essentially vacant land zoned industrial/mixed use and that does not currently support any agriculture. Thus, the project will not result in any impacts to agriculture.*

(c) Increase residential densities to reduce the impacts related to loss of agricultural lands. *The Project includes single-family residential housing at an average density of 21 units per acre, well above the lower densities of most existing neighborhoods in Reedley and the Project is within City boundaries on highly disturbed, essentially vacant land zoned industrial/mixed use and that does not currently support any agriculture. Thus, the project increases average residential densities and will not result in the loss of any agricultural lands.*

(d) Establish a pattern of urban development which provides for the economically efficient provision of urban services with particular emphasis on sewer, water and storm drainage infrastructure. *The Project is served at its perimeter boundaries by existing sewer and water infrastructure with sufficient capacity to accommodate the Project. Storm drainage will be sustainably reclaimed through a dedicated retention basin and harvesting of rainwater for irrigation. Project wastewater will be sent to the City sewer system. Groundwater recharge will result from the use of pervious pavement in the park, minimization of paved asphalt areas that have a high runoff co-efficient and infiltration of winter rains in excess of storage capacity. The Project will also incorporate existing public bus services through a public/private partnership with the FCRTA and to which the FCRTA has verbally committed as well as Kings Canyon Unified School District buses based on a strong commitment by the School District.*

(e) Seek a balanced and compatible land use pattern which accommodates projected population growth and encourages alternative transportation such as walking, bicycling or transit. *The Project includes an internal jobs/housing balance and includes walking, bicycling and transit priorities including a transit center and a compact, mixed-use composition, to encourage alternative transportation. Housing densities are greater than that anticipated in Reedley's General Plan 2030 and analyzed in the associated FEIR. City population totals are projected to increase by almost 4,000 people during project build out (2016 through 2021), with the project contributing approximately 950 of those residents (based upon an average 2.8 persons per home - adjusted for seniors/apartments).*

(f) Provide transitions between various land uses and intensities using high quality design. *The Project is utilizing a Vesting Tentative Subdivision Map with development conditions and a Conditional Use Permit with Community Design Guidelines to ensure a high level of architectural design quality and thematic consistency.*

(g) Integrate land use planning, transportation planning, and air quality planning to make the most efficient use of public resources. *The Project includes a commitment to a balanced mix of uses, walkable streets, renewable resource energy features, storm water reclamation, water conservation, and transit. The Project includes energy and water-saving features and avoids all impacts to land currently used for agriculture or zoned for agricultural uses. The Project includes features to integrate existing mass transit services, and has a verbal commit from the providing agencies (FCRTA and the Kings Canyon Unified School District) for such integration.*

(h) Development in the planning area shall occur in a fashion that protects and enhances air quality and water quality. *The Project will enhance air quality through aggressive measures to reduce auto dependency for residents and visitors alike, which will result in minimizing long-term emissions when compared to conventional development. Water quality is enhanced through reduced residential consumption, particularly stormwater capture and irrigation re-use, reducing the demand on potable water for the project, as well as bioswales that include a filtration membrane to ensure the quality of stormwater input to a dedicated retention basin.*

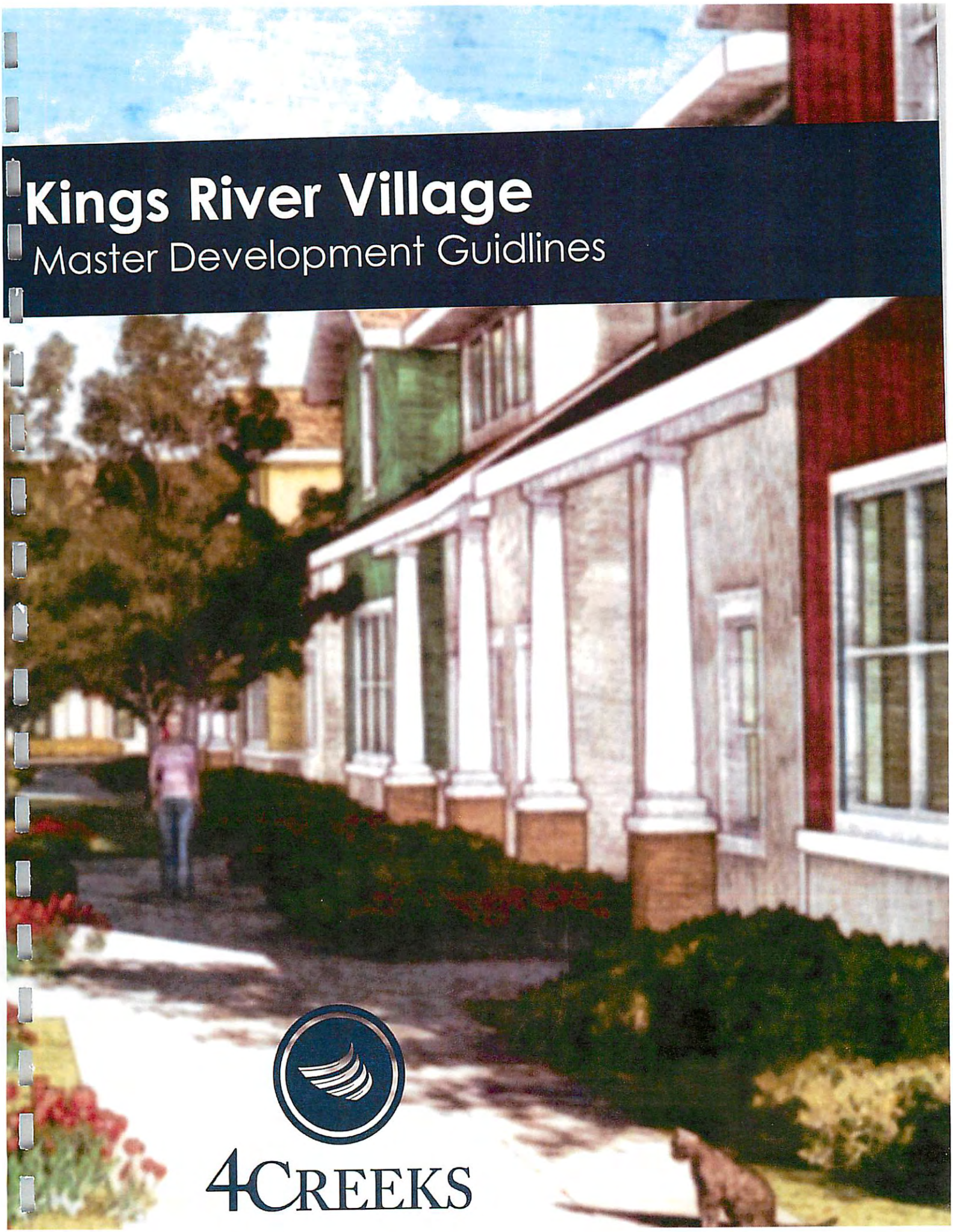
(i) Public open space shall be made an integral part of new development in the planning area. *The Project immediately adjoins Reedley's 50-acre sports park and further includes a 2.7-acre Village Green Park for active and passive community use, two common green areas for the use of the associated units, two pools, and multiple community courtyards.*

Anticipated Development Agreement

The Applicant expects construction of the Project under a Development Agreement with the City pursuant to Government Code 65864 *et seq*. The Development Agreement is anticipated to include individual rights and obligations of both the City and the Master Developer with respect to the payment amount and timing of Project development impact fees and credits related thereto, the term and conditions of tentative map and appurtenant document approvals, the timing of the map recordation process and the commencement and termination of the development agreement itself, the process of issuance of grading and building permits and timing requirements for Project construction progress, the effective standards of the Project including the Design Guidelines and the design submittal approval process related thereto, dedication process of public streets, HOA (or CFD) obligations of private property owners, code requirements, and other matters typically addressed in similar project development agreements.

Kings River Village

Master Development Guidlines



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Submitted to the City of Reedley:

RECEIVED
DEC 17 2014
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COMMUNITY DEVELOPMENT DEPT.

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EBM DESIGN GROUP ARCHITECTS

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1 INTRODUCTION

SECTION 1: INTRODUCTION

1.1 PROJECT DESCRIPTION

The Kings River Village mixed use project will be located in central California on the south eastern edge of the City of Reedley, which is also known as the "The World's Fruit Basket". The project will provide for a mix of uses within the City that will include office, retail, and a variety of residential choices.

The City of Reedley is in Fresno County within the central valley of California. It is located approximately 20 miles southeast of Fresno, CA and approximately 90 miles north of Bakersfield. The City of Reedley has a total area 4.858 square miles where its population of 24,622 people resides. Figure 1.1-1 provides a regional location map that shows the City of Reedley's location relative to other cities in the area. The City of Reedley's long history in agriculture started with Thomas Law Reed who, in the mid-1800s, began growing wheat to supplement Gold Rush miners. Since then its agriculture has transformed to comprise of mostly fruit and vegetable crops. To maintain the City's rich history in agriculture, the Kings River Village planned community will incorporate agricultural themes into the architecture and landscaping of the community.

The Kings River Village consists of a mixed use development within the City of Reedley Light Industrial (ML) Zone. The project is situated on the south side of Dinuba Ave approximately ¼ of a mile east of the roundabout at S. Buttonwillow Avenue. Figure 1.1-2 represents a local vicinity map for the project.

The Kings River Village planned community in Reedley brings the aspiration of neighborhoods with reduced carbon footprints, strong communitarian objectives, jobs/housing balance, and forward-thinking sustainable design and

operational features that provide a model for controlled growth not only in the City of Reedley but throughout the entire San Joaquin Valley.

There are several types of land uses surrounding the project area. Directly to the north of the project area there are High Density Residential, Low Density Residential, and Neighborhood Commercial Land uses. The Low Density Land Use is comprised of an established subdivision. Neighboring the subdivision are the High Density and Neighborhood Commercial Land uses. To the west of the project area is a Service Commercial and Light Industrial Land Uses. The Service Commercial area to the west is currently occupied by a mini storage business. Public Institution land use borders the project area to the south. To the east there is a City of Reedley regional park within the Open Space Land Use. The City of Reedley General Plan designations can be seen in Figure 3.1-1.

In accordance with Reedley's General Plan 2030, The Project promotes smart growth through compact infill development. Site designs include desired increases to residential and commercial densities along gridded streets and the efficient use of urban services in a transit-oriented community. Residential densities are designed to achieve both medium and high density designations within a range of housing types and styles accommodating a wide spectrum of socio-economic levels, all including exceptional architectural design. To promote a pedestrian scale community and to conserve both agricultural land and water, lots are reduced in size with narrower street widths and homes feature front porches and reduced dominance of garages through the use of courtyards and alleys. Extensive use of street trees on all streets will provide shade and aesthetic beauty to the community. Detained storm water within the landscape strips will promote groundwater recharge and reduce irrigation demand.

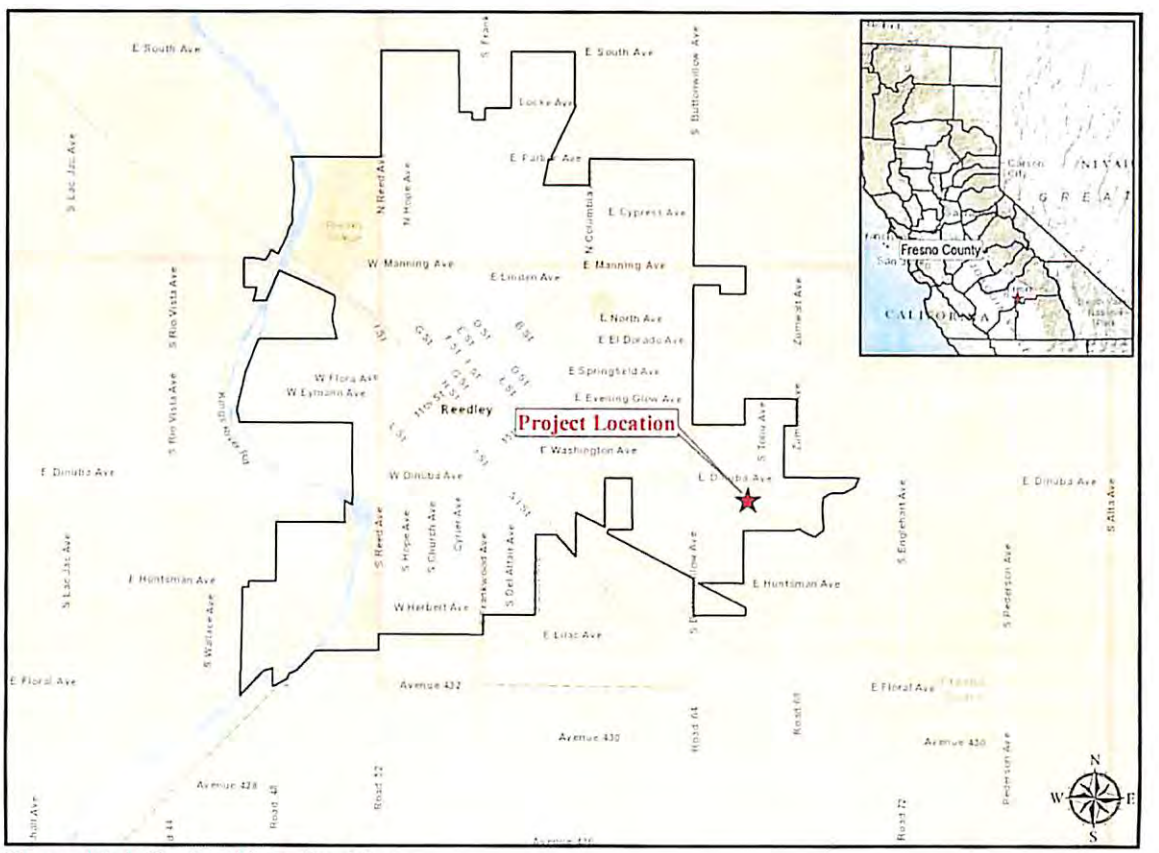

Figure 1.1-1: Regional Location Map

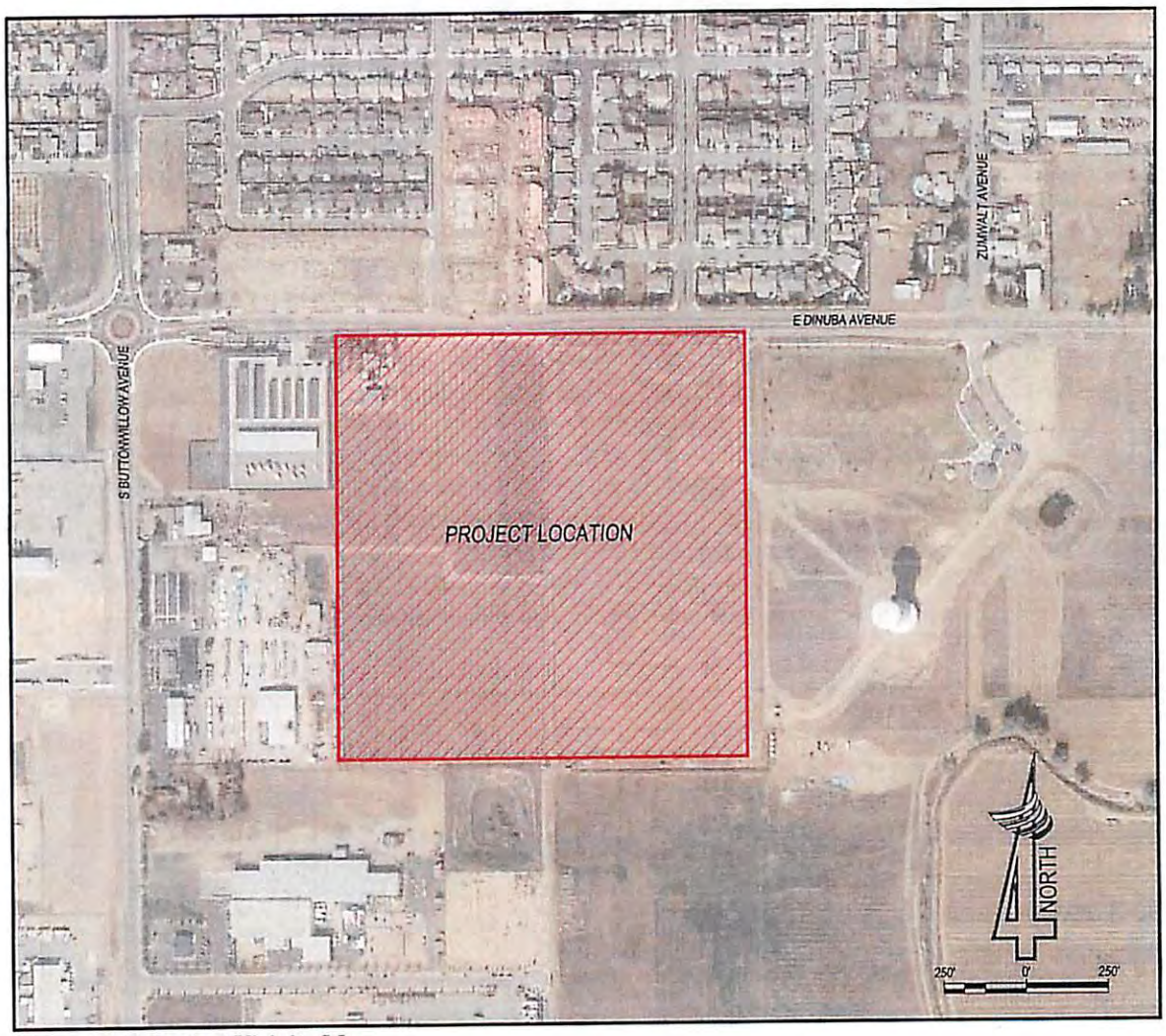

Figure 1.1-2: Project Vicinity Map

1.2 Master Developer And Master Development Guidelines

The Master Developer is the individual, district, or organization that legally governs the approval of the Master Development Guidelines. The city approves the Master Development Guidelines but does not interpret or administer and any deviations must be approved by the Master Developer before it is sent to the city for approval. The Master Development Guidelines are to be followed when any development within the planned community occurs. The Master Development Guidelines have standards for underlying architectural themes, design constraints, methodology and organization of the development. Prior to the issuing of the building permit, the owner will be required to submit site plans with elevations, landscape, and hardscape design to the Master Developer and they will dictate if the submitted items meet the requirements set forth in the Master Development Guidelines.

1.2 MASTER DEVELOPER AND MASTER DEVELOPMENT GUIDELINES

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The Master Developer is the individual, entity~~district~~, or organization that has authority to ~~legally~~ governs the ~~approval~~ implementation of ~~of~~ the Master Development Guidelines. The Master Developer will form a Design Review Committee, which shall initially be composed of the Master Developer, Architect of Record and Engineer of Record. The role of the Design Review Committee is to orchestrate and ensure the implementation of the adopted Master Development Guidelines (MDG). The Committee may also be expanded to include member(s) of the HOA, and the Master Developer, Architect/Engineer of Record may be replaced with equally qualified members. The Committee, at a minimum shall be formed prior to the commencement of the first Phase and be in effect through complete build-out of the project.

The Guidelines are to guide the construction of the physical environment, while relying upon the established standards, underlying and unified architectural thematics, design constraints, methodology and organization of the development. The MDG are to be followed when any development is proposed or occurs within the boundaries of the planned community.

Through the entitlement approval process, the ~~The~~ city approveds the Master Development Guidelines but does not interpret or administer the Guidelines. ~~and any deviation must be approved by the Master Develop before it is sent to the city for approval. The Master Development Guidelines are to be followed when any development within the planner community occurs. The Master Development Guidelines have standards for underlying architectural themes, deign constraints, methodology and organization of the development.~~

Any proposed development (planning approvals and or building permits) within the planned community area is required to first submit their proposal to the Design Review Committee. The applicant/developer should submit at a minimum a ~~Prior to the issuing of a building permit, the owner will be required to submit~~ site plans with elevations, landscape, and hardscape design for their review. The Design Review Committee will make a determination if the proposed project is consistent with the intent and standards set forth in the MGD. ~~to the Master Developer and they will dictate if the submitted items meet the requirements set forth in the Master Development Guidelines.~~

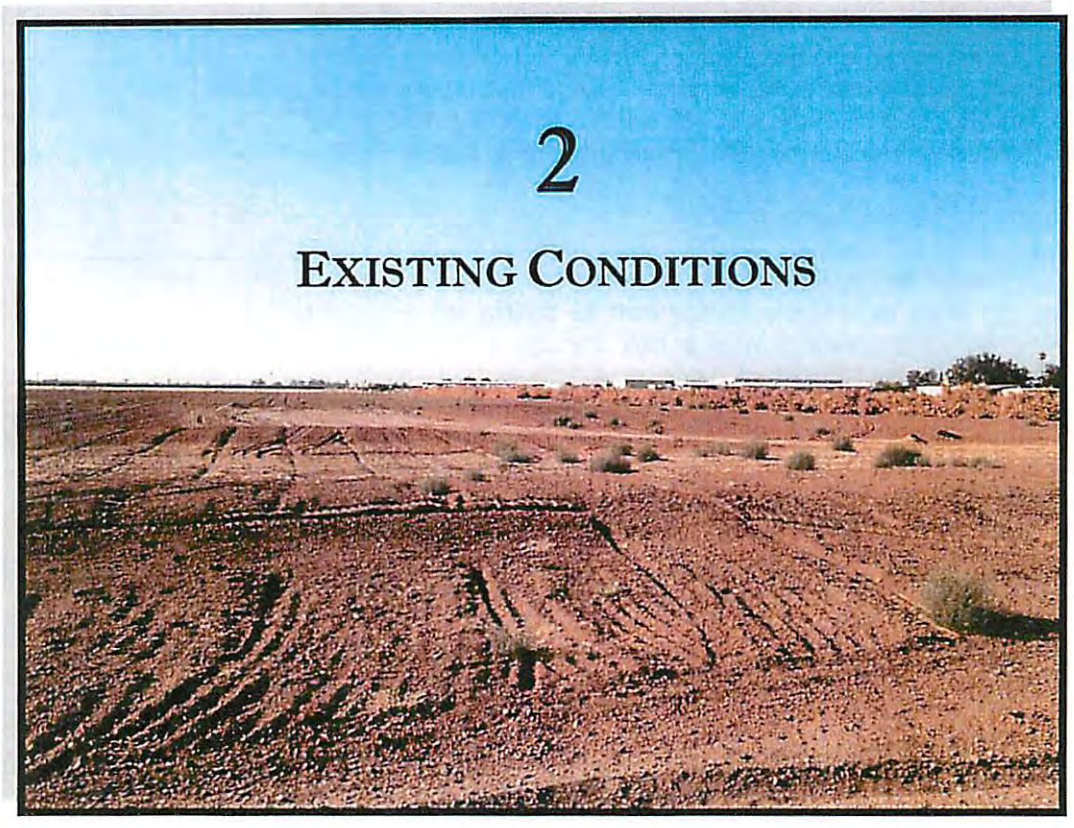
~~The Master Developer will be a part of the Design Review Committee. All approved uses within the adopted master plan shall be subject to review and approval by the Design Review Committee, which shall initially be composed of the Master Developer and the Project Architect and Project Engineer of Record.~~

Based upon the findings of the Design Review Committee t~~T~~he Project Architect of Record may ~~shall~~ prepare a letter indicate~~sing~~ design conformity with ~~to~~ the MDG and ~~Master Plan~~ authorize the applicant/developer to submit the appropriate application (entitlement/building permit) ~~prior~~ to ~~submitting any project to~~ the City of Reedley ~~for building permits~~. The City of Reedley shall not accept or process any entitlement or building permit application without the approval of the Design Review Committee.

The Master Developer will be a part of the Design Review Committee. All approved uses within the adopted master plan shall be subject to review and approval by the Design Review Committee, which shall initially be composed of the Master Developer and the Project Architect and Project Engineer of Record. The Project Architect of Record shall prepare a letter indicating design conformity to the Master Plan prior to submitting any projects to the City of Reedley for building permits.

1.3 Purpose and Intent of Mixed Use Land Use

The project area lies within the Light Industrial Land Use zoning district. The City of Reedley, through the Municipal Code, has been outlined to allow Mixed Use Development within the Light Industrial Zone designations. The master plan project meets the density of 20 units per acre per Section 10.13.9. The concept of mixed use is to fully integrate office, commercial and light industrial and residential land uses. The City of Reedley's intent for Mixed Use is to encourage more dense and orderly development of urban uses which include gathering places where residents may interact, work, and obtain goods and services in the same general location. There should be an emphasis on pedestrian activities and linkages, priority transit routes and facilities to serve the development, and reducing the number of vehicular miles traveled by promoting alternative modes of transportation, including pedestrian pathways, bicycling pathways, and public transportation as major facets in the design of each project.



SECTION 2: EXISTING CONDITIONS

2.1 SITE CONDITIONS/SURROUNDING ENVIRONMENT

The entire project property consists of two contiguous parcels. The east and west parcels of the project location are agricultural land. The parcels are located on the south side of Dinuba Avenue approximately 0.25 miles east of the roundabout at S. Buttonwillow Avenue. The properties are bounded by a 45 acre City of Reedley regional park on the east side, several light industrial buildings to the west and south, and existing residential subdivisions to the north. The project will not have any ingress/egress points along the proposed roadways to other properties abutting the planned community except for the three primary access points along Dinuba Avenue. A traffic study has been completed to determine how the level of service on Dinuba Avenue and other locations within the vicinity are affected by the increased traffic demands created by this development.

2.2 Opportunities and Constraints

The purpose of this section is to define the opportunities and constraints found within and surrounding the subject property. A site survey has been conducted to provide an in depth analysis of the existing conditions and to utilize all opportunities and accommodate for any issues from the site constraints.

Opportunities

A. This project area's location offers an opportunity to become seen as part of the gateway into the City from the eastern end of Reedley. This project provides a high amenity mixed use introduction to the City that will create an aesthetically pleasing corridor view from Dinuba Avenue. The fact that the project is oriented parallel to the Dinuba Avenue arterial allows for quick ingress/egress for residents and shoppers.

Opportunity A

B. Existing roadways surrounding the project site, combined with access to the Dinuba Avenue arterial, present exceptional access to and from the site to support office, commercial and residential uses. The project will be designed to have ingress/egress points along existing Dinuba Avenue with close access to Downtown Reedley

Opportunity B

C. The scenic corridor along the northern boundary of the project area provides vegetation and large trees to act as additional buffer space between the project area and Dinuba Avenue. The corridor will also add a natural landscape for the proposed walkway along Dinuba Avenue

Opportunity C

D. Section 10.13.9 of the Reedley Municipal Code provides the framework for a mixed use community within the Light Industrial Land Use designation. This allows for a diversity of uses to promote synergy within the project area and its surrounding area.

Opportunity D

Constraints

A. The only access to the project area will exist along Dinuba Avenue. This project will be required to provide a well circulated pattern with ingress/egress only along Dinuba Avenue.

Constraint A

B. Existing residential land uses exist near the Northern portion of the project site. Appropriate location and distribution of land uses, and/or buffering will be necessary.

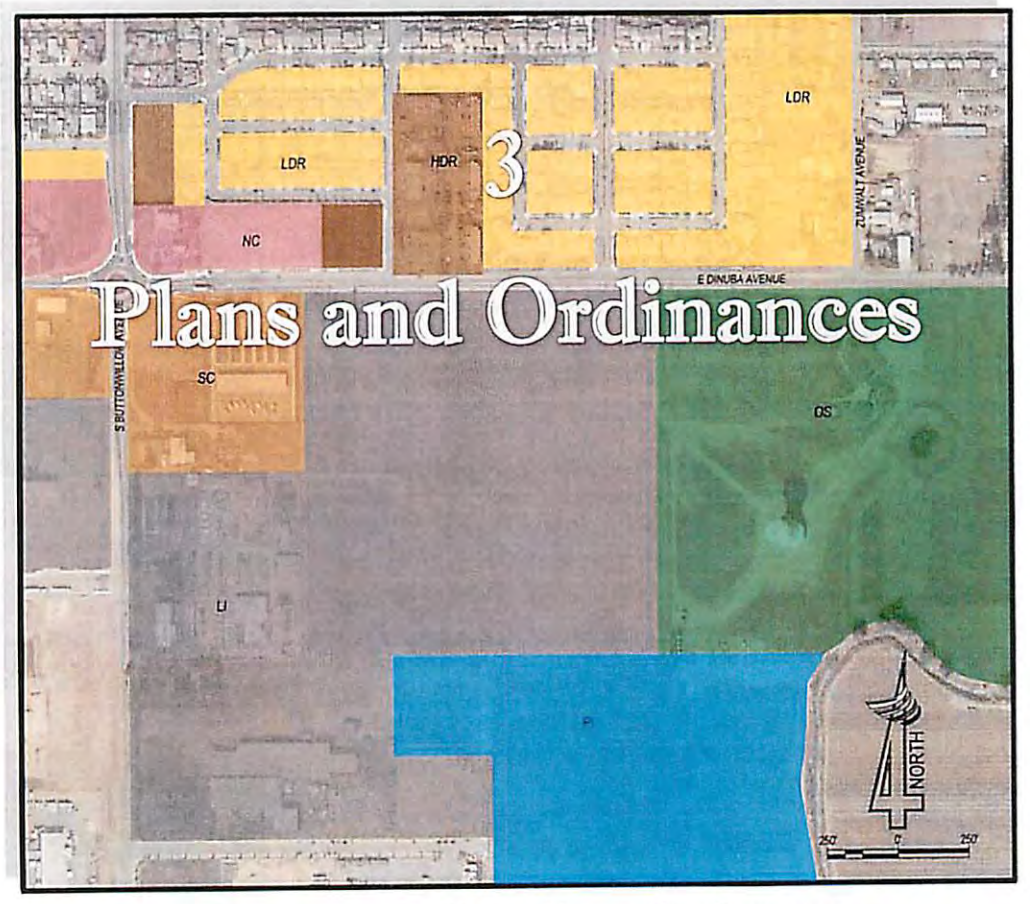
Constraint B

C. A roundabout was deemed to be the most appropriate way to reduce the impact that the project had on traffic. A roundabout has some inherent constraints which include additional right of way requirements along Dinuba Avenue and sizing to accommodate the type of traffic that would potentially be using it.

Constraint C

D. Most of the parking within the development is shared parking for all land uses. The City and residents of Reedley are not familiar with this type of parking plan. Walking distances to destinations will increase due to the fact that there are very few private parking areas within the development

Constraint D



SECTION 3: GENERAL PLAN/ ZONING/ SPECIFIC PLAN COMPLIANCE

3.1 REEDLEY GENERAL PLAN

The City of Reedley has recently prepared a General Plan that shows their vision and a blueprint for development through 2030. This new plan was adopted by the City of Reedley on February 18, 2014. The General Plan shows that the area where The Kings River Village is being developed is designated as light industrial. Section 10.13.9 of the Reedley Municipal Code allows for Mixed Use Land Use which allows residential development within Light Industrial Land Uses. Figure 3.1-1 displays the subject property and surrounding General Plan Land Uses.

The Land Use Element is the most palpable of the General Plan elements and includes a series of goals, objectives, and implementing policies to provide a plan for Reedley development growth. The Kings River Village Master Plan has been designed to maintain consistency with the adopted General Plan Land Use Element as well as other elements within the plan. The project has achieved objectives through specified policies for the following goals of the General Plan Land Use Element:

- INCREASE RESIDENTIAL DENSITIES TO REDUCE THE IMPACTS RELATED TO LOSS OF AGRICULTURAL LANDS;

- ESTABLISH A PATTERN OF URBAN DEVELOPMENT WHICH PROVIDES FOR THE ECONOMICALLY EFFICIENT PROVISION OF URBAN SERVICES WITH PARTICULAR EMPHASIS ON SEWER, WATER AND STORM DRAINAGE INFRASTRUCTURE;
- SEEK A BALANCED AND COMPATIBLE LAND USE PATTERN WHICH ACCOMMODATES PROJECTED POPULATION GROWTH AND ENCOURAGES ALTERNATIVE TRANSPORTATION SUCH AS WALKING, BICYCLING OR TRANSIT;
- PROVIDE TRANSITIONS BETWEEN VARIOUS LAND USES AND INTENSITIES USING HIGH QUALITY DESIGN;
- INTEGRATE LAND USE PLANNING, TRANSPORTATION PLANNING, AND AIR QUALITY PLANNING TO MAKE THE MOST EFFICIENT USE OF PUBLIC RESOURCES;
- DEVELOPMENT IN THE PLANNING AREA SHALL OCCUR IN A FASHION THAT PROTECTS AND ENHANCES AIR QUALITY AND WATER QUALITY;
- PUBLIC OPEN SPACE SHALL BE MADE AN INTEGRAL PART OF NEW DEVELOPMENT IN THE PLANNING AREA.

The General Plan has established a Mixed Use Land Use to provide suitable transition areas between commercial and residential zones. The areas are to be master planned and contain an office-type setting with specific design guidelines to identify landscaping, architecture, pedestrian connectivity, signage, circulation, etc.) This master plan document is being prepared to maintain consistency with the outlined requirement of this Land Use designation.

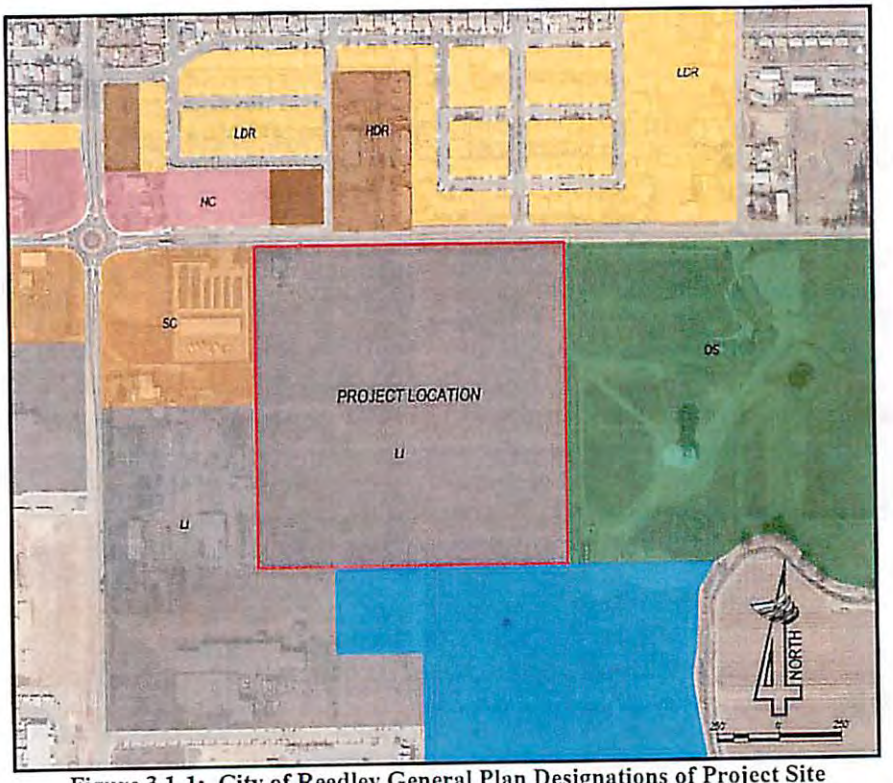


Figure 3.1-1: City of Reedley General Plan Designations of Project Site

The property is located within the south east quarter of the City of Reedley within the light industrial area. The project area is bounded to the north by Dinuba Avenue and residential housing. To the south there is light industry and public institution land. A City of Reedley regional park shares a property line with the project to the east and to the west is a service commercial mini storage. This location is very suitable for a high amenity mixed use development with close proximity to the downtown portion of the City of Reedley. The master planned project has been prepared to include a number of General Plan policies as depicted in Table 3.1-1.

TABLE 3.1-1: Project Consistency with Reedley General Plan Policies

POLICY NUMBER	IMPLEMENTING POLICY
LU 2.7.1	a) Residential designation is intended for single-family or multiple-family development. Development shall be located near or adjacent to collector or arterial intersection and close to shopping and employment opportunities. Multiple family developments may serve as a transition from commercial to single family residential neighborhoods.
LU 2.7.2	Residential development projects shall achieve the minimum density requirements as designated by the General Plan Land Use Map.
LU 2.7.4	Incorporate interface design standards (e.g. setbacks, fencing) into each residential and commercial zone district to ensure compatibility.
LU 2.7.6	Ensure that residential development occurs in areas that have sufficient infrastructure to accommodate the density of residential development being proposed.

LU 2.7.7	Residential development shall be designed in a manner so that new development is well connected to the surrounding area and to encourage pedestrian and bicycle transportation.
LU 2.7.8	Provide incentives for development, such as reduced lot size, setbacks, and narrower street widths for developments, and include amenities such as front porches, increased front yard landscaping, and reduced dominance of the front yard by garages and driveways.
LU 2.7.9	New subdivision shall annex into or form a landscape and lighting district to maintain public improvements including but not limited to walls, street trees and lighting.
LU 2.7.21	Mixing of residential uses, densities and lot sizes shall be encouraged, while maintain traditional neighborhood values and emphasizing concepts for livable, walkable neighborhoods.
LU 2.7.23	Future commercial development in the planning area shall be well designed to respect neighborhood scale and traditional architectural design. Toward that end, commercial development will be reviewed utilizing the following design standards: a) Parking space requirements shall be minimized for commercial developments. Parking lots should be segmented to minimize the impact of parking on the streetscape. In particular, parking should be located to the rear or to the side of commercial and office buildings. b) Incorporate interface design standards (e.g.; setbacks, fencing) into each residential and commercial zone district to ensure compatibility. c) Commercial development shall be designed to facilitate pedestrian and bicycle access and function, featuring outdoor seating, pedestrian plazas and wide, shade-covered walkways. d) Landscaping, particularly shade trees and drought tolerant plants, shall be maximized in all commercial developments.
LU 2.7.24	Ensure all commercial land uses are developed and maintained in a manner complementary to and compatible with adjacent residential land uses, to minimize interface problems with the surrounding environment, and to be compatible with public facilities and services. As part of the City's project review process, major emphasis will be given to site and building design in order to ensure and/or preserve functionality and community aesthetics. a) Development projects shall appropriately interface with adjacent properties. b) Shopping Centers shall embrace a unified building, landscaping and signage design. c) Building facades with visible side of buildings shall not develop with featureless, "blank walls" d) Adequate screen roof-mounted mechanical equipment, and ensure that such equipment adhere to noise standard set forth in the General Plan Noise Element.
LU 2.7.25	Off-street Parking for commercial areas shall be designed to adequately support surrounding land use pattern. Off-street parking areas shall also include landscaping to provide shading for at least 50 percent of the surfaced area within 10 years from planting.
LU 2.7.26	Encourage efficient use of land by allowing a percentage of compact car parking spaces.
LU 2.7.27	Planned unit developments shall be permitted in all commercial designations
LU 2.7.28	Encourage continued efforts to improve the appearance of the commercial areas including the commercial corridor along 11th Street.

LU 2.7.29	Ensure that the City of Reedley has adequate land designated for Community Commercial to accommodate large scale retail development
LU 2.7.43	Office commercial development shall primarily be focused around the Downtown area and the area surrounding the hospital.
LU 2.7.44	Office commercial development shall also be encouraged to be used as a buffer between arterial streets and residential development.
LU 2.7.45	Office commercial uses are intended as a transition land use between residential and more intensive commercial uses. Residential development would also be appropriate in this land use designation.

City of Reedley General Plan (Revised February 2014)

3.2 Reedley Zoning Ordinance

The City of Reedley through the Municipal Code, has an outline to allow Mixed Use Development within the Light Industrial zone designation. The master plan project meets the density of 20 units per acre per Section 10.13.9. Figure 3.2-1 depicts the project area and surrounding zoning districts. The Mixed Use Land Use intent is to encourage more dense and orderly development of urban uses which include gathering places where residents may interact, work, and obtain goods and services in the same general location. There should be an emphasis on pedestrian activities and linkages, priority transit routes and facilities to serve the development, and reducing the number of vehicular miles traveled by promoting alternative modes of transportation, including pedestrian pathways, bicycling pathways, and public transportation as major facets in the design of each project.

The Kings River Village has included a mix of uses within the Light Industrial Zone. The master planned project provides a mix of office, residential, commercial business, and open space areas with amenities to accommodate Reedley's goals and design standards for Mixed Use per Section 10.13.9 of the Reedley Municipal Code.

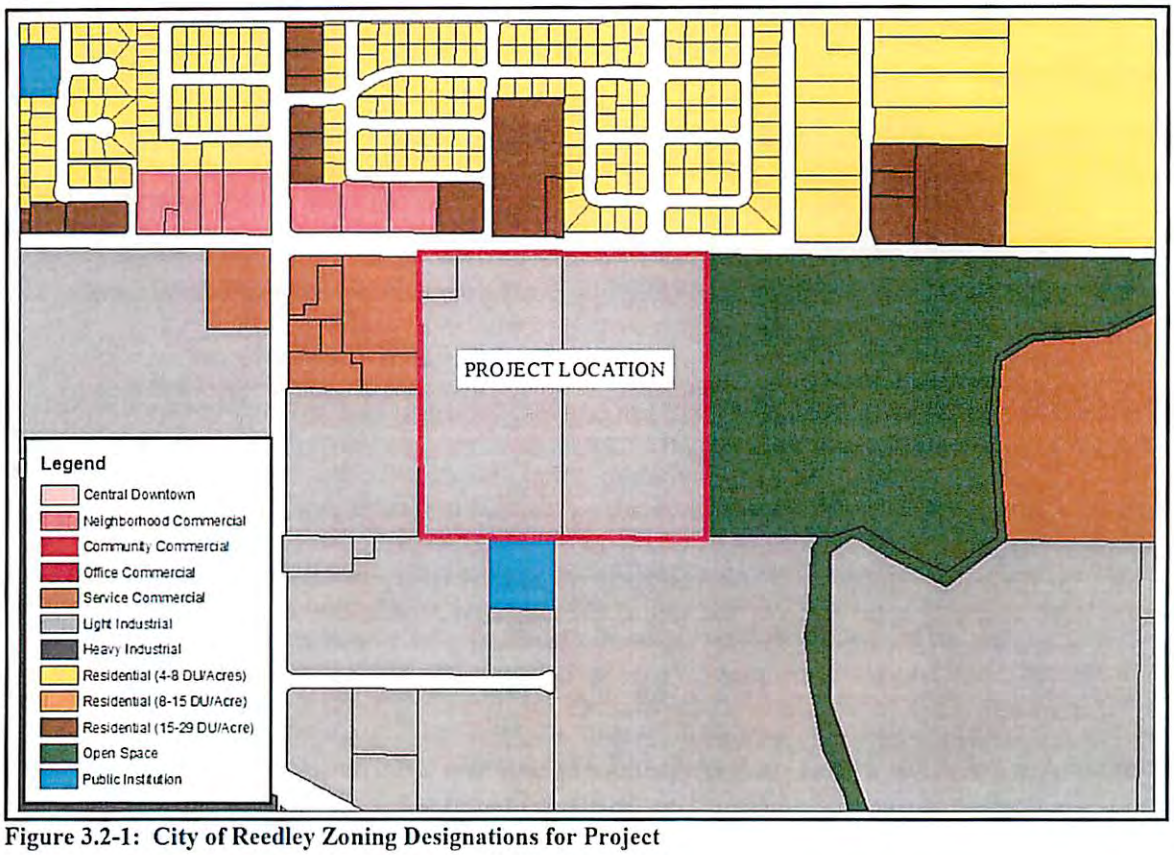


Figure 3.2-1: City of Reedley Zoning Designations for Project

The project consists of a mixed use community setting that includes several "permitted uses" per the City's Zoning Ordinance. Table 3.2-1 outlines the proposed uses for the project and the required permit needed to be processed through the City of Reedley. Other uses that are listed as permitted or conditionally permitted may be considered in the plan and substituted from the approved uses if the parking requirements are achieved, use compatibility within the approved Master Plan is achieved, and complies with the design guidelines of the adopted Master Plan.

Table 3.2-1: Proposed uses / Consistency with Section 10.13.9 of the Reedley Municipal Code

PROPOSED USE	PERMIT APPROVAL REQUIREMENT
GENERAL BUSINESS AND PROFESSIONAL OFFICE	PERMITTED USE/MINISTERIAL
GENERAL MERCHANDISE RETAIL	PERMITTED USE/MINISTERIAL
RESIDENTIAL UNITS: 15 UNITS/ARCE	CONDITIONAL USE PERMIT
MEDICAL / OPTOMETRY CLINICS	PERMITTED USE/MINISTERIAL

City of Reedley Zoning Use Matrix (Section 10-25-4)

Parking Requirements:

Parking shall be provided per the City of Reedley Zoning Ordinance, Section 10-12-2. This master planned area contains the following uses with a shared parking agreement:

A. **Offices, including all public and professional offices:** One parking space per 400 square feet of floor area;
B. **Residential:** Two spaces per dwelling unit;
C. **Senior Living:** One Space for each Dwelling unit, provided that sufficient space shall be set aside for 1 ½ spaces for each dwelling unit in the event of a change of use.
D. **General Retail Stores:** Three parking space per 1,000 square feet of gross leasable area;
E. **Medical Clinics:** 2 spaces for each practitioner, plus 1 space for each 400 square feet of floor area.

Development Standards (Mixed Use Land Use):

The project will be consistent with the following development standards identified in Title 10, Chapter 13, Section 9 of the Reedley Municipal Code:

A. The mix of residential use of 20 units per gross acre along with permitted office/commercial/industrial uses shall occur both in the horizontal and vertical axis except that the City may waive the requirement for a vertical mix of use, if the design of the project, or the inclusion of a residential component to an existing development illustrates performance standards that meet the intent of the section by providing an integrated, well designed network of pedestrian pathways connecting the places of residence with places of work, commerce, and open space areas;
B. Each building within a mixed use development project shall have a minimum of two stories. Notwithstanding the foregoing, any use for seniors' independent or congregate care living shall be permitted to limit their buildings to one-story conditioned upon architectural compatibility with the remainder of the two-story buildings in the mixed use development project.
C. If modifications to the development standards are proposed, the applicant is required to provide supporting evidence for the modification of the general standards, which shall be submitted with the project application.

Development Standards (Commercial and Residential Use Land Uses):

The project will be consistent with development standards identified in Title 10, Chapters 6, 8 and 13 of the Reedley Municipal Code.

SECTION 4: THE PROPOSED DEVELOPMENT PLAN

4.1 SITE PLAN DESCRIPTION/DESIGN PROCESS

The Kings River Village has been designed to provide for a high amenity, pedestrian friendly setting with a mix of uses for the entire 39 acre site. The Kings River Village Project commercial uses will emphasize architecturally compatible building forms, neighborhood scale, interesting urban elevations, parking lots hidden from main streets, and buffered residential areas from the Dinuba arterial. The retail areas of the Project are designed to supplement, not replace, downtown retail and to function as an activity node for the community. Both office and retail prioritize walkability with shade-covered promenades and plazas that encourage a "park-once" strategy for visitors not arriving by transit and a walkable and bicycle friendly orientation for residents conducive to fostering the many benefits of a mixed use community.

Land use types include medical and office buildings, retail goods and services, market rate apartments, a senior independent living neighborhood, and single family detached and attached homes. All of these product types are located around a central Village Green Park intended to be a distinct place for passive recreation, with a farmer's market, community garden, running track, barbeque area, gazebo, and other amenities that will benefit residents and visitors alike. A Property Owners Association will be established to maintain the Village Green Park. The Project benefits further from its immediate proximity to the Kings River Commons affordable housing neighborhood to the north and the Reedley Sports Park, adjoining the Project to the east.

Significantly, the Project will include a full-service Transit Center. While a new concept for Reedley, it represents an innovative and valuable amenity for Reedley encourage the use of transit for local trips and the commensurate reduction of conventional, auto-centric, unnecessarily high greenhouse gas emitting development. To implement the inclusion of transit directly into the community, a public/private partnership will be established between the Applicant and the Fresno County Transit Agency to construct and operate the Transit Center. As a mixed use neighborhood amenity it would be unique to Reedley and perhaps the entire San Joaquin Valley.

The purpose of the Transit Center is to encourage and incentivize resident and visitor behaviors that can lead to reduced automobile vehicle miles traveled, reduced greenhouse gas emissions compared to conventional development, reduced ownership of community household automobiles, and an increase in ridership for the Fresno County Transit Agency. The Transit Center is proposed to include a transit staff person able to assist with carpooling/vanpooling, issuance of universal transit passes, bicycle and electric vehicle rentals, and schedules for all transit headways with points of destination and multi-modal connections to community facilities, the Kings River area, the Rail Trail, Downtown Reedley, Reedley College, public schools and employment areas. The Transit Center will be centrally located at the northern end of the Village Green Park.

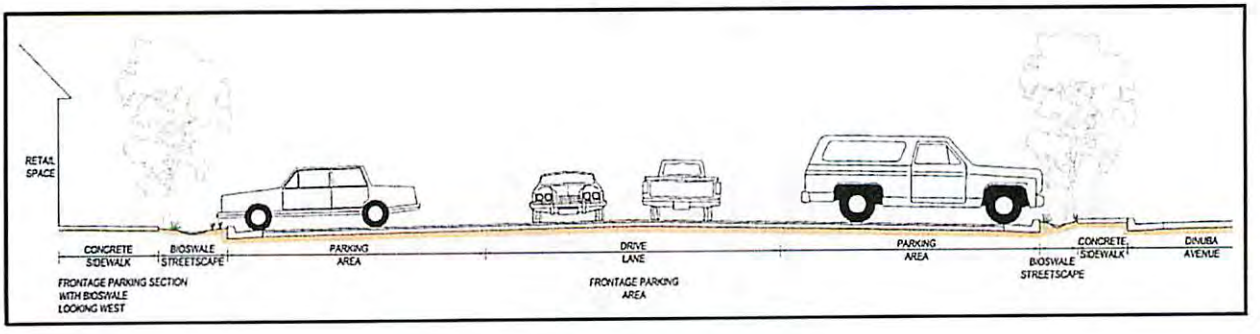
The Kings River Village has incorporated tools and design features that will fulfill many of the San Joaquin Valley Blueprint Smart Growth Principles. The San Joaquin Valley (SJV) Blueprint process began in 2006 with the coordination of a number of organizations including all seven Valley Council of Governments and was adopted on April 1, 2009 with 12 Smart Growth Principles and an approved scenario B+. The Valley Blueprint can be implemented in two primary ways: 1) through collaborative local and regional programs and planning processes; and 2) through on-the-ground projects built primarily by private sector developers. This project was able to include tools and design features in line with the following SJV Blueprint Smart Growth Principles:

- Create walkable neighborhoods;
- Enhance the economic vitality of the region;
- Foster distinctive, attractive communities with a strong sense;
- Mix land uses;
- Preserve open space, natural beauty, and critical environmental areas;
- Provide a variety of transportation choices;
- Take advantage of compact building design.

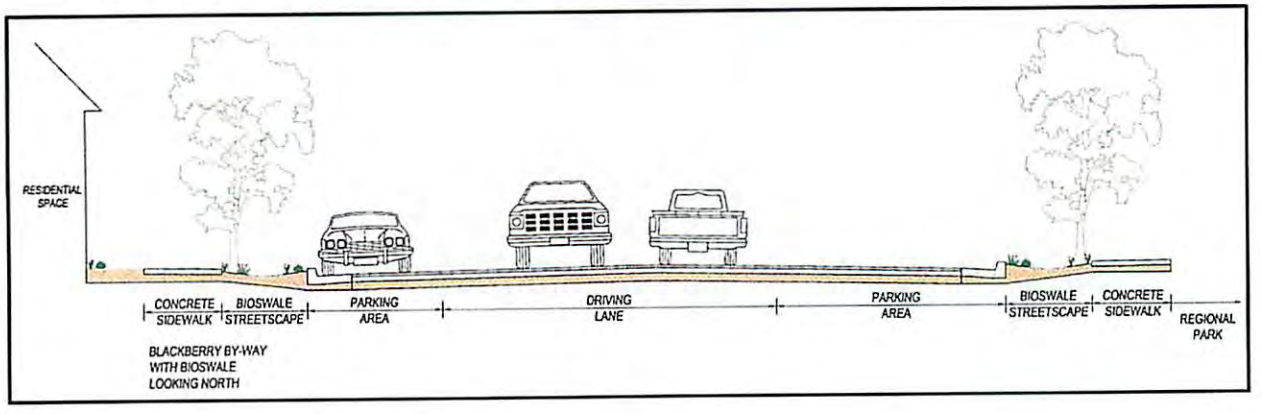
KINGS RIVER VILLAGE

Cross Section Details:

FRONTAGE AREA CROSS SECTION, BUFFER BETWEEN DINUBA AVE AND RETAIL



PEACH AVENUE S CROSS-SECTION



The streets within The Kings River Village planned community were designed to increase pedestrian walkability by calming traffic. Traffic calming comes with the added benefits of noise and air pollution reduction in the area as well as safety. Traffic calming is important in a mixed use community like Kings River Village because it allows the residents the luxury of the neighborhood atmosphere while being in close proximity to commercial developments. To calm traffic the streets were narrowed which will result is slower traffic speeds throughout the community. Slower traffic speeds will make it inherently safer for residents and visitors of the community.

The overall master plan incorporates a number of green design elements to allow the ability for any of the projects to become a Leadership in Energy and Environmental Design (LEED) certified project.

The LEED certification program has been created by the U.S. Green Building Council to allow for a highly recognized green building certification system. Buildings and sites that have implemented a certain amount of sustainable features get international recognition for achieving either a Certified, Silver, Gold, or Platinum certification.

LEED certification is not required as part of the Master Plan, however it is encouraged to continue and add further sustainable design features to the projects as they develop. Some of the sustainable features that are elements of this site plan are bio-swales, pedestrian connectivity, permeable surfaces, shade trees and heavy landscaping, housing and jobs, mixed land uses, and bicycle facilities. These features are awarded points for LEED certification and would contribute to a great start towards achieving a certified project.

4.2 Architectural Theme/Guidelines

The main architectural theme for the Master Planned area will pay omage to the City of Reedley's long standing roots in agriculture. Agricultural design has inspired the theme; and thus, would incorporate the look of both ***traditional and contemporary Agricultural Architectural styles.*** The idea is to incorporate a high quality architectural theme that connects the rural theme with modern style. The overall architectural theme for this project would incorporate agricultural architectural styles through the use of rustic material, articulation of form, trim, signage, and streetscape on all exterior sides of the buildings. The intention is to integrate elements of this type of architecture style in the buildings and site while leaving some room for flexibility to allow for slight modifications to the agricultural style architectural theme.

The end product shall be consistent throughout the project area. Modifications from the approved Master Plan Guidelines shall be approved by the Master Developer.

The Site Planning concept provides a unique theme with pedestrian connectivity throughout the plan to allow connections for pedestrians to/from the surrounding perimeter buildings/uses. The central park with the pedestrian connectivity and open space features allow for a great themed destination. Each of the building sites will incorporate lush landscaping around the perimeters of the buildings to prevent additional hardscape and to allow for an aesthetically pleasing appearance to the area. The site design has been designed to allow for a mixed use development that will fit in to the existing area and allow for synergy within the master planned project.

The purpose of providing these guidelines is to provide for a reference document to assist the property owner, architect, developer, and builder in designing projects that will be harmonious with the existing master planned area.

These guidelines also serve as a guide to the City of Reedley staff to utilize as projects develop within the master planned area.

Architectural Design Guidelines (Figures 4.2-1 through 4.2-11 represent the conceptual architectural theme to be implemented into the master plan area):

A. **Building Theme** – The overall building theme shall reflect traditional and contemporary agricultural style architecture.

B. **All Exterior walls** – Exterior walls shall incorporate agricultural elements of rustic barn siding material, brick, and plaster finishes unless approved by the community as being consistent with the overall theme. An assortment of materials will be used on exterior walls to highlight the different building program and usage. Building transparency will achieved by carefully choosing materials that will fall in line with the overall agricultural theme.

C. **Varied Wall Planes** – The walls of the building shall be divided horizontally and vertically with a combination of materials and pop-outs.

D. **Pedestrian Scale** – The building design shall be broken down with a combination of materials, colors, windows, architectural features, overhangs, and insets to allow for a human scale environment. Buildings should be articulated to allow for a pedestrian-oriented setting.

E. **Tenant Entries** – Buildings that will include more than one tenant, shall integrate the use of columns and insets, and architectural features to provide for a sense of individuality for each tenant.

F. **Windows** – Windows shall be provided throughout the design to allow for high amounts of natural lighting into the buildings while creating an inviting atmosphere to each building. The windows shall consist of different sizes and will be unique to each type of building use.

G. **Roofs** – Pitched gable and cantilevered overhangs roof design are strongly encouraged throughout to provide consistency of the master plan development. The roof material type shall consist of corrugated metal and asphalt or wood shingles. Solar panels will also be utilized on roof to supplement electricity usage throughout the development.

H. **Mechanical Equipment Screening** – It shall be that all mechanical equipment to be mounted on the ground and screen from view by trellis design and heavy landscaping. If any mechanical equipment is required to be roof mounted, then the equipment shall be screened from view of the public with screening consistent with the architectural styles and colors of the building.

I. **Garages (Residential Only)** – Garages are only permitted for the residential single family detached buildings that are located on the southeast portion of the site. Garages must incorporate agricultural style architecture components. Windows within the garage door are strongly encouraged.

J. **Canopies** – Any canopies that are proposed for the master planned project will also require treatments in line with the agricultural theme along the columns with corrugated metal, asphalt or wood shingle roofing (gable or hip style roofing approved).

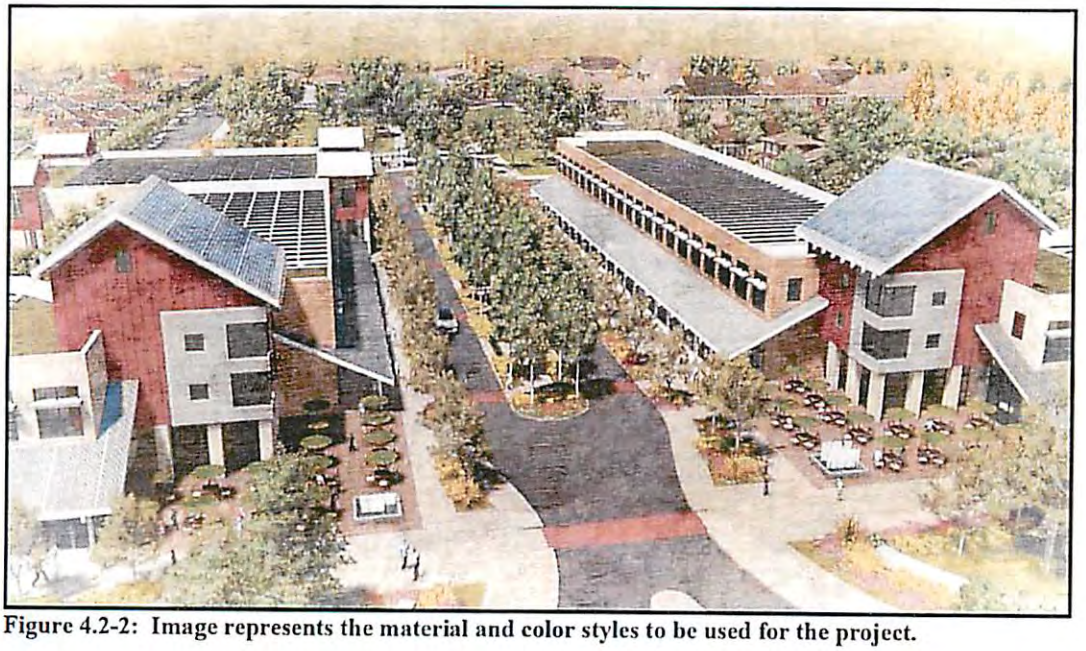


Figure 4.2-2: Image represents the material and color styles to be used for the project.

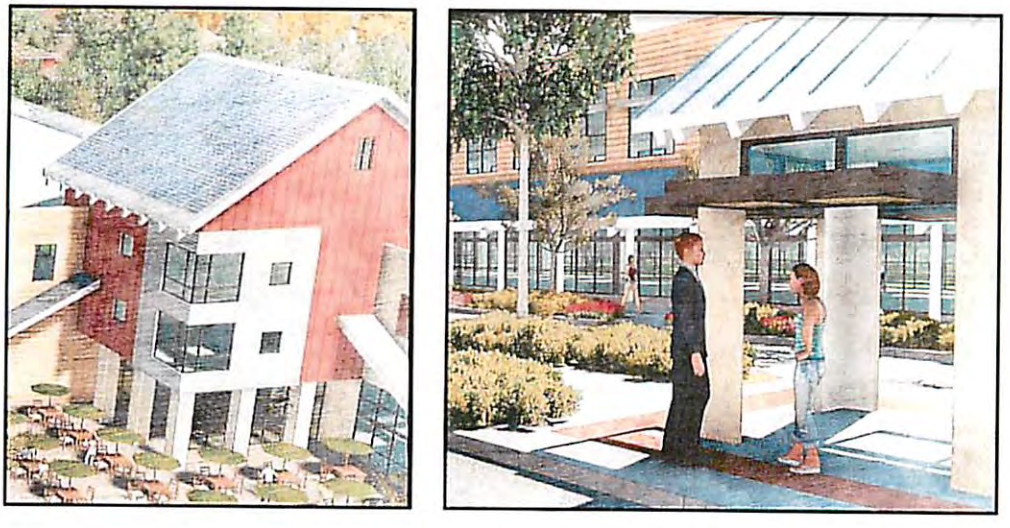


Figure 4.2-3: Images represents material and color styles to be used for the project.

RETAIL_ Alternative Schemes

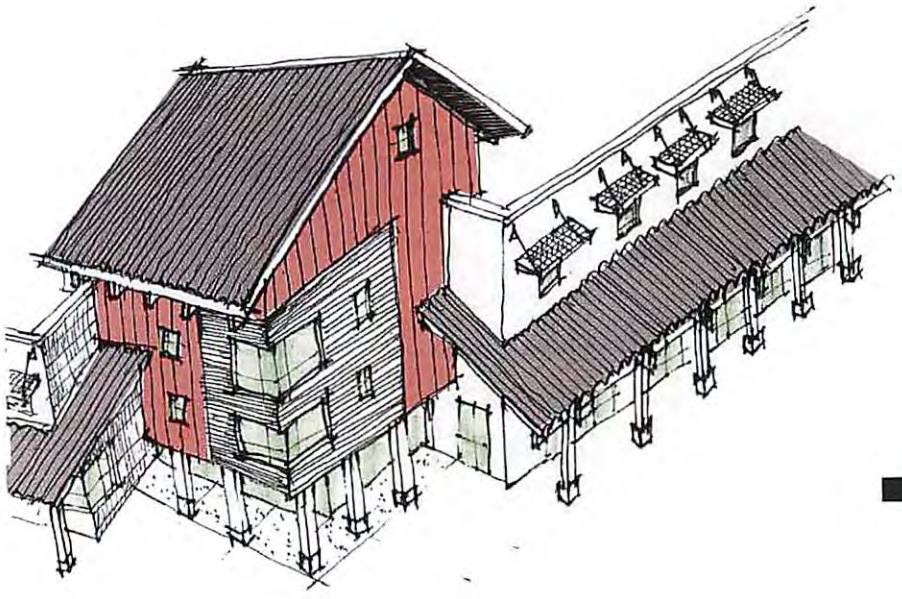


Figure 4.2-4: Rendering of typical retail building.

Figure 4.2-5: Rendering of S. Apple Avenue Entrance.

Figure 4.2-6: Rendering 1-story Senior Independent Living building concept.

Figure 4.2-7: Rendering of typical residential townhome units street view.

Figure 4.2-8: Rendering of typical residential townhome units internal view.

Figure 4.2-9: Rendering of typical residential single family housing units street view.

Figure 4.2-10: Rendering of typical residential single family housing units internal view.

Figure 4.2-11: Rendering of typical residential single family housing garages.

Figure 4.2-12: Rendering of typical 2-story apartment buildings street view.

Figure 4.2-13: Rendering of typical 2-story apartment buildings street view.

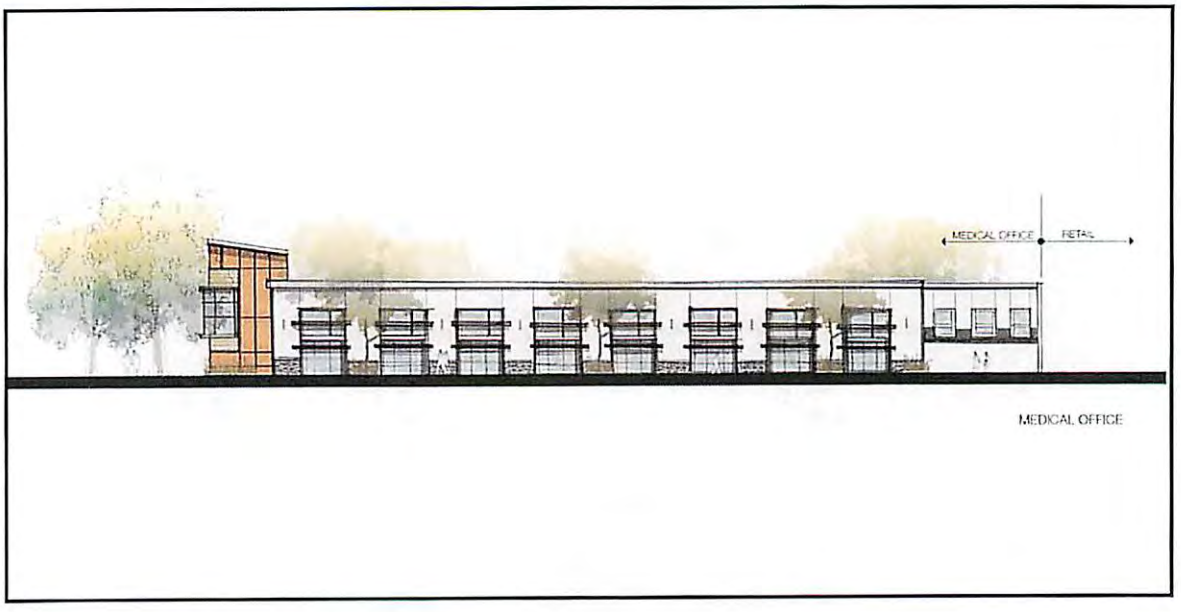


Figure 4.2-14: Rendering of medical office.

Figure 4.2-15: Color rendering of commercial area.

Figure 4.2-16: Color rendering of transit center.

Figure 4.2-16: Transit Center Side View.

Figure 4.2-17: Color rendering of the central park area with transit center.

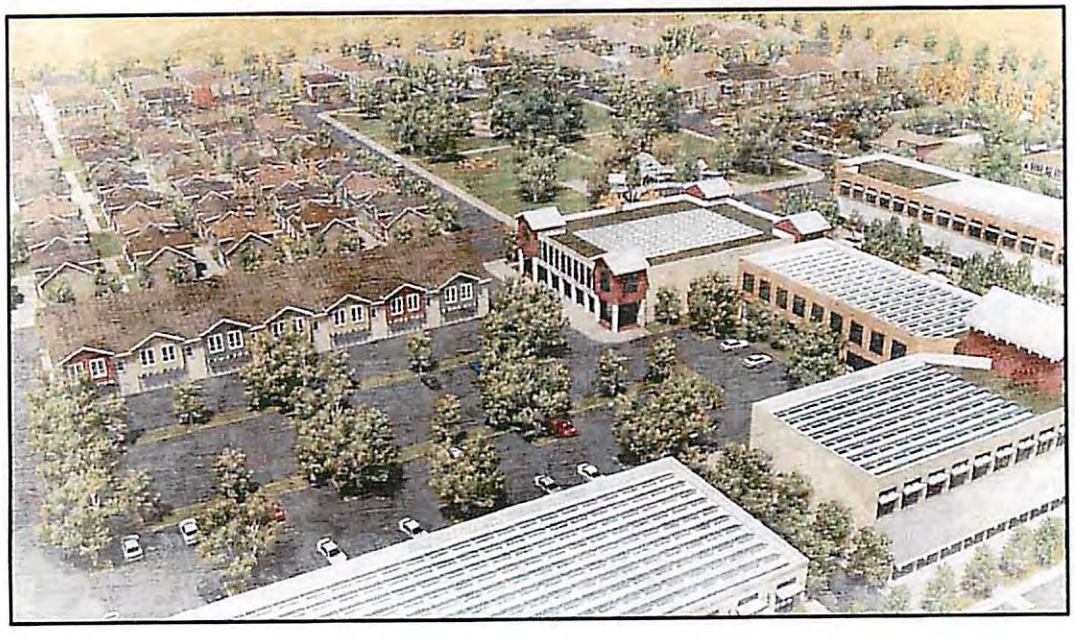


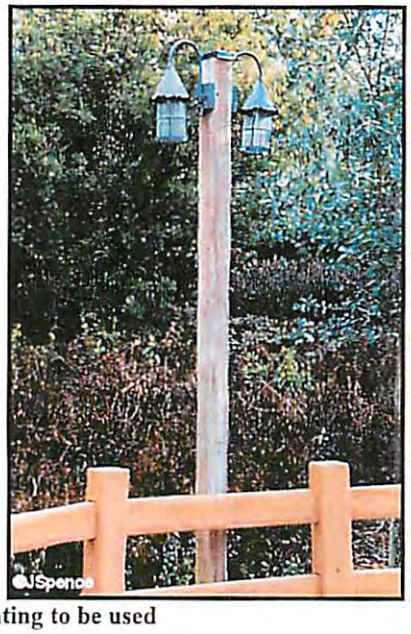
Figure 4.2-18: Aerial 3-D rendering of Kings River Village.

Urban Streetscape Amenities:

A. **Lighting:** Lighting within the master planned project site is important for safety and security of the residents, employees, and visitors and shall be designed to maintain consistency with the Agricultural Architecture themes. Lighting to maintain consistency throughout, once the actual style and model type are determined by the Design Review Committee composed of the Master Developer, the Project Architect, and Project Engineer. All project lighting shall be maintained by the Property Owner's Association.

I. **Parking lot lighting –** Lights located within the parking lot will be the largest scale lights to provide for safety for entry/exit of vehicles located away from the buildings. Maximum height shall be 25' above grade.

II. **Pedestrian walkways –** Lighting around the buildings, walkways, townhomes, and central areas will require pedestrian scale lighting to provide for an intimate yet safe environment. Maximum height shall be 12' above grade.



Samples pedestrian scale lighting to be used

III. **Signage and Building Exterior lighting –** Wall mounted decorative LED light fixtures with small wall mounted light fixtures to illuminate signage, entryways, or architectural building features

Samples of lighting elements that shall be incorporated.

IV. **Public Street Lighting** – A suitable lighting fixture approved by PG&E will be selected for lighting on public streets. Installation will be the responsibility of the developer. PG&E will provide ongoing maintenance and repair.

B. **Pedestrian Walkways** – Special stamped/colored concrete shall be incorporated along pedestrian pathways that cross asphalt paving. Other features such as benches, lush landscaping, lampposts, trellises, and seating areas shall be incorporated along the pathways throughout the design. **Trellis design shall include Agricultural Architectural components to blend in with the building architecture.**

C. **Building Entry Paving** – The entryway in front of the main entry shall be of a unique stamped/colored concrete or tile design with incorporating landscape area, tree wells, and/or potted plants. These special entry features allow for wayfinding and grand entry into buildings.

D. **Tables, Chairs, Benches** – Tables and chairs are encouraged within the parks and common areas to allow for small clusters of seating for businesses. Other outside patio areas can include tables and chairs for outdoor seating and must be shown on site plans and approved by the City of Reedley through the Site Plan Review process. Outdoor seating within courtyards and patios shall take into consideration noise, lighting, and safety of the master planned community. Benches shall be located within the central square turf area and along the interior and exterior loops to provide for a resting space while pedestrians connect throughout the site. Benches shall be bolted down to prevent theft and movement of the bench locations. Benches shall also be located periodically around the square in between tree wells to provide siting/waiting area. All benches, tables and chairs in common areas shall be maintained by the Property Owner's Association.

Samples of high quality benches to be incorporated into project.

E. **Trash Receptacles** – Trash receptacles shall be placed within the site and maintain a consistent design throughout the master planned community. Color and model type to be consistent with building design. Durable metal trash enclosures shall be used.

Sample trash receptacle design.

F. **Tree well grates –** Tree well grates shall be provided at areas where trees are planted within the sidewalk or hard surface areas. Customized tree well grates with master plan identification (logo branding) is encouraged to identify and brand the master plan community. Each building requires tree wells in between

the parking and building/sidewalks. The tree wells can consist of either a single tree with tree well grate or a single tree with flowering plants around the perimeter and no grate or combination of these elements. These areas are located around the entry locations of the buildings and on the exterior and interior walkways of the central square.

Samples of tree well with landscaping (no grate).

4.3 Landscape Plan/Guidelines

The Agricultural Landscape Garden theme would be incorporated in both formal and traditional styles of landscape. The landscaping will be representative of the agricultural theme designated for the development. Trees, shrubs, plants, vines and flowers with bark shall be utilized within the landscape plans with minimal use of turf with the exception of the central park area. The landscape materials will include drought tolerant landscaping with adaptive plants. All projects shall include landscaping to comply with the Water Efficient Landscape Ordinance (WELO).

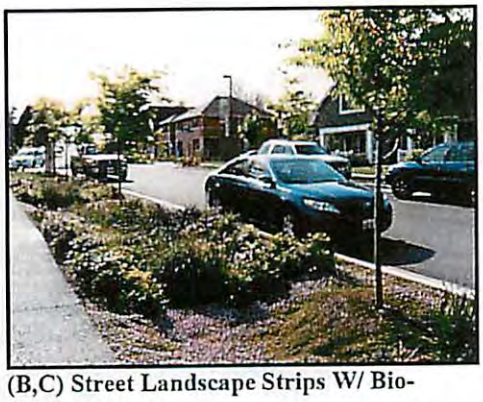
The purpose of providing these guidelines is to provide for a reference document to assist the property owner, architect, developer, and builder in designing projects that will be harmonious with the existing master planned area. These guidelines also serve as a guide to the City of Reedley staff to utilize as projects develop within the master planned area.

A. **Landscape Theme** – The overall landscaping theme shall reflect Agricultural Landscape that will include both formal and traditional styles of landscaping. Trees are to be placed at an average of 30 feet intervals across all public street frontages

(A) Landscape Theme

B. **Street Landscape Strips** – The parkway landscape strip between the curb and the sidewalk will consist of street trees planted per City of Reedley street tree standards along all proposed streets. Bio-Swales will be utilized in all landscape strips

C. **Bio-Swales** – Low impact design to include bio-swales will be located throughout the perimeter of the project area scattered to collect on-site storm water runoff and promote groundwater recharge while maintaining a high level of landscaping appearance with a sand/mulch base covered by 4"-8" river rock cobbles. The maximum swale depth shall be 4" with a maximum side slope not to exceed 5:1 ratio.



(B,C) Street Landscape Strips W/ Bio-Swales

D. **Central Park landscaping** – The majority of the Central Park landscaping shall consist of turf with shade trees throughout the park. The purpose is to provide for a relaxing and natural landscaped environment to enjoy for employees, customers, and residents. All common area landscaping within the project is to be maintained by the Property Owner's Association.

(D) Central Park

E. **Parking Lots** – Shade trees shall be planted within parking area medians and within the landscaped planting wells. Landscape wells shall contain shade trees with other bushes, flowers, and mulch base.

F: **Building Perimeters** – The landscaping around the building perimeters shall be consistent throughout the project. The sides of buildings where no entrance or frontage consists shall require large massing and layering of plant types to provide for added visual appearance to the buildings elevations. The building entrance areas shall include tree wells and either large potted plants or planters to create a grand entry for buildings.

G. **Maintenance and Replacement** - Landscape maintenance shall be provided and include mowing, trimming, weed control, fertilization, pruning, edging, and pest control. Trees that are dead or in poor condition shall be replaced immediately with similar species. These services are to be provided by the Property Owner's Association within the project area. Landscaping along Dinuba Avenue will be installed by the project consistent with City of Reedley Standards and maintain through a lighting and landscaping district specific for this development.

H. **Greywater** – Greywater programs will be implemented into the development. Greywater systems help reduce the environmental impact of landscape watering by supplementing the freshwater demand with grey water from household chores. See appendix B for supporting documentation.

(E) Parking Lots

(F) Building Perimeter Landscaping

I. **Landscape Planting List –** A plant list and landscape conceptual plan has been established for the project to ensure the consistent, proper use of planting materials throughout the project design. The landscape materials will include drought tolerant landscaping with adaptive plants throughout the site. The site shall be developed in substantial compliance with this conceptual landscape plan and plant list. Minor deviations from the planting list shall be approved by the Design Review Committee. Below is the adopted plant list:

SHADE TREES:

TREES

Acer rubrum, Red maple
Pistacia chinensis, Chinese Pistache
Plantanus x acerfolia, London Plane Tree
Ulmus parvifolia, Chinese Elm
Zelkova serrate, Sawleaf Zelfkova
Quercus rubra, Red Oak
Platanus racemosa, California Sycamore
Magnolia grandiflora, Southern Magnolia
Quercus Viginiana, Southern Live Oak

ORNAMENTAL TREES-EDIBLES:

TREES

Citrus aurantifolia, Mexican Thornless Lime
Feijoa sellowiana, Pineapple Guava
Pistache, Pistacio
Olea europaea, Olive
Prunus persica, Nectarine
Citrus x sinensis, Orange
Citrus unshiu, Tangerine
Prunus persica, Peach
Diospyros virginiana, Persimmon
Ficus carica, Black Jack Fig
Prunus salicina, Japanese Plum
Prunus avium, Cherry
Malus, Apple
Prunica granatum, Pomegranate
Prunus persica, Nectarine
Citrus x meyeri, Meyer Lemon
Prunus armeniaca, Apricot
Pyrus pyrifolia, Pear
Eriobotrya japonica, Loquat
Cydonia oblonga, Quince

SHRUBS-EDIBLE/HABITAT:

Shrubs

Romarinus officinalis, Rosemary
Poncirus trifoliate, Hardy Orange
Arbutus unedo, Strawberry
Amelanchier 'Ballerina', Juneberry
Vacinum corymbosum, Blueberry
Agastache foeniculum, Anise hyssop
Lavandula, Lavendar
Salvia spp., Sage
Gardenia jasminoides, Gardenia
Rhamnus californica, Coffeeberry
Punica granatum 'Nana', Dwarf Pomegranate
Citrus paradisi, Dwarf Grapefruit
Fortunella margarita 'Nagami', Dwarf Kumquat
Buddleja davidii, Butterfly Bush
Aesculus parviflora, Bottlebrush
Cotoneaster horizontalis, Cotoneaster
Nandina domestica, Heavenly Bamboo

GROUNDCOVER-EDIBLE/HABITAT:

GROUNDCOVER

Mentha, Mint
Thymus serpyllum, Creeping Thyme
Fragaria vesca, Alpine Strawberry
Romarinus officinalis 'Prostratus', Creeping Rosemary
Gaultheria procumbens, Wintergreen
Origanum vulgare, Oregano
Vinca minor, Periwinkle

TURF:

TURF

Festuca spp., Tall Fesue

4.4 SIGN PROGRAM

An effective sign master program, when implemented correctly, helps to define and control all of the site development signage. The program allows the project area to improve on wayfinding, quality, and identity of the community.

The following criteria have been established for the purpose of assuring a uniform, high quality, and consistent sign program for the benefit of all occupants. These criteria are also intended to stimulate creative invention while providing a high quality image on the building's exterior. Appropriate signage is an integral part of the image of the project master plan, so signs must be thoughtfully designed, sized, and placed to the architectural building facades. Maintaining conformity with the sign program will enhance the overall appearance of the project and contribute to the projects overall theme.

* All proposed signs shall at a minimum comply with the City of Reedley Sign Ordinance.

Administration:

A. The Landlord will be responsible to provide sign program details to the tenant's sign design consultant.
B. The Tenant will be responsible to submit one (1) copy of detailed drawings that shall include the following:
    - Sign dimensions and square footage,
    - Tenant building dimensions and leasehold space
    - Signage colors,
    - Location of signage on site or building,
    - Type of materials used for the sign,
    - Method of attachment, and electrical (if lighted).

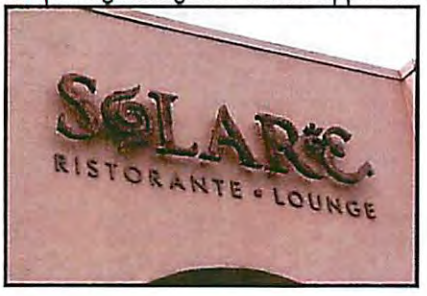
C. The Landlord will be required to review and approve the tenant sign submissions based on maintaining consistency with the sign program.
D. Prior to installation and manufacture of any sign, the Tenant shall obtain a sign permit from the City of Reedley and provide a copy to the Landlord.
E. Any non-conforming or unapproved signs must be removed or brought to compliance within 30 days of notice by the Master Developer. The parties involved in the installation of the non-conforming sign will be responsible for the expenses for the removal and updated sign(s).

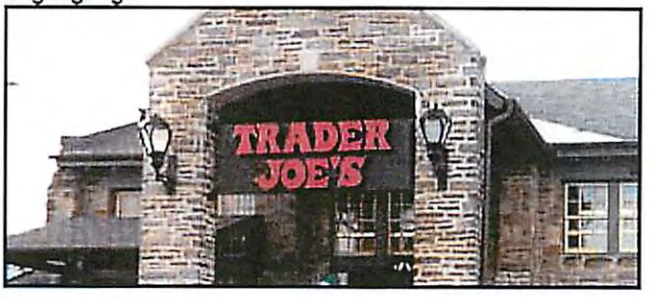
Design Criteria:

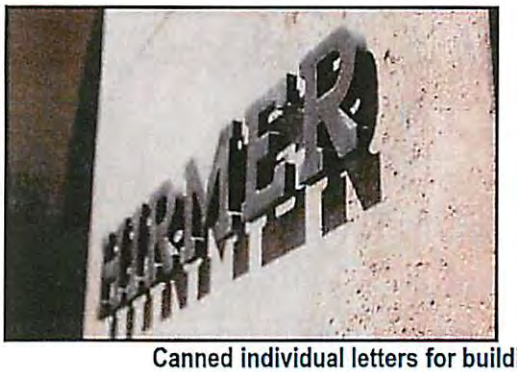
A. **Tenant Building Signage (1 story and 2 story buildings)** – Signage must consist of either wood, metal, glass, or tile materials to provide for a high quality sign. Other high quality materials may be applied if approved by the Community Development Department. A mix of materials is strongly encouraged for signage (ex. Wood background with metal channel letters). Tenant signs shall be designed with the consideration of the English style architecture, scale relative to façade of business, and critical viewing angles. Channel letters shall also be displayed to provide depth to allow for a 3-dimensional appearance.

    - **Residential townhomes shall comply, at a minimum, with section 10-14-5 (A) of the Reedley Municipal Code.**
    - **All other tenant building signage shall consist of individual raised letters/logos. Signs on building walls shall comply, at a minimum, with section 10-14-5 (D) of the Reedley Municipal Code.**

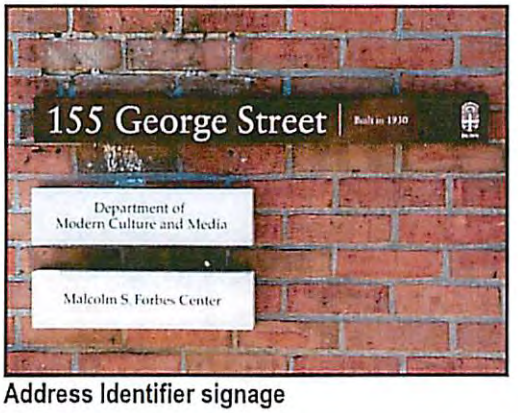
Sample sign images of tenant approved building signage:







Canned individual letters for building tenant identification

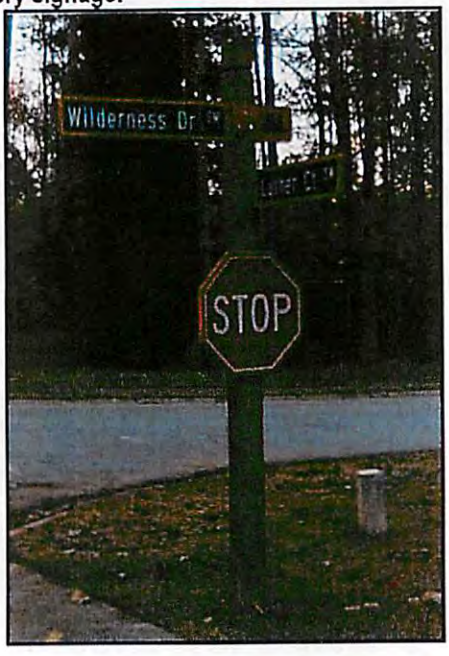


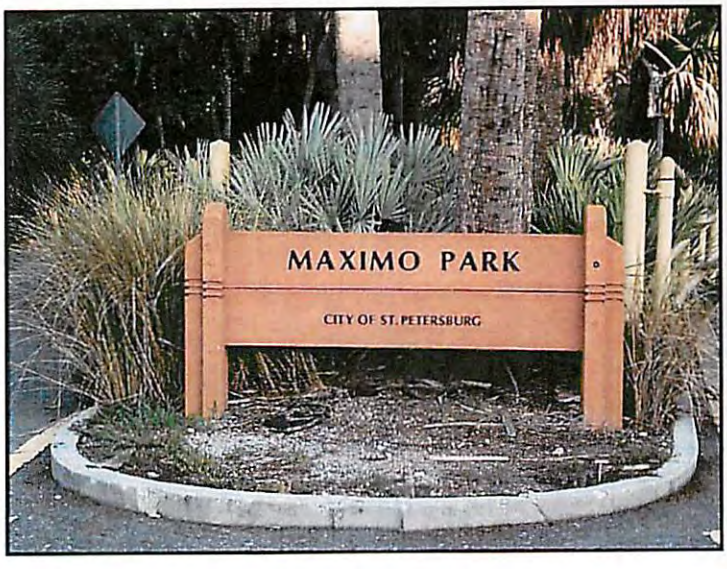
Address Identifier signage

Tenant pedestrian oriented signage

B. **Wayfinding, Directional, Regulatory signs –** Signage that provides direction, regulation, or wayfinding shall be require to incorporate the agricultural style theme consistent with the building designs of the master planned community. Proposed Signage shall be approved by the Project Architect of Record for consistency with the design guideline before submitting to the City of Reedley for a sign permit.

Samples of approved directional, wayfinding, and regulatory signage:





Construction/General Maintenance:

A. All penetrations of any building structure or surface required for sign installation shall be neatly sealed and continuously maintained in watertight condition.
B. The tenant shall employ licensed professional sign fabricators and State of California licensed contractor for the design and installation of the proposed signs
C. All materials to be used shall be of top quality and durability to create a long lasting visual quality on the buildings and site.

Prohibited Signs:

A. Any sign that is not permanently mounted or attached to a vehicle parked for the purpose of calling attention to or advertising a special business establishment.
B. Any sign or sign structure which has become a public nuisance due to inadequate maintenance, dilapidation, or abandonment.
C. Any sign which obstructs in any manner the ingress to, or egress from, a door, window, fire escape, or other accessway required by building codes adopted by the city.
D. Any sign unlawfully installed, erected, or maintained.
E. Any sign now or hereafter existing which no longer advertises a business conducted or a product sold as prescribed in this chapter.
F. Any sign which encroaches into any city right of way and/or easement, except an under canopy sign or projected sign.
G. Animated signs.
H. Pole signs.
I. Any sign that flashes, blinks, moves, changes color, appears to change color, changes intensity, or contains any part of attachment which does the same except that standard barber poles, time and temperature signs, and approved bulletin board signs shall be permitted in commercial and industrial zones if otherwise in compliance with these provisions.
J. Any unofficial sign, signal or device, or any sign, signal or device which purports to be or is an imitation or, or resembles an official traffic sign or signal, or which attempts to direct the movement of traffic, or which hides from view any official sign or signal.
K. Any light of any color of such brilliance as to blind or dazzle the vision of drivers upon any roadway or highway nor shall any light be placed in such positions as to prevent the driver of a vehicle from readily recognizing any traffic sign or signal.
L. Any sign located so that it interferes with visibility at an intersection, public right of way, driveway, or other ingress/egress.
M. Andy sign located or displayed on or over public property except as expressly permitted by these provisions unless approved by the city council.
N. Any sign attached to a tree.
O. Any rooftop mounted sign.
P. Any sign erected or maintained which has less horizontal or vertical clearance from communication lines and energized electrical power lines than that prescribed by the state, or rules and regulations duly promulgated by agencies thereof.
Q. Offsite signs, advertising structures and billboards.
R. Portable signs, other than approved banners and sandwich board signs.
S. Any sign which is obscene or offensive to morals; containing statements, words, or pictures of an obscene, indecent , or immoral character which, taken as a whole, appeal to the prurient interest in sex, and which signs are patently offensive and, when taken as a whole, do not have serious literary, artistic, political, or scientific value.
T. Any sign which, in the opinion of the community development director and based upon applicable legal standards, is in conflict with the spirit or intent of chapter 14 of the City of Reedley city codes.

5 Administration/ Project Implementation

SECTION 5: ADMINISTRATION/PROJECT IMPLEMENTATION

5.1 PROJECT REVIEW PROCESS

Adoption of the Master Plan/Master Conditional Use Permit allows for the overall development of the site plan consistent with Figure 4.1-1.

All approved uses within the adopted master plan shall be subject to review and approval by the Design Review Committee, which shall initially be composed of the Master Developer and the Project Architect and Project Engineer of Record. The Project Architect of Record shall prepare a letter indicating design conformity to the Master Plan prior to submitting any projects to the City of Reedley for building permits. After the project has been approved and completed, the Design Review Committee may or will include members of the HOA. The Master Developer will then no longer be involved in the decision making nor approvals pertaining to matters of the master plan development.

Permitted uses by the City not included in Figure 4.1-1 may be allowed provided that the Design Review Committee finds that such permitted use design is consistent as to quality with the Design Guidelines and does not create significant additional traffic or other infrastructure-related impacts beyond those originally approved for the Project. The Project Architect of Record shall prepare a letter indicating design conformity to the Master Plan prior to submitting any projects to the City of Reedley for building permits.

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5.1 Project Review Process

The adopted Master Design Guidelines(MDG) in concert with the Kings River Village site plan, dated December 2014 (Page 17) represents the ~~Adoption of the Master Plan/Master Conditional Use Permit allows~~ the allowable ~~or the~~ overall development. ~~of the site plan consistent with Figure 4.1-1.~~

~~All approved uses within the adopted master plan shall be subject to review and approval by the Design Review Committee, which shall initially be composed of the Master Developer and the Project Architect and Project Engineer of Record. The project Architect of Record shall prepare a letter indicating design conformity to the Master Plan prior to submitting any project(s) to the City of Reedley for building permits. After the project has been approved and completed, the Design Review may or will include member of the HOA. The Master Developer will then no longer be involved in the decision making nor approvals pertaining to matters of the master plan development.~~

All proposed future uses shall be consistent with the "Vesting" Tentative Tract Map No. 6096, the Kings River Village site plan, dated December 2014 (Page 17), the intent of the Master Design Guidelines (MDG) and Reedley Municipal Code, Title 10, Chapter 25, List of Permitted and Conditional Uses.

Any proposed future development seeking planning approvals and building permits within the planned community area is required to first submit their proposal to the Design Review Committee. The applicant/developer should submit at a minimum a site plans with elevations, landscape, and hardscape design. The Design Review Committee will make a determination if the proposed project is consistent with the intent and standards set forth in the MGD. Based upon the findings of the Design Review Committee the Project Architect of Record will prepare a letter to the applicant/developer. The letter which indicates design conformity to the Master Plan will also authorize the applicant/developer to submit the appropriate application (entitlement/building permit) prior to submitting any project to the City of Reedley. The City of Reedley shall not accept or process any entitlement or building permit application without the approval of the Design Review Committee.

~~Permitted use by the City not included in Figure 4.1-1 may be allowed provided that the Design Review Committee finds that such permitted use design is consistent as to quality with the Design Review Committee and does not create significant additional traffic or other infrastructure-related impacts beyond those originally approved for the project. The Project Architect of Record shall prepare a letter indicating design conformity to the Master Plan prior to submitting any project to the City of Reedley for building permits.~~

~~Uses not identified in Figure 4.1-1 or permitted by right by the City of Reedley shall require a conditional use permit. They may be allowed provided all adverse impacts are fully mitigated and provided the proposed use is reviewed and approved by the Design Review Committee. The developer then must apply to the City for a conditional use permit. Once the conditional use permit is approved by the City the developer must request that the Project Architect prepare a letter indicating design conformity to the Master Plan prior to submission to the City of Reedley for a building permit.~~

A major change of use or modification to the MDG ~~Any major changes to the development plan or guidelines~~ shall be initiated, reviewed and approved by the Design Review Committee. Major changes are defined as uses substantially inconsistent with the design or zoning in the adopted Master Plan. These projects shall require a formal application to the City to amend Conditional Use Permit Application No. 2014-05. ~~the development plan or guidelines subject to approval by the Planning Commission and City Council. Throughout the duration of the Project, both Project Architect and Engineer of Record may be succeeded by equally qualified personnel at the discretion of the Master Developer.~~

~~Developer making proposals for Kings River Village Planned Community will be required to follow these requirements within the Master Plan. However,~~ Due to ~~the~~ changing market conditions and other special requirements of future ~~a particular develope~~development, ~~r~~ may require minor modifications to these adopted ~~published~~ MDG~~design guidelines~~. In such cases the Committee shall provide to the City a full description of the changes and why the changes are needed. The City shall be provided a 30 day comment period prior to the Committee enacting such minor modifications to the adopted MDG. If the City provides no comment the Committee may proceed with the modifications. ~~All projects will be subject to be reviewed by the designated design review committee and minor changes to be published design guidelines will be under review at this time.~~

~~The Kings River Planned Community project included extensive common areas needed to be constructed and maintained for the shared benefit and obligation among all owners of the proposed parcels. A common area maintenance agreement (CAM) shall be prepared and completed before the issuance of any building permit.~~

Uses not identified in Figure 4.1-1 or permitted by right by the City of Reedley shall require a conditional use permit. They may be allowed provided all adverse impacts are fully mitigated and provided the proposed use is reviewed and approved by the Design Review Committee. The developer then must apply to the City for a conditional use permit. Once the conditional use permit is approved by the City the developer must request that the Project Architect of Record prepare a letter indicating design conformity to the Master Plan prior to submission to the City of Reedley for a building permit.

Any major changes to the development plan or guidelines shall be reviewed and approved by the Design Review Committee. Major changes are defined as uses substantially inconsistent with design or zoning in the adopted Master Plan. These projects shall require a formal application to the City to amend the development plan or guidelines subject to review and approval by the Planning Commission and City Council. Throughout the duration of the Project, both Project Architect and Engineer of Record may be succeeded by equally qualified personnel at the discretion of the Master Developer.

Developers making proposals for Kings River Village Planned Community will be required to follow these requirements within the Master Plan. However, the changing market conditions and other special requirements of a particular developer may require minor modifications to these published design guidelines. All projects will be subject to be reviewed by the designated design review committees and minor modifications to the published design guidelines will be under review at that time.

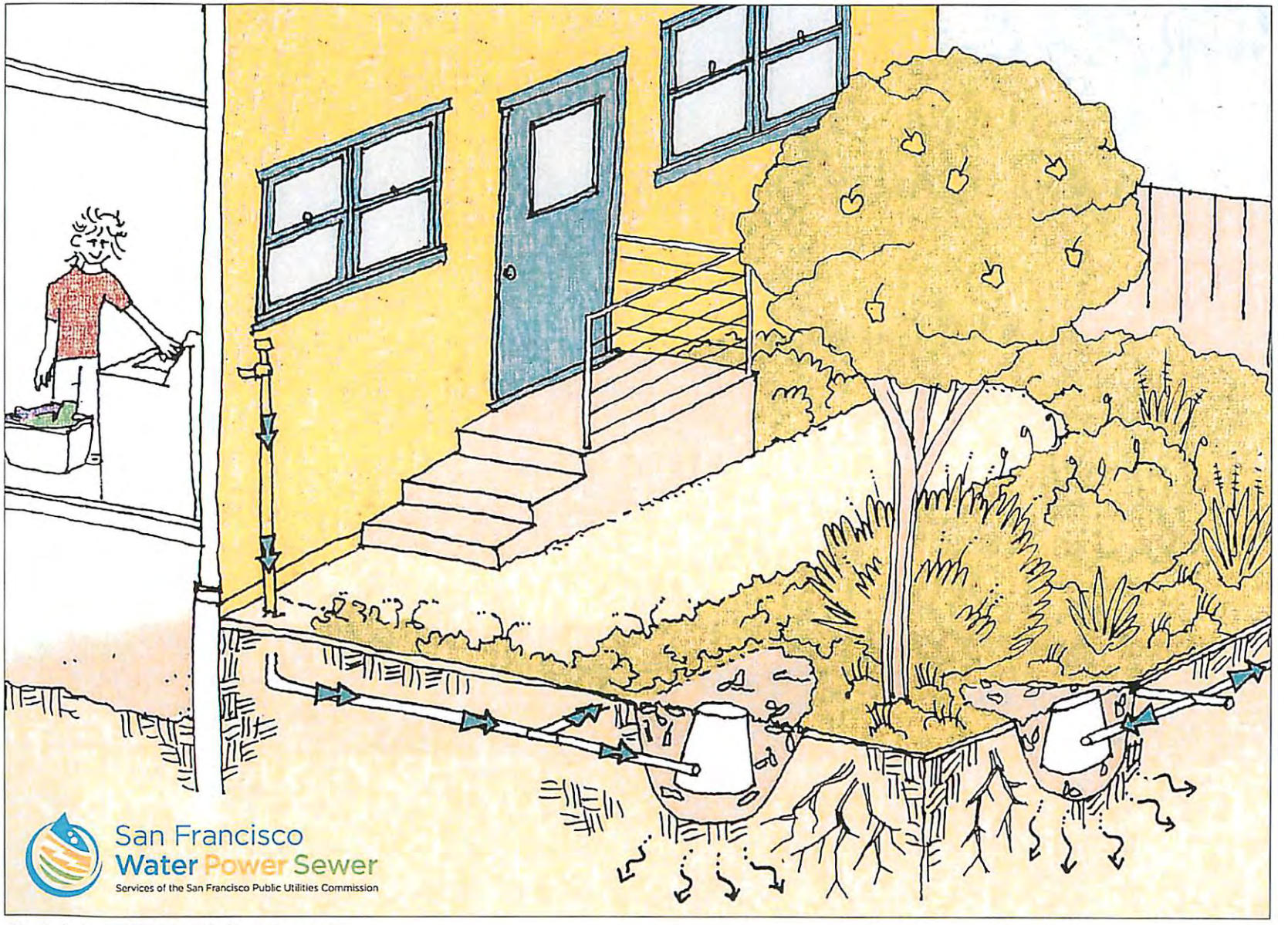
The Kings River Village Planned Community project includes extensive common areas needed to be constructed and maintained for the shared benefit and obligation among all owners of the proposed parcels. A common area maintenance agreement (CAM) shall be prepared and completed before the issuance of any building permits.

SUMMARY/CONCLUSION

In conclusion, The Kings River Village Community Master Plan meets the goals, objectives, and policies of the City of Reedley's Mixed Use Land Use and Zoning categories. The master planned development will promote Reedley's agricultural community identity while maintaining consistency with the special site development standards within the Zoning Ordinance and design district. The Kings River Village Planned Community provides for business, residential, and open space opportunities within a mixed use setting for the area. The plan includes an efficient quality driven guide for development of the area with maintaining slight flexibility to allow new innovative design solutions to be integrated into the project as time goes on.

Most importantly, The Kings River Village Planned Community provides for an opportunity to develop a high quality, highly sustainable project near the eastern gateway into the City of Reedley and create a strong image for the area.

Appendix B



SAN FRANCISCO graywaterdesignmanual for OUTDOOR IRRIGATION

June 2012 Version - Updates will be published as necessary

SAN FRANCISCO
graywater design manual
FOR OUTDOOR IRRIGATION

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San Francisco Information

Additional Resources

This guide gives an overview of the design, construction, permitting, and operation of graywater systems for outdoor irrigation, including laundry-to-landscape, branched-drain, and pumped systems.

Introduction

Overview of Guide

Why send your laundry water to be treated at a sewage treatment plant when you could use it to water plants and trees in your own yard instead? Sending water that's clean enough for other uses out of the house with the sewage doesn't make sense. That's why many Californians use their laundry and shower water to keep their landscapes green, even during times of drought.

The *San Francisco Graywater Design Manual for Outdoor Irrigation* is an educational resource for homeowners and professionals who want to install residential graywater systems for subsurface outdoor irrigation. In this guide, you'll learn about the benefits of graywater, when and where to use it, when not to use it, permitting requirements, what products to use, and suggested plants to irrigate.

The guide provides suggested methods for designing and installing a laundry-to-landscape system and a basic overview of the design and installation of branched-drain and pumped systems. The methods described in this guide may not be the only acceptable procedures

for designing and installing systems that meet current requirements. Each homeowner's circumstances are different: you must ensure that a graywater system on your property is designed and installed safely, is consistent with applicable code requirements, and is operated in a manner that causes no harm or damage to yourself or neighbors. If at any time you have doubts about undertaking the installation of a graywater system, please consult a professional installer.

San Francisco's Water Supply

Residents of San Francisco receive some of the highest quality tap water in the nation. Sierra snowmelt flows into the Tuolumne River, is stored in the Hetch Hetchy Reservoir, and travels 167 miles by gravity to San Francisco. Our regional water system carries pristine water to 2.5 million customers throughout San Francisco and the Bay Area. The San Francisco Public Utilities Commission (SFPUC) , provider of San Francisco's water, power and sewer, is committed to preserving this precious resource through conservation and by using local alternative supplies—such as recycled water, rainwater, and graywater—for non-potable purposes. Using laundry water for irrigation is one of many ways to conserve our drinking water supply and reduce flows to our wastewater system.

What is Graywater?

Graywater is water from washing machines, showers, bathtubs, and bathroom sinks. It is wastewater that can contain some soap, salts, hair, suspended solids and bacteria, but that is clean enough to water plants. Water from toilets, kitchen sinks, or wash water from diapers is not considered graywater in California.

Graywater (treated or untreated) is not the same as recycled water, which is highly treated wastewater from a centralized treatment facility. Recycled water is commonly used in other Bay Area cities, and the SFPUC is working on several recycled water projects in San Francisco.

Benefits of Graywater

Reusing graywater is an important component of sustainable water practices. There are many benefits of using graywater instead of potable water for irrigation.

Reusing graywater can:

- Decrease potable water use by 16 to 40 percent, depending on the site (Cohen 2009).
- Decrease water and wastewater utility bills.
- Diversify the City's water portfolio and provide an alternate source of irrigation water, reserving treated potable water for high-quality water needs.
- Reduce the energy (approximately 2 watt-hours per gallon of water) and chemicals needed to treat wastewater.

Another benefit of using graywater is that it connects us to our water supply, helping us understand where our water comes from and where it goes. Becoming conscious of our water supply encourages healthier product choices and engagement with our landscape. By reusing household graywater, we preserve water resources for other living things. In concert with water-wise landscaping, rainwater harvesting, and conservation, using graywater as a resource helps reduce dependency on imported water and protects watersheds.

Graywater Basics

Graywater is a unique source of water and must be used differently from potable water and rainwater. These are some basic guidelines for residential graywater systems:

- Do not store graywater more than 24 hours. If you store graywater, the nutrients in it start to break down and create bad odors.
- Minimize contact with graywater. Graywater can contain pathogens. All systems must be designed so that water soaks into the ground and is not accessible to contact by people or animals.
- Infiltrate graywater into the ground; do not allow it to pool or run off. You'll need to know how fast water soaks into your soil to properly design your system. Pooling graywater can provide opportunities for mosquitoes to breed, as well as for human contact.

Inform Your Gardener or Landscaper About Your Graywater System

Be sure to inform anyone who works in your yard about your new graywater system. Show him or her where the pipes and irrigation points are so that the pipes don't get accidentally punctured or the mulch basins altered or buried. Otherwise, your system could be unintentionally damaged by people who don't understand how it functions.

- Keep your system as simple as possible. Simple systems last longer, require less maintenance, use less energy, and cost less. Keep in mind that systems with pumps and filters require more commitment and regular maintenance.
- Install a diverter valve at a convenient location to allow for easy switching between the graywater system and the sewer system.
- Match the amount of graywater directed to your plants with their irrigation needs. See Appendix C for information about plant-friendly products; many products contain salts and boron, which harm most plants.

Graywater Regulations

Graywater use is legal in California. In August 2009, California's graywater regulations changed, allowing for lower-cost graywater systems to be installed legally, including some without the need for a permit. In San Francisco, a permit is not required for a laundry graywater system that meets the conditions listed in the next section, "When a Permit Is Not Required." For information about systems that do require permits, see the following section, "When a Permit Is Required." California's regulations for residential graywater systems can be found in Chapter 16A of the California Plumbing Code.

When a Permit Is Not Required

You can install a graywater system for outdoor irrigation without a permit if you meet **all** of the following requirements:

- Graywater comes from the washing machine only.
- Graywater system does not alter the household plumbing (you access graywater from the hose of the machine, not by cutting into the plumbing).
- Graywater system is for a one- or two-unit residential building.
- Graywater system follows 12 guidelines set forth in the California Plumbing Code (see Appendix B, "Operation and Maintenance Manual for Laundry-to-Landscape Graywater System").

When a Permit Is Required

You **need** a permit for a graywater system for outdoor irrigation that includes **any** of the following conditions:

- Graywater system collects water from showers, sinks, or baths.
- Graywater system alters the plumbing (you cut into the drainage plumbing to access the graywater).
- Graywater system is installed in a building that is not a one- or two-unit residential building.
- Graywater system includes a pump (besides the washing machine's internal pump) or a tank.

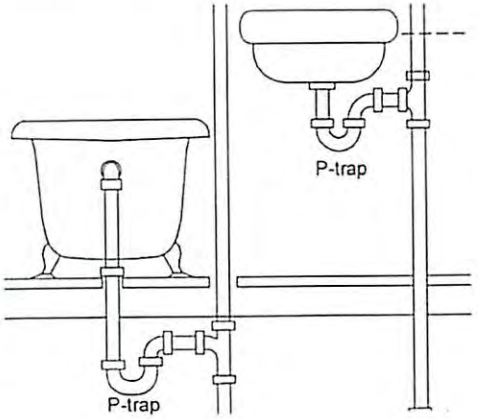
For additional information about permitting a graywater system, contact the Department of Building Inspection at 415-558-6088.

References

California Residential Graywater Code: California Plumbing Code, California Code of Regulations Title 24, Part 5, Chapter 16A. Available at http://www.hcd.ca.gov/codes/shl/2007CPC_Graywater_Complete_2-2-10.pdf

Cohen, Yorem, 2009. Graywater—A potential source of water. UCLA Institute for the Environment. Available at http://www.ioe.ucla.edu/reportcard/article.asp?parentid=4870

The shower p-trap is the copper pipe shaped like an upsidedown and sideways letter "p." In this example, the p-trap and shower drainage pipes are located below the shower/tub. Photo: Josh Lowe.



Developing a Graywater System

Graywater systems can range from the very simple to the very complicated. Follow these steps to create a well-functioning and safe system.

1. Start with conservation! Conservation is always the most economical and environmentally beneficial place to begin. You might find that your landscape doesn't require as much water as you've been giving it, or that there are easy ways to greatly reduce the amount of water your household uses. See the SFPUC's resources for conservation information to learn about ways to save water and money.

   - Before planning a graywater system, consider scheduling a free home water conservation consultation by contacting the SFPUC Water Conservation Section at 415-551-4730 or by visiting *http://conserve.sfwater.org/*. This evaluation can help you to assess your indoor and outdoor water use and to identify ways you can lower both by fixing leaks and taking other measures.
   - If you are not able to install a graywater system, you can still reuse water by collecting shower water in a bucket as the water heats up and using it to water your plants.

2. Determine which fixtures in your home are candidates for graywater capture.

   - Washing machines are usually the easiest place to begin. If your machine is in a room with an exterior wall, it's usually simple to send a pipe outside. If your machine is in an interior room, you'll need a way to run the pipe outside, either through a crawl space or basement.
   - Another potential fixture for graywater capture is the shower and bathtub faucet. Identify the shower drain pipe by going beneath the shower (for example, in the basement), looking for a "p-trap" (see image on left). The p-trap prevents sewer gases from entering the home. Run hot water in the shower and observe which pipe heats up. Make sure you do not tap into the toilet drain! A plumber can help reroute shower pipes. If your shower is

on the second story, and the pipes run inside the wall, the drain is probably combined with the toilet drain in the floor, making the shower graywater inaccessible without a major plumbing remodel.

3. Estimate the quantity of graywater your chosen source produces using the "Estimating Graywater Flows" section of this manual.

4. Analyze how water drains on your site and find out your soil type with a "soil ribbon test" and/or a low-cost laboratory analysis (required if your system needs a permit). In combination with your flow calculations, this analysis will help you determine how large your landscape distribution area will need to be.

5. Read about types of graywater systems and decide which is best for you. Figure 1 provides some guidance for your selection.

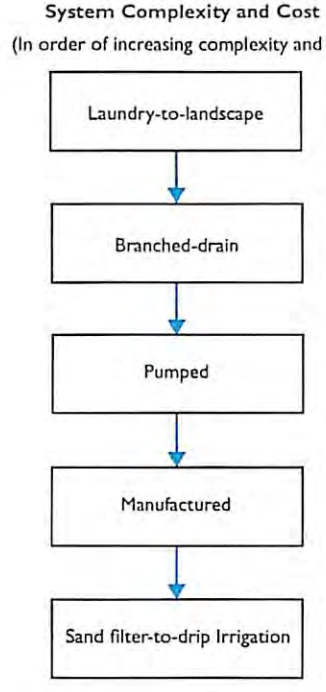
6. Read about setback requirements to determine your system layout.

7. Draw a sketch of your proposed system. If a permit is required, you'll need to submit a plot plan and details about the system to the San Francisco Department of Building Inspection (DBI). For more information, contact DBI at 415-588-6088. Note: If your current plumbing is not up to code, you'll need to upgrade the part of the plumbing affected by the installation of the graywater system. For example, if the shower drain is undersized, you will need to upgrade to 2-inch pipe.

8. Find an installer or install the system yourself.

9. Remember to label the system (3-way valve and all above-ground graywater pipes) and keep an operation and maintenance manual with it. If you sell your home, the manual must stay with the residence.

10. Operate and maintain your system.



System Types	Fixture Choices
Laundry-to-landscape	Washing machine only
Branched-drain	All fixtures [1]
Pumped system	All fixtures [1]
Manufactured systems	All fixtures [1]
Sand filter-to-drip irrigation	All fixtures [2]

1 Systems can use graywater from washing machine, shower, tub, or bathroom sink.

2 System typically only used for high graywater volumes.

All systems require a permit except the laundry-to-landscape system.

Figure 1. *Guidance for choosing your graywater system.*

Notes on Requirements for Calculating Graywater Flows

For Permitted Systems: The California Code of Regulations describes a specific method that must be used to calculate graywater flows for systems that require permits (Title 24, Part 5, Chapter 16A). This method is described on page 9 of this manual.

For Systems That Do Not Require a Permit: Laundry-to-landscape systems can be sized using the method described for permitted systems OR the method described in the section of this manual titled Irrigation Supply Calculations, found on page 10.

Start by Saving Water!

Saving water and money is easy! You can reduce your water use by about 35 percent just by installing water-efficient fixtures and appliances (see *http://conserve.sfwater.org/*).

You can obtain free high-efficiency showerheads and aerators and possibly qualify for a rebate on a water-efficient washing machine from SFPUC. Call 415-551-4730 for more information.

Sizing Your Graywater System

There are three steps to sizing your graywater system. It is important to follow these steps so that you can design a system that has adequate landscape distribution. Remember, state law requires that graywater irrigation systems never cause pooling or runoff.

Step 1: Estimate your graywater flows. There are different methods for estimating your graywater flows based on whether your system requires a permit or not. Follow the steps in the "Estimating Graywater Flows" section to estimate your graywater flows (page 9).

Step 2: Estimate the absorption capacity of your soils based on the methods outlined in the "Soil Absorption and Distribution Area" section (page 11).

Step 3: Use your graywater flow calculations and your soil absorption estimate to calculate the necessary size of your mulch basins (page 14).

After calculating the necessary size of your landscape distribution area (as described in the next section), record this information in the operation and maintenance (O&M) manual for your system (templates in Appendix B). Be sure to include the assumptions you used in your calculations. That way, if you sell your home and move out, the new owner will know how much water the system was designed for. If the new household produces more or less water, the new owner might need to make alterations to the system.

Estimating Graywater Flows

Permitted System Calculations

The California Code of Regulations indicates that graywater flows for permitted systems in single- and multi-family dwellings can be estimated based on records of water use, calculated based on local daily per-person interior water use, or calculated using a default method listed in the code (Title 24, Part 5, Chapter 16A). The following is the method listed in the code:

Step 1) The number of occupants in your household must be calculated as:

2 occupants in the First Bedroom

1 occupant in Each Additional Bedroom

Step 2) Graywater flows must be calculated as follows:

Showers, Bathtubs, and Washbasins (combined): 25 gallons per day (gpd)/occupant

Washing Machines: 15 gdp/occupant

Step 3) Multiply the number of occupants (as calculated above, not the actual number of people who live in the home) by the estimated graywater flow in gpd per occupant to calculate the total estimated daily graywater flow.

Number of occupants x graywater flow per occupant
= total estimated daily graywater flow

In San Francisco, you must present calculations based on this default method to DBI when you apply for a permit (see Appendix E for an example). However, you may be able to reduce your graywater flow calculations if you consistently use less water in your home and can produce documentation of reduced graywater production for DBI's review. Please contact DBI if you would like to make alternate calculations based on reduced graywater production in your home. Note that it is best to contact DBI early in the process so staff can assist you in creating a well-designed graywater system that works for you and future occupants of your home.

Example Graywater Flow Estimate for Permitted Systems Using the Default Code Method

In a three-bedroom home of three people, the following volumes of graywater would be produced:

Number of occupants: Four. The three-person home would have four occupants using the permitted systems calculation method (two in the first bedroom plus one for each additional bedroom).

Shower graywater: 25 gpd x 4 people
= 100 gpd

Washing machine graywater: 15 gpd x 4 people
= 60 gpd

Total graywater produced: 100 + 60 gpd
= 160 gpd

Design for Highest Calculated Flow

Note that if your irrigation supply calculations (page 10) yield a higher flow than the permitted system calculations, you should size your system based on the irrigation supply calculations.

Example Graywater Flow Estimate Using the Irrigation Supply Calculation Method

In a three-bedroom, three-person household with a laundry-to-landscape system, each person does one load of washing a week, plus there is an extra load for towels, totaling four loads per week. Washing machine use is spread out across the week, sometimes two loads of laundry in one day. The household's front-loading washing machine is rated at 20 gallons per load.

Washing machine graywater (weekly flow): 4 loads per week x 20 gallons per load = 80 gallons per week

Washing machine graywater (daily flow): 2 loads per day x 20 gallons per load = 40 gallons per day

Irrigation during Vacations

Keep in mind that most types of simple graywater systems only irrigate when you are at home producing graywater. If you take frequent summer vacations or are away every weekend, you might want to plan for back-up irrigation, or you could simply ask a housesitter to water the plants. More complex systems, like sand filter-to-drip irrigation, typically include back-up irrigation (see page 31).

Irrigation Supply Calculations

(can also be used to size laundry-to-landscape systems)

Calculating how much graywater your home actually produces is an important step for all graywater systems. These calculations determine how much water is flowing to your plants, regardless of whether you have a permitted or non-permitted system. These calculations will help you ensure that your plants are not getting over- or under-watered.

Irrigation supply calculations can also be used instead of the permitted systems method to size the landscape distribution area for systems that do not require a permit. Hence, they can only be used to size the landscape distribution area for laundry-to-landscape systems.

Washing machines (weekly flow): __ gallons/load (the rating of your machine) x __ loads per week = __ gallons per week

Washing machines (daily flow): __ gallons/load (the rating of your machine) x __ loads on a typical laundry day = __ gallons per typical laundry day

Showers: __ gallons per minute (the flow rate of your showerhead) x __ minutes you shower x __ showers per day x actual number of home occupants = gallons per day

Note that if you regularly produce higher amounts of graywater in a single day, you'll need to consider this when you design your system. Examples include multiple loads of laundry in one day or baths. You will also need to consider situations where you produce atypical amounts of graywater. If you sometimes do five loads of laundry in one day, rather than spread them out over the week, you'll need to consider this when you design and operate your system. In cases of high flows, one option is to redirect the laundry water to the sewer system using the 3-way valve. Remember that you must design and operate your system to avoid graywater pooling and runoff.

Note that performing these calculations for your specific household fixtures yields the most accurate estimate of the amount of graywater available for your plants, yet it does not consider future changes. Volumes could vary if the size or habits of your household change over time or if a new owner moves in.

Soil Absorption and Distribution Area

Understanding the infiltration capacity of the soils in your yard is critical for designing your graywater system and sizing your landscape distribution area. The distribution area must be sized to allow the graywater to soak into the soil without pooling or runoff.

If your system requires a permit, you must provide DBI with the results of a laboratory soil analysis to confirm your soil type. See page 12 for details. To learn the basics about the soil in your yard, you should also conduct a simple soil "ribbon test," described below.

After you have identified your soil type via laboratory analysis (required for permitted systems) and/or a ribbon test, conduct a simple drainage test to find out how well water drains on your property. This drainage test will help ensure that you choose a good location for your graywater outlets.

Soil Ribbon Test

To conduct the soil ribbon test, take a small handful of soil in your hand, slowly moisten it with water, and knead it. Try to form the soil into a ball. Squeeze it to see if you can make a cast (an impression of your fingers). Place the ball of soil in your hand between your thumb and forefinger, gently squeeze the soil, and push it upwards into a ribbon (see image at right). Let the ribbon break from its weight. Don't try to mold the soil into a ribbon by rolling it in

Table 1. *Identifying Soil Type Using the Ribbon Test*

Characteristics of Soil Sample	Soil Texture or Soil Type
Soil does not stay in a ball. Loose and gritty feeling when moistened.	*Sand*
A cast, or molded imprint of your fingers, forms, but it breaks easily. It does not form a ribbon. Soil feels slightly gritty.	*Sandy loam*
A short ribbon can be formed but breaks when about ½ inch long.	*Loam*
A ribbon can be formed. It is moderately strong until it breaks at about ¼ inch length. Soil feels slightly sticky.	*Clay loam*
The soil can easily be formed into a ribbon that is an inch or more long. Soil feels very sticky and gritty.	*Sandy/silty clay*
The soil can easily be formed into a ribbon that is an inch or more long. Soil feels very sticky and smooth.	*Clay*

Source: Adapted from Alameda County Waste Management Authority and Source Reduction and Recycling Board (StopWaste.org), 2010, and Thein, S.J., 1979.

Soil forms a "cast," an impression of your fingers. Photo: Josh Lowe.

Soil ribbon being squeezed between thumb and finger. Photo: Josh Lowe.

your palms, as this will give inaccurate results. See Table 1 to identify the texture or type of soil you have. You should conduct a ribbon test at several locations on your property to understand the variability of soil characteristics.

Laboratory Test

If your system requires a permit, you must provide DBI with the results of a soil analysis. This requirement can be fulfilled by submitting a soil sample to a laboratory for an inexpensive soil texture analysis (see Appendix F for local laboratories) or by providing an existing soil analysis to DBI. The soil sample must be taken from the area to be irrigated with graywater. If there is more than one type of soil, representative samples from different areas must be taken. An example of an existing soil analysis is a geotechnical study done for your property. Note that the geotechnical report must be signed and stamped by a licensed engineer or geologist.

Drainage Test

Identifying your soil type (either by ribbon test or laboratory analysis) does not always provide enough information about how well water will infiltrate in a particular location, as deeper soils could differ from surface soils, or hardscape (for example, an old cement patio) might be buried under your yard. Urban yards can be full of surprises! To ensure that water drains properly in the location you would like to irrigate with graywater, you should conduct a simple drainage test, as described below.

This drainage test is optional, as it is not required by the code. If you plan to use graywater to irrigate sections of your yard that you already irrigate, and you know that water drains well, you might not need to conduct the drainage test. If you are unsure about how water drains, the drainage test can help you choose appropriate locations for irrigating with graywater. Remember, pooling and runoff of graywater is never allowed, so if you have poor drainage with pooling, you will have to redesign your system.

1. Dig a hole, approximately 1 foot deep, in the area where you plan to infiltrate graywater. Insert a ruler or stick marked with inches into the hole (Figure 2).

2. Fill the hole with water and let it soak in. Repeat this several times so that the surrounding soil is saturated when you take your reading.

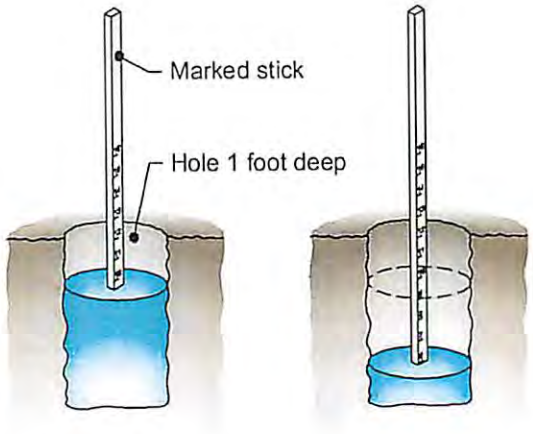


Figure 2. Drainage test.

3. Fill the hole with water again; this time record how long it takes for the water level to go down a few inches. If it drains approximately 1 inch per hour or faster, you have adequate drainage for irrigating the area with graywater.

4. If it takes longer than two hours for the water level to go down 1 inch, or the hole doesn't drain all day, don't use graywater to irrigate this area. Try another location to see if the drainage is better. If you irrigate an area that does not have adequate drainage, you could have pooling and runoff. Plants could also be damaged by water-logged soil, so make sure to irrigate only properly draining soils, or amend your soil by adding compost to improve drainage.

Calculating Your Landscape Distribution Area

Once you know how many gallons per day your home produces (see the Estimating Graywater Flows section), have identified your soil type (either by ribbon test or laboratory analysis), and know that water drains well in the area you wish to irrigate, you can calculate how large an area you need to ensure proper drainage of graywater.

To calculate your landscape distribution area, you will need the following information:

- Gallons of graywater generated each day
- Soil type (to be used with Table 2)

Table 2. *Minimum Irrigation Area for Different Soil Types*

Soil Type	Square Feet of Area Needed to Infiltrate Each Gallon of Graywater (per day)
Coarse sand or gravel	0.2
Fine sand	0.25
Sandy loam	0.4
Sandy clay	0.6
Clay with considerable sand or gravel	0.9
Clay with small amounts of sand or gravel	1.1

Source: Table 16A-2, Design Criteria of Six Typical Soils, California Plumbing Code Section 16A.

Example: Calculating Minimum Infiltration or Irrigation Area

If you identified your soil type as sandy loam, you would need 0.4 square feet per gallon of graywater (Table 2). If you produce 100 gallons of graywater per day, you'd multiply 0.4 square feet/gpd by 100 gpd to get 40 square feet, the minimum area needed for your graywater to infiltrate.

100 gpd x 0.4 square feet per gpd (from Table 2) = 40 square feet of total irrigation area

This irrigation area can be spread across different locations in your yard. For example, if you want to irrigate 10 trees and your total irrigation area must be 40 square feet, each mulch basin would need to be at least 4 square feet.

This calculation does not take into consideration the appropriate amount of water necessary for the plants; refer to Appendix D for plant water requirements.

Note: If your system incorporates drip irrigation, there is a different way to size the irrigation area; refer to Chapter 16A of the California Plumbing Code, Table 16A-3.

Multiply your gallons of graywater per day by the number corresponding to your soil type in Table 2. This calculation gives you the minimum area, in square feet, needed to infiltrate your graywater.

When you design your system, make sure that the total area (not volume) of your mulch basins is at least as large as the minimum distribution area calculated above. Your irrigation area can be larger, but not smaller. Record your system specifications in your O&M manual for future reference.

Protecting Groundwater

Graywater must be discharged a minimum of three feet above the groundwater table. Groundwater occurs deeper than three feet on most of the western side of San Francisco, but some areas, especially on the eastern side, can have shallower groundwater. If you don't know how deep groundwater is beneath your property, you can check by digging a hole three feet deep below your lowest anticipated graywater discharge point. If no water enters the hole, then it is safe to irrigate the area with graywater. If water enters the hole, the groundwater table is too shallow, and graywater may not be used for irrigation. If you dig a hole to check the depth to groundwater, do so during the irrigation season, as this is the time you'll be using graywater. During the rainy months, with any signs of pooling or runoff from rainfall, or in places where the groundwater table rises, all graywater systems must be shut off and graywater must be diverted back to the sewer.

References

Alameda County Waste Management Authority and Alameda County Source Reduction and Recycling Board, 2010. Bay-Friendly Gardening. Available at http://www.stopwaste.org/home/index.asp?page=8.

Thein, S.J., 1979. A Flow Diagram for Teaching Texture by Feel Analysis. Journal of Agronomic Education, 8:54-55.

Setback Requirements: Where Not to Put Your Graywater!

Your graywater system should irrigate plants without causing problems for you or your neighbors. A setback is a required distance between structures, such as between a building and another building, other structure, or property line. The purpose of setbacks is to avoid potential problems caused by nearby land uses. For example, you'll need to keep graywater a certain distance from your house to avoid damaging its foundation, from your neighbor's yard to maintain good neighborly relations, and from creeks to prevent contamination of freshwater. Table 3 lists setback requirements in San Francisco.

Table 3. *Setbacks Required in San Francisco*

	Minimum Distance (Horizontal) from	
	Irrigation Field (Feet)	Tank (Feet)
Building structures (not including porches and steps or covered walkways, patios, driveways, etc.)	2	5
Private property lines	1.5	5
Water supply wells	100	50
Streams and lakes	100	50
On-site domestic water service line	0	5
Pressurized public water main	10	10
Water table	3 feet above (see note 1).	NA
Retaining wall[2]	2	NA

Notes:

Unless otherwise noted, setbacks are from the California Plumbing Code (California Code of Regulations, Title 24, Part 5, Chapter 16A, Table 16A-1).

1. A test hole 3 feet deep without water can demonstrate that the site is far enough above the ground water table. The graywater system must be shut off in the rainy season.
2. Requirement specific to San Francisco.

Laundry-to-Landscape System

Description: The washing machine pump sends graywater from the drain hose out to the landscape through 1-inch tubing. The system does not alter the existing plumbing and does not require a permit. Best suited for irrigating trees, bushes, shrubs, small perennials and larger annuals.

Installation: Easy to install for the do-it-yourselfer or a professional.

Cost: Ranges from a few hundred dollars (installed by homeowner) to $1,000 to $2,000 (professional installation).

Laundry-to-Landscape System

System Overview

A laundry-to-landscape graywater system captures graywater from the discharge hose of your washing machine, enabling you to reuse the water without altering the existing plumbing in your home.

In this system, the hose leaving the washing machine is attached to a valve that allows for easy switching between the graywater system and the sewer. It is important to be able to switch to the sewer anytime you don't want to send the water outside, for example if you're using bleach, which could harm plants, or if the soil is saturated during the rainy season. The graywater is distributed through a 1-inch irrigation line with outlets directing water to specific plants (Figure 3). This system is low-cost, easy to install, and very flexible if you need to make future changes to your home or landscaping.

Parts You Will Need

You can purchase most of the parts you need from large irrigation stores; 1-inch brass 3-way valves are available from some plumbing supply stores, and complete laundry-to-landscape kits can be found online. See Appendix F for more information.

Assemble these parts:

1. 3-way valve
2. PVC 1-inch male adapter
3. 1-inch barbed male adapter
4. Hose clamp
5. PVC 1-inch x 1½-inch bushing
6. PVC 1½-inch female adapter (slip by FPT)
7. Auto vent (or air admittance valve)
8. 1-inch PVC tee
9. 1-inch barbed x slip adapter

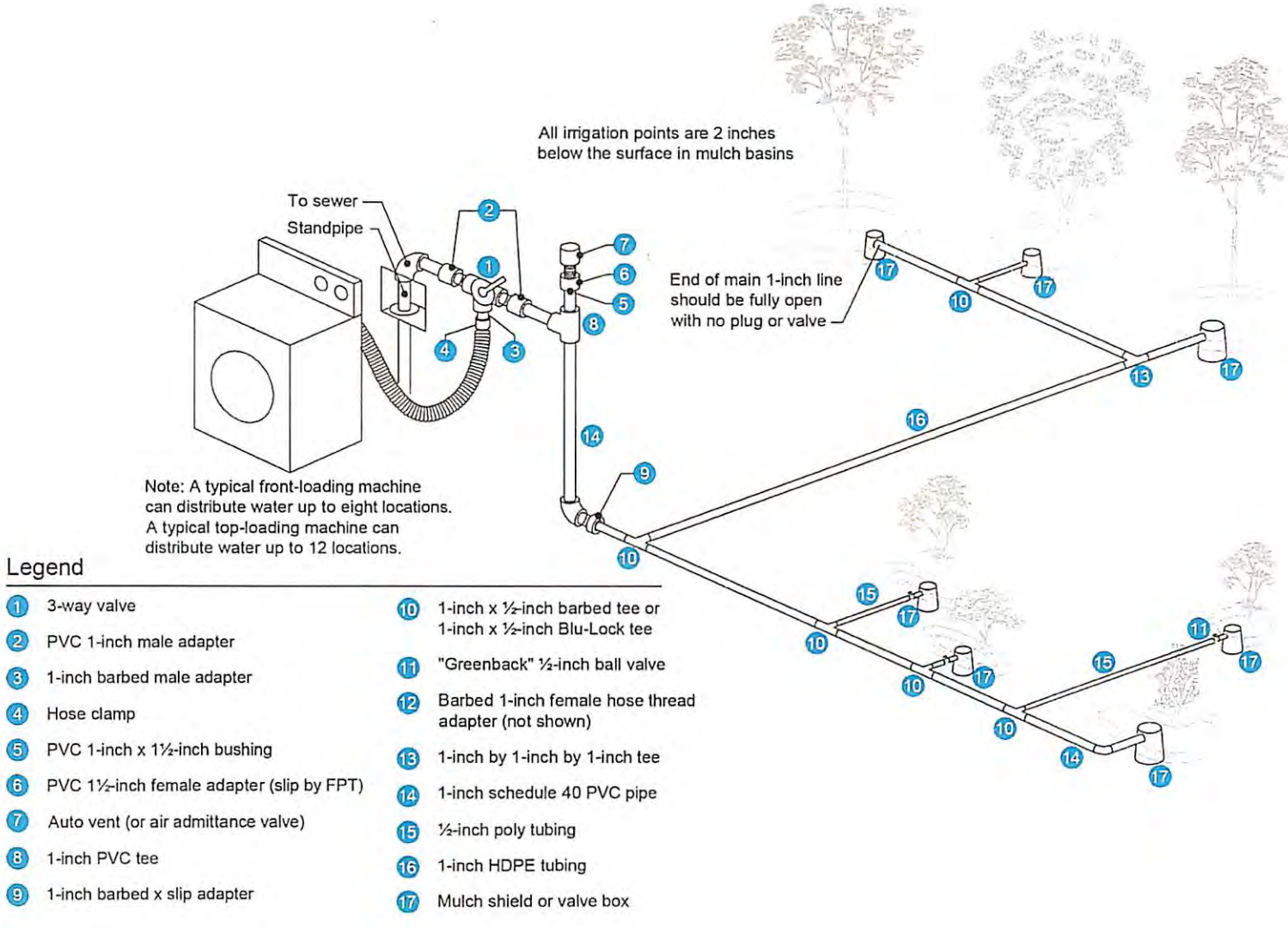
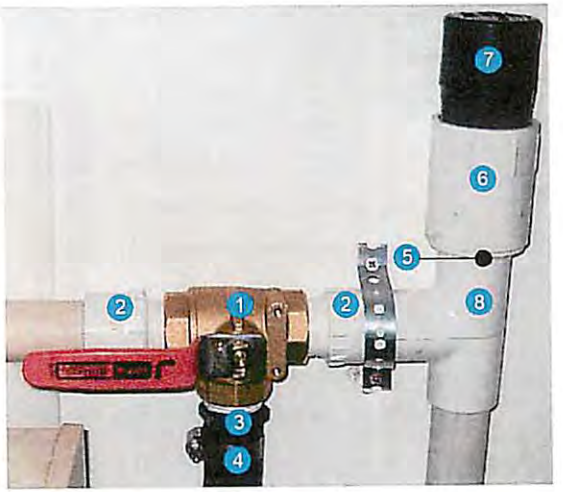


Figure 3. Laundry-to-landscape overview. Source: Clean Water Components.



Legend

1. 3-way valve
2. PVC 1-inch male adapter
3. 1-inch barbed male adapter
4. Hose clamp
5. PVC 1-inch x 1½-inch bushing
6. PVC 1½-inch female adapter (slip by FPT)
7. Auto vent
8. 1-inch PVC tee

3-way valve for diverting laundry graywater to the landscape. Auto vent shown at right. Photo: Laura Allen.

Cleaning the Pump Filter

If your washing machine is not pumping out the water properly, the most frequent cause is objects (for example, coins or paperclips) getting stuck in the pump filter and blocking the flow of water. It is a good idea to check the pump filter before installing your graywater system. See the references at the end of this section for more information about how to clean a washing machine pump filter.

10. 1-inch x ½-inch barbed tee or 1-inch x ½-inch Blu-Lock tee
11. "Green or purple back" ball valve (as needed)
12. Barbed 1-inch female hose thread adapter
13. 1-inch by 1-inch by 1-inch tee
14. 1-inch schedule 40 PVC pipe
15. ½-inch poly tubing
16. 1-inch HDPE tubing
17. Mulch shield or valve box
18. Garden staples

Tools you will need:

- Measuring tape
- PVC cutting tools (ratcheting cutters or a saw)
- Two pairs of channel locks
- Level
- Tubing cutters
- Drill
- 1½-inch hole saw
- ¼-inch pilot bit
- ¼-inch masonry bit (if the wall is stucco)
- Caulking gun and adhesive caulk
- Hammer
- Chisel
- Tin snips
- Shovel and pickaxe

How to Build a Laundry-to-Landscape System

Step 1: Assess Your Site

Where is the easiest area to irrigate? Usually this area is closest to the washing machine and not uphill. Does this area need irrigation? If not, are there plants that need irrigation that you'd like to grow in this area? If not, is there another area needing irrigation where you could send the graywater?

Once you have identified the best place to irrigate, you'll need to figure out how to get the graywater to this landscape. Start in the laundry room. Imagine a pipe leaving the house near the machine. Is the machine on an exterior wall? If so, you'd drill through the wall to exit the building. Is the machine in an interior room? If so, is there a crawlspace or basement where you could drop down through the floor and run the pipe outside? Look for obstacles, such as doorways, sidewalks, patios, driveways, etc., on the way out. A narrow sidewalk can be cut with a concrete saw, or dug under, but a large driveway between the washer and the landscape could potentially be an insurmountable barrier.

Below are general guidelines to help you select appropriate locations to irrigate using a laundry-to-landscape system. It is your responsibility to determine what is safe for your particular situation. If your washing machine is not operating properly or draining well, it is probably not a good idea to install a laundry graywater system. When in doubt, contact a pump specialist or graywater professional.

- Sloped yards: Don't distribute water uphill. The washing machine has an internal pump, but it is not designed to pump up a hill.

  If your yard slopes downhill from the location of the washing machine, the graywater distribution piping can extend as far as needed. On steep slopes, the tubing should be installed in a serpentine pattern (S-shape, like a switch-back trail) to slow down the water. Otherwise it will rush to the bottom of the hill, and you won't be able to irrigate the upper plants.

- Flat yards: For most machines, it is generally safe to distribute graywater up to 50 feet across a flat yard. Greater distances could result in damage to the washing machine pump, since friction losses increase with distance and put more pressure on the machine's pump.

Drilling a 1½-inch hole for pipe. Note: A pilot hole was drilled first. Photo: Laura Allen.

Tightening fittings onto the 3-way valve with channel locks. Photo: Laura Allen.

Important Considerations for Exterior Walls

Exterior walls within 3 feet of the property line must be fire-rated. If your pipe exits a fire-rated wall, then you must comply with applicable building and plumbing codes to ensure that the integrity of the wall is not compromised. Consult a professional or contact DBI with questions.

Gluing pipes on either side of a 3-way valve. Photo: Laura Allen.

Draw a simple sketch of your system, from the washing machine to the plants. Graph paper is provided in Appendix B. Collect the tools and parts needed.

Now you're ready to start building the system.

Step 2: Make an Exit for the Pipe

Identify where the pipe will exit the building. Be careful not to cut into electrical wires, pipes, or studs. Drill a ¼-inch pilot hole with a thin, long drill bit that can pass through the entire wall. Ensure you are not hitting anything in the wall. You may need to try more than one location if you hit a stud or other obstacle.

If the drill path is clear of electrical wires, pipes, and studs, and the hole exits in a good location on the outside of the building, use the pilot hole as a guide and drill with a 1½-inch hole saw to make a hole large enough for the 1-inch PVC pipe (#14). The type of bit you'll need depends on what the wall is made of: use stucco bits on stucco walls and wood bits on wooden walls. To make a clean hole on both sides, drill from both the outside in and from the inside out. After you finish installing your system, you will need to seal the hole with a waterproof adhesive, such as Sikaflex®, to prevent moisture from entering the wall.

If your washing machine is in an interior room and the pipe will exit the house through a crawlspace or basement, go under the house and look for potential obstacles. Then follow the same instructions for drilling as described above, although you only need to drill from the top down, since it won't matter what the hole looks like in the crawlspace.

Step 3: Prepare the 3-Way Valve

Note that numbers in parentheses refer to the parts list above.

1. Wrap Teflon® tape clockwise around the threaded fittings (two male adapters [#2] and one barbed male adapter [#3] fitting).

2. Insert the male adapters into the threads on both sides of the 3-way valve and turn gently, by hand, making sure not to cross-thread the plastic threads. Do the

same with the barbed male adapter, inserting it into the middle of the valve. Turn clockwise with your hands as tightly as you can.

3. With two pairs of channel locks, continue to tighten the fittings until very tight.

4. Remove the laundry drain hose from the sewer connection (utility sink or standpipe) and place a hose clamp (#4) over the end of the hose. Connect the hose to the barbed fitting on the tee and use the hose clamp to tighten and secure the hose in place, making a watertight seal. (If the hose is rigid plastic, heating the plastic can soften it and make it easier to slip over the barbed fitting. You can use a blow dryer or cup of hot water to heat the hose.) After the system is complete, you will check this seal by running the machine.

Note: These directions are written for a 1-inch laundry drain hose, which is the most common size. Some of the newer, ultra-efficient hoses are ¾-inch. If your hose is non-standard, you'll need to use a barbed fitting that fits your hose and then adapt it to a 1-inch male pipe thread fitting to attach to the 3-way valve. For example, if your hose is ¾-inch, you'll use a ¾-inch barbed male adapter threaded into a ¾-inch by 1-inch threaded bushing.

Step 4: Plumbing to and from the 3-Way Valve

1. Hold the 3-way valve (#1) up and look for a good place on the wall to mount it so that the handle can turn freely and is accessible. The valve MUST be above the flood rim of the washing machine: don't put it lower than the machine (see photo at right).

2. Choose the most direct route for plumbing one side of the valve to the sewer, and orient the other side of the valve towards the hole in the side of the house, or the floor, depending on your situation.

   Note: If your system exits through the floor, the auto vent will be inside the home, since you must put the auto vent at the high point in the system, usually directly above the hole in the floor. See Step 7 for instructions on installing the auto vent.

Legend

1. Auto vent (or air admittance valve)
2. Flood rim

The 3-way valve is slightly above the sewer connection (behind the machine), while the auto vent is about a foot higher than the flood rim of the machine.
Photo: Laura Allen.

1-inch Blu-lock HDPE tubing laid out in trenches. All tubing was buried after system was finished. Photo: Laura Allen.

Mulch basin around a dwarf peach tree being filled with wood chips. Photo: David Glover.

3. Measure all the pipe pieces you need, cut the 1-inch PVC (#14), and connect the piping and fittings without any glue. Once glued, the pipe will slide farther into the fitting to a lip on the interior, so take this into account when measuring. Leave a few inches of pipe sticking out of the hole on the outside of the building.

4. Mark all of the fittings and pipe so that when you glue them together, they are in the position you would like them to be.

5. One at a time, glue the pipe sections and fittings together with PVC glue, being sure to protect underlying surfaces from dripping glue. "Gorilla PVC" is a less toxic PVC glue (do not confuse "Gorilla PVC" with "Gorilla Glue").

6. Go outside and glue the branch of the tee onto the pipe sticking out of the wall. While the glue is wet, adjust the tee with a level so the long axis of the tee is pointing straight up and down. Remember, if the pipe goes through the crawl space or basement, the auto vent must be located inside the laundry room. Make sure the auto vent (see next step below) is accessible so that it can be changed if it wears out and needs replacement. If water ever leaks out of the auto vent, it must be replaced.

7. The auto vent should be at least 6 inches above the flood rim of the washing machine and, when possible, located outside in case it fails and leaks. To assemble the auto vent, follow these steps. Glue the bushing (#5) into the slip portion of the 1½-inch female adapter (#6). Wrap Teflon® tape on the threads of the auto vent (#7), and then thread the auto vent into the threaded side of the female adapter (#6) and tighten. Glue one end of a small 2-inch piece of 1-inch PVC pipe (#14) into the 1-inch side of the bushing (#5). Then glue the other end into the top of the tee (#8).

8. Measure, cut, and glue a piece of PVC pipe to extend from the bottom part of the tee to the ground. If there is a deck or other obstacle between your washer and the irrigation area, you will have to route the pipe around the obstacles. Try to maintain a downward slope whenever possible. Put a 90-degree bend at the bottom of the vertical pipe section and direct the pipe towards the landscape. Place the 1-inch barbed x slip adapter (#9) on the end of the pipe. This is where the 1-inch HDPE tubing (#16) will connect.

Step 5: Preparing the Landscape and Running the Irrigation Tubing

1. Dig mulch basins around the drip line of all the plants you wish to irrigate. The drip line is the exterior boundary of the plant, where the branches end. Mulch basins are created by removing soil and filling the empty space with mulch. If you can't dig a basin around the entire plant, dig a semi-circle, or trench on one side of the plant. The mulch basins should be between 6 and 12 inches deep, depending on the mature size of the plant. Smaller plants need less water and smaller basins.

2. Dig a trench, about 4 inches deep, from the PVC pipe to the first mulch basin. Continue the trench to all the basins, taking the most direct route possible while avoiding sharp turns. If possible, maintain a slight downward slope or at least a level gradient. If the system has dips and rises, it will be harder to get even distribution of water when you tune the system.

3. Make or buy a "valve box" or "mulch shield" for each graywater outlet (Figure 4). Mulch shields can be made out of 1- or 3-gallon flower pots. Put the pot upside down (so the bottom is on top) and make a "lid" by cutting the bottom of the pot so that it can be flipped up like a lid on a can (leaving a section intact to hold the "lid" in place). Drill a hole 2 inches below the "lid" for the graywater tube to enter. Then cut off the rest of the pot 4 inches below the hole you made for the graywater tube. If a more sturdy shield is needed, a valve box can be purchased and altered in a similar way.

4. Place each box or shield in a mulch basin. Make sure there is 2 to 4 inches of mulch underneath the mulch shield. The graywater outlet must enter the shield at least 2 inches below the ground surface.

5. Roll the HDPE tubing (#16) out in the trench to all the mulch basins, staking the tubing so it stays in place. At each irrigation point, cut the tubing and insert a 1-inch by 1/2-inch barbed tee (#10) into the tubing. Attach a short section of ½-inch poly tubing (#15) as needed to reach each basin, and insert it into the mulch shield.

6. Take a photograph of the yard before you bury the tubing! Put this picture in your O&M manual (templates in Appendix B) for future reference. After taking the

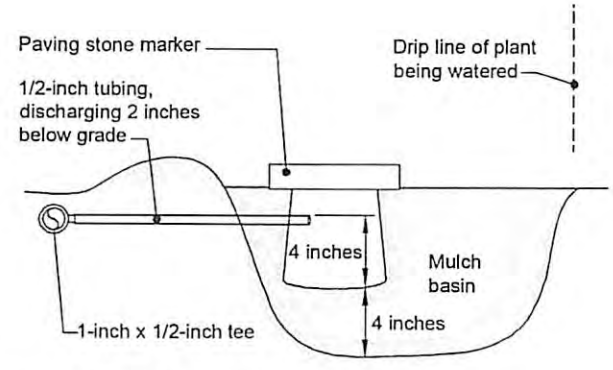


Figure 4. Mulch shield placement.

Homemade mulch shield. Photo: Laura Allen.

This 3-way valve creates two zones in the landscape. Water can be redirected from one zone to another zone by turning the handle. Photo: Laura Allen.

Adjusting flow by rotating the tees. Ball valves can be added to the ends of small tubes, if necessary. Photo: David Glover.

photograph, bury most of the tubing so it is securely in place. Leave the areas with 1 x ½-inch tees (#10) exposed, as you might need to adjust them while tuning the system.

7. Multiple irrigation zones: If your site produces a lot of water and your plants are spread out in different sections of your yard, you might want to set up two irrigation zones. Having separate zones allows you to spread the water out to more places but requires someone to manually switch the system between zones. To install a second zone, add another 3-way valve at the desired location in the system, threading a male adapter by barb into each side of the tee. Run separate 1-inch tubes to different areas of the landscape. The valve directs water to each area as desired.

Step 6: "Tuning" the System

After you have laid out all the tubing, you need to test it to ensure that water flows out evenly from the multiple outlets. To do this, temporarily insert a barbed 1-inch female hose thread adapter (#12) into the tubing, where it would normally connect to the PVC pipe. Then connect a garden hose to this fitting. Turn the hose on, about medium-high flow, and then monitor the outlets.

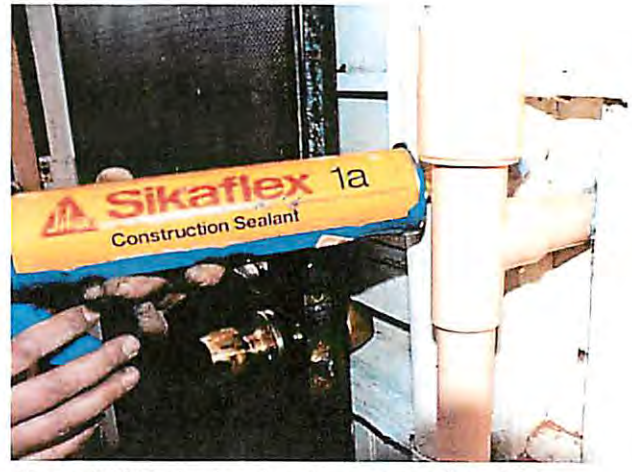
If you notice that more water is exiting the first outlet and none is reaching the end, you can adjust the angle of the tees, turning them up or down depending on whether there is too much or too little water coming out. If the flow is still uneven after you've done that, add a ½-inch green or purple back ball valve (#11) to the first outlet and shut off the flow slightly. Do not use other types of ball valves, as they clog quickly. Is water coming out evenly among outlets now? If not, you may need to add another valve and repeat the process until water flows evenly from all the outlets. Avoid adding extra ball valves, because they are a point of potential clogging. NEVER put a valve or plug into the end of the main 1-inch line. If you restrict the end of the main line and your outlets clog, the washing machine pump could get damaged. If you have more than one 1-inch line, as when you use a 1-inch by 1-inch by 1-inch tee, and send two 1-inch lines in different directions, then it is okay to restrict one end, since there is a second end fully open.

Step 7: Testing the System

After you have tuned the part of the system outside your home, disconnect the hose and connect the tubing to the PVC pipe. Now you'll test the system with the washing machine. Run a load of laundry with the 3-way valve turned to the graywater system. As the water flows out, check the glued joints, making sure they are all watertight. Check the connection from the washer hose to the 3-way valve; this is a common place to have leaks. You might need to tighten the hose clamp or add a second clamp. Next, go outside and observe how water flows through the system. You might need to readjust the ball valve(s), since the water pressure from the machine will be different from that of the hose. After testing is complete, paint exposed PVC pipe with regular house paint, usually the same color as the building (to protect it from UV damage), and waterproof any holes.

Step 8: Labeling the System

Label the 3-way valve and aboveground graywater pipes (Appendix A). The 3-way valve must be labeled with clear instructions for changing the direction of graywater flow (to sewer or landscape). Aboveground pipes must be labeled with the words "CAUTION: NONPOTABLE WATER, DO NOT DRINK" at intervals of 5 feet or less.



Exposed PVC pipe is painted to protect it from UV degredation. The hole is sealed with an adhesive sealant to prevent moisture from entering. Photo: David Glover.

Key Points

- Put the 3-way valve above the flood rim of the machine, in an accessible location inside the home.
- Put the auto vent at the high point of the system, at least 6 inches above the flood rim of the washing machine in an accessible location in case it needs to be replaced. If possible, locate the auto vent outside.
- Use 1-inch pipe and tubing, with 1-inch x ½-inch tees to send graywater to specific plants; do not use larger or smaller pipe for the main graywater line.
- Always leave one end of the 1-inch main line tubing fully open, with no valves or caps.
- Don't overwork your washing machine. Remember not to use the pump to send water uphill or too far across a flat yard (50 feet across a flat yard is typically a safe distance).

Table 4. Laundry-to-Landscape System: Operation and Maintenance Checklist

Component	Inspection Schedule	O&M Activity	Action Needed
3-way valve	Annual	Check for leaks at washer hose and that label is in place	☐ Condition good ☐ Action needed • If leaking, tighten hose clamp. • Replace label if needed.
Auto vent	Annual	Check for leaks from auto vent	☐ Condition good ☐ Action needed • If leaking, replace the auto vent.
Piping and tubing	If you notice water in an unusual place	Check for leaks	☐ Condition good ☐ Action needed • If piping or tubing is damaged, cut out damaged section and reconnect with a 1-inch barbed coupling.
	Annual	Check for even distribution from outlets	☐ Condition good ☐ Action needed • Unclog hair or lint built up in the outlets. Open ball valves, check for clogs. If needed, flush the system with a hose: temporarily disconnect the tubing from the PVC fitting, attach the garden hose by barb fitting, and connect the hose to the system.
Mulch basins	Annual	Check to see if mulch has decomposed and water is pooling under graywater outlets	☐ Condition good ☐ Action needed • Remove decomposed mulch and add new mulch.

Operation and Maintenance

Table 4 summarizes O&M activities for laundry-to-landscape systems. Templates for O&M manuals are provided in Appendix B.

Second Standpipe Option for Laundry Graywater

Another option for a washing machine system is to install a second standpipe next to the existing standpipe (Figure 5). A standpipe is a vertical pipe into which the washing machine hose discharges. The existing standpipe should be plumbed to the sanitary sewer. The second standpipe can be plumbed to a graywater irrigation system.

In a second standpipe graywater system, the exterior graywater irrigation system should be identical to the branched-drain system described in the section titled "Branched-Drain System." There is no 3-way valve inside the house at the washing machine, and the hose from the washing machine is moved manually from one standpipe to the other. The second standpipe method adds no extra strain on the washing machine pump. If your machine is old or has any problems, and you are worried that a laundry-to-landscape system might not be good for the machine, you can install a second standpipe graywater system instead. This method does make it harder to distribute the water to plants than the laundry-to-landscape system, because it is a gravity-based system and does not take advantage of the washing machine's pump to distribute graywater.

The second standpipe option does not require a permit as long as the graywater system is for a one- or two- unit residential building and follows the 12 guidelines set forth in the California Plumbing Code (see Appendix B).

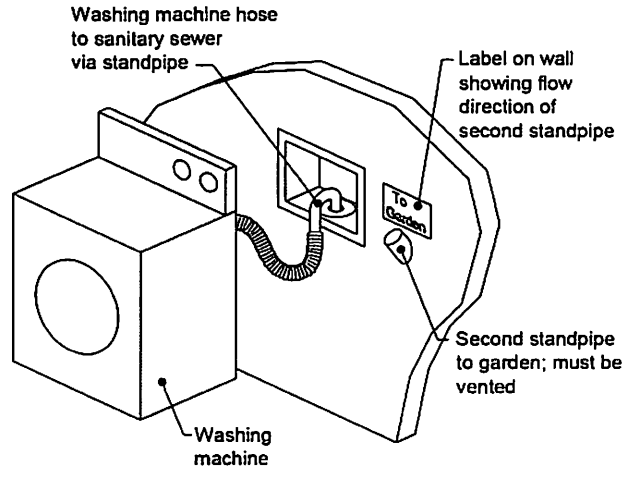


***Figure 5.** Second standpipe option. Source: City of Berkeley.*

References

Clean Water Components.: http://www.cleanwatercomponents.com/education/greywater/laundry-landscape-greywater-system/

Create an Oasis with Greywater 5th Ed.: http://oasisdesign.net/greywater/laundry/index.php

How to clean the filter of your washing machine pump: http://www.ehow.com/how_6161420_clean-front-load-washing-machine.html

Branched-Drain System

Description: Graywater drains through a series of branching pipes and is dispersed into the landscape via mulch basin outlets. Branched-drain systems are typically installed on shower drains and/or sinks; however, they can also be installed on washing-machine systems that use the second standpipe variation. When installed on shower drains or sinks, branched-drain systems alter the existing plumbing and require a permit. A branched-drain system is best suited for irrigating trees, bushes, shrubs, and other larger perennial plants.

Installation: Installation difficulty varies greatly depending on the existing household plumbing. A solid understanding of plumbing is needed, as well as basic landscaping skills. Installation is more time-consuming than for a laundry-to-landscape system.

Cost: Costs can range from a few hundred dollars (installed by homeowner) to a few thousand dollars (professional installation).

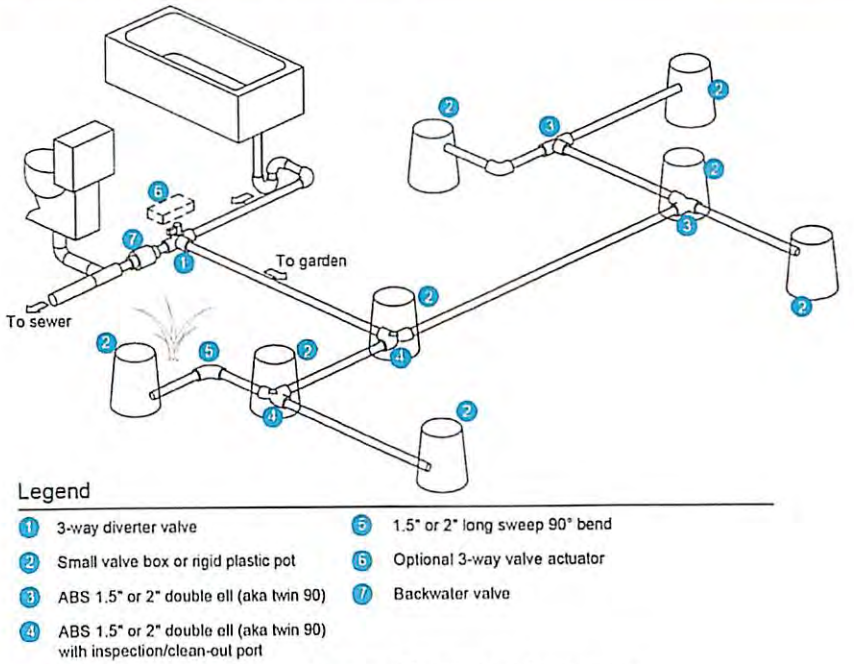


Figure 6. Branched-drain system. Source: Cleanwater Components.

Branched-Drain System

System Overview

A branched-drain system allows a homeowner to use graywater from other sources besides the washing machine. The system is simple and requires no electricity. A branched-drain system is driven by gravity flow; no pressure is provided by a washing machine pump or any other pump. This type of system usually distributes graywater from showers and/or sinks, although it is often used in the second standpipe system (for washing machines) described on the previous page. A branched-drain system distributes graywater to the landscape using standard 1½-inch or 2-inch drainage pipe (Figure 6). The irrigated area must be lower in elevation than the graywater source, and the entire distribution system must have a downward slope of 2 percent (¼ inch per foot). The graywater irrigation zone must be downhill relative to the graywater source. Branched-drain systems are best suited to irrigating trees or large shrubs. This kind of system can be time-consuming to construct, but once complete, it requires little maintenance and lasts a long time, since it has no moving parts to break.

How to Build a Branched-Drain System

Note that the following description provides a basic outline of the steps for installing this type of system, but you will need to consult other resources when you plan and install your system.

1. Assess your site: Identify the graywater pipes (shower, sink, or laundry), make sure that you can

access them, and install a 3-way valve before the pipes combine with the toilet drain. Think about how the pipe could be directed to your landscape, considering obstacles like driveways or patios. Identify appropriate plants to irrigate: this type of system is best for trees, shrubs, vines, and other large perennials.

2. Obtain a graywater permit from DBI. See Appendix E for more details.

3. Install a 3-way diverter valve in the drainpipe of the fixture you will be collecting graywater from (Figure 7). The valve must be installed after the p-trap and vent but before the connection to a toilet or kitchen sink drain. If you must install the valve in an inaccessible area because of space considerations, for example, in a small crawlspace, you can add a motor (called an actuator) to the valve and connect it to a switch in the bathroom or other convenient location.

4. Plumb the graywater pipe to your landscape, following standard plumbing techniques, strapping, maintaining a ¼-inch-per-foot gradient, using clean-outs (pipe fittings with a removable plug to allow access to the interior of a pipe, for example, for removing clogs) when needed, and properly sealing the hole you created to exit the building. When exiting the building, make sure not to damage electrical, gas, or plumbing pipes that could be located in the wall, and avoid structural beams and the building foundation. If you have any doubts about plumbing and/or drilling through floors or walls, call in a professional! Chapter 7 of the California Plumbing Code contains the drainage

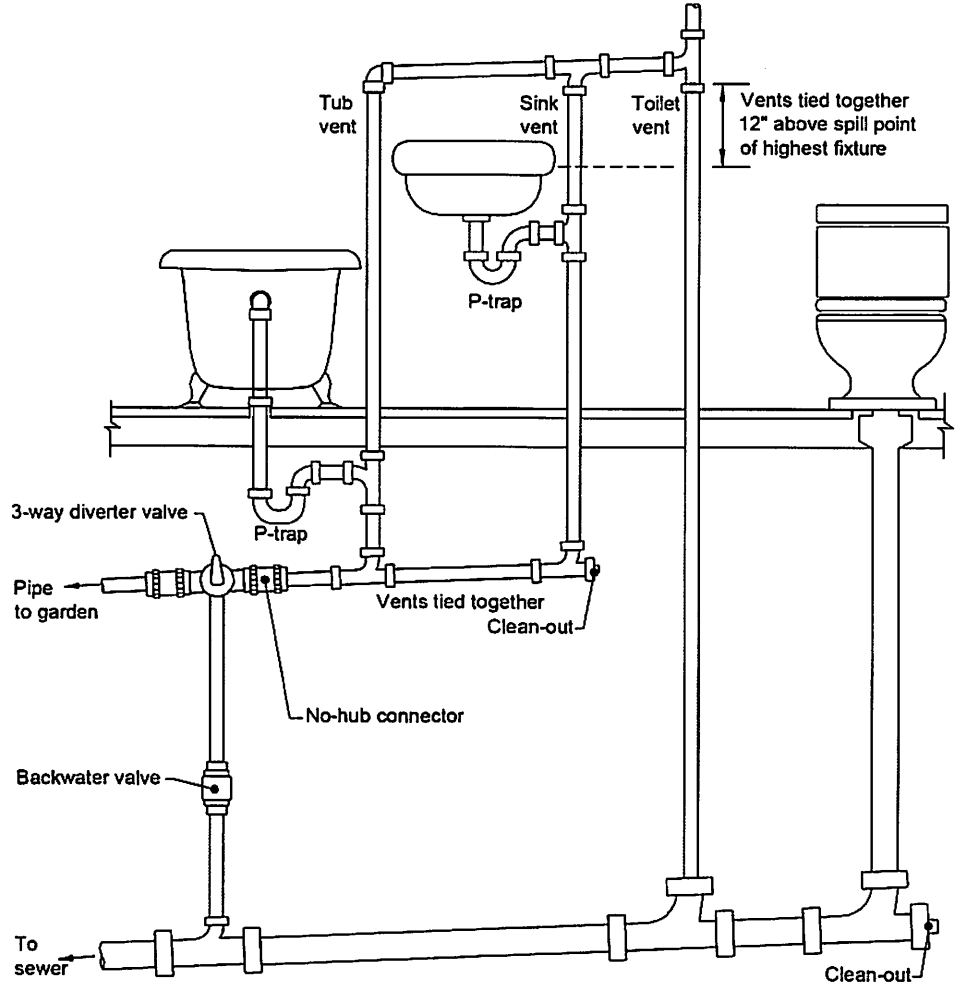


Figure 7. Location of the 3-way valve in a shower or sink system. Source: Art Ludwig, Oasis Design.

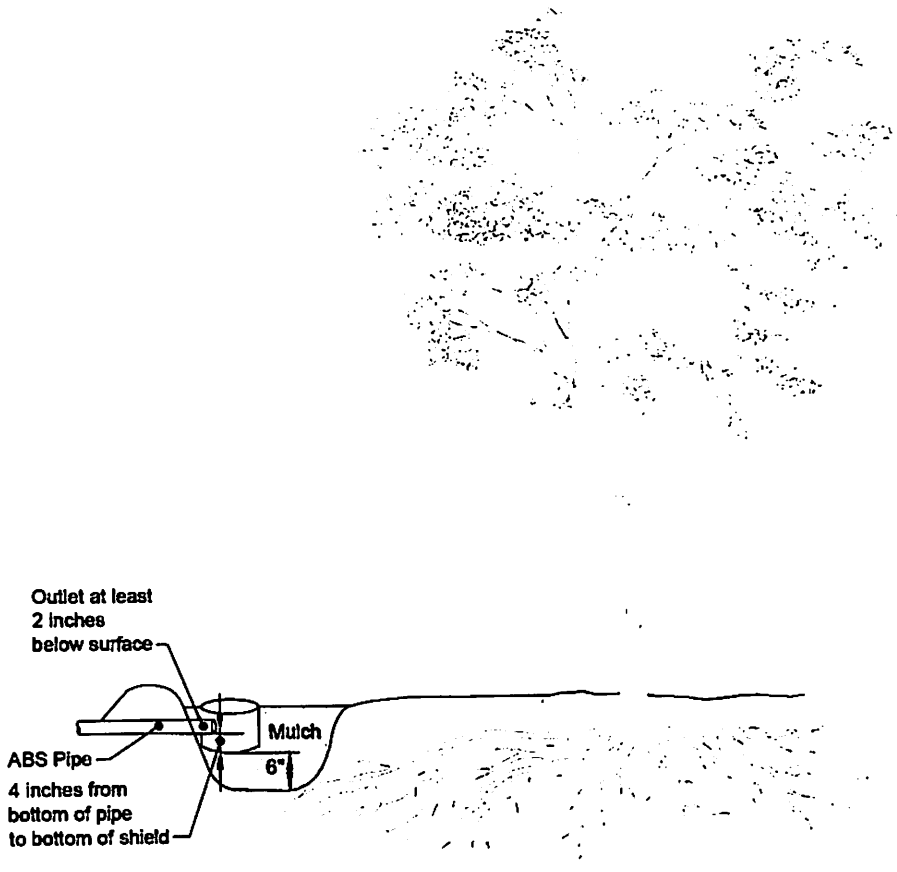


Figure 8. Mulch shield inside of mulch basin. Note: Roots of a real tree would extend under basin and outside of drip line by many feet.

plumbing requirements that must be followed when you install the system.

5. Prepare the landscape: dig mulch basins around the drip lines of the plants to be irrigated, trench the pipe to the plants, and construct mulch shields for subsurface irrigation (Figure 8). Make sure that the graywater is discharged at least 2 inches below ground surface and that it falls through the air onto 4 to 6 inches of mulch.

6. Pipe must slope at least 1/4 inch per foot, which is the standard slope for drainage plumbing. The burial depth of the pipe does not have to meet standard depths for sewer pipes, since this is an irrigation system. In flat yards, start with the pipe buried as shallowly as possible (approximately 2 inches), as it will get progressively deeper. If yard is downward sloping, bury the pipe deep enough to prevent it from becoming exposed over time. Consult with DBI about proper depths in this situation.

7. Test the system by turning on the fixture(s), making sure that the graywater flows properly.

For more information about how to install a branched-drain system, see the book references in Appendix F.

Pumped Systems

Electricity and Water in California

In California, almost 20 percent of all electricity and over 30 percent of natural gas is used to pump, heat, and treat water. Graywater systems sometimes need to incorporate a pump, but the homeowner should carefully examine non-pumping options first to minimize the use of electricity. Pumped systems are most often installed when irrigation is needed uphill of the graywater source. Pumped systems can also be installed to pressurize graywater for a drip irrigation system, in which case the water must be filtered.

Overview of Pumped Systems

In pumped systems, graywater is directed to a holding tank for temporary storage (less than 24 hours) before being pumped to the landscape. If the system is to be used for drip irrigation, the graywater must be filtered before it reaches the drip emitters (see description of Sand Filter-to-Drip Irrigation system in the next section). The pumped system described below does not include filtration and therefore can only be used for sending graywater uphill, not for drip irrigation.

Pumped System with No Filtration

As illustrated in Figure 9, in a pumped system with no filtration, also referred to as a "drum with effluent pump system," graywater is directed to a watertight tank (also called a surge tank), from which an effluent pump

Pumped Systems with No Filtration

Description: Graywater from showers, sinks, or laundry is directed to a temporary holding tank and then pumped to the landscape, which can be uphill of the graywater source(s). This system usually alters the existing plumbing and always requires a permit; an additional electrical permit might also be required for the outlet that the pump is plugged into. These systems are best suited for irrigating perennials of any size and larger annuals, for example, corn.

Installation: Installation difficulty varies greatly depending on the existing household plumbing. A solid understanding of plumbing is needed, as well as basic landscaping skills. If a new electrical outlet is required, electrical skills are also required.

Cost: Costs can range from $500-$700 (installed by homeowner) to a few thousand dollars (professional installation).

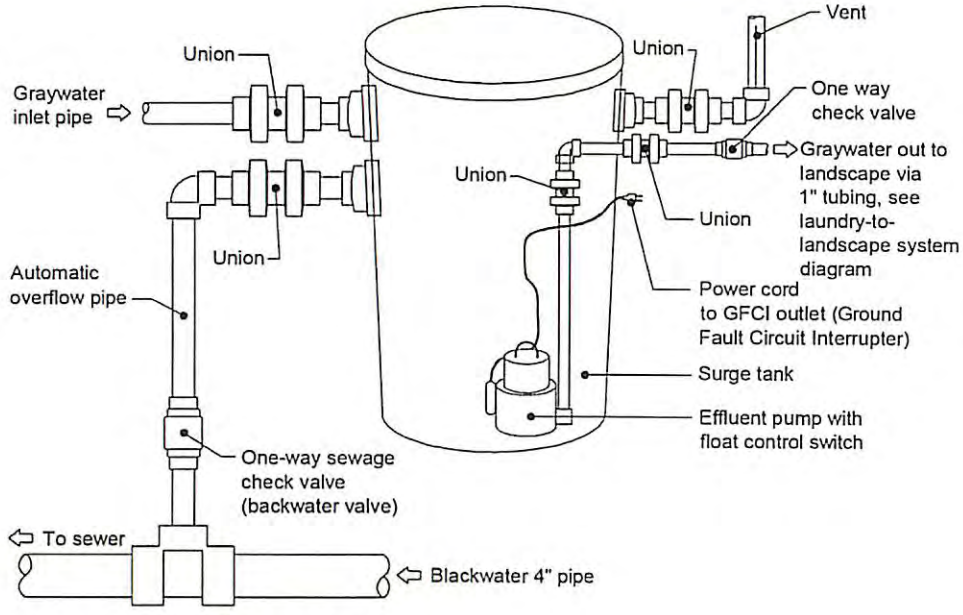


Figure 9. *Drum with effluent pump.*
Source: Robert Kourik, in Drip Irrigation for Every Landscape and All Climates.

discharges water through tubing to the landscape. This system is lower in cost and easier to install than a system that includes a filter for drip irrigation, but it is less water-efficient, since the outlets are larger.

It is possible to put in simple filters to capture hair and lint "upstream" of the surge tank, thus reducing the power required of the pump, but the filters need to be cleaned regularly. Cleaning a graywater filter is a smelly, slimy, and generally unpleasant task that is sometimes left undone, leading to clogged filters, possibly graywater overflows, and other undesired consequences. It is critical to understand the maintenance requirements of your system before installing it. See the Manufactured System section for information about other filtering options.

How to Build a Pumped System with No Filtration

Once you have determined that pumping the graywater is the only possible way to reach your landscape, the steps below provide a general overview for installing a simple pumped system with no filtration. Note that you will need to consult additional resources to build the system. Keep in mind that a pumped system is more complicated than the systems described previously.

1. Assess your site: Identify the graywater pipes (shower, sink, or laundry) and make sure you can access them. Identify a location for the surge tank and an outlet to plug in the pump. If there is an existing outlet nearby, you'll need to determine if the outlet can handle the additional electrical load of the pump. If you are unsure how to determine this, hire a professional. If you need to add an electrical outlet, an electrical permit will be required.

2. Apply to DBI for a graywater permit and for an electrical permit, if a new outlet or dedicated circuit is needed for the pump.

3. Install a 3-way diverter valve in the drain line of the desired graywater fixture, after the p-trap and vent but before the connection to a toilet or kitchen sink drain.

4. Install the surge tank and route the graywater to it. Check the California Plumbing Code for requirements for how to outfit the tank. Requirements include a union fitting, vent, overflow pipe with a backwater valve, and a swing-check valve on the

graywater pipe exiting the tank. Graywater may not be stored for longer than 24 hours, so size the tank so that it empties at least once a day.

5. Direct the irrigation line to the landscape using 1-inch tubing and reducing tee fittings at each plant. See Figure 3 for the laundry-to-landscape system for more details.

6. Prepare the landscape: dig mulch basins around the drip lines of the plants to be irrigated, trench the pipe to the plants, and construct mulch shields for subsurface irrigation.

7. Test the system by turning on the fixture(s), making sure that the graywater flows properly, the pump turns on when it should, and graywater is distributed evenly to the landscape.

Materials needed for a pumped system:

- 3-way valve
- ABS fittings
- Tank
- Effluent pump rated to pump ¾-inch solids
- Unions
- Backwater valve
- Swing-check valve
- 1-inch tubing
- Barbed fittings with ½-inch outlets
- Mulch

For more information about pumped systems, see the references in Appendix F.

Graywater sand filter at the Sunset San Francisco Idea House. Photo: WaterSprout.

Sand Filter-to-Drip Irrigation

Description: Graywater flows by gravity to a temporary holding tank, is pumped through a sand filter to remove particles, and then is pumped to a drip irrigation system. An irrigation controller allows municipal water to supplement graywater as needed and also controls automatic cleaning of the filter. This system requires a permit for graywater and could require an electrical permit as well. In addition, a backflow prevention assembly must be installed on the municipal water supply line, and the assembly must be tested annually. This system is suitable for all plants, except for lawns.

Installation: Sand filter-to-drip irrigation systems should be installed by a professional.

Cost: System costs range from $7,000 to $15,000 (professional installation).

Other Graywater Systems

In addition to the systems described previously in this manual, there are other options for designing and installing more complex graywater systems. Some of these options are briefly discussed below. New construction or full plumbing remodels can give you access to more graywater sources than are typically available in a retrofit situation. With a larger volume of graywater available, more complex options might be appropriate for your situation. These systems are usually more expensive, can distribute water to more locations, and are a more water-efficient way to irrigate. Complex graywater systems are typically found in high-end residential new construction, especially houses seeking LEED (Leadership in Energy and Environmental Design). Such systems always require a permit.

Dual-Drainage Plumbing

If you are building a new house or doing a major plumbing remodel, you can ask the plumber to keep the graywater drains separate from the toilet and kitchen sink drains, enabling you to access all the household graywater in one pipe. This is dual-drainage plumbing. In this scenario, the graywater and black water (toilet and kitchen sink) pipes can combine either after they exit the house or "downstream" of a convenient location for installing a 3-way valve on the graywater pipe.

Sand Filter-to-Drip Irrigation

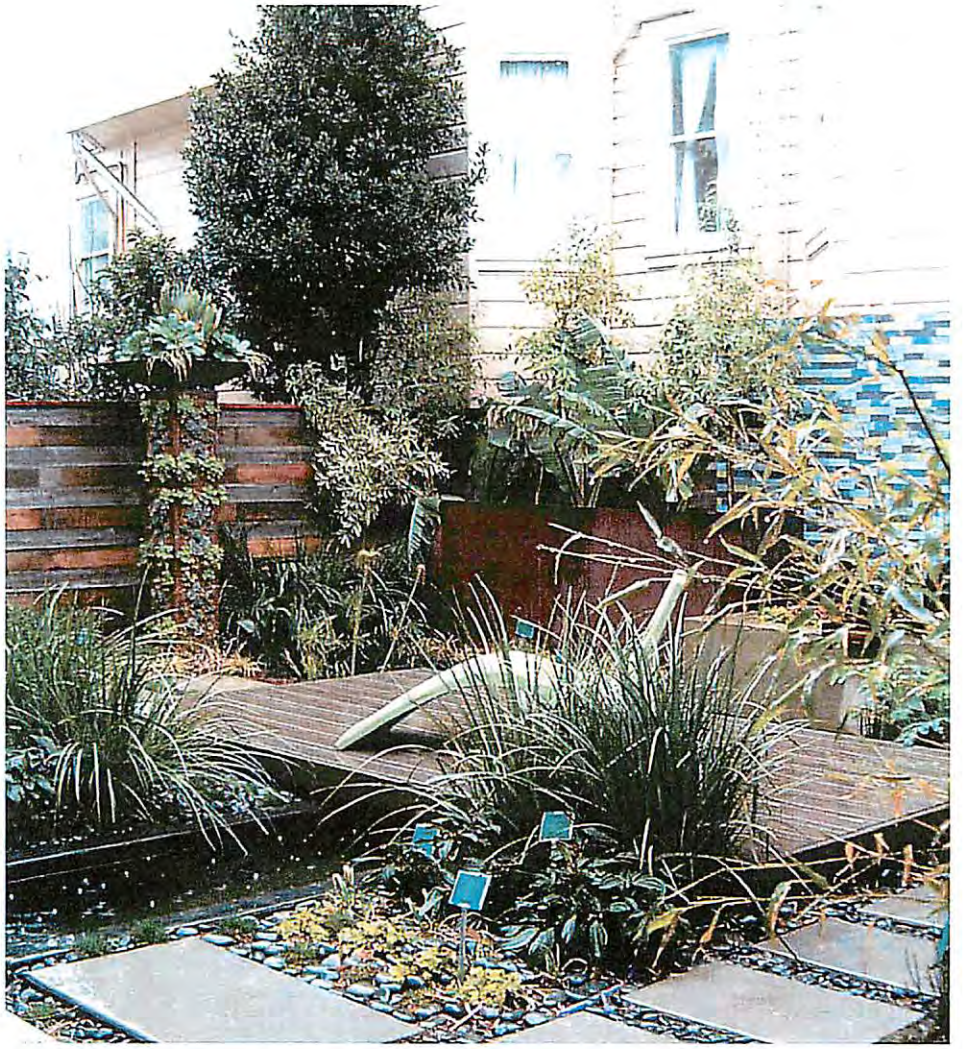
Drip irrigation is the most water-efficient form of landscape irrigation. For graywater to be used in a drip irrigation system, the dirt, hair, and lint must be filtered out so they won't clog the drip emitters. Graywater for drip irrigation is commonly filtered with a sand filter. Note that sand

filters only remove solids, not salts or chemicals, so it is still important to use graywater-friendly cleaning products (Appendix C).

In a sand filter-to-drip irrigation system, all the graywater from the house is plumbed to a holding tank, where the graywater is temporarily stored. An irrigation controller turns on an effluent pump in the holding tank when irrigation is needed. The pump sends the graywater through a sand filter, where the dirt, hair, and lint particles are filtered out. The filtered graywater then goes to drip irrigation tubing in the landscape. If there is not enough graywater, the system is set up to include municipal water. This type of system is fully automated and thus more complex and higher in cost than simpler systems, but it allows for greater flexibility in irrigation and can irrigate plants of any size and elevation relative to the house. The sand filter is cleaned automatically on a timed schedule: pressurized municipal water is sent backwards through the filter to remove debris, with the effluent water directed to the sewer. A reduced pressure principle backflow prevention assembly must be installed at the point of connection to protect the municipal (potable) water supply from accidental contamination with graywater. This assembly must be tested by a licensed tester upon installation and subsequently on an annual basis. Results must be sent to the Water Quality Division of the SFPUC. This system requires a plumbing permit and could require an electrical permit as well. Design must be reviewed and approved by the City's DBI.

Manufactured Graywater Systems

Several types of manufactured graywater systems are available for purchase in California. These systems typically filter graywater for use in graywater-compatible drip



This landscape is irrigated with graywater that has passed through a sand filter before entering the subsurface drip irrigation system. Note: The pond is not supplied by graywater and is lined so that graywater doesn't enter it. Photo: WaterSprout.

irrigation tubing. This makes it possible to irrigate smaller plants and to spread the water out over a larger area than is possible with other simple graywater systems or unfiltered pumped systems. Manufactured graywater systems are typically lower in cost than automatized sand filter-to-drip irrigation systems, but higher in cost than the previously mentioned simple systems. The technology for these types of systems is relatively new and still being developed, so their longevity is unknown. If possible, it would be helpful to talk to a homeowner who has owned and operated the system (and not just a sales person) for at least a year to learn more about how it functions. Because these systems incorporate filters, pumps, and sometimes disinfectant (in higher-technology versions), they have more components to maintain and replace. It is also important to find out the system's maintenance needs and learn how you'll know if the system isn't working properly. Since these systems typically require manual filter cleaning one solution is a maintenance contract with the installer, or training an existing on-site landscaper/gardener in system maintenance. This could help prevent system failures from lack of maintenance. All of these systems require a permit.

Indoor Use

In theory, graywater can be filtered, disinfected, and pumped back inside residential buildings to be used for toilet flushing and other non-potable uses. In practice, doing so is not very easy. There are currently rigorous water quality standards that need to be met for interior graywater reuse (California Code of Regulations, Title 22, Section 60301.230). While technology has been developed to meet these standards, it can be expensive for individual homes. Many of these systems also have kinks that need to be worked out.

Currently, it may be easier for most households to use rainwater for toilet flushing and graywater for outdoor irrigation.

Glossary

3-way diverter valve A valve that directs water in one of two directions: the sewer or the landscape. Diverter valves come in different materials and sizes.

ABS Acrylonitrile butadiene styrene, a black plastic pipe used in drainage plumbing. ABS pipe is used in gravity-based graywater systems, such as branched-drain systems. ABS is cut with a saw or tubing cutters and glued together with ABS glue, also called ABS cement.

Actuator A motor that attaches to the face of a plastic 3-way valve and connects to a plug-in transformer and a toggle switch so that a graywater system can be turned on or off from another location (usually inside the house).

Auto vent (also called air admittance valve, AAV, Studor valve, in-line vent) A device that allows air to enter a drainage plumbing system. In a graywater system, it prevents water being "sucked out" or siphoned out of the washing machine while it is filling. The auto vent must be located at the high point of the graywater system. This device must not be installed on the plumbing system of the house or unit, as this is not allowed under the San Francisco Plumbing Code.

Backflow preventer An assembly that prevents water from reversing its flow direction. Backflow preventers are used to protect the municipal water system from contamination, for example, by graywater from a sand filter-to-drip irrigation system. Backflow preventer assemblies must be tested annually by a licensed tester to ensure they're working properly. A reduced pressure principle backflow preventer (RP) is required for graywater systems that include municipal make-up water and do not have an air gap.

Backwater valve A type of swing-check valve used on the overflow pipe of a graywater tank. Its purpose is to prevent sewage from entering the tank in the event of a sewage clog.

Ball valve A device that shuts off the flow through a tube or pipe when a "ball" is turned inside the valve.

Barbed fitting Fitting used in the irrigation part of a laundry-to-landscape system. The tubing fits over the barbs and can be forcibly removed if needed. The connection may not be completely watertight; if a watertight connection is required, a hose clamp can be added. A Blu-Lock fitting, a special type of irrigation fitting, can be used as an alternative to barbed fittings. Blu-Lock fittings make a watertight seal and are easy to work with.

Branched-drain system A simple graywater system that uses standard drainage plumbing parts to distribute graywater by gravity out to the landscape.

Double ell (also called twin 90, double ¼ bend) A plumbing fitting that divides the flow in a branched-drain system. Typical sizes are 1½ and 2 inches.

Drainage test A test to determine how well water drains on a site.

Drip line The outer point of the leaves on a tree or shrub, where water would drip off onto the ground in a light rain. Trees should be irrigated at or beyond their drip lines; roots typically extend at least twice the distance from the trunk to the drip line.

Dual-drainage plumbing Separate plumbing systems for separate wastewater flows. As applied to graywater systems, dual-drainage plumbing separates graywater flows (laundry, sinks, and shower/baths) from toilet and kitchen sink wastewater, enabling the entire graywater flow to be accessed in one pipe.

Effluent pump A pump designed to pump wastewater, including graywater. A graywater effluent pump should be able to pass ¾-inch solids.

Emitter An outlet that discharges water into the landscape. Drip irrigation emitters have very small openings and thus must have adequate filtration if graywater is used. Unfiltered graywater requires emitters, or outlets, of at least 1/2 inch in diameter.

Evapotranspiration The combination of water transpired from plants and evaporated from soil and surfaces. The evapotranspiration rate, or ET, is one variable that determines how much irrigation plants require.

FHT (female hose thread) An adapter or fitting that has hose threads on the inside of the fitting. These hose threads are incompatible with pipe threads.

FPT (female pipe thread) An adapter or fitting that has standard pipe threads on the inside of the fitting.

Filter A device that captures lint, hair, and other particles in graywater to prevent clogging in the rest of the system.

HDPE/PE High density polyethylene or polyethylene, a type of plastic that is used in irrigation tubing. The manufacturing process for HDPE and PE produces fewer toxins than that for PVC, and they are also recyclable.

Loam Soil material that is 7 to 27 percent clay particles, 28 to 50 percent silt particles, and less than 52 percent sand particles.

Laundry-to-landscape system A type of graywater system that diverts laundry water directly to the landscape. This system does not require a permit in a one- or two-family dwelling so long as 12 guidelines are followed and the system does not alter the drainage plumbing.

MPT (male pipe thread) Pipes that have standard pipe threads on the outside of the adapter or fitting.

Manufactured system A type of graywater system purchased from a company. These types of systems usually incorporate a surge tank, a filter, and a pump.

Mulch A covering, usually of organic matter, placed on the soil surface. For graywater systems, the preferred mulch is large wood chips (not shredded wood or small chips), as the large chips take longer to decompose and thus require less frequent replacement.

Mulch basin An area created by removing soil and filling the empty space with mulch. Mulch basins are typically located in the drip line of a plant and are sized according to the amount of graywater entering them. Mulch basins create a large space for graywater to spread out and sink into the ground without pooling or runoff.

Mulch shield See valve box.

Overflow A pipe exiting a surge tank to allow graywater to flow to the sewer in case of pump failure. The diameter of the overflow pipe must be at least the size of the total of all inlet pipes to the tank.

P-trap A curved, U-section of drain pipe that holds a water seal to prevent sewer gasses from entering a building through a fixture's drain pipe.

Pathogens of concern Disease agents and viruses that enter graywater through contact with fecal matter or other infectious agents. Such pathogens could harm health if ingested.

Phytophthora (crown rot) A plant disease caused by water pooling at the base of the plant, or crown. Crown rot can be prevented by irrigating in the drip zone of the plant and locating the plant on a mound so its crown is above the elevation of the landscape.

Plot plan A simple aerial view drawing of the site, including the footprint of the building, property lines, municipal supply lines, graywater lines, and areas to be irrigated.

Pooling Pools or puddles of water at the surface. Pooling of graywater is not allowed under the California Plumbing Code and is also unsightly. Pooled graywater provides a place for mosquitoes to breed and the potential for contact by people or pets.

PVC Polyvinyl chloride, a material commonly used for pipes. The manufacturing process is highly toxic, so PVC pipe use should be minimized. PVC is used to make rigid 1-inch pipe that is easy to work with.

Reclaimed water See recycled water.

Recycled water Treated wastewater produced by a wastewater treatment plant.

Sand filter (or rapid sand filter)
Sand filters remove particles from graywater so the water can be used in a drip irrigation system. These filters do not remove salts or chemicals. To function properly, sand filters must be automatically backflushed with fresh water to clean them out. Sand filters are commonly used in pool and spa systems.

Sand filter-to-drip irrigation system
A type of graywater system that uses a sand filter to remove particles from graywater and distributes the water through graywater-compatible drip irrigation tubing.

Slip connection A connection of plastic fittings made by slipping one piece of pipe inside the fitting. These fittings must be glued with the appropriate glue (depending on pipe material) to create a watertight seal.

Surge tank A tank that temporarily collects graywater before it is pumped or drained out to the landscape. Surge tanks should not store graywater for longer than 24 hours.

Surfactants (anionic and nonionic)
Substances used in detergents and cleaning products to loosen dirt from fabric and prevent it from re-adhering. Surfactants can be made from plants or petro-chemicals.

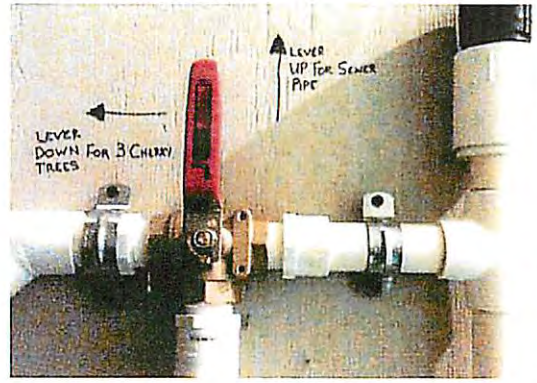
Swing-check valve (one-way valve)
A valve that allows water to flow in one direction only. Inside the valve is a flap that swings open in one direction; if water begins to flow backward, the valve closes and prevents water from passing. These valves are used in pumped systems when the irrigated area is higher in elevation than the pump. Note: do not confuse a "swing" check valve with a "spring" check valve, as they are not the same thing.

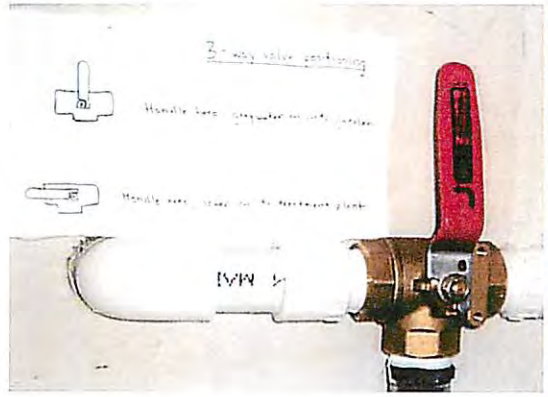
Valve box
Also called a mulch shield, a valve box is a subsurface cavity into which graywater is discharged. Graywater flows from the valve box into mulch. Air space between the outlet and the mulch prevents roots from growing back into the graywater pipe and clogging the system. Valve boxes can be purchased or made at home out of 1- to 5-gallon plastic pots, the size depending on the quantity of graywater to be discharged.

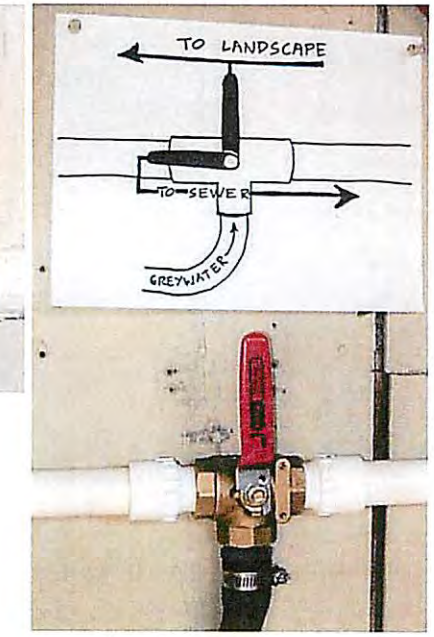
Water table
The upper surface of the saturated zone, where water fills the pore spaces of soil or rock.

Appendix A: Signs for Your Graywater System

- Your graywater system must be labeled so that all users (current and future) know how to turn it on and off. Sample signs are shown in the images to the right.
- You must label all above-ground graywater pipes as follows: "Caution: Non-potable water, do not drink" at intervals of 5 feet or less.
- Consider putting a reminder of what soaps to use on or near your machine, particularly if you share it with other people.







Examples of labeling the 3-way valve.

Appendix B: Operation and Maintenance Manual Templates

See *http://www.sfwater.org/landscape* for links to Microsoft Word versions of these templates. Graph paper is provided at the end of each template for use in drawing a plan of your graywater system.

Sample Operation and Maintenance Manual for Laundry-to-Landscape Graywater System

Congratulations on your new graywater system! This manual will help you maintain a well-functioning, water-saving graywater irrigation system. This manual is to remain with the building throughout the life of the system. Upon change of ownership or occupancy, the new owner or tenant must be notified that the structure contains a graywater system. A map showing the location of all graywater system components should be attached to this manual.

Insert the calculations you used to design your system here:

My washing machine uses _____ gallons per load.

My household does _____ loads of laundry per day on a typical laundry day.

My household does _____ loads of laundry per week.

Soil type _____

This system was designed to accommodate _____ gallons per day.

1. How do I turn my graywater system off?

To turn your graywater system off, turn the handle of the 3-way valve to direct the water towards the sewer or septic system. The first few times you do this, check to make sure the system is turning off and that your 3-way valve is labeled correctly.

These are common times you'll need to turn off your system:

- During the rainy season. Graywater may be used if there are extended dry periods during the typical rainy season, but the system must be turned off as soon as the rain resumes.
- When washing dirty diapers.

- When washing anything with chemicals, such as oily rags.
- Anytime you notice that the water isn't draining well and you see pooling or runoff.
- If you think your plants are receiving too much water.
- Anytime you use products that are harmful to plants (like bleach or harsh cleaners).

2. What products can I use in my graywater system?

It is important to use plant-friendly products when reusing your graywater. All products should be biodegradable and non-toxic. In addition, they should be free of salt (sodium) and boron (borax), two common ingredients that are non-toxic to people but are harmful to plants and/or the soil.

Chlorine bleach is harmful to plants and should be diverted, along with any other harmful products, to the sewer or septic system (by switching the 3-way valve). Hydrogen peroxide bleaches are less harmful and can be used instead of chlorine.

Another consideration with cleaning and personal care products, such as shampoos and conditioners, is their effect on the pH of the water. While many soaps do not change the water's pH, some do. In general, liquid soaps do not affect the pH, while bar soaps make the water alkaline (opposite of acidic). Certain acid-loving plants might not be happy with alkaline water. If you're uncertain if the pH is being affected, use the graywater to irrigate plants that are not acid-loving. Acid-loving plants include ferns, azaleas, camellias, rhododendrons, and blueberries.

For information about products that independent groups have found to be free of ingredients that may harm plants, see websites such as *http://greywateraction.org/content/greywater-friendly-products* and *http://www.harvestingrainwater.com/greywater-harvesting/greywater-compatible-soaps-and-detergents/*.

3. How do I maintain my graywater system?

The main thing you'll need to do to maintain your graywater system is periodically check on the mulch basins (the mulch layer the graywater flows into) and make sure the graywater is draining properly. If you notice any pooling or runoff, dig out the mulch basin and put in new mulch (wood chips or bark). Mulch usually needs to be replaced every one or two years.

At the beginning of the irrigation season, check to ensure that graywater is flowing out of the outlets evenly. If you notice uneven distribution, check the outlets for clogs, and manually remove any debris. If you notice that many of the outlets are clogged, you need to flush the system.

To flush the system, open any partially closed ball valves, making sure the end of each line is open. Pull the tubing off the PVC connection point and insert the barbed 1-inch female hose thread adapter. Attach a garden hose to the hose connection and turn the hose on high to flush particles out of the system. ***Any time you attach a garden hose to temporarily flush the system, you are required to have an anti-siphon valve or vacuum breaker on the hose bibb!*** When you are finished, be sure to readjust the ball valves for an even flow of graywater.

A basic operation and maintenance checklist for laundry-to-landscape systems is provided in Table B-1.

Table B-1. *Laundry-to-Landscape System: Operation and Maintenance Checklist*

Component	Inspection Schedule	O&M Activity	Action Needed
3-way valve	Annual	Check for leaks at washer hose and that label is in place	☐ Condition good ☐ Action needed • If leaking, tighten hose clamp. • Replace label if needed.
Auto vent	Annual	Check for leaks from auto vent	☐ Condition good ☐ Action needed • If leaking, replace the auto vent.
Piping and tubing	If you notice water in an unusual place	Check for leaks	☐ Condition good ☐ Action needed • If piping or tubing is damaged, cut out damaged section and reconnect with a 1-inch barbed coupling.
	Annual	Check for even distribution from outlets	☐ Condition good ☐ Action needed • Unclog hair or lint built up in the outlets. Open ball valves, check for clogs. If needed, flush the system with a hose: temporarily disconnect the tubing from the PVC fitting, attach the garden hose by barb fitting, and connect the hose to the system.
Mulch basins	Annual	Check to see if mulch has decomposed and water is pooling under graywater outlets	☐ Condition good ☐ Action needed • Remove decomposed mulch and add new mulch.

4. What are the 12 guidelines I must follow to comply with the law?

Under the 2010 California Plumbing Code (California Code of Regulations, Title 24, Part 5, Chapter 16A), washing machine systems in one- or two-unit residential buildings do not require a permit as long as the installer follows the 12 minimum requirements outlined in the code:

1. If required, notification has been provided to the Enforcing Agency regarding the proposed location and installation of a graywater irrigation or disposal system. *Note: A city, county, or other local government may, after a public hearing and enactment of an ordinance or resolution, further restrict or prohibit the use of graywater systems.*

2. The design shall allow the user to direct the flow to the irrigation or disposal field or the building sewer. The direction control of the graywater shall be clearly labeled and readily accessible to the user.

3. The installation, change, alteration or repair of the system does not include a potable water connection or a pump and does not affect other building, plumbing, electrical or mechanical components including structural features, egress, fire-life safety, sanitation, potable water supply piping or accessibility.

4. The graywater shall be contained on the site where it is generated.

5. Graywater shall be directed to and contained within an irrigation or disposal field.

6. Ponding or runoff is prohibited and shall be considered a nuisance.

7. Graywater may be released above the ground surface provided at least two (2) inches (51 mm) of mulch, rock, or soil, or a solid shield covers the release point. Other methods which provide equivalent separation are also acceptable.

8. Graywater systems shall be designed to minimize contact with humans and domestic pets.

9. Water used to wash diapers or similarly soiled or infectious garments shall not be used and shall be diverted to the building sewer.

10. Graywater shall not contain hazardous chemicals derived from activities such as cleaning car parts, washing greasy or oily rags, or disposing of waste solutions from home photo labs or similar hobbyist or home occupational activities.

11. Exemption from construction permit requirements of this code shall not be deemed to grant authorization for any graywater system to be installed in a manner that violates other provisions of this code or any other laws or ordinances of the Enforcing Agency.

12. An operation and maintenance manual shall be provided. Directions shall indicate the manual is to remain with the building throughout the life of the system and indicate that upon change of ownership or occupancy, the new owner or tenant shall be notified the structure contains a graywater system.

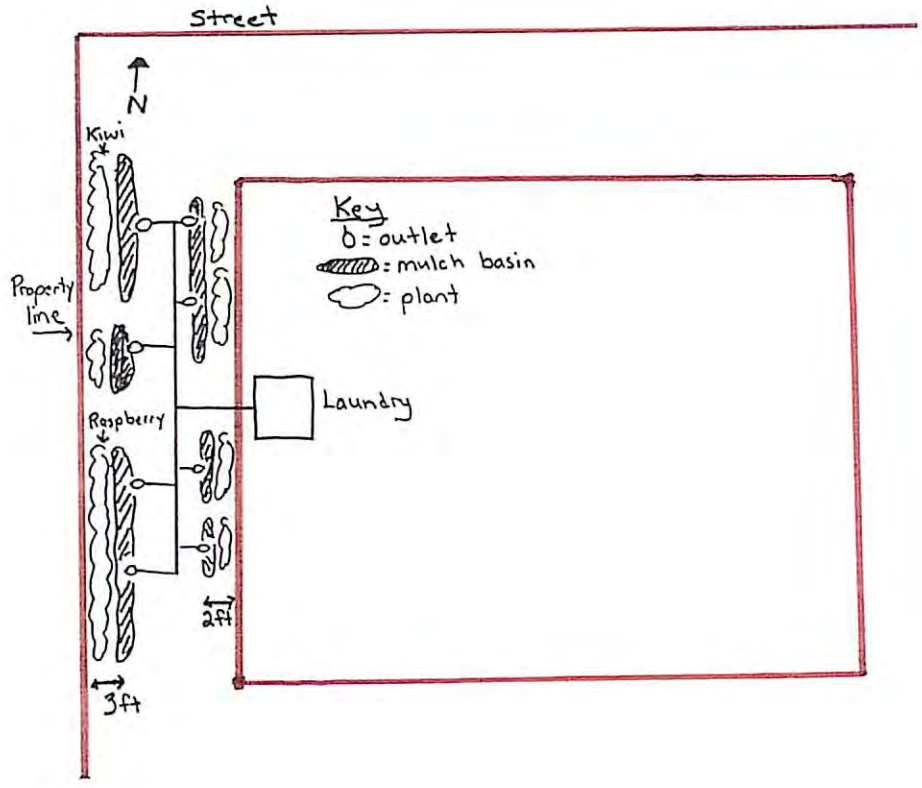
Creating a Simple Plot Plan

It is recommended that you sketch the layout of your laundry to landscape graywater system and attach it to your O&M manual. Guidelines for the sketch are listed below, and grid paper is provided on the next page. Attach photos of irrigation tubing taken after installation but before the tubing is covered with soil. Together, the sketch and photos will provide a good record of your system for future reference.

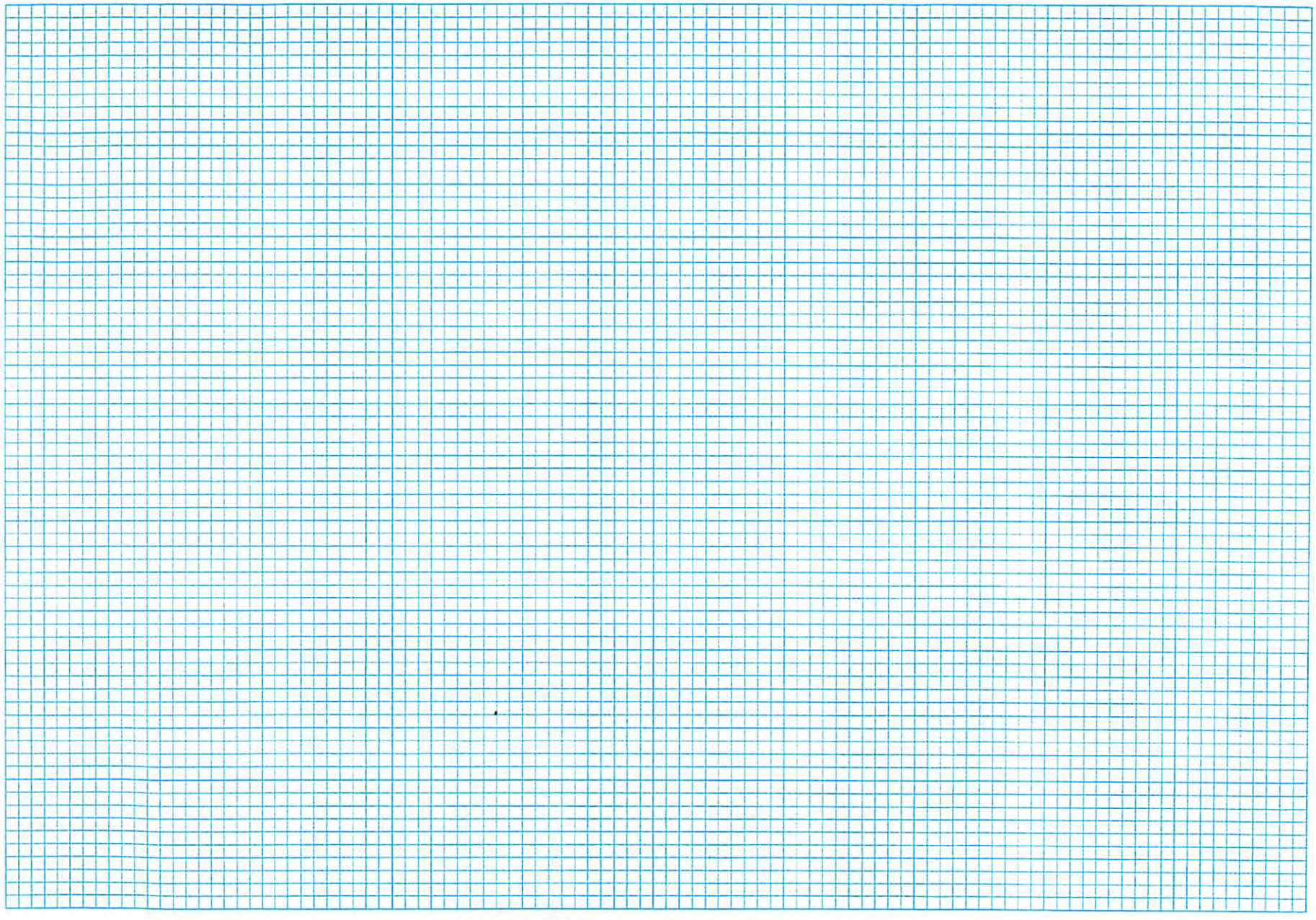
Guidelines for your sketch:

- Put in landmarks for reference, for example, the side of your home, sidewalk, fences, and street.
- Indicate where the pipe exits your home.
- Show the pipe, tubing, and mulch shields.
- Add setbacks between the system and your home, property lines, and other structures.
- Add a rough scale, for example, 1 inch = 10 feet.
- Add a north (or other direction) arrow.

This sketch is for your own use, so it can be as simple or detailed as you like. An example is shown at right.



Sketch: Laura Allen.



Graywater System Plot Plan

Address: _____ Date: _____

Sample Operation and Maintenance Manual for Branched-Drain Graywater System

Congratulations on your new graywater system! This manual will help you maintain a well-functioning, water-saving graywater irrigation system.

This manual is to remain with the building throughout the life of the system. Upon change of ownership or occupancy, the new owner or tenant must be notified that the structure contains a graywater system. A map showing the location of all graywater system components is attached to this O&M manual.

Insert the information you used to design your system here:

Estimated graywater flow (permitted systems calculation) _____

Soil type _____

Minimum size of irrigation or infiltration area required _____

Actual size of irrigation or infiltration area _____

Estimated graywater flow (irrigation supply calculations) _____

1. How do I turn my graywater system off?

To turn your graywater system off, turn the handle of the 3-way valve to direct the water towards the sewer or septic system. The first few times you do this, check to make sure the system is turning off and that your 3-way valve is labeled correctly.

These are common times you'll need to turn off your system.

- During the rainy season. Graywater may be used if there are extended dry periods during the typical rainy season, but the system must be turned off as soon as the rain resumes.
- When washing dirty diapers.

- When washing anything with chemicals, such as oily rags.
- Anytime you notice that the water isn't draining well and you see pooling or runoff.
- If you think your plants are receiving too much water.
- Anytime you use products that are harmful to plants (like bleach or harsh cleaners).

2. What products can I use in my graywater system?

It is important to use plant-friendly products when reusing your graywater. All products should be biodegradable and non-toxic. In addition, they should be free of salt (sodium) and boron (borax), two common ingredients that are non-toxic to people but are harmful to plants and/or the soil.

Chlorine bleach is harmful to plants and should be diverted, along with any other harmful products, to the sewer or septic (by switching the 3-way valve). Hydrogen peroxide bleaches are less harmful and can be used instead of chlorine.

Another consideration with cleaning and personal care products, such as shampoos and conditioners, is their effect on the pH of the water. While many soaps do not change the water's pH, some do. In general, liquid soaps do not affect the pH, while bar soaps make the water alkaline (opposite of acidic). Certain acid-loving plants might not be happy with alkaline water. If you're uncertain if the pH is being affected, use the graywater to irrigate plants that are not acid-loving. Acid-loving plants include ferns, azaleas, camellias, rhododendrons, and blueberries.

For information about products that independent groups have found to be free of ingredients that may harm plants, see websites such as *http://greywateraction.org/content/greywater-friendly-products* and *http://www.harvestingrainwater.com/greywater-harvesting/greywater-compatible-soaps-and-detergents/*. You can also find out what's in your products at *http://cosmeticdatabase.org*. In a shower, shampoo is fairly diluted so it is not as important as detergents in the washing machine.

3. How do I maintain my graywater system?

The main thing you'll need to do to maintain your graywater system is periodically check on the mulch basins (the mulch layer the graywater flows into) and make sure the graywater is draining properly. If you notice any pooling or runoff, dig out the mulch basin and put in new mulch (wood chips or bark). Mulch usually needs to be replaced every one or two years.

At the beginning of the irrigation season, check to ensure that graywater is flowing out of the outlets evenly. If you notice uneven distribution of graywater, check the outlets for clogs, and manually remove any debris you find. If you notice that many of the outlets are clogged, you need to flush the system. There could be some settling of the system over time, which could result in uneven distribution out of the outlets. You can readjust the slope of the double-ell (twin 90) flow splitters to even out the flow.

To "flush" the system, insert a garden hose into a clean-out and force water through the system. If there is a blockage, you can insert a "snake" to push out a clog.

4. What is required to keep my system legal and in compliance with the graywater code?

Under the 2010 California Plumbing Code (California Code of Regulations, Title 24, Part 5, Chapter 16A), the requirements below must be followed:

- The graywater system shall not be connected to any potable water system without an air gap or other physical device which prevents backflow and shall not cause the ponding or runoff of graywater.
- No graywater system or part thereof shall be located on any lot other than the lot that is the site of the building or structure that discharges the graywater, nor shall any graywater system or part thereof be located at any point having less than the minimum distances indicated in Table 16A-1.
- Water used to wash diapers or similarly soiled or infectious garments or other prohibited contents shall be diverted by the user to the building sewer.

- Graywater shall not be used in spray irrigation, allowed to pond or runoff and shall not be discharged directly into or reach any storm sewer system or any surface body of water.
- Human contact with graywater or the soil irrigated by graywater shall be minimized and avoided, except as required to maintain the graywater system. The discharge point of any graywater irrigation or disposal field shall be covered by at least (2) inches of mulch, rock, or soil, or a solid shield to minimize the possibility of human contact.
- Graywater shall not be used to irrigate root crops or edible parts of food crops that touch the soil.

Creating a Plot Plan

Permitted System

If your system requires a permit because you altered the existing plumbing to access sink or shower water, you will be required to submit a plan of your graywater system to DBI. Contact DBI for plot plan requirements. For an example of the level of detail that might be required, refer to the example plans in Appendix E of the Graywater Design Manual. Keep this plot plan with your O&M manual. Attach photos of irrigation tubing taken after installation but before the tubing is covered with soil. Together, the plan and photos will provide a good record of your system for future reference.

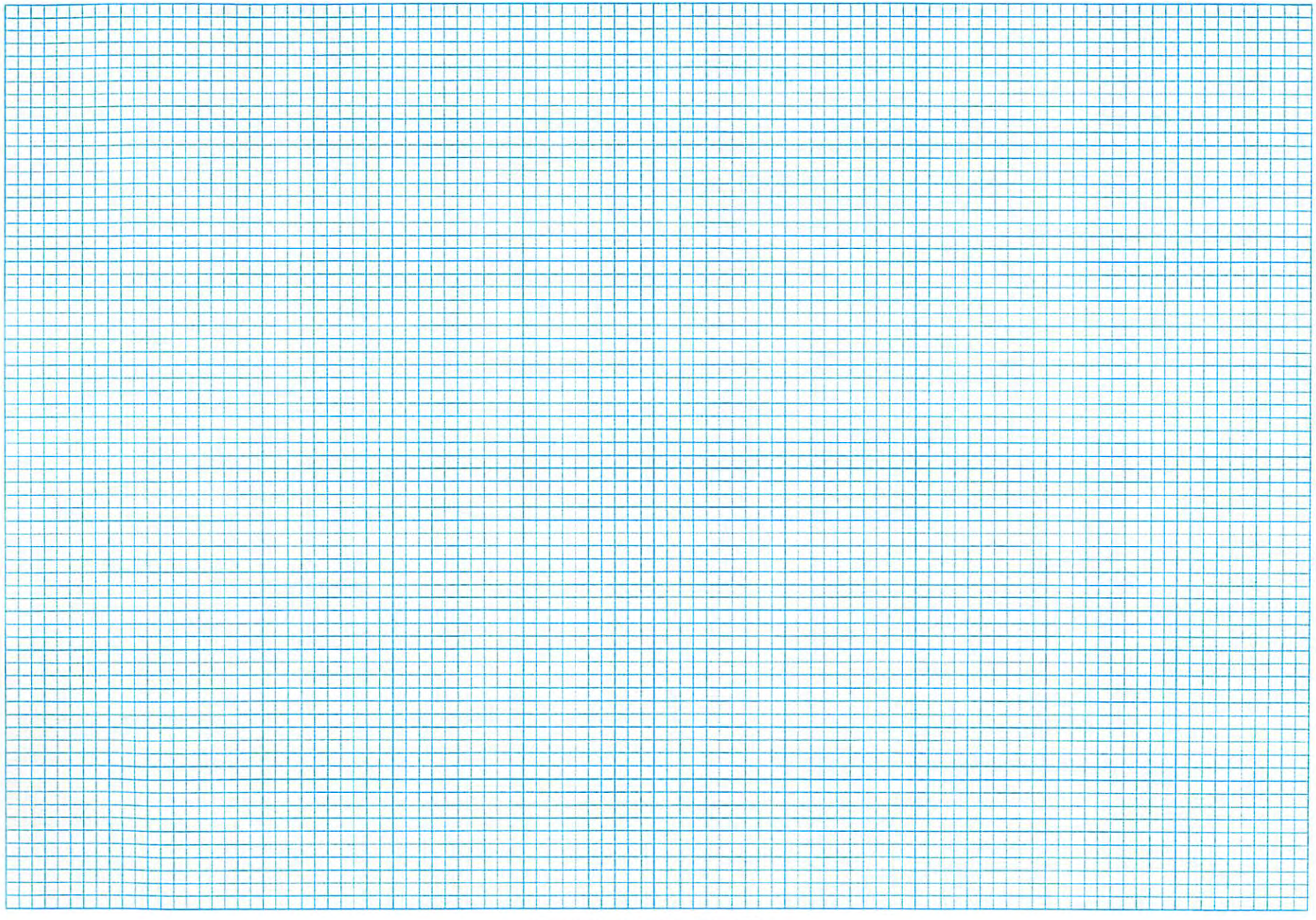
Unpermitted System

If you have a second-standpipe system for laundry graywater and have not altered the existing plumbing, it is recommended (but not required) that you sketch the layout of your graywater system and attach it to your O&M manual. Guidelines for the sketch are listed below, and grid paper is provided on the next page. Attach photos of irrigation tubing taken after installation but before the tubing is covered with soil. Together, the sketch and photos will provide a good record of your system for future reference.

Guidelines for your sketch:

Put in landmarks for reference, for example, the side of your home, sidewalk, fences, and street.

- Indicate where the pipe exits your home.
- Show the pipe, tubing, and mulch shields.
- Add setbacks between the system and your home, property lines, and other structures.
- Add a rough scale, for example, 1 inch = 10 feet.
- Add a north (or other direction) arrow.



Graywater System Plot Plan

Address: _____ Date: _____

Sample Operation and Maintenance Manual for Pumped Graywater System

Congratulations on your new graywater system! This manual will help you maintain a well-functioning, water-saving graywater system.

This manual is to remain with the building throughout the life of the system. Upon change of ownership or occupancy, the new owner or tenant must be notified that the structure contains a graywater system. A map showing the location of all graywater system components is attached to this O&M manual.

1. How do I turn my graywater system off?

To turn your graywater system off, turn the handle of the 3-way valve to direct the water towards the sewer or septic system. The first few times you do this, check to make sure the system is turning off when you want and that your 3-way valve is labeled correctly.

These are common times you'll need to turn off your system:

- During the rainy season. Graywater may be used if there are extended dry periods during the typical rainy season, but the system must be turned off as soon as the rain resumes.
- When washing dirty diapers.
- When washing anything with chemicals, such as oily rags.
- Anytime you notice that the water isn't draining well and you see pooling or runoff.
- If you think your plants are receiving too much water.
- Anytime you use products that are harmful to plants (like bleach or harsh cleaners).

2. What products can I use in my graywater system?

It is important to use plant-friendly products when reusing your graywater. All products should be biodegradable and non-toxic. In addition, they should be free of salt (sodium) and boron (borax), two common ingredients that are non-toxic to people but are harmful to plants and/or the soil.

Chlorine bleach is harmful to plants and should be diverted, along with any other harmful products, to the sewer or septic system (by switching the 3-way valve). Hydrogen peroxide bleaches are less harmful and can be used instead of chlorine.

Another consideration with cleaning and personal care products, such as shampoos and conditioners, is their effect on the pH of the water. While many soaps do not change the water's pH, some do. In general, liquid soaps do not affect the pH, while bar soaps make the water alkaline (opposite of acidic). Certain acid-loving plants might not be happy with alkaline water. If you're uncertain if the pH is being affected, use the graywater to irrigate plants that are not acid-loving. Acid-loving plants include ferns, azaleas, camellias, rhododendrons, and blueberries.

For information about products that independent groups have found to be free of ingredients that may harm plants, see websites such as *http://greywateraction.org/content/greywater-friendly-products* and *http://www.harvestingrainwater.com/greywater-harvesting/greywater-compatible-soaps-and-detergents/*. You can also find out what's in your products at *http://cosmeticdatabase.org*. In a shower, shampoo is fairly diluted so it is not as important as detergents in the washing machine.

3. How do I maintain my system?

You will be required to submit a plan of your graywater system with your permit application. Contact DBI for requirements. For an example of the level of detail that might be required, refer to the example plans in Appendix E of the Graywater Design Manual. Attach photos of irrigation tubing taken after installation but before the tubing is covered with soil. Together, the plan and photos will provide a good record of your system for future reference.

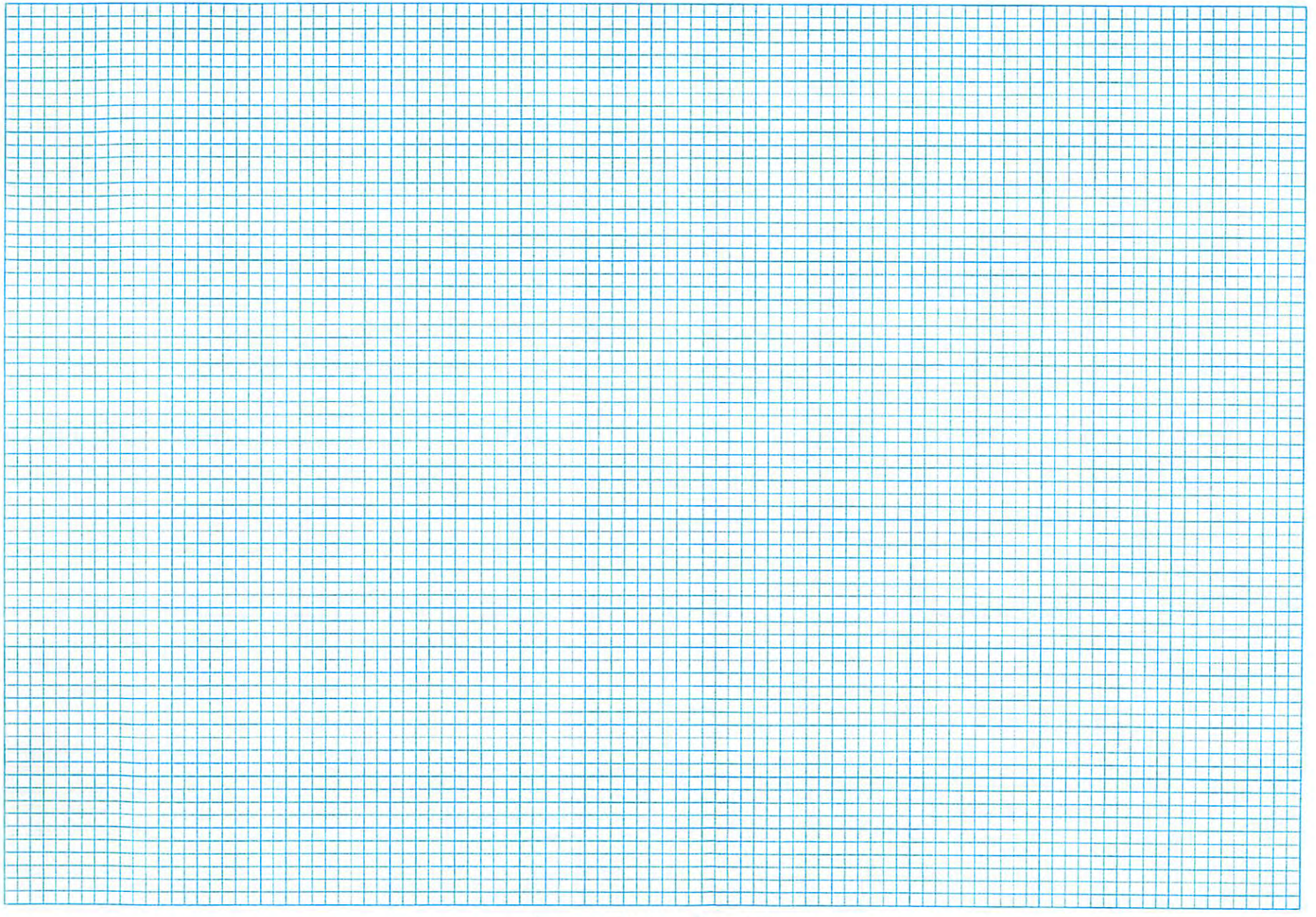
4. What is required to keep my system legal and in compliance with the graywater code?

Under the 2010 California Plumbing Code (California Code of Regulations, Title 24, Part 5, Chapter 16A), the requirements below must be followed:

- The graywater system shall not be connected to any potable water system without an air gap or other physical device which prevents backflow and shall not cause the ponding or runoff of graywater.
- No graywater system or part thereof shall be located on any lot other than the lot that is the site of the building or structure that discharges the graywater, nor shall any graywater system or part thereof be located at any point having less than the minimum distances indicated in Table 16A-1.
- Water used to wash diapers or similarly soiled or infectious garments or other prohibited contents shall be diverted by the user to the building sewer.
- Graywater shall not be used in spray irrigation, allowed to pond or runoff and shall not be discharged directly into or reach any storm sewer system or any surface body of water.
- Human contact with graywater or the soil irrigated by graywater shall be minimized and avoided, except as required to maintain the graywater system. The discharge point of any graywater irrigation or disposal field shall be covered by at least (2) inches of mulch, rock, or soil, or a solid shield to minimize the possibility of human contact.
- Graywater shall not be used to irrigate root crops or edible parts of food crops that touch the soil.

Creating a Plot Plan

You will be required to submit a plot plan of your graywater system with your permit application. For an example of the level of detail that might be required for simpler systems, refer to the example plans in Appendix E of the Graywater Design Manual. However, depending on system complexity, you may be required to provide additional details to DBI. Contact DBI for requirements. You may need to consult with a professional to assist you with your plans. Keep this plot plan with your O&M manual. Attach photos of irrigation tubing taken after installation but before the tubing is covered with soil. Together, the plan and photos will provide a good record of your system for future reference.



Graywater System Plot Plan

Address: _____ Date: _____

Appendix C: Products

Product Ingredients to Avoid

Salt and sodium compounds: Salts can build up in the soil and prevent plants from taking up water. Over time, salt build-up can kill plants.

Boron or borax: Boron is a plant micronutrient, but once plants have their boron needs met, it quickly becomes a microtoxin that damages plants. Since boron is non-toxic to people, it is a common element in ecological detergents. To avoid boron poisoning of your plants, do not use any soap or detergent that contains boron or borax.

Chlorine bleach: Chlorine bleach kills soil microorganisms and can damage your plants. Do not use it in a graywater system! Hydrogen peroxide bleach can be used as an alternative.

Recommended Soaps and Products

Look for products that are free of the ingredients above. For information about products that independent groups have found to be free of ingredients that may harm plants, see websites such as *http://greywateraction.org/content/greywater-friendly-products* and http://*www.harvesingrainwater.com/greywater-harvesting/greywater-compatible-soaps-and-detergents/*. You can also read the back of detergent bottles. If a company doesn't list all its ingredients, you'll have no way of knowing if the product is safe for your plants or not. There are also soap alternatives for laundry machines, such as soap nuts, magnets, and balls that deionize the water.

Cleaners: Many cleaners have high levels of salts, contain harmful chemicals, and can be very basic (alkaline). In general, cleaning products made from vinegar are better for plants. Use cleaners sparingly.

Personal care products: If you are interested in learning more about the ingredients in your shampoos, conditioners, and deodorants, visit *http://cosmeticdatabase.org*, an on-line information site that allows you to investigate what is in your products.

Appendix D: What to Irrigate with Graywater and How Much Water to Use

Irrigation

The key to proper irrigation with low-tech graywater systems is to get an accurate estimate of how much graywater is produced and then match the available amount of graywater with the proper plants. Typically, plants with larger root zones, like trees and shrubs, can withstand times without irrigation, although they do better with regular watering.

"Hydrozoning" is keeping plants with similar water needs on the same irrigation cycle. This practice is important for conserving water in a landscape. In a landscape irrigated with graywater, it is important to put your water-loving plants in locations accessible to graywater while putting drought-tolerant plants in other areas. This way you can avoid the need for irrigation with potable water. Low-tech graywater systems typically supply only one hydrozone at a time, whereas more complex systems can supply multiple hydrozones.

The information below will help you estimate how much of your landscape can be irrigated using a graywater system.

A typical medium-sized fruit tree in San Francisco needs approximately 10 to 20 gallons of water per week during the dry season. Using this rough estimate, graywater from one load of laundry from a front-loading machine (approximately 20 gallons) could irrigate one to two trees per week; graywater from a top loader (approximately 40 gallons) could irrigate three to four trees per week.

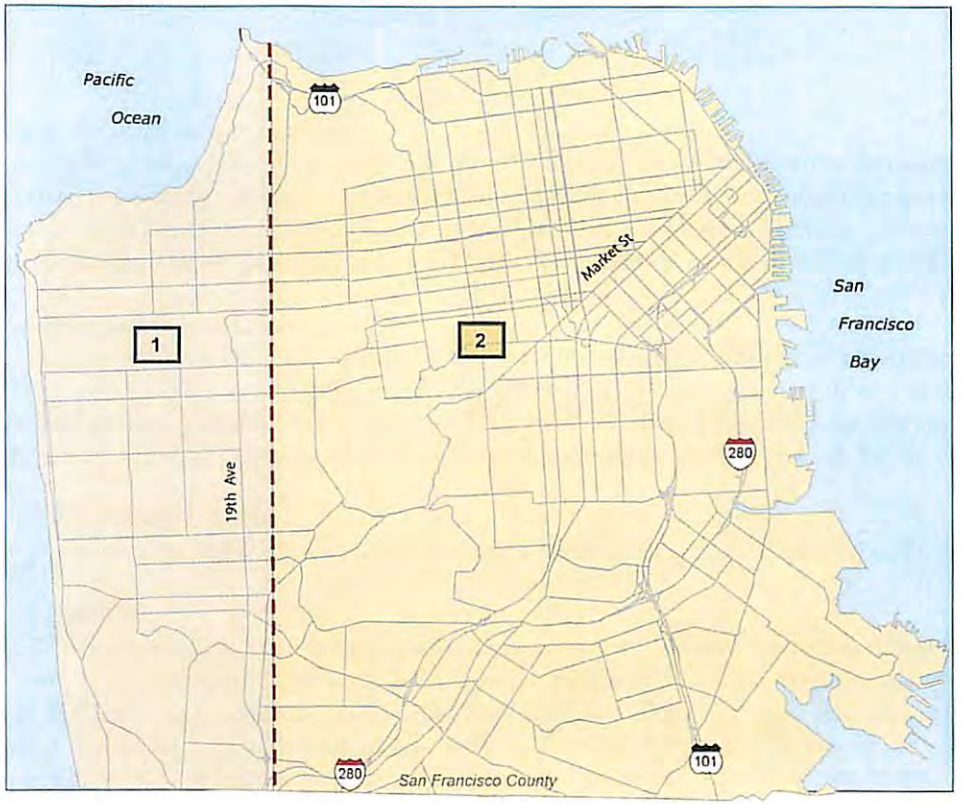
Another easy rule of thumb for estimating plant water needs is to find the square footage of the plant's canopy and divide it by 4. This approximates the gallons per week the plant needs. For example, an apple tree with a canopy area of 80 square feet might need 80/4, or about 20 gallons per week. Note that drought-tolerant plants require much less water than estimated by this method!

This graywater system is used to irrigate plants with similar water needs. The fruit trees and larger perennials are irrigated from the laundry machine in one "hydrozone." Photo: Leigh Jerrard.

***Table D-1.** Water Needs of Some Common Plants*

Low (Species Factor 0.2)	Moderate (Species Factor 0.5)	High (Species Factor 0.8)
California poppy	Tulip tree	Birch
Pineapple guava	Apple tree	Willow
European grape	Fig tree	Coast redwood
Bougainvillea	(Most other fruit trees)	Kiwi
Lemon verbena	Shasta daisy	White Alder

Source: Water Use Classification of Landscape Species, California Department of Water Resources.



Source: California Irrigation Management Information System (CIMIS)

REFERENCE EVAPOTRANSPIRATION

Legend

1 COASTAL PLAINS HEAVY FOG BELT
Lowest ETo in California, characterized by dense fog

2 COASTAL MIXED FOG AREA
Less fog and higher ETo than zone 1

Monthly Average Reference Evapotranspiration by ETo Zone (inches/month)

Zone	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1	0.93	1.40	2.48	3.30	4.03	4.50	4.65	4.03	3.30	2.48	1.20	0.62	33.0
2	1.24	1.68	3.10	3.90	4.65	5.10	4.96	4.65	3.90	2.79	1.80	1.24	39.0

Figure D-1. Reference evapotranspiration zones in San Francisco.

You can also use an equation to estimate how much water your specific plants need. However, note that there are many variables that affect plant water needs, so any technique you use will be an approximation. The most important thing is to observe your plants and note how they are doing.

The equation for plant water requirements on the following page provides a method for calculating how many gallons per week a specific plant or planted area requires. To use this equation, you need the following information:

- **The area of the plants:** Estimate the planted area using the area of a circle for trees (the distance from the trunk to the drip line is the radius of the circle) or the area of a rectangle for rectangular-shaped planted areas.
- **The species factor of the plant(s):** Available at *http://www.water.ca.gov/wateruseefficiency/docs/wucols00.pdf* or in the *Sunset Western Garden Book*. The species factor is a number used to differentiate between the water needs of plants (high, moderate, and low). Table D-1 lists the species factors of some common plants in San Francisco.
- **The evapotranspiration, or ET, rate:** Available at *http://wwwcimis.water.ca.gov/cimis/infoEtoOverview.jsp#*. Evapotranspiration is a combination of water transpired from plants and evaporated from soil and plant surfaces.

Example: Estimating How Much Water Your Plants Need

A western San Francisco household has a yard with eight small fruit trees and native plants. The homeowners currently irrigate the trees using tap water, but they would like to use graywater from their washing machine instead. The homeowners estimate that they produce 60 gallons of graywater from their washing machine per week. The drip lines of the trees are 3 feet from their trunks.

The homeowners start by making a rough estimate of how much water the trees need. Since a medium-sized fruit tree requires between 10 and 20 gallons per week, they assume that their small fruit trees will need less than 10 gallons per week, or less than a total of 80 gallons for all eight trees.

For a more accurate estimate, they use the plant water requirements formula on page D-3. Three variables are needed for this calculation: area of the trees, species factor, and evapotranspiration (ET) rate.

Area of each tree: πr^2 = 3 x 3 feet x 3 feet = 27 square feet (note that π = 3.14, but 3 is close enough for this estimate)

Species factor: 0.5 (from *http://www.water.ca.gov/wateruseefficiency/docs/wucols00.pdf* or the *Sunset Western Garden Book*)

July weekly ET = 1.16 and April weekly ET = 0.82. For weekly ET divide monthly ET by four (July ET 4.65/4 = 1.16)

Using the plant water requirements formula:

Weekly plant water needs in July (in gallons) = 0.62 x 1.16 (July ET weekly) x 0.5 (species factor) x 27 square feet (area of each tree) = 9.7 gallons per week in July

Using the April ET weekly rate of 0.82, the homeowners calculate that each tree requires 6.9 gallons per week in April.

The homeowners estimate that if they split the 60 gallons equally between eight trees, each will get approximately 7 gallons a week. This is less than the peak irrigation need in July but enough for most of the year. They decide to install a laundry-to-landscape system, with graywater distributed equally to all eight trees. They plan to observe the trees in the summer. If the trees exhibit signs of water stress, they will supplement the graywater irrigation with tap water.

Evapotranspiration is given in inches per month or inches per day. You can convert this to inches per week. Figure D-1 includes a map of ET zones in San Francisco and ET rates for each month of the year.

Plant water requirements (in gallons per week) = 0.62 (conversion factor for the ET rate, converting inches to gallons) x planted area (square feet) x species factor (high, moderate, or low) x evapotranspiration (ET) rate (inches per week).

For simplicity, it is assumed that all the water goes to the roots of the plants, i.e., that the irrigation is 100 percent efficient.

Note that although July has the highest ET and thus the highest irrigation needs of the year, you don't need to irrigate at the July rate all year long. You could decide to irrigate your plants with graywater at less than their July requirement for most of the year, knowing that your plants might need additional water in July. Alternatively, if you have more graywater than your plants need, you could irrigate your plants according to their peak need all year round, even though they don't need that much water most of the year. If your drainage is good, slight over-watering with graywater will not harm your plants, although it is unnecessary.

To learn more about plant water requirements and evapotranspiration rates, visit the California Irrigation Management Information Systems (CIMIS) at *http://wwwcimis.water.ca.gov/*.

Graywater irrigates this row of fruit trees. Thick mulch from a local tree company has been placed over the pathway, as well as inside the mulch basins. Photo: Leigh Jerrard.

Edibles

You can safely irrigate edible crops with graywater, as long as the graywater does not touch the edible part of the plant. For example, the California graywater code prohibits watering root crops like carrots with graywater. It is possible that the graywater could contact the carrots, and someone who ate a carrot without washing it first could ingest graywater. It is generally easier to irrigate perennial plants and trees with graywater; good edibles to water can be fruit trees, fruiting vines, berries, and large perennials.

Any system that uses drip irrigation tubing can water all types of vegetables with the edible portion above the ground. Vegetable beds with larger annuals and food above the ground, like corn, beans, tomatoes, etc. can be watered with laundry and pumped systems, since it is easier to spread out the water to reach these types of plants with these pumped systems. In contrast, it is not as easy to irrigate vegetables with gravity-fed, branched-drain systems.

Easy Plants to Water

- Fruit trees adapted to your local microclimate
- Berries
- Riparian plants that like irrigation (willow, maple, birch, water-loving plants)
- Any plant that likes to be irrigated.

What Not to Water

- Root crops. Reason: Health risk. Someone ingesting a root crop without washing it could ingest graywater. The graywater code prohibits irrigation of root crops.
- Drought-established plants. Reason: Risk to plant. Plants that have never been watered before, like an oak tree, or an old citrus that was never irrigated, are used to extended dry periods and could be damaged by sudden frequent irrigation.
- Possibly acid-loving plants (depending on the pH of graywater). Reason: Risk to plant. Graywater tends to be basic (alkaline), and acid-loving plants might not do well with basic irrigation water. You can use pH-neutral liquid laundry detergents and put acidic bark in mulch basins to create acidic soil conditions. Common

acid-loving plants include ferns, azaleas, rhododendrons, camellias, and blueberries. You can look up the pH needs of your plants in a plant or gardening book. If the book doesn't mention pH or acidic conditions, it is generally safe to assume the plant doesn't need acidic conditions, as garden plants commonly prefer neutral or slightly alkaline conditions.

- Very sensitive plants. Reason: Risk to plant. Plants that are generally hard to grow, like some ferns and avocados, might not be a good choice for graywater irrigation.

Soil Health

To have healthy plants, you need healthy soils! Soils are alive with billions of beneficial organisms. These are some easy steps you can take to promote healthy soils in your yard:

- A few times a year, irrigate with rainwater or freshwater. A rainy day counts!
- Add compost to your soil.
- Use mulch.
- Don't use chemical pesticides or fertilizers.
- Only use plant-friendly products; salts and chlorine bleach can harm soil and soil microbes.

References

California Irrigation Management Information Systems (CIMIS) at: http://wwwcimis.water.ca.gov/f

Sunset Western Garden Book 8th Edition, 2007

California Department of Water Resources Water Use Classification of Landscape Species at: http://www.water.ca.gov/wateruseefficiency/docs/wucols00.pdf

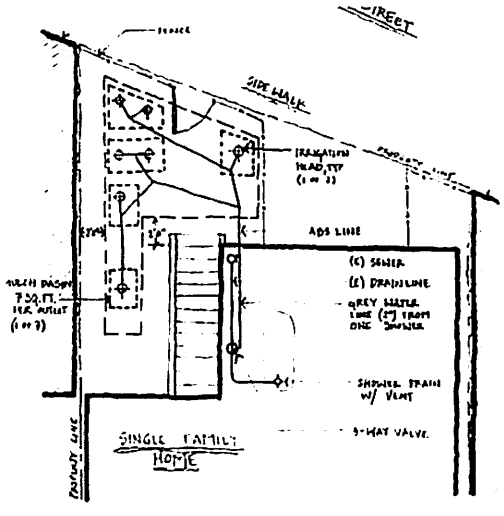
SFPUC Low Water Use and Climate Appropriate Plant List at: sfwater.org/landscape

DATE OF REPORT: 08/13/10

SOIL PHYSICAL CHARACTERISTICS

Sample ID	Lab Number	% Sand	% Silt	% Clay	Soil Texture
FRYRD	55218	68	20	12	SANDY LOAM

Sample laboratory results from a soil texture analysis.



Sample plot plan showing the street, building, setbacks, location of irrigation area, and size of mulch basins.

Appendix E: Worked Example with Sample Plot Plans and Permits

The following is a simplified example of the design and permitting steps followed by two San Francisco homeowners when they installed a branched-drain graywater system. Samples of the documentation submitted with their permit application are included. Elements of this worked example have been fictionalized for simplicity and clarity.

Note that if you are installing your own system, you will need to consult the applicable sections of this manual for an overview of installing your system, as well as consult additional resources for further guidance on branched-drain system installation details.

Step 1: Estimated the gallons of graywater generated by the shower fixture in a one-bedroom home using the permitted systems estimation method on page 9 of this manual.

- One-bedroom home = 2 occupants
- System uses graywater from a shower only: 25 gpd x 2 people = 50 gpd

Step 2: Identified the soil type.

Soil ribbon test indicated soil to be sandy loam. Soil was also sent to a laboratory for soil texture analysis, which confirmed the soil to be sandy loam.

Step 3: Calculated minimum irrigation, or infiltration, area based on soil type and gallons of graywater generated per day. This process is described on page 13 of this manual.

- As shown in Table 2 of this manual, "sandy loam soil" needs 0.4 square feet of infiltration area per gallon per day.
- 0.4 square feet per gallon per day x 50 gpd = 20 square feet

Step 4: Drew a plot plan (previous page) and plumbing detail (at right).

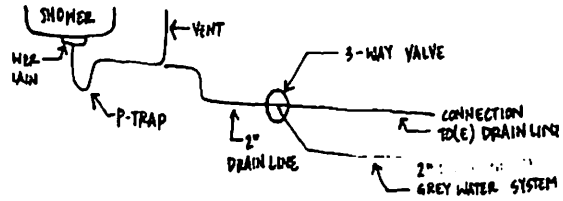
- In the plot plan, the flow was divided into seven outlets, with basins of 7 square feet each, totaling 49 square feet of infiltration area. This number is significantly higher than the minimum 20 square feet calculated using Table 2 of this manual, as the homeowners designed their system to spread the graywater out to many plants across their yard.
- The plumbing diagram on the right shows the 3-way valve located after the p-trap and vent, as well as the size of pipe used. The graywater pipe is 2-inch ABS (plastic), since it is for irrigation, while the rest of the plumbing is of cast iron.
- House had up-to-code plumbing, so it did not need to be upgraded.

Step 5: Applied for a permit.

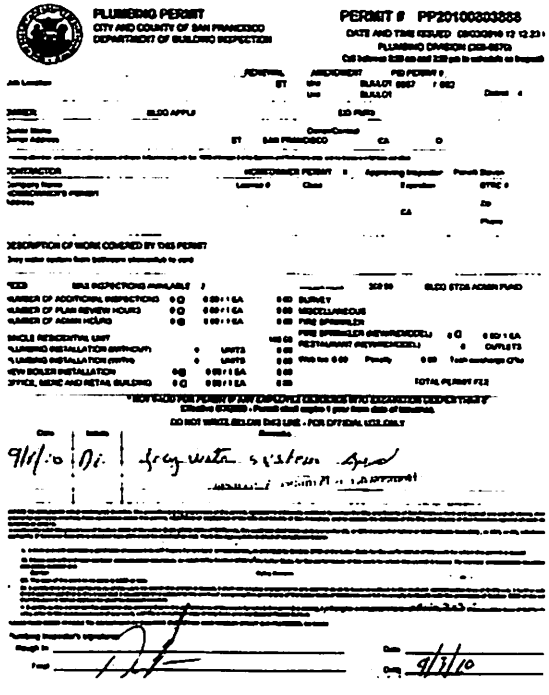
Step 6: Constructed the system.

- Installed the system. This system started with the pipe shallowly buried (approximately 2 inches) and got deeper as the system progressed.
- Tested system.
- Buried straight runs of pipe. Runs with bends were left exposed for inspection.
- Labeled above-ground pipe.
- Labeled 3-way valve.
- Attached O&M manual under the 3-way valve.

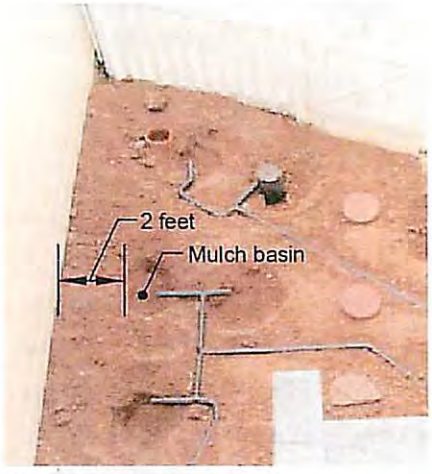
Step 7: Called DBI to schedule an inspection.



Sample plumbing detail showing the 3-way valve connection after the p-trap and vent; pipe size shown as 2-inch, which is required for a shower drain.



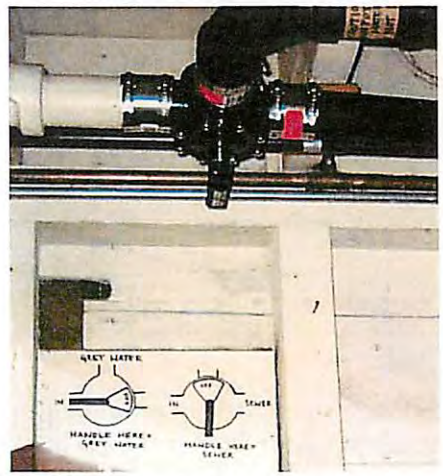
Sample graywater permit.



Sample image of a graywater system pre-burial. Photo: Josh Lowe.

Sample image of a completed graywater system after installation and planting. Photo: Josh Lowe.

Sample image of a completed graywater system after one year of operation and plant growth. Photo: Josh Lowe.



Sample image of a 3-way valve clearly labeled. Photo: Josh Lowe.

Step 8: Operated the system.

Notes from the homeowers one year after installing the graywater system: *"The graywater system is going great. We have not watered the yard with anything but the graywater since the weekend after we planted the plants. They are doing great and the ground cover is really taking off too."*

Appendix F: Information and Resources

San Francisco Information

San Francisco Public Utilities Commission: *http://sfwater.org/landscape*
Water Conservation and Urban Watershed Management Program
525 Golden Gate Avenue, San Francisco, CA 94102
Email: landscape@sfwater.org

San Francisco Department of Building Inspection: *http://www.sfdbi.org*
1660 Mission Street, San Francisco, CA 94103
Tel: (415) 558-6088
Fax: (415) 558-6401

San Francisco Department of Public Health: *http://www.sfdph.org/*
101 Grove Street, San Francisco, CA 94102-4505
Tel: (415) 554-2625

California Residential Graywater Code:
http://www.hcd.ca.gov/codes/shl/2007CPC_Graywater_Complete_2-2-10.pdf

Additional Resources

Note that the following lists are not comprehensive and contain only a few of the resources available to homeowners designing and installing graywater systems. The inclusion of these organizations and resources is intended to assist homeowners and designers in their process and does not imply any endorsement by the SFPUC.

Websites

Oasis Design Graywater Information Site: *http://www.oasisdesign.net/greywater*

Greywater Action: For a Sustainable Water Culture: *http://www.greywateraction.org*

California's Integrated Water Reuse Management Center: *http://www.whollyh2o.org/*

Books

Create an Oasis with Greywater, by Art Ludwig. 19th Revision, Oasis Design. 2009.

Golden Gate Gardening: Year-Round Food Gardening in the San Francisco Bay Area and Coastal California, by Pam Pierce. 1998.

Classes

Greywater Action: *http://www.greywateraction.org/*

The Ecology Center: *http://www.ecologycenter.org/*

The Garden for the Environment: *http://www.gardenfortheenvironment.org/*

Plants

California Irrigation Management Information System: *http://wwwcimis.water.ca.gov*

Laboratories for Soil Analyses

A&L Western Agricultural Laboratories
1311 Woodland Ave #1
Modesto, CA 95351
Telephone: (209) 529-4080
http://www.al-labs-west.com/

Control Laboratories Inc.
42 Hangar Way
Watsonville, CA 95076
Telephone: (831) 724-5422
http://compostlab.com/

Materials

Urban Farmer Store (kits for laundry-to-landscape systems): *http://urbanfarmerstore.com/*

Clean Water Components (kits for graywater systems): *http://cleanwatercomponents.com*

Bayview Greenwaste (for mulch): *http://bayviewgreenwaste.com/*

Local tree trimmers (for wood chips)

SAN FRANCISCO

graywater design manual

FOR OUTDOOR IRRIGATION

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Services of the San Francisco Public Utilities Commission

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The **solution** for **water shortages**

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Energy Efficiency Category Award (USA) — TOP 10 GREEN BUILDING PRODUCTS 2007

BRAC Systems

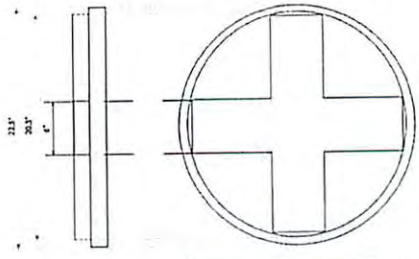
Brac Systems Data Sheet

BRAC System RGW-250

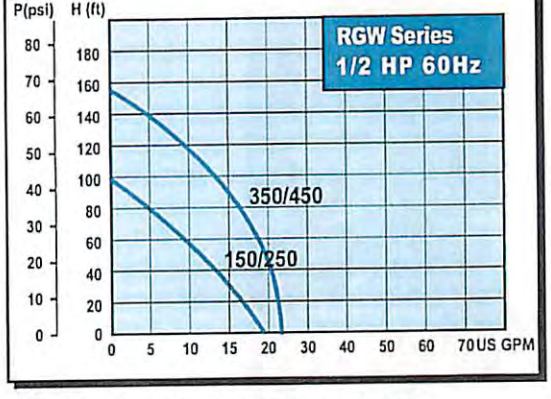
The RGW–250 is our most popular tank, designed for homes with up to 6 people who want to save money on their water bill, while helping the environment.

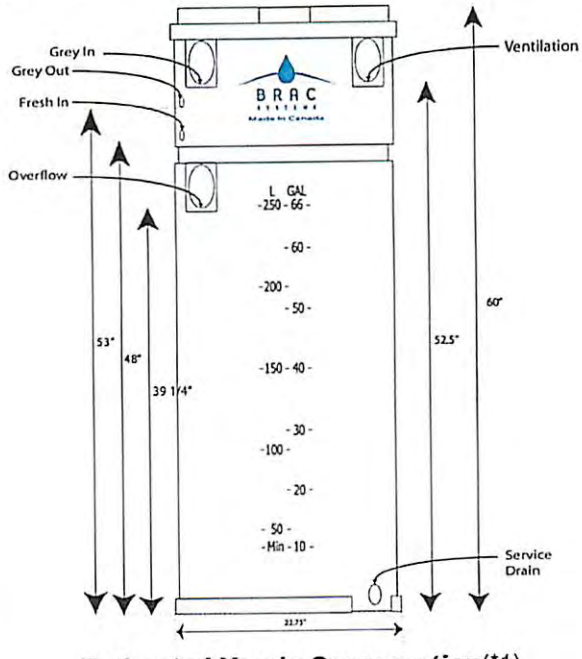
Capacity :
250 Liters
66 Gallons US

Dimensions:
60" Height (152 cm)
22.5" Width (57 cm)
95 lbs (43 kg)



Hydraulic Performance curve:





Suction Lift Performance Table

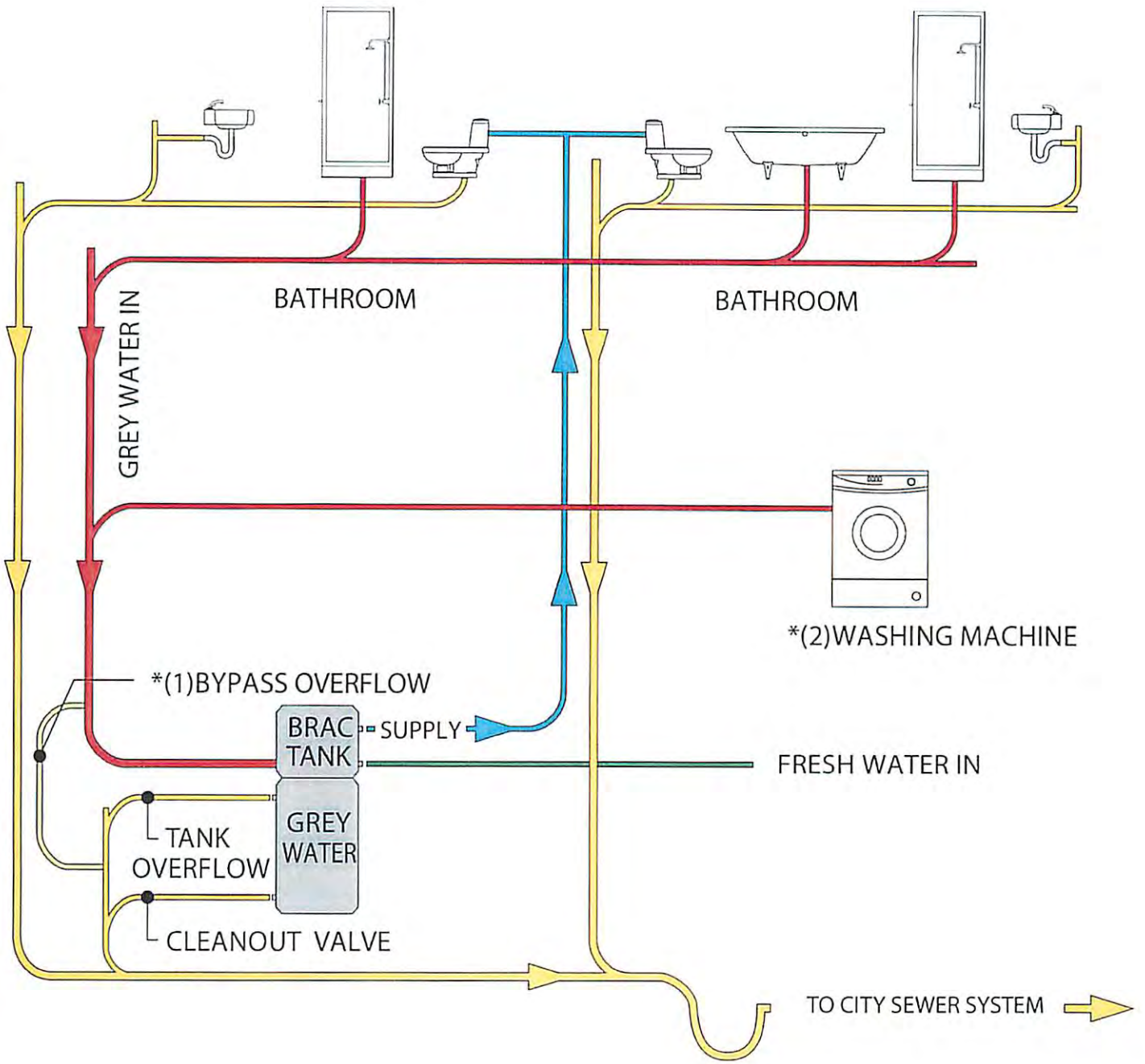
Model RGW	Discharge pressure in psi	Capacity in US gallons per Minute — Suction Lift in Feet						Max pump boost pressure (psi)
		0	5	10	15	20	25	
150/250	10	16.6	15.6	14.6	13.6	12.7	11.7	40
	20	12.0	11.0	10.0	9.0	7.8	6.6	
	30	7.1	5.8	4.5	3.2	2.0	0.6	
350/450	10	22.4	22.1	21.7	21.3	20.8	20.5	67
	20	20.7	20.2	19.8	19.2	18.8	18.2	
	30	18.3	17.8	17.1	16.2	15.3	14.2	
	40	14.7	13.8	12.9	12.1	11.1	10.2	
	50	10.5	9.3	8.1	6.9	5.6	4.3	

Estimated Yearly Consumption(*1)
2 person 41 Kw/h
4 person 82 Kw/h
6 person 123 Kw/h
Peak Startup Surge 2100 Watts
(*1) Based on 7 flushes per person (6 liter toilet).

Specification:

Model RGW	Power (HP)	Cycle (Hz)	Phase (Ø)	Voltage (V)	Amp's (A)	H max. (ft)	Q max. (GPM)
150/250	½	60	1	115 / 230	6.0/3.0	92	18.5
350/450	1	60	1	115 / 230	11/5.5	154	23.8

Brac Systems 4034 Poirier, Ville St-Laurent Montreal, Quebec, Canada, H4R 2J5
Tel.: 514-856-2722, **Fax.:** 514-856-2723
info@bracsystems.com - www.bracsystems.com



THE BRAC SYSTEMS PLUMBING NETWORK

*(1) All bypasses, piping and components external to the Brac System unit must be installed by a professional plumber and are not supplied by Brac Systems, or Brac Systems representatives or distributors, who are absolved of any responsibility either real or intended.

*(2) Inquire with your local plumbing authority for permited attached devices.

4CREEKS

Master Development Guidelines

PHASE ONE	MIXED USE MEDICAL/OFFICE/RETAIL SITE												
	Streets	Traffic Control Facilities	Law Facilities	Fire Facilities	General Facilities and Equipment	Storm Drainage Facilities	Wastewater Treatment	WW Collect Facilities	Water S/H Facilities	Water Dist. Facilities	Parks & Rec.	Open Space	TOTALS
Medical/Office - 91,700 sq. ft.	$464,919	$105,455	$51,352	$57,771	$59,605	$158,641	$49,518	$20,174	$57,771	$28,427	$0	$48,601	$1,102,234
Retail - 31,130 sq ft	$157,829	$35,800	$17,433	$19,612	$20,235	$53,855	$16,810	$6,849	$12,141	$9,650	$0	$16,499	$366,711
Live/Work Units - 1st Floor Office/Retail - 8,750 sq ft	$44,363	$10,063	$4,900	$5,513	$5,688	$15,138	$4,725	$1,925	$3,413	$2,713	$0	$4,638	$103,075
Live/Work Units - 2nd Floor Residential - 7 units	$4,704	$1,064	$2,058	$12,327	$7,805	$4,312	$15,820	$6,335	$7,595	$6,153	$7,175	$2,303	$77,651
	$671,815	$152,381	$75,743	$95,222	$93,332	$231,945	$86,873	$35,283	$80,919	$46,943	$7,175	$72,040	$1,649,671

PHASE TWO	SINGLE FAMILY RESIDENTIAL (DETACHED AND ATTACHED) SITES												
	Streets	Traffic Control Facilities	Law Facilities	Fire Facilities	General Facilities and Equipment	Storm Drainage Facilities	Wastewater Treatment	WW Collect Facilities	Water S/H Facilities	Water Dist. Facilities	Parks & Rec.	Open Space	TOTALS
64 Single Family Homes	$88,576	$20,032	$21,312	$56,640	$71,360	$89,792	$172,160	$68,928	$82,624	$66,944	$238,144	$68,480	$1,044,992
70 SFR Townhomes	$96,880	$21,910	$23,310	$61,950	$78,050	$98,210	$188,300	$75,390	$90,370	$73,220	$260,470	$74,900	$1,142,960
	$185,456	$41,942	$44,622	$118,590	$149,410	$188,002	$360,460	$144,318	$172,994	$140,164	$498,614	$143,380	$2,187,952

PHASE THREE	MIXED USE SENIOR INDEPENDENT LIVING AND RETAIL/OFFICE SPACE SITE												
	Streets	Traffic Control Facilities	Law Facilities	Fire Facilities	General Facilities and Equipment	Storm Drainage Facilities	Wastewater Treatment	WW Collect Facilities	Water S/H Facilities	Water Dist. Facilities	Parks & Rec.	Open Space	TOTALS
Second Floor Office - 15,200 sq ft	$77,064	$17,480	$8,512	$9,576	$9,880	$26,296	$8,208	$3,344	$5,928	$4,712	$0	$8,056	$179,056
80 SFR - Restricted Senior Independent Living	$53,760	$12,160	$23,520	$140,880	$89,200	$49,280	$180,800	$72,400	$86,800	$70,320	$82,000	$26,320	$887,440
Rec Building - 7,500 sq ft	$38,025	$8,625	$4,200	$4,725	$4,875	$12,975	$4,050	$1,650	$2,925	$2,325	$0	$3,975	$88,350
	$255,039	$57,815	$45,752	$165,891	$115,005	$117,961	$202,238	$81,134	$102,283	$82,627	$82,000	$47,361	**$1,355,106**

PHASE FOUR	MARKET RATE APARTMENT SITE												
	Streets	Traffic Control Facilities	Law Facilities	Fire Facilities	General Facilities and Equipment	Storm Drainage Facilities	Wastewater Treatment	WW Collect Facilities	Water S/H Facilities	Water Dist. Facilities	Parks & Rec.	Open Space	TOTALS
120 Garden Apartments	$80,640	$12,160	$23,520	$211,320	$133,800	$73,920	$271,200	$108,600	$130,200	$105,480	$123,000	$39,480	$1,313,320
Building 7,500 sq ft	$38,052	$8,625	$4,200	$4,725	$4,875	$12,975	$4,050	$1,650	$2,925	$2,325	$0	$3,975	$88,377
	$118,692	$20,785	$27,720	$216,045	$138,675	$86,895	$275,250	$110,250	$133,125	$107,805	$123,000	$43,455	**$1,401,697**

MEMORANDUM

Community Development Department
Engineering Division
1733 Ninth Street, Reedley, CA 93654
637-4200, Ext. 214

Date: January 29, 2015

To: Kevin Fabino, Director

From: John Robertson, P.E. City Engineer

Re: Conditions of Approval for Conditional Use Permit No. 2014-05 and Vesting Tentative Tract No. 6096, "Kings River Village", Four Phase Subdivision, APN's 370-024-20, 21, 24

Engineering Division has completed its review of Vesting Tentative Tract Map No. 6096 and Conditional Use Permit No. 2014-05. The following are the Engineering Division's conditions of approval.

General Conditions

1. All required public improvements shall be constructed consistent with the Reedley City Municipal Code and the Standard Plans and Specifications of the City of Reedley, dated January 2007(updated 1/11/08). Improvement plans for all proposed off-site public improvements shall be prepared by a State of California registered engineer for review and approval by the City Engineer.

2. The Subdivider/Developer shall file a preliminary soil analysis and report as required by Section 17953 of the Health and Safety Code. The City Engineer shall have the authority to require the Subdivider to take such corrective action or make such improvements as the City Engineer may determine necessary to prevent structural defects.

   The soil classification report must be submitted to the Building Official for approval of the building pads prior to recordation of the final map. Such report shall address soil bearing capacity, effects of moisture variation on soil bearing capacity, compressibility and expansiveness. No grading shall commence until a soil engineering report is submitted and approved by the City and a grading permit is obtained from the City of Reedley Building Official. All grades and property stakes (corners) shall be in place prior to obtaining building permits.

3. The Subdivider/Developer's engineer shall notify the City Engineer thirty (30) days prior to the submittal of the required final map and improvement plans. Thereafter a meeting with the City Engineer and developer's engineer may occur to facilitate the preparation of the Master Public Utility improvement plans and each subsequent phase of Vesting Tentative Tract No. 6096.

4. The Final Map for any phase must be approved by the City of Reedley prior to the expiration of the Vesting Tentative Tract Map No. 6096. The Final Map for the various phases of Vesting Tentative Tract No. 6096, Kings River Village, must be approved and recorded prior to the issuance of any building permits within the phase. All subdivision public and utility improvements within the limits of each phase must be completed prior to issuance of building permits unless otherwise outline in the development agreement between the City and Subdivider/Developer.

5. All building structures shall be located outside of existing or proposed rights-of-way or dedicated easements.

6. The Subdivider/Developer shall enter into a cross access agreement prepared by the City. As part of seeking approval of a Final Map a cross access agreement shall include, but not be limited to, pedestrian and vehicular ingress and egress, shared parking, drainage for storm water and storm water facilities, all utilities (including but not limited to gas, electricity, water, fire suppression systems, sanitary sewer, tele-communications, etc.), access to all buildings and areas for emergency services, landscaping, walls/fences, solid waste facilities, and any additional uses pursuant to amendments to the Special Permit approved by the City. Said instrument shall be recorded with the County of Fresno Recorder's Office.

7. The Subdivider/Developer shall pay all applicable capital facilities fees (CFD) at the time the developer obtains building permits. The assessment for these public services is currently estimated at $0.12 per gross building square footage for infill non-residential development, $886.00 per dwelling unit for single family residential, $659.00 per dwelling unit for multifamily residential and $447.00 per dwelling unit for affordable housing per City of Reedley, Resolution No. 2014-021.

8. All Development Impact Fees (DIF) shall be paid at the time of building permit issuance in accordance with Reedley City Council Resolution No. 2005-030, adopted April 12, 2005.

9. Subdivider/Developer's engineer shall establish his vertical control for this project to City (NAV88) Datum. Vertical control for this project shall be from City of Reedley Bench Mark No. BM 25O02, TM = 342.77 (NAV88) [TM =341.96, Bates – for reference only], 2" Brass Cap northeast corner, northerly return and the intersection of Tobu and Cherry Avenues. Subdivider/Developer's engineer shall deliver to the City of Reedley AutoCAD (r2012) file of the subdivision Final Maps and construction improvement plans drawn to City's Horizontal datum, NAD83(2007NSRS) Zone 4. All control points shall be approved by the City's contract City Surveyor, DJ Johnson Land Surveying (559) 275-4900.

10. Construction within off-site City streets, easements, alleys, and other City rights-of-way shall be subject to encroachment permit issued by the Community Development Department, Engineering Division.With the final submittal of construction improvement plans for this project, the Subdivider/Developer's engineer shall deliver the following to the City Engineer:

    Four (4) bond sets of the project civil improvement construction plans, and shall include a digital copy on CD of the complete project plans, to include civil improvement construction and grading & drainage plans which shall include public utilities improvement plans if applicable.

11. Consistent with the requirements of the federal Clean Water Act, Developer shall file a Notice of Intent to comply with the terms of the general discharge of storm water associated with construction activity (SWRCB Order No. 2009-0009-DWQ NPDES No. CAS000002) as a result of this Development's disturbance of more than one acre. Subdivider/Developer shall also have a qualified professional prepare a site-specific Storm Water Pollution Prevention Plan (SWPPP) for this project and submit to the City Engineer, along with the Notice of Intent, for review of compliance before any construction begins. A copy of the SWPPP shall be made available at the construction site at all times.

12. If applicable, the Subdivider/Developer shall also comply with the Regional Water Quality Control Board Central Valley Region Order No. 5-00-175 construction activity requirements for all water discharges into the City's storm drain collection system, resulting from, but not limited to, pressure testing, leakage testing and disinfecting.

13. Subdivider/Developer's engineer shall file a preliminary soil analysis and report as required by Section 17953 of the Health and Safety Code. The City Engineer shall have the authority to require the Subdivider/Developer to take such corrective action or make such improvements as the City Engineer may determine necessary to prevent structural defects.

    The soil classification report must be submitted to the Building Official for approval of the building pads prior to recordation of the final map. Such report shall address soil bearing capacity, effects of moisture variation on soil bearing capacity, compressibility and expansiveness. Said soils report shall also include the result of the percolation test as required for the storm drain vegetated bio-swale (filtration) basin sites. No grading shall commence until a soil engineering report is submitted and approved by the City and a grading permit is obtained from the City of Reedley Building Official. All grades and property stakes (corners) shall be in place prior to obtaining building permits.

14. A Phase I Environmental Site Assessment shall be prepared for the site which must include research pertaining to the use of agricultural chemicals on the properties proposed for development. Phase I report shall be submitted to the City Engineer prior to filing the final subdivision map. Depending on the findings of the environmental assessment, the City Engineer may impose additional conditions to alleviate environmental concerns.

15. The Subdivider/Developer's contractor proposing to construct in the public right-of-way shall apply for an encroachment permit in accordance with City policies.

16. The cost of City infrastructure and facilities to be constructed shall be based on prevailing wages per California requirements and shall be submitted to the City Engineer for calculation of fees predicated on the cost of all public improvements. A deposit of this development construction improvement plan check fee predicated on said engineer's cost estimate for public improvements must be submitted to the City Engineer with the first submittal of improvement plans.

    Improvement plan check fee shall be 2% of the first $20,000 plus 1.5% of amount over $20,000 of the approved engineer's cost estimate. The inspection fee for water, sewer, storm

drain and similar public improvement requirements shall be paid prior to recordation of final map for each phase within vesting tentative Tract No. 6096, Kings River Village. Inspection charge shall be 4 ½% of the first $10,000 plus 3% of the amount over $10,000 of the approved engineer's cost estimate.

Security in a form approved by the City of Reedley shall be posted for the construction of all public infrastructure facilities including off-site improvements as shown on the approved engineer's cost estimate. All cost estimates for proposed public improvements shall be estimated at prevailing wage work. A subdivision agreement shall also be required to establish requirements for completion of improvements, security, and other matters related to the subdivision. Such security shall be provided prior to approval by the City Council of said subdivision agreement and final subdivision map.

17. All City inspection fees for water, sewer, storm drain and similar requirements, including all applicable rebate reimbursements for improvements installed by other developers shall be paid to the City of Reedley prior to City Council approval of recordation of final map.

18. A demolition permit shall be obtained from the Building Official prior to the removal of any existing structures. All septic tanks, dry wells or seepage pits shall be pumped and filled. Inspection shall be made by the City Building Official prior to covering. Relative compaction of ninety percent (90%) is required for fill areas outside of existing or proposed City right-of-ways. All areas within existing and/or proposed City right-of-ways, relative compaction of ninety-five percent (95%) is required. Water supply wells shall be destroyed by a State Licensed C-57 Contractor in accordance with the requirements herein. A permit must be obtained from the Building Department before destroying any well. These above requirements shall be noted on the subdivision construction improvement plans.

19. City standard trash enclosure(s) shall be constructed on-site with the City Engineer's review and approval of the proposed location(s).

20. Subdivider/Developer shall contact City of Reedley Post Office for specifications and requirements for mail box cluster units proposed to be installed within the subdivision. All locations of proposed mail box cluster units shall be shown on the construction improvement plans for vesting tentative Tract No. 6096, Kings River Village for review and approval by the City Engineer.

21. Subdivider/Developer proposes to file multiple final maps, thus phasing the development of this subdivision, additional conditions may be imposed to provide a complete and workable system of City and public utilities as well as development of streets to provide traffic circulation and access for emergency and service equipment as various phases of the project are developed. The initial phasing proposal and each subsequent proposal thereafter shall be submitted for review and approval and attachment of conditions in addition to the conditions contained herein. At a minimum, phasing of the subdivision will require looping of water lines to tie back into existing or extended services to provide a complete water service loop with no dead-ends.

22. All City inspection fees for street improvements, water, sewer, storm drain and similar requirements, including if applicable any rebate reimbursements for improvements installed by other developers shall be paid to the City of Reedley prior to City Council approval of recordation of final map. Security in a form approved by the City of Reedley in accordance with Title 10, Chapter 8, of the Reedley Municipal Code shall be posted for the construction of all public infrastructure facilities including off-site improvements as shown on the approved engineer's cost estimate.

23. A development/subdivision agreement between Subdivider and City of Reedley shall be required to establish requirements for completion of improvements, security bonds, and other matters related to the project development.

24. Subdivider/property owner shall provide written consent to the City of Reedley for inclusion of these properties APN's 370-240-20, 21, 24 in the Landscaping and Lighting Maintenance District No. 1 to provide for maintenance of the planter strip landscaping between the back of curb and sidewalk and street lights along the south side of Dinuba Avenue and interior streets within proposed vesting tentative Tract No. 6069, Kings River Village. The District shall also include a future landscape median island in Dinuba Avenue. The assessment shall be a proportionate share of the City Engineer's estimated cost for the District.

25. All conditions of approval must be complied with prior to the Notice of Completion and/or the issuance of a "Certificate of Occupancy" by the Building Official.

Mapping

26. Public utility easements shall be provided to PG&E and other utility companies. All PUE's shall be shown and noted for dedication on the final maps for vesting tentative Tract No. 6096 at the locations and widths as required by the public utility companies.

27. All subdivision and block corners, lot corners and street centerlines shall be monumental as per Subdivision Map Act and City of Reedley, Standard Plan ST-9 and City Specifications, dated January 2007.

28. Each phase of vesting tentative Tract No. 6096 must be recorded prior to the issuance of a building permit on said parcels within each phase. Any revisions to the approved Phasing Plan submitted with the application must be approved by the City Engineer and Community Development Director.

29. An estimate deposit for Final Map checking for Phase 1 of Vesting Tentative Tract No. 6096 in the amount of $2,500.00 shall be required with the submittal of the Final Map to the City of Reedley. All applicable fees be applied in accordance with the Master Fee schedule, and shall be paid in full prior to the scheduling of the Final Map before the City Council for approval.

Streets

30. All paving, repaving, and patching shall be done to the satisfaction of the City Engineer. Any City roadway travel way surface disturbed by construction activities shall be restored to provide a safe travel-way. A fog or slurry seal shall be required to provide continuity for re-paved areas with original street cross-section.

31. Streets to be dedicated, as set forth herein, shall be designed and constructed in accordance with Section 11-5-2 of the Reedley Municipal Code and the Standard Plans and Specifications of the City of Reedley. Sidewalk widths shall be in conformance with the City standards Street geometric cross section for Dinuba Avenue within the limits of the project and shall comply with the standards City Standard Plan ST-2A, which shall include a minimum 5-foot wide meandering sidewalk per City Standard Plan ST-4A.1.

32. Subdivider shall dedicate to the City of Reedley an additional 13-foot width of street right-of-way along the south side of Dinuba Avenue for a total of 53 feet from the Section Line to the south right-of-way line of Dinuba Avenue with Phase 1 of Vesting Tentative Tract No. 6096. Said additional right-of-way dedication along Dinuba Avenue and for each subsequent Phase, interior street dedications shall be noted as a dedication to the City of Reedley and shown and noted on the accompanying final map.

33. All streets shall be fully improved with sidewalk, curb, gutter, valley gutter, and permanent asphalt concrete paving pursuant to City of Reedley Standards Plans and Specifications, dated January, 2007.

34. Concrete curbed landscaped median islands in Dinuba Avenue within vesting tentative Tract No. 6096, Kings River Village shall be designed to be constructed with a curb height of eight-inches (8") from top of pavement.

35. The design of the proposed roundabout at the intersection of Dinuba Avenue and Apple Avenue shall be submitted by the Subdivider/Developer's engineer to Reid Middleton, Inc., or other engineering firm approved by the City Engineer for a peer review of the roundabout geometrics, identifying design deficiencies and recommendations that would improve capacity and safety. A report from Reid Middleton, Inc. or other engineering firm approved by the City Engineer shall be submitted to the City Engineer for his review prior to completing the final design of the proposed roundabout.

36. A City standard temporary barricade per ST-8A shall be installed at the end of all dead-end streets and at those locations where street width is reduced from a full width to a partial width street.

37. All advisory and regulatory signs and street lights shall be constructed in accordance per the City of Reedley, Standard Plans and Specifications, and under the direction of the City Engineer.

All material excavated, graded or otherwise disturbed shall be sufficiently watered to prevent fugitive dust emissions. Watering shall occur at least twice daily with complete coverage, preferably in the morning and after work is done for the day, or as necessary. The Subdivider/Developer shall be responsible for dust control in the event of high winds or watering needs after normal working hours. Water trucks or sprinkler system shall be used during construction to keep all areas of vehicle movement damp enough to prevent dust from leaving the site. The frequency of watering shall be increased when wind speeds exceed 15 miles per hour if soils are not completely wet. If wind speeds increase to the point that dust

control measures cannot prevent dust from leaving the site, construction activities shall be suspended.

38. The proposed geometric cross-section for Dinuba Avenue is delineated on the City's standard plan ST-2B and specifications and is on the City's website and on file with the City of Reedley, Engineering Division.

39. A drainage water test shall be performed under the supervision of the Engineering Inspector on all curb and gutter lengths installed within the proposed project prior to the acceptance of public improvements by the City of Reedley.

40. The number and locations of proposed driveway approaches within this development, including entrance and exit, shall be constructed as shown on the approved site plan. All proposed concrete driveway approaches shall conform to the standard commercial type approach, City of Reedley Standard Plan ST-5B and shall be ADA compliant.

41. Construction within street rights-of-way shall be done with proper signing for construction and maintenance work zones in accordance with the California Manual on Uniform Traffic Control Devices (California MUTCD 2012) and Work Area Traffic Control Handbook requirements. All work shall be in conformance with OSHA and other safety hazard prevention requirements.

42. A signing and striping plan for the subdivision including proposed off-site improvements shall be prepared by the Subdivider/Developer's engineer for this development. Proposed striping plan shall include required transitions at each end of the project site.

43. Subdivider/Developer shall install vertical control "bronze" two-inch (2") diameter leveling markers at top of curbs within the limits of vesting tentative Tract No. 6069, Kings River Village at the SE corner of Orange and Dinuba Avenue, at the SE corner of Peach and Dinuba Avenue, at the NE corner of Apricot Avenue and Apple Avenue, at the NW corner of Almond and Tobu Avenue, at the NE corner of Orange and Shoemake Avenue and at the NW corner of Peach and Shoemake Avenue. Approximate locations of vertical control markers shall be per City Engineer and shall be shown on the construction improvement plans. Said markers shall be per Berntsen's CD2L Leveling Marker Series, Item No. CD2BL or approved equal and stamped "City of Reedley BM". Subdivider's engineer shall tie and close all proposed vertical controls installed by this development to the City's Bench Marks system and deliver the data elevations to the City of Reedley, Engineering Division prior to issuance of a Notice of Completion (NOC) on the public improvements.

44. The Subdivider/Developer shall include in a covenant, which shall be executed and recorded in the Office of the Fresno County Recorder, that stipulates that the City of Reedley's street parkway strip in front of the single family dwelling units, which extends four and a half feet (4'-6") behind the curb, that the owner of record shall maintain street trees with an irrigation system and water. Said covenant shall be recorded prior to or concurrently with the recordation of a Final Maps for vesting tentative Tract No. 6096, Kings River Village.

Street trees in the parkway strips shall be planted in accordance City of Reedley Landscaping Standard Plans. Boring a 24-inch diameter hole, 8-foot in depth and backfilled with sandy

blended material to within 24 inches of finished grade may be required based on soil conditions within all proposed tree planting areas.

The street trees' minimum height shall be six feet (6') in 15-gallon containers as per City of Reedley Standard Plans and Section 21 of the Standard Specifications. The Subdivider/Developer's landscape contractor shall contact the City's Public Works Department for a list of street trees to be planted within the parkway strips and side yards within vesting tentative Tract 6069, Kings River Village. All proposed street trees within the City's rights-of-way shall be approved prior to planting by the City Engineer and Public Works Director.

45. The landscaping plans shall show the location, type, size and botanical name of plants/trees. Said landscaping plans shall be prepared by a licensed landscape architect or other qualified person approved by the City of Reedley. Landscape and irrigation plans designed to City of Reedley Specifications and Standard Plans shall be delivered to the City Engineer with the construction improvement plans within each Phase of vesting tentative Tract No. 6069, Kings River Village for review and approval by the City Engineer and the Public Works Director. The future maintenance of said trees shall be included in the City of Reedley's Landscaping & Lighting Maintenance District No. 1 to comprise of Phases 1, 2, 3, and 4 of vesting tentative Tract No. 6069, Kings River Village as a benefiting area.

46. Any and all work performed in the City of Reedley Rights of Way shall be warranted for a period of 12 months from the date of installation.

General Utilities

47. To enhance safety and aesthetics of the project, public utilities, including any existing overhead utility lines, shall be installed underground in accordance with Section11-5-11(G) of the Reedley Municipal Code.

48. All Pacific Gas & Electric (PG&E) transformers shall be installed in accordance with the Reedley Municipal Code. Also, the Subdivider/Developer shall coordinate with PG&E to ensure that all utility boxes and other facilities are installed in accordance with City policies.

49. Public utility plans and common trench utility plans for gas, electric, telephone and cable TV shall be prepared by the Subdivider/Developer's public utility engineer and submitted with the subdivision improvement plans for review and comment by the City Engineer. All public utilities shall be installed at back of sidewalk.

50. Subdivider/Developer shall underground all existing overhead utility lines along the south side of Dinuba Avenue within the limits of vesting tentative Tract No. 6096, Kings River Village. Any additional necessary public utility easements shall be obtained by the Subdivider/Developer.

51. Public utility easements shall be provided to PG&E and other utility companies. All PUE's shall be shown and noted for dedication on the final maps for tentative Tract No. 6069 at the locations and widths as required by the public utility companies

52. The Subdivider/Developer shall submit to the City Engineer, for his review and approval, a detailed street lighting plan prepared by a qualified electrical engineer. The plan shall show the street light locations, wattage, and mast arm length as a minimum. Street lights within the limits of project site shall be LED type luminaires installed per City of Reedley Standard Plans ST-24A.1, ST-24B, ST-24C, ST-24D and in accordance with the recommendations of the utility companies and as approved by the Public Works Director to qualify for PG&E LS-2B rate schedule. All street lights shall be served by underground service. All street lights within the right of way shall be City owned and maintained. LED luminaire specifications are on file with the Public Works Director and City Engineer.

53. Abandonment of existing water and sewer services shall be capped at the mains in accordance with City of Reedley standards and policies. All proposed service abandonments are to be verified and completed in the presence of the Public Works Department, pursuant to City Policies.

54. The Subdivider/Developer shall remove any and all underground storage tank(s) existing on the property in accordance with the requirements of the County of Fresno Health Department and other applicable agencies. The Public Works Department and Building Official must verify either the nonexistence of such tanks or the appropriate abandonment and/or removal and provided with the copies of the Health Department certification prior to the issuance of building permits.

Water

55. All connections to the existing City of Reedley water system must be made in the presence of a City employee authorized by the Public Works Department to inspect water connections.

All connections must be cleaned and disinfected to the satisfaction of the City of Reedley. In the event a City employee is not present to witness the connection, all connection operations must be terminated.

In the event a connection to the existing water system proceeds without a City employee present, the contractor or developer will be required to show proof that the proper cleaning and disinfection procedures were taken to the satisfaction of the City Engineer. Remedial action such as flushing, cleaning of lines by polyurethane pigs, or other actions may be required by the City Engineer.

56. Water distribution facilities shall be in accordance with the Standard Plans and Specifications of the City of Reedley and the City's Master Water Plan as required by the City Engineer consistent with the purpose and intent of Reedley City Code. The standard location for water mains in streets is sixteen feet (16') from the east right-of-way line and sixteen feet (16') from the south right-of-way line of the street. Water mains internal to the subdivision shall be eight inches (8") minimum size and shall be looped for circulation except for the extensions into cul-de-sacs, unless otherwise noted. Water mains terminating at points of future extension shall be provided with blow-offs.

57. On-site water system shall be sized and designed so as to meet development demands as approved by the City of Reedley Fire Chief and City Engineer.

58. In accordance with City ordinances and resolutions, the Subdivider/Developer shall install water service assemblies with water meter, box and reduced pressure backflow preventer within the City right-of-way per City Standard Plan W-3A or 3B and W-12 and Specifications of the City of Reedley and any amendments thereto as directed by the City Engineer. The size and location of proposed water service(s) shall be noted on the construction improvement plans.

59. There is an existing ten-inch (10") water main in Dinuba Avenue which can be connected to. The Master Water Utility Plan shall provide for a looped system, with adequate valuing to provide isolation which protects the health and safety of the public water system. Trench patch(s) in Dinuba Avenue shall be infrared heater-remixed; the existing asphalt along with the new asphalt concrete in the trench patch is to be scarified and mixed to a homogenous asphalt concrete mixture, the area is then to be compacted to provide a seamless joint along the trench edges.

60. Subdivider/Developer shall pay a proportionate share of the cost for the installation of a ten-inch (10") water main facilities installed in Dinuba Avenue by other developers. The Developer's proportionate share is $17,416.66, which shall be paid in full at time of final map approval.

61. Backflow preventers shall be tested and certified prior to the utilization of water. The owner shall have the proposed backflow preventer tested (repaired if required) by a certified backflow plumber on a yearly basis at their expense and the results submitted to City of Reedley Public Works Department.

62. Fire hydrants within the subdivisions phase shall be charged prior to issuance of building permits.

63. Fire hydrant(s) used to obtain construction water shall be equipped with a hydrant meter and must be obtained from the City of Reedley and installed prior to any usage of water. Water trucks or water wagons must have appropriate air gap or Reduced Pressure Backflow prevention devices.

64. A water sampling station per City of Reedley Standard Plan W-10 shall be located within the limits of vesting tentative Tract No. 6096, Kings River Village, at a location approved by the City Engineer.

Sewer

65. Sanitary sewer facilities and services shall be installed in accordance with the Standard Specifications of the City of Reedley and Standard Plan S-1. The size and location of proposed sewer service shall be noted on the construction improvement plans. The internal sewer mains to be installed within the boundaries of vesting tentative Tract No. 6096, Kings River Village shall be a minimum eight-inch (8") diameter sewer except that, in cul-de-sacs, they may be six-inches (6") in diameter if grade permits. The standard location for sewer mains within streets is on the street centerline as per City Standard Plan ST-25. Prior to acceptance of all new sewer main improvements installed with this subdivision, all mains shall be video-taped and reviewed by the City Engineer.

The standard location for sewer service lateral shall be located ten feet (10') from water service as per City of Reedley Standard Plan S-1. All sewer service lateral locations shall be shown and stationed on subdivision construction improvement plans. Said services shall not be located within driveway approaches.

66. This development shall connect to the existing fifteen-inch (15") sewer main in Dinuba Avenue. Trench patch(s) in Dinuba Avenue shall be infrared heater-remixed; the existing asphalt along with the new asphalt concrete in the trench patch is to be scarified and mixed to a homogenous asphalt concrete mixture, the area is then to be compacted to provide a seamless joint along the trench edges.

67. Subdivider/Developer shall pay a proportionate share of the cost for the installation of a fifteen-inch (15") sewer system facilities installed in Dinuba Avenue by other developers. The Developer's proportionate share is $17,896.68, which shall be paid in full at time of final map approval.

Grading & Drainage

68. The Subdivider/Developer's engineer shall provide a certified statement stating that all grades shown on the approved construction improvement plans have been constructed to grade. Any discrepancies in grade shall be noted and corrections made on "AS BUILT" plans for review and approval by the City Engineer. In addition, the Developer's engineer shall deliver a digital file (in AutoCAD R2012 format) of the projects civil plans to the City Engineer prior to issuance of a Notice of Completion and/or Certificate of Occupancy to the Developer.

69. The Developer shall incorporate dust and erosion control measures into the construction phase of the project according to the San Joaquin Valley Unified Air Pollution Control District requirements. The City Engineer shall review and approve said measures prior to the issuance of a grading and drainage permit by the City's Building Official. Failure of the Subdivider/Developer to appropriately incorporate adequate erosion and dust control measures shall constitute a material breach of these Conditions of Approval including the Subdivision Agreement for this project and may result in administrative or legal actions taken by local, state or federal government agencies.

    All material excavated, graded or otherwise disturbed shall be sufficiently watered to prevent fugitive dust emissions. Watering shall occur at least twice daily with complete coverage, preferably in the morning and after work is done for the day, or as necessary. The Subdivider/Developer shall be responsible for dust control in the event of high winds or watering needs after normal working hours. Water trucks or sprinkler system shall be used during construction to keep all areas of vehicle movement damp enough to prevent dust from leaving the site. The frequency of watering shall be increased when wind speeds exceed 15 miles per hour if soils are not completely wet. If wind speeds increase to the point that dust control measures cannot prevent dust from leaving the site, construction activities shall be suspended

70. Subdivider/Developer shall submit to the City Engineer for his review and approval a grading and drainage plan prepared by a registered civil engineer employed by the

Subdivider/Developer for site drainage grades in accordance with applicable standards. Drainage from this development shall be in accordance with the City's Master Storm Drainage Plan for this area. The storm drainage collection system shall be designed, sized and constructed on the basis of the Rational Method or similar method approved by the City Engineer. The City requires that all developments be responsible for the installation of a minimum eighteen-inch (18") inside diameter storm drain trunk pipeline size to service their proposed facilities.

71. All on-site surface drainage shall be designed to be collected on-site. No on-site surface drainage shall be allowed to drain over sidewalk, driveways or onto an adjacent property. Project on-site and off-site drainage from this development shall be directed towards a proposed drainage basin expansion site located at the northwesterly corner of the Central Valley Transportation Center (CVTC) project site (Lot 62 of Producer's Colony).

    Existing storm drainage retention basins shall be expanded onto the CVTC site to accommodate all of the drainage for this proposed development and be provided with an outfall structure designed to drain said storm drainage. The proposed ponding basin expansion shall be designed as a retention basin in conformance with the City of Reedley's Storm Drain Master Plan and shall be approved by the City Engineer. The design of the storm drainage retention basin shall be based upon the total volume of runoff that the retention basin must be capable of storing. Pond sizing, hydraulics, oil and grease screening, and trash removal shall be designed by a registered civil engineer in accordance with the project site runoff.

72. All lots within this subdivision shall be drained to the street along which the lot fronts.

73. The parking area, aisles, and access drives shall be paved so as to provide a durable, dustless surface and shall be so graded and drained as to dispose of surface water, with the design and specifications of such work subject to the approval of the City Engineer consistent with the purpose and intent of the City Municipal Code.

CITY OF REEDLEY - COMMUNITY DEVELOPMENT DEPARTMENT

REQUEST FOR COMMENTS, CONDITIONS, ENVIRONMENTAL ASSESSMENT, AND ENTITLEMENT APPLICATION REVIEW OF TENTATIVE SUBDIVISION MAP APPLICATION NO. 2014-01 CONDITIONAL USE PERMIT APPLICATION NO. 2014-05 (KINGS RIVER VILLAGE)

Russ Robertson
Public Works Director
City of Reedley
1733 Ninth Street
Reedley, CA 93654

Return comments/conditions in memo or letter format to:
Ellen Moore, Assistant Planner
Email: ellen.moore@reedley.ca.gov
Telephone: (559) 637-4200 ext. 222
Community Development Department
1733 Ninth Street, Reedley, CA 93654

PROJECT DESCRIPTION AND LOCATION:

Tentative Subdivision Map Application No. 2014-01 and **Conditional Use Permit Application No. 2014-05** pertains to the authorization of a mixed use development located on the southeastern side of Reedley. The project site is approximately 38.64 acres with street frontage on East Dinuba Avenue. The project area is bordered by East Dinuba Avenue to the north, the Reedley Sports Park to the east, vacant land and industrial uses to the south, and a self-storage facility and industrial uses to the west.

The following uses are proposed: 106,900 square feet of medical/office, 48,130 square feet of retail, 7 live/work units totaling 8,750 square feet of ground floor office/retail and 8,750 square feet of second floor residential; 64 single family two-story detached courtyard cluster homes; 70 single family two-story attached town homes; 80 single story attached senior restricted living units with a single story recreational/office building of approximately 7,500 square feet and pool; and 120 two-story garden apartments with a single story recreational/office building of approximately 7,500 square feet and a pool. Also proposed is a nearly 3-acre Village Green Park and transit center that is proposed to be located in the center of the project.

This mixed use development project is consistent with Reedley Municipal Code Section 10-13-9, Mixed Use. The project is also consistent with the 2030 General Plan Light Industrial Planned Land Use Designation and the Reedley Municipal Code UR Urban Reserve and ML Light Industrial Zone Districts.

APN: 370-024-20, 370-024-21 & 370-024-24
ZONING: UR Urban Reserve and ML Light Industrial **ADDRESS: Dinuba Avenue, Reedley, CA**

DATE ROUTED: January 13, 2015 **COMMENT DEADLINE: January 27, 2015**

If no response is received by the comment deadline, it will be assumed you have no comments to submit.

WILL THIS PROJECT AFFECT YOUR AGENCY/JURISDICTION? (If yes, specify.)

Development shall incorporate into the master utility plans for solid waste bin locations/area for the collection of trash. The Public Works Director will review and approve bin locations.

Development shall incorporate and show all water meter locations as part of the master utility plan for water services. Public Works Director shall approve locations and plans.

SUGGESTION(S) TO REDUCE IMPACTS/ADDRESS CONCERNS:

REQUIRED CONDITIONS OF APPROVAL:

The City may require a sewer interceptor (to catch grease) before the sewer enters the sewer main on Dinuba Ave.

IS ANY ADDITIONAL INFORMATION NEEDED FOR YOU TO COMPLETE YOUR REVIEW? (Be specific):

REVIEWED BY:	Russ Robertson	Public Works Director	559-637-4200 x213	1/23/2015
	Name and Title		Telephone Number	Date

CITY OF REEDLEY

Fire Administration
Jerry Isaak, Chief
1060 D Street, Reedley CA 93654
559-637-4230

January 20, 2015

To: Ellen Moore, Assistant Planner
Community Development Department

Re: Tentative Parcel Map Application No. 2014-01 and Conditional Use Permit Application No. 2014-05

The Fire Department has the following comments regarding the above referenced application.

1. Fire hydrant locations to be determined by the Fire Chief
2. Addressing scheme to be submitted for review by the Fire Chief prior to assignment

Jerry Isaak, Fire Chief

Kings Canyon Unified School District
675 W Manning Ave ~ Reedley CA 93654
1502 "I" Street ~ Reedley CA 9365 (mailing)

(559) 305-7024 Fax (559) 637-1186

January 26, 2015

Ellen Moore, Assistant Planner
City of Reedley
Community Development Department
1733 Ninth Street
Reedley, CA 93654

Subject: Kings River Village
Tentative Subdivision Map No. 2014-01, Conditional Use Permit No. 2014-05
South side of Dinuba Avenue, east of Buttonwillow Avenue, Reedley, CA

Dear Ms. Moore:

This letter is in response to your request for comment on the proposed Kings River Village project, which would include the following on the 38.64-acre project site: 106,900 square feet of medical/office; 48,130 square feet of retail; 7 live/work units totaling 8,750 square feet of ground floor office/retail and 8,750 square feet of second floor residential; 64 single family two-story detached courtyard cluster homes; 70 single family two-story attached town homes; 80 single story attached senior restricted living units with a single story recreational/office building of approximately 7,500 square feet and pool; and 120 two-story garden apartments with a single story recreational/office building of approximately 7,500 square feet and a pool.

The proposed project will impact the District by generating students that will need to be housed in District schools. Based on the District's student generation rates, the 261 residential units proposed (senior units not included) would generate 177 students in grades K-8 and 50 students in grades 9-12.

Student living in the project are currently within the attendance area of Silas Bartsch K-8 School (2225 E. North Avenue) and Reedley High School (740 W North Avenue). Silas Bartsch has a 2014-15 school year enrollment of 650 students and an operational capacity of 600. Reedley High School has a 2014-15 school year enrollment of 1,817 and an operational capacity of 1,500.

The District has acquired sites for a new high school and a new elementary school in the south Reedley area. The District is planning to start construction of the facilities by the 2020-21 school year.

New commercial development, as proposed in the project, would affect the District by generating employees. The children of employees living in the District will need to be housed in District schools.

The District currently levies a school facilities fee of $3.36 per square foot for residential development and $0.54 per square foot for commercial/industrial development. New development on the subject property will be subject to the fees in place at the time school facilities fees are paid.

Thank you for the opportunity to comment. Please contact me if you have any questions on this letter.

Sincerely,

John Quinto, Ed.D., MPA
Assistant Superintendent/CBO

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

January 21, 2015

Ellen Moore
City of Reedley
Community Development Department
1733 Ninth Street
Reedley, CA 93654

Agency Project: Tentative Subdivision Map Application No. 2014-01 and Conditional Use Permit Application No. 2014-05 for Kings River Community Partners, LLC

District CEQA Reference No: 20150029

Dear Ms. Moore:

The San Joaquin Valley Unified Air Pollution Control District (District) has reviewed the project referenced above consisting of a mixed use development, the Kings River Village. The proposed project consists of 341 dwelling units (single family residential units and multifamily residential units), 106,900 square feet of medical and office space, 48,130 square feet of retail space including a grocery store, a park, and a transit center. The project site consists of approximately 39 acres bordered by East Dinuba Avenue to the north, the Reedley Sports Park to the east, vacant land and industrial uses to the south and a self-storage facility and industrial uses to the west. (APNs: 370-024-20, 370-024-21, and 370-024-24) The proposed mixed use development project is consistent with the Reedley 2030 General Plan Light Industrial Planned Land Use Designation and the Reedley Municipal Code Urban Reserve and Light Industrial Zone Districts. The District offers the following comments:

1. Based on information provided to the District, project specific emissions of criteria pollutants are not expected to exceed District significance thresholds of 10 tons/year NOX, 10 ton/year ROG, and 15 tons/year PM10. Therefore, the District concludes that project specific criteria pollutant emissions would have no significant adverse impact on air quality
2. Based on information provided to the District, the proposed project would equal or exceed 50 residential dwelling units; 2,000 square feet of commercial space; 20,000

Seyed Sadredin
Executive Director/Air Pollution Control Officer

Northern Region
4800 Enterprise Way
Modesto, CA 95356-8718
Tel: (209) 557-6400 FAX: (209) 557-6475

Central Region (Main Office)
1990 E. Gettysburg Avenue
Fresno, CA 93726-0244
Tel: (559) 230-6000 FAX: (559) 230-6061

Southern Region
34946 Flyover Court
Bakersfield, CA 93308-9725
Tel: 661-392-5500 FAX: 661-392-5585

www.valleyair.org www.healthyairliving.com

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square feet of medical office space, and 39,000 square feet of general office space. Therefore, the District concurs that the proposed project is subject to District Rule 9510 (Indirect Source Review). District Rule 9510 is intended to reduce a project's impact on air quality through project design elements or mitigate its impact by payment of applicable off-site mitigation fees.

Pursuant to District Rule 9510 section 5.0, an applicant subject to the rule shall submit an Air Impact Assessment (AIA) application to the District no later than applying for final discretionary approval. Therefore, if this approval constitutes the final discretionary approval, the project proponent may be in violation of District Rule 9510 requirements. In addition, please note that starting construction before receiving an approved AIA application and paying the required Off-site Mitigation Fees, if any, is a violation of District regulations and is subject to enforcement action.

The District recommends that demonstration of compliance with District Rule 9510, including payment of all applicable fees before issuance of the first grading/building permit, whichever comes first, be made a condition of project approval.

More information regarding District Rule 9510 can be obtained by:

- E-mailing inquiries to: ISR@valleyair.org;
- Visiting the District's website at: http://www.valleyair.org/ISR/ISRHome.htm; or,
- For project specific assistance, the District recommends the applicant contact the District's Indirect Source Review (ISR) staff at (559) 230-6000.

3. The District recommends an assessment of potential health impacts to sensitive receptors be performed due to potential onsite truck travel, idling, transportation refrigeration units (TRUs), and onsite bus travel and idling.

4. Development projects may also be subject to the following District rules: Regulation VIII (Fugitive PM10 Prohibitions), Rule 4102 (Nuisance), Rule 4601 (Architectural Coatings), and Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations). In the event an existing building will be renovated, partially demolished or removed, the project may be subject to District Rule 4002 (National Emission Standards for Hazardous Air Pollutants). The above list of rules is neither exhaustive nor exclusive. To identify other District rules or regulations that apply to this project or to obtain information about District permit requirements, the applicant is strongly encouraged to contact the District's Small Business Assistance Office at (559) 230-5888.

   More information regarding compliance with District rules and regulation can be obtained by:

   - Visiting the District's website at http://www.valleyair.org/rules/1ruleslist.htm for a complete listing of all current District rules and regulation
   - Visiting the District's website at http://www.valleyair.org/busind/comply/PM10/compliance_PM10.htm for information on controlling fugitive dust emissions

- Information on asbestos requirements for demolitions: http://www.valleyair.org/busind/comply/asbestosbultn.htm;
- Copy of the asbestos compliance bulletin: http://www.valleyair.org/busind/comply/compliance_assistance_bulletins.htm

5. The District recommends that a copy of the District's comments be provided to the project proponent.

If you have any questions or require further information, please contact Georgia Stewart by phone at (559) 230-5937.

Sincerely,

Arnaud Marjollet
Director of Permit Services

Georgia Stewart

For: Chay Thao
Program Manager

AM: gs

CITY OF REEDLEY - COMMUNITY DEVELOPMENT DEPARTMENT

REQUEST FOR COMMENTS, CONDITIONS, ENVIRONMENTAL ASSESSMENT, AND ENTITLEMENT APPLICATION REVIEW OF TENTATIVE SUBDIVISION MAP APPLICATION NO. 2014-01 CONDITIONAL USE PERMIT APPLICATION NO. 2014-05 (KINGS RIVER VILLAGE)

Chris Kapheim
General Manager
Alta Irrigation District
289 N. "L" Street
Dinuba, CA 93618

Return comments/conditions in memo or letter format to:
Ellen Moore, Assistant Planner
Email: ellen.moore@reedley.ca.gov
Telephone: (559) 637-4200 ext. 222
Community Development Department
1733 Ninth Street, Reedley, CA 93654

PROJECT DESCRIPTION AND LOCATION:

Tentative Subdivision Map Application No. 2014-01 and **Conditional Use Permit Application No. 2014-05** pertains to the authorization of a mixed use development located on the southeastern side of Reedley. The project site is approximately 38.64 acres with street frontage on East Dinuba Avenue. The project area is bordered by East Dinuba Avenue to the north, the Reedley Sports Park to the east, vacant land and industrial uses to the south, and a self-storage facility and industrial uses to the west.

The following uses are proposed: 106,900 square feet of medical/office, 48,130 square feet of retail, 7 live/work units totaling 8,750 square feet of ground floor office/retail and 8,750 square feet of second floor residential; 64 single family two-story detached courtyard cluster homes; 70 single family two-story attached town homes; 80 single story attached senior restricted living units with a single story recreational/office building of approximately 7,500 square feet and pool; and 120 two-story garden apartments with a single story recreational/office building of approximately 7,500 square feet and a pool. Also proposed is a nearly 3-acre Village Green Park and transit center that is proposed to be located in the center of the project.

This mixed use development project is consistent with Reedley Municipal Code Section 10-13-9, Mixed Use. The project is also consistent with the 2030 General Plan Light Industrial Planned Land Use Designation and the Reedley Municipal Code UR Urban Reserve and ML Light Industrial Zone Districts.

APN: 370-024-20, 370-024-21 & 370-024-24
ZONING: UR Urban Reserve and ML Light Industrial **ADDRESS: Dinuba Avenue, Reedley, CA**

DATE ROUTED: January 13, 2015 **COMMENT DEADLINE: January 27, 2015**

If no response is received by the comment deadline, it will be assumed you have no comments to submit.

WILL THIS PROJECT AFFECT YOUR AGENCY/JURISDICTION? (If yes, specify.)

The goal of having storm water entering the Traver Canal would need to be mitigated.

SUGGESTION(S) TO REDUCE IMPACTS/ADDRESS CONCERNS:

There would need to a Storm Water Agreement between the City of Reedley & Alta ID.

REQUIRED CONDITIONS OF APPROVAL:

IS ANY ADDITIONAL INFORMATION NEEDED FOR YOU TO COMPLETE YOUR REVIEW? (Be specific):

REVIEWED BY: Chris M. Topham (559-358-8278) 1-14-2015

Name and Title | Telephone Number | Date

Commons. To the northeast is a subdivision consisting of single-family homes. Thus, the Project will not divide an existing community or reduce the availability of existing housing.

Specific, Anticipated Project Design Features And Attributes

Hydrology and Water

The Village will conserve potable water and achieve minimal water consumption and maximize water conservation through a variety of mechanisms. In partnership with the City of Reedley and the Kings Canyon Unified School District, the project will include construction of an unlined retention basin on the School District property immediately south of the site. The retention basin will provide approximately 14 acre-feet of water storage. The retention basin will be constructed along with Phase One, as its spoils will be used for surcharge on-site and to make the facility immediately available for project use. The anticipated 23,000 cubic yards of soil removed during excavation of the retention basin will be used for necessary fill during construction of the Village. The retention basin will be fed by rainwater, in addition to stormwater runoff from the Village that will pass through bioswales prior to entering piping to the basin. It is the City's goal to tie both ponding basins to the Traver Ditch, whereby Alta Irrigation District can convey water to maximize ground water recharge. The bioswales will be located in landscaped strips along public streets will filter the water as it transitions to underground pipes that will transport the stormwater from the Village to the retention basin. These features mitigate sediments from entering the retention basin. The Village Green Park eliminates the need for individual yards to plant lawns and thereby reduces the project's water demand to below what would be required by traditional mixed-use developments of comparable size and composition and is consistent with projections in Reedley's General Plan 2030 and the analysis in the associated FEIR.

Water conservation will also be achieved by requiring builders to meet all low-flow fixture requirements under the California Building Code 2013 (CBC), and by requiring builders to exceed CBC minimums through the use of computerized weather-sensitive irrigation, water efficient landscaping practices through the reduction of turf grass by at least 40% and increasing the amount of plants that are native or adapted to the region by at least 25%, water-efficient washing machines and dishwashers, and plumb-ready laterals to permit individual homeowners to install home grey water recycling systems for irrigation. Applicant also plans to encourage builders to plumb rainwater into grey water recycling systems consisting of appropriately small underground tanks associated with the single-family attached and detached residential living units. These tanks will be managed by the homeowner's association. Ideally, these systems would pay for themselves over time by allowing the capture of rainwater during the wet months to be stored for use to water plants associated with the same units during the dry season, effectively reducing homeowner's water costs while conserving potable supply.

The combined result of the water-saving features Applicant plans to build is that use of City potable water for the Village's landscape strip irrigation will be minimal and the Village's consumptive use will be less than that anticipated by Reedley's General Plan 2030 and analyzed in the associated FEIR. A Water Service Assessment is unnecessary because the Village is not a "project" under California Water Code § 10912.

Traffic and Parking

In addition to the transit center discussed above, additional Village features will minimize vehicle miles traveled and therefore long-term impacts to traffic and air quality. Specifically, street trees

FRESNO COUNTY RURAL TRANSIT AGENCY
2035 Tulare Street, Suite 201, Fresno, CA 93721
Phone: 559-233-6789 Fax: 559-233-9645
Webpage: www. ruraltransit.org

January 27, 2015

Ms. Ellen Moore
Assistant Planner
Community Development Department
City of Reedley
1733 Ninth Street
Reedley, CA 93654

Re: Kings River Village

Dear Ms. Moore,

The Fresno County Rural transit Agency (FCRTA) has completed its review of the proposed project with the following specific comments related to the on-site Transit Center.

The FCRTA has committed to providing a bus shelter and installation at this center until such time as the developer constructs a final structure in phase two of this project. This would allow the developer to secure the necessary funding for construction of the transit center and if the City or FCRTA were able to assist in securing additional funding for this Transit Center that would enhance any additional funding opportunities. In addition, the Fresno Council of Governments (FCOG) is available to assist with grant funding opportunities, including those offered through the Cap and Trade programs through the state.

The right-of-way for this Transit Center would need to be determined with the City of Reedley prior to the proposed conditions of approval since this transit center would be available for the general public as well as residents and patrons of the Kings River Village.

Any credits available to the developer based on this Transit Center concept could be applied toward the construction and or enhancements to the transit center and its potential amenities such as electric vehicle charging stations and or compressed natural gas fueling stations just to mention a few possibilities, and could be further utilized to leverage additional grant funds. The project description under Transit Center page three (3) should clarify the applicant's role in the design, construction and funding so there is no misunderstanding in the future with regards to the various roles of the City, FCRTA and others such as FCOG in assisting in obtaining additional funding; however not an expressed responsibility for securing the funding as it is the developers sole responsibility.

The benefits of this project with a Transit Center located in the center of this development allows for the FCRTA Inter-City route from Orange Cove into Fresno by way of Reedley, Parlier and Sanger to stop at this site twice daily Monday through Friday. The demand response bus routes in the City of Reedley would also be available to serve this location since it is designed as a multi-use development with residential, medical and retail commercial uses. Also the proposed Fresno to Sequoia-Kings Canyon (SEKI) National Parks Shuttle Service is scheduled to begin service later this year with connections to Reedley.

We look forward to this collaborative effort with the City and the developer on this project. If I can be of further assistance, please contact me at 233-6789 ext. 244.

Sincerely,

M. Stites

Moses Stites
FCRTA General Manager

Cc: Rob Terry, Principal Regional Planner, FCOG

Consolidated Mosquito Abatement District

2125 FLORAL AVENUE
MAIL: P.O. BOX 278
SELMA, CALIFORNIA 93662
(559) 896-1082
(559) 888-2619
FAX (559) 896-6425

January 14, 2015

Ellen Moore, Assistant Planner
Community Development Department
City of Reedley
1733 Ninth Street
Reedley CA 93654

Subject: Tentative Subdivision Map Application No. 2014-01 and Conditional Use Permit Application No. 2014-05 (Kings River Village)

The Consolidated Mosquito Abatement District (District) is a local government agency charged by the California Health and Safety Code to protect the public, in our jurisdiction, from nuisance and disease caused by mosquitoes. The above referenced project is in the District's jurisdiction, and we are concerned with the potential for mosquito development in the stormwater retention/ground water recharge basin, bioswales, and the possibility of small underground tanks plumbed to collect and store rainwater. Mosquitoes produced in these types of habitats have the potential to transmit, or vector several viruses, e.g., West Nile, Chikungunya, and Dengue. These vector mosquitoes – vectors are organisms that transmit diseases to humans and animals - are also severe biting pests and have the potential to significantly impact public health and comfort. Clearly, the potential for mosquito production associated with this project must be mitigated.

Prior to May/June 2013, *Aedes aegypti*, the potential vector of both Chikungunya and Dengue did not inhabit California; however, since that time this invasive mosquito has been expanding its range and is now found in several parts of the state including Fresno County. *Aedes aegypti* is closely associated with people and their dwellings. The mosquito readily breeds in man-made containers such as cisterns used for domestic water storage, buckets, flower vases and planter dishes, discarded plastic food containers, and other items that collect rainwater or water from sprinkler irrigation. The mosquito lays her eggs on the sides of the various water receptacles. Eggs hatch into larvae after a rain, flooding, or sprinkler water discharge. A larva changes into a pupa in about a week, which then becomes an adult mosquito after two days. Eggs of *Aedes aegypti* are adapted to withstand desiccation and to survive without water for several months on the inner walls of containers. This makes it very difficult to control the mosquito since its populations quickly recover as a result of eggs, which had been dormant for a long time, hatching following rainfall or the addition of water to containers.

The proposed underground grey water recycling systems that builders are going to be encouraged to plumb/connect to collect rainwater are essentially underground cisterns. The cisterns must be designed to exclude all mosquitoes from entering in order to prevent egg deposition and mosquito breeding. After reviewing the proposal, it appears that the greatest risk of entry by mosquitoes into the cisterns would be from the plumbing that would allow for the collection of rainwater or any surface water runoff. *Aedes aegypti* and other mosquito species will fly through piping/drains and very small openings to find water conditions suitable for laying their eggs and for larval development.

In light of the potential for the Proposed Project to produce vector species of mosquitoes, the District strongly recommends that the City of Reedley require the Applicant to comply with the following mosquito control mitigation measures as a condition of approval for the Kings River Village Project.

1. Any above ground openings to the proposed underground cisterns must be designed to prevent mosquitoes from accessing the system. The California Department of Public Health, Vector-Borne Disease Section should be consulted for design modifications that will eliminate the potential of the cisterns to produce or harbor vector mosquitoes. Lifetime maintenance of the exclusionary devices utilized to prohibit mosquitoes from accessing the underground system would also be a mandatory requirement. An alternative would be to abandon the idea of collecting and storing surface water/rainwater in the underground cisterns and use the system exclusively for domestic grey water storage and use. The grey water system could be designed without any above ground openings, would not provide access for mosquitoes and would be much less problematic for mosquito control.

2. The bioswales should be graded to prohibit water from standing in excess of 48 hours – shorter than the minimum mosquito development time – and vegetation should be periodically thinned or mowed to facilitate mosquito control inspection/treatment activities.

3. Pond water depth must be maintained in excess of four feet to preclude invasive emergent vegetation such as cattails.

4. Vegetation associated with impounded water promotes mosquito breeding and the production of mosquitoes constitutes a public nuisance. Pond edges must be maintained free of excess vegetation to prevent harborage for mosquito breeding and so that mosquito fish and other predators are not inhibited.

5. Free and unencumbered access to the pond perimeter for vehicle and foot traffic must be provided for inspection and mosquito control activities.

Please feel free to contact me at (559) 896-1085 if you have any questions or would like additional clarification, and thank you for the opportunity to provide comment on this Project.

Sincerely,

Mark Amorino
Operations Director
Consolidated Mosquito Abatement District

The information given below is intended to provide general guidance related to the RTMF and is not intended to be, nor is, legal advice. Applicants for developments that might be subject to the RTMF should submit the details of their project to the RTMF Joint Powers Agency for determination of the amount due, if any.

INFORMATIONAL SUMMARY

REGIONAL TRANSPORTATION MITIGATION FEE

Background: Measure "C" Extension, passed by the voters of Fresno County in November 2006, included a provision for the establishment of a Regional Transportation Mitigation Fee (RTMF). The purpose of the fee is to create a mechanism for new development to pay its fair share of the cost of road improvements based on the expected traffic impacts generated by the development.

Date of Effectiveness: The RTMF is effective for all developments approved on or after January 1, 2010, unless the development is exempt for of one of the reasons described below.

Developments Subject to the Fee: Generally, all new developments occurring in Fresno County are required to pay the RTMF, with amounts varying based on the expected traffic impact of the development, less the development falls into one or more of the following exempt categories:

a) The development is to be used for public or non-profit education

b) The development is for use by a government agency for a governmental function (government-owned commercial developments are not exempt)

c) The development is the subject of an unexpired tentative map, vested tentative map, or subdivision map approved prior to January 1, 2010.

d) Renovations or improvements to existing residential buildings are exempt if the number of dwelling units is not increased. Renovations or improvements to existing non-residential buildings are exempt if the floor space is not increased.

Payment of the Fee: The RTMF must be paid to the RTMF Joint Powers Agency, located at 2035 Tulare Street, Suite 201, Fresno, CA. Please call ahead to (559) 233-4148, extension 200, to ensure that staff will be on hand to process your payment. The amount to be paid is based on the number and type of dwelling unit(s) if any, and the square footage of floorspace and type of non-residential building(s) if any. The rate to be paid is the rate in effect at the time of payment.

Payment may be made at any time prior to issuance of a certificate of occupancy. A Record of Payment will be issued as proof that the RTMF obligations, if any, have been met. Developments exempt under points A, B, or C above require a Record of Payment from the RTMF Joint Powers Agency, even though the amount paid will be zero. A service fee may be charged for issuance of a Record of Payment.

I acknowledge that I have read and understand this information, and am aware that the City or County will not issue a certificate of occupancy until I have fulfilled my obligations, if any, regarding the RTMF.

_____ _____

Representative of the Applicant Date

39975

RECORD OF PAYMENT OF REGIONAL TRANSPORTATION MITIGATION FEE

REGIONAL TRANSPORTATION MITIGATION FEE JOINT POWERS AGENCY

2035 Tulare Street, Suite 201, Fresno, CA 93721
(559) 233-4148, ext. 200 www.fresnocog.org

APPLICANT

Name: _____
Contact Person: _____
Address: _____
_____
Telephone Number: _____

PROJECT

Job Site Address _____
Tract Number _____
Lot/Parcel Number _____
Building Permit Number _____
Building Permit Issued _____ DATE
Final Map Recorded _____ DATE

Parcel Map, Tentative Map filed, Deemed Complete by Agency _____ DATE

Rezone Approval (attach relevant documents if applicable) _____ DATE

Single-Family Dwelling		dwelling unit @ $1,637/DU	$
Multi-Family Dwelling		dwelling units @ $1,150/DU	$
Public School / Education		Exempt from RTMF	
Government		Exempt from RTMF	
Commercial/Retail		square feet @ $1.61	$
Commercial/Office/Service		square feet @ $0.89	$
Light Industrial		square feet @ $0.32	$
Heavy Industrial		square feet @ $0.07	$
Other Non-Residential		square feet @ $0.28	$
		Total Fee Due (subtotal)	$
		Handling Fee	$ 25.00
Check# _____		Total Amount Due	$

_____ _____
Applicant Date

_____ _____ _____
Representative of Permit Issuing Agency Date Issuing Agency

DISPOSITION OF RTMF

_____ RTMF Joint Powers Agency certifies that the above fees have been PAID IN FULL

_____ RTMF Joint Powers Agency certifies that the above project is EXEMPT from the requirement to pay the RTMF because _____

_____ _____
Representative of the RTMF JPA Date

Note: The fees shown are those in effect as of January 1, 2015. Fees are subject to change. The amounts due will be based on the fees in effect on the day the fee is paid.

This form must be validated by the Fresno County Regional Transportation Mitigation Fee Joint Powers Agency and returned to the Permit Issuing Agency prior to final inspection or certificate of occupancy.

NOTICE OF THE RIGHT TO APPEAL

You have the right to appeal the application of the RTMF to the Board of the RTMF Joint Powers Agency if you feel that the RTMF is being applied incorrectly. The procedure to file an appeal is:

1) The Applicant must first tender any required payment in full or provide satisfactory evidence of arrangements to pay the fee when due or ensure performance of the conditions necessary to meet the requirements of the imposition (Gov. Code § 66020(a)(1)). The JPA shall determine if the requirement under Gov. Code § 66020(a)(1)) has been satisfied.

2) The applicant then submits a letter to the JPA stating that payment was tendered or shall be tendered under protest along with the reasons they believe that the fee as calculated by JPA staff is not justified, and the amount of fee the applicant believes to be correct . This letter must be accompanied by a copy of the Record of Payment. The appeal must be filed within 90 days after the imposition of the fee (Gov. Code § 66020 (d)(1)). Failure to file a timely appeal will preclude a subsequent lawsuit.

3) If the appeal is based on some document other than the Record of Payment, such as a document issued by a local jurisdiction indicating the starting date of vesting rights or a document showing earlier payments for which the applicant wants credit, then copies of this document must be included in the additional documentation mentioned in the previous bullet point. The Applicant has the option to submit additional documentation to support their appeal.

   The Applicant must submit at their own expense twenty-two copies of each supporting document they want considered. The copies are for the use of the JPA and will not be returned to the applicant.

4) If the appeal is based on a technical issue related to traffic or trip generation then the Applicant must submit a technical analysis for consideration by the JPA. The Applicant is responsible for the cost of this analysis.

5) The RTMF-JPA will act on appeals during the open portion of a Board meeting within 180 days of receipt of the written appeal. The Applicant will have a chance to speak on behalf of their request and to answer questions. Based on its consideration of the appeal, the Board may choose to set the RTMF for the Applicant's project at the amount stated in the appeal, the amount recommended by Staff based on the RTMF as generally applied, or some other amount deemed appropriate based on the information presented in the Appeal.

If you challenge the applicability or amount of the RTMF in court, you may be limited to raising only those issues you or someone else raised at the public hearing described above or in written correspondence delivered to the JPA at, or prior to, the public hearing.

RECORD OF PAYMENT OF REGIONAL TRANSPORTATION MITIGATION FEE

REGIONAL TRANSPORTATION MITIGATION FEE JOINT POWERS AGENCY

2035 Tulare Street, Suite 201, Fresno, CA 93721
(559) 233-4148, ext. 200 www.fresnocog.org

APPLICANT

Name: _____

Contact Person: _____

Address: _____

_____

Telephone Number: _____

PROJECT

Job Site Address _____

Tract Number _____

Lot/Parcel Number _____

Building Permit Number _____

Building Permit Issued _____ DATE

Final Map Recorded _____ DATE

Parcel Map, Tentative Map filed, Deemed Complete by Agency _____ DATE

Rezone Approval (attach relevant documents if applicable) _____ DATE

Single-Family Dwelling		dwelling unit @ $1,637/DU	$
Multi-Family Dwelling		dwelling units @ $1,150/DU	$
Public School / Education		Exempt from RTMF	
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Commercial/Retail		square feet @ $1.61	$
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		Total Fee Due (subtotal)	$
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Check# _____		Total Amount Due	$

_____ _____
Applicant Date

_____ _____ _____
Representative of Permit Issuing Agency Date Issuing Agency

DISPOSITION OF RTMF

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_____RTMF Joint Powers Agency certifies that the above project is EXEMPT from the requirement to pay the RTMF because _____

_____ _____
Representative of the RTMF JPA Date

Note: The fees shown are those in effect as of January 1, 2015. Fees are subject to change. The amounts due will be based on the fees in effect on the day the fee is paid.

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If you challenge the applicability or amount of the RTMF in court, you may be limited to raising only those issues you or someone else raised at the public hearing described above or in written correspondence delivered to the JPA at, or prior to, the public hearing.

Exhibit B

Environmental Assessment No. 2014-21, a Mitigated Negative Declaration (MND), dated February 11, 2015, for the proposed conditional use permit and tentative tract map applications.

CITY OF REEDLEY
MITIGATED NEGATIVE DECLARATION

prepared for **Environmental Assessment (EA) No. 2014-21**

APPLICANT:

Curt Johansen, Managing Member
Kings River Community Partners, LLC
625 2nd Street #110
Petaluma, California 94952

PROJECT LOCATION: The project site is approximately 38.7 acres with street frontage on East Dinuba Avenue, between Buttonwillow and Zumwalt Avenues.

Site Latitude: 36°35'21.30"N
Site Longitude: 119°25'35.20"W

Assessor's Parcel Numbers: 370-024-20, 370-024-21 and 370-024-24

The Notice of Intent for this proposed environmental finding was filed with the

FRESNO COUNTY CLERK
2221 Kern Street
Fresno, California 93721-2600

On **February 11, 2015** (copy Attached)

PROJECT DESCRIPTION: The City of Reedley initiated Environmental Assessment No. 2014-21 for the purpose of assessing the environmental effects of Vesting Tentative Tract Map No. 6096 and Conditional Use Permit Application No. 2014-05, which requests authorization to construct a phased mixed use project, integrating various residential types, commercial/retail office and open space/recreational land uses. The proposed Kings River Village project is consistent with the Reedley General Plan 2030, Reedley Municipal Code (RMC), UR (*Urban Reserve*) Zone District, ML (*Light Industrial*) Zone District and RMC, Section 10-13-9, Mixed Use.

The project site is located in the southeastern sector of the City of Reedley. The project site consists of three contiguous parcels (APN: 370-024-20, 370-024-21 and 370-024-24). The ±38.7 gross acres are fallow and bound by existing residential development to the north, existing recreational facilities to the east, to the west is an existing commercial storage facility and to the south is a planned public facility. The Vesting Tentative Subdivision Map No. 6096 is requesting authorization to subdivide the property for residential and commercial uses. The Conditional Use Permit Application No. 2014-05 is requesting authorization of a mixed-use project, pursuant to RMC, §10-13-9, Mixed Use.

The Kings River Community Partners, LLC ("Applicant") proposes to construct a ±38.7-acre mixed use community known as Kings River Village (the "Village" or "KRV"). The Village will mix residential types, medical and professional office, commercial/retail, and recreational land uses. Proposed are 341 residential dwelling units of various types. Also proposed Is a combination of office and commercial/retail spaces of approximately 155,030 sq. ft. The applicant is proposing to build the Village in four phases.

The proposed residential density range for each of the housing types will exceed the required density ranges, pursuant to the RMC, §10-13-9 and is consistent with the Reedley's General Plan 2030, Land Use Element. Additional description of the project's features and attributes are set forth in more detail below. Final Project requirements will be included in the development conditions of the Vesting Tentative Subdivision Map, the Conditional Use Permit, the Community Design Guidelines, and the proposed Development Agreement.

Residential Uses: In accordance with RMC, §10-13-9, the Project promotes smart growth through compact infill development. The average residential density has been calculated and exceeds the minimum 20 dwelling units per acre requirement for all proposed residential housing types and styles to accommodate a wide spectrum of socio-economic levels. The anticipated mix of housing consists of: seven live/work units, 64 detached single-family homes, 70 single-family attached fee simple units ("town homes") with 40 units configured as two units with one common wall ("duplexes") and 30 units configured as attached by one or two common vertical walls with no common horizontal walls ("triplexes"), 120 apartments, and 80 independent (non-assisted care) senior living residences.

The Village is proposing seven live/work units will consist of 17,500 square feet of live/work space configured as a two to three bedroom unit upstairs, and space for either a commercial, professional or residential use below.

The 64 single-family detached homes are anticipated to be two-story, three and four bedroom units of 1,500 to 2,100 square feet each.

The 70 attached town homes are also planned to be two-story units ranging from 1,200 to 1,800 square feet each.

The 120 two-story garden apartment units, to be constructed as part of Phase Four, are anticipated to be 650 square feet each for the one-bedroom units, 900 square feet each for the two bedroom units and 1,100 square feet each for the three bedroom units. Most of these units will be two or three bedrooms.

The 80 senior living residences will average 750 square feet each, and will be constructed during Phase Three.

Commercial/Retail and Professional Office Uses: The Village proposes 106,900 square feet of medical and professional office space, and 48,130 square feet of commercial/retail space (including a 12,000 square foot grocery store). With the exception of the proposed grocery store, all Project retail space includes second-floor office above. The combined office and commercial/retail space is approximately 155,030 sq. ft. The medical and professional office space would be constructed as follows: 85,500 in Phase One, and 21,400 square feet in Phase Three. With respect to the commercial/retail space, 27,500 square feet will be constructed in Phase One and 20,630 square feet will be constructed in Phase Three. These uses would be supported by the Project's 990 proposed parking spaces (286 built in Phase One, 265 in Phase Two, 264 in Phase Three and 175 in Phase Four) and a transit center providing car-free access to the Kings River area, the Rail Trail, Downtown Reedley, Reedley College, public schools, and other employment areas.

Project commercial, retail and professional use buildings will emphasize an architecturally unified building forms, neighborhood scale, interesting urban elevations, parking lots hidden from main streets, and buffered residential areas from the Dinuba arterial. The retail areas of the Project are designed to complement and not replace Reedley's downtown retail area and to function as a commercial activity node for the Village community. Village office and retail uses will prioritize walkability with shade-covered promenades and plazas. The walk-friendly design will encourage a "park-once" strategy for visitors not arriving by transit and a walkable orientation for residents, all of which will reduce traffic, parking congestion and long-term impacts to air quality.

Open Space and Recreation Features: The proposed Village Green Park (±3-acres) is centrally located on the project site and it is proposed to be constructed as part of Phase Two. The Park is designed to provide active and passive recreation for residents and visitors. Park improvements will include a running track, barbeque area, gazebo, and barbeque/picnic area, a play area for toddlers, fountain, and dedicated spaces for a Farmers' Market and/or community garden. The Village Green Park will be maintained by Home Owners' Association fees, it is included in Phase Two to facilitate receipt of sufficient funds to maintain the park from primarily residential end users.

In addition to the park, the Village will offer two pools and two community centers, to be funded and maintained through a private assessment mechanism. Another common green area within the Village will create a place-making center space for the senior independent living neighborhood. Residents will have a comfortable sidewalk looping the green, which may be planted with a rose garden and extensive other flowering plants and trees. The small internal mini park within the apartment complex is intended to be a meeting spot with tables and chairs for apartment residents. For larger gatherings the apartments are immediately across Raspberry Road from the large Village Green Park.

The Project is immediately adjacent to the Reedley Sports Park, a 50-acre facility that, at full build out, will include a wide variety of playing fields. Connections will be made along South Peach Avenue to permit residents to walk or ride bicycles directly into the Sports Park, again helping to reduce vehicle miles traveled ("VMT") and greenhouse gas ("GHG") emissions. In addition, Reedley's Rail Trail project and its connecting pedestrian/bike trail system will be linked to the Project to encourage walking and biking across and into downtown Reedley and the Kings River recreation area.

Transit Center: The Village has been designed to accommodate conventional parking and traffic demands without the need for a Transit Center. Therefore, it is not an essential element of the Village that a Transit Center be built and operated. However, one of the project goals is to incorporate a Transit Oriented Development component with a project specific goal of 15% of Village residents living *and* working within the Village, and another 15% living in the Village and utilizing an integrated, embedded transit center, as opposed to private vehicles, to get to and from work. The Master Developer has independently committed to work with the Fresno County Rural Transit Authority (FCRTA) to find revenue sources for the construction and operation of the transit center through grants and transportation funding. Neither this process nor the funding will involve the City. Busses would enter and leave the Village on Dinuba Avenue, and proceed from/to Dinuba Avenue along a wide north-south local street to/from a dedicated, half circle bus driveway at the transit center where passengers, bikes and bags would be loaded and unloaded.

The transit center is also expected to provide access for Kings Canyon Unified School District busses, as well as para-transit vans. The availability of public transportation within the Village will encourage use of public transit by those both able and unable to drive, which will result in a reduction of automobile vehicle miles traveled when compared with business-as-usual development, as well as a potential reduction of ownership and use of private vehicles.

Development Agreement: The Applicant is proposing a Development Agreement with the City pursuant to Government Code 65864 *et seq*, to ensure the project proceeds in accordance with existing policies, rules and regulations, and subject to conditions of approval, to strengthen the public planning process, while encouraging private participation and investment. The Development Agreement is anticipated to include individual rights and obligations of both the City and the Master Developer with respect to the payment amount and timing of Project development impact fees and credits related thereto, the vesting tentative map and conditional use permit, conditions of approvals, the timing of the map recordation process and the commencement and termination of the development agreement itself, the process of issuance of grading and building permits and timing requirements for Project construction progress, the effective standards of the Project including the Design Guidelines and the design submittal approval process related thereto, dedication process of public streets, HOA (or CFD) obligations of private property owners, code requirements, and other matters typically addressed in similar project development agreements.

Project Phasing and Build-out Schedule: Applicant proposed to build the Village in four phases, as set forth below, each consisting of a "quadrant" of the approximately square, overall project. Phase One is approximately 7.64 acres; Phase Two is approximately 15.69 acres; Phase Three is approximately 9.20 acres; and Phase Four is approximately 5.67 acres (see Vesting Tentative Subdivision Map, Phasing Plan, Page 5 of 9). Note, however, that the construction phases are not necessarily listed in the order of construction, and can be implemented in a variety of configurations.

Phase One: Phase One includes Lots 1 through 7 consisting of office, retail, medical and parking uses as well as the live/work units. Phase One will construct approximately 85,500 square feet of medical/office space, approximately 27,500 square feet of neighborhood serving retail, and 17,500 square feet of live/work space (seven live/work units). The retail component includes area for a medium-sized neighborhood grocery store. Other retail spaces will be targeted, to the extent possible, for underserved goods and services as identified in Reedley's retail leakage study (Buxton, 2010.) In order to support the uses constructed during Phase One, this phase includes the proposed installation of 286 parking spaces.

Phase Two: Phase Two includes Out Lots A and B, and Lots 19 through 161, consisting of single-family residential homes in courtyard and town home configurations in the southeast quadrant of the Project. This quadrant includes 64 detached courtyard cluster residential homes and the 70 attached residential town homes. In order to support these uses, Phase Two includes the proposed installation of 265 parking spaces. All homes are sited for one-car garages substantially out of view from public streets, utilizing courtyards. As noted above, Applicant also proposes to construct The Village Green Park and Transit Center as part of the Phase Two construction.

Phase Three: Phase Three includes Lots 8 through 14, consisting of office, retail, and senior independent living uses in the northwest quadrant of the Project. Phase Three will construct a mixed-use neighborhood consisting of approximately 21,400 square feet of second-floor office, 20,630 square feet of retail, and 80 single-story senior independent living homes age-restricted for residents over the age of 55. The senior independent living homes will be supported by a small common clubhouse, a small outdoor recreation and seating area and a small pool. In order to support the uses constructed in Phase Three, this phase includes the proposed installation of 264 parking spaces.

Phase Four: Phase Four includes Lots 15 through 18 in the southwest quadrant of the site. This quadrant will construct 120 two-story garden apartment units, a common facility clubhouse, a small pool, and a small, centrally located passive park area. In order to support the uses constructed in Phase Four, this phase includes the proposed installation of 175 parking spaces.

The proposed Kings River Village is consistent with the San Joaquin Valley Blueprint Council adopted 12 Growth Principles and recently adopted General Plan 2030, Land Use Element. The proposed Kings River Village project is also consistent with the Reedley Municipal Code, the UR (*Urban Reserve*) Zone District (RMC, §10-5), ML (*Light Industrial*) Zone District (RMC, §10-9A) and RMC, §10-13-9, Mixed Use.

Project Consistency With the Reedley General Plan 2030, Land Use Element: The Project as proposed achieves all of the City's Land Use Element Guiding Principles in the General Plan 2030, as follows:

(a) Protect the agricultural economic base of the Reedley area by encouraging the preservation of the maximum feasible amount of productive and potentially productive agricultural land.

(b) Plan for urban growth in a manner that minimizes impacts on agriculture and the consumption of agricultural land.

(c) Increase residential densities to reduce the impacts related to loss of agricultural lands.

(d) Establish a pattern of urban development which provides for the economically efficient provision of urban services with particular emphasis on sewer, water and storm drainage infrastructure.

(e) Seek a balanced and compatible land use pattern which accommodates projected population growth and encourages alternative transportation such as walking, bicycling or transit.

(f) Provide transitions between various land uses and intensities using high quality design.

(g) Integrate land use planning, transportation planning, and air quality planning to make the most efficient use of public resources.

(h) Development in the planning area shall occur in a fashion that protects and enhances air quality and water quality.

(i) Public open space shall be made an integral part of new development in the planning area.

The proposed Kings River Village project is consistent with the RMC, the UR (*Urban Reserve*) Zone District (RMC, §10-5), ML (*Light Industrial*) Zone District (RMC, §10-9A) and RMC, §10-13-9, Mixed Use.

The 19.72-acre easterly portion of the project site is classified as UR (*Urban Reserve*) Zone District (APN: 370-024-24) and has been fallow for at least ten years, has been by-passed for development, and continues to be reserved for future development. To minimize potential premature development of lands, the granting of a conditional use permit in lieu of requiring a change of zone to occur prior to actual development (RMC §10-5-1(B)). Therefore, the Kings River Village has submitted a conditional use permit, in accordance with RMC §10-5-3.

The remaining westerly portion of the subject property area is classified with a ML (*Light Industrial*) Zone District designation (APN: 370-024-20 & 370-024-21). Because the Kings River Village project is a mixed use project, the applicant has submitted the required conditional use permit to satisfy the requirements of the RMC, §10-13-9.

Project Consistency With RMC, §10-13-9: The legislative intent of RMC, §10-13-9 is to encourage more dense and orderly development of urban uses. Developments are consistent with this intent when they include gathering places where residents may interact, work, and obtain goods and services in the same general location and emphasize pedestrian activities and linkages, priority transit routes and facilities to serve the development. The statute makes clear that the inclusion of these attributes are intended to reduce the number of vehicular miles traveled by promoting alternative modes of transportation, including pedestrian pathways, bicycling pathways, and public transportation. To accomplish these goals, the statute sets minimum density requirements and permits mixed use development. The statute defines "mixed use" as,

> A concept and/or design that is a finite development project within whose boundaries residential uses are introduced and fully integrated with office, commercial and light industrial land uses, designed to offer more intensification and concentration of urban uses, and promote a walkable environment in a locale where residential uses are in close proximity to places of employment and commerce.

As shown below, the Project satisfies each of the requisite elements and Findings set forth in RMC, §10-13-9.C.1.b(1) through §10-13-9.C.1.b(5)[1].

> The project shall be a minimum of four (4) acres. (RMC, §10-13-9.C.1.b(1).) As noted above, the Project is 38.7 acres. Therefore, the Project is well in excess of this minimum area requirement.

[1] Only sections Reedley Municipal Code § 10-13-9.C.1.b(1) through 10-13-9.C.1.b(5) are discussed herein, as Reedley Municipal Code § 10-13-9.C.1.b(6) through 10-13-9.C.1.b(9) set forth affirmative obligations on the part of the City, and therefore are not relevant to the evaluation of the Project's consistency with Reedley Municipal Code § 10-13-9.

The integration of a residential use must be developed have a residential planned land use density of 20 units per acre (based on the Project's 38.2 acres). (RMC, §10-13-9.C.1.b(2).) The overall Village residential density averages 21 units per acre, in excess of the minimum requirement.

The subject property shall not share a common property line on two (2) or more sides with a designated heavy industrial zone district. (RMC, §10-13-9.C.1.b(3).) There are no heavy industrial zoned properties adjoining the Project. Therefore, this element is satisfied.

The project shall be architecturally unified throughout the entire site and compatible with surrounding development. (RMC, §10-13-9.C.1.b(4).) As specified in the Master Development Guidelines, the various product types within the mixed use Village consistently embrace a culturally authentic design respecting rural archetypes while introducing a more urban appearance. The proposed architecture is compatible with the Village Commons affordable housing project immediately to the north. All other surrounding development is light industrial.

A project may be phased over time, however, each phase shall contain an integration of a minimum of two (2) of the mix of uses. (RMC, §10-13-9.C.1.b(5).) Three of the Village's four phases include creation of multiple uses. Phase One includes retail, medical office, professional service, and residential uses. Phase Two includes residential, recreational, and transit uses. Phase Three includes senior living, retail, and professional service uses. Phase Four includes only residential uses but will be immediately adjacent to Phase Three and its mix of uses and will integrate with the uses developed in Phases One through Three. At all times following the first stage of development, the Project will include a minimum of two or more uses.

Mixed use developments must also satisfy the development standards set forth in RMC, §10-13-9.D.1 through 10-13-9.D.4, which the Project does as follows:

The development standards of the underlying zone district shall generally guide the development of the subject property. (RMC, §10-13-9.D.1) As noted above, the site is zoned "ML" and the Project will satisfy every element required for mixed use in a "ML" zone.

The mix of residential use with permitted office/commercial/industrial uses shall occur both in the horizontal and vertical axes except that the director may waive the requirement for a vertical mix of use, if the design of the project, or the inclusion of a residential component to an existing development illustrates performance standards that meet the intent of the section by providing an integrated, well designed network of pedestrian pathways connecting the places of residences with places of work, commerce, and open space areas. (RMC, §10-13-9.D.2.) Phases One and Three of the Village will include a mix of use types both in the horizontal and vertical axes.

Each building within a mixed use development project shall have a minimum of two (2) stories. Notwithstanding the foregoing, any use for seniors' independent or congregate care living shall be permitted to limit their buildings to one story conditioned upon architectural compatibility with the remainder of the two-story buildings in the mixed use development project. (RMC, §10-13-9.D.3.) With the exception of the senior independent living units, which are proposed as one story, each of the buildings in the Project are proposed to have at least two stories. The architectural theme of the senior living units is fully compatible will all other adjoining uses within the Village.

If modifications to the development standards are proposed, the applicant is required to provide supporting evidence for the modification of the general standards, which shall be submitted with the project application. (Ord. 2014-001, 5-13-2014 & RMC, §10-13-9.D.4.) The Master Developer shall remain the Applicant throughout build out for the purposes of any proposed modifications to the development standards.

The City of Reedley has conducted an environmental analysis for the above-described project, contained in the attached initial study. The City of Reedley, as the Lead Agency, proposes to adopt a Mitigated Negative Declaration for this project. This Mitigated Negative Declaration is tiered from the certified Program Environmental Impact Report (SCH No. 2010031106) (PEIR) prepared for the Reedley General Plan Update 2030 (GPU). The project has been determined to be a subsequent project that is not fully within the scope of the certified Program Environmental Impact Report prepared for the GPU. Pursuant to Public Resources Code §21083.3 and California Environmental Quality Act (CEQA Guidelines) §15168, this project has been evaluated with respect to each item on the attached environmental checklist to determine whether this project may cause any additional significant effect on the environment which was not previously examined in the Program Environmental Impact Report (SCH No. 2010031106).

After conducting a review of the adequacy of the Program Environmental Impact Report (SCH No. 2010031106) pursuant to Public Resources Code Section 21083.3, the City of Reedley, as the lead agency, finds that no substantial changes have occurred with respect to circumstances under which the Program Environmental Impact Report (SCH No. 2010031106) was certified, and that no new information which was not known and could not have been know at the time that the PEIR was certified, has become available.

The completed environmental impact checklist, its associated narrative, and any proposed mitigation measure(s) reflect applicable comments of responsible and trustee agencies, as well as research and analysis conducted to examine the interrelationship between the proposed project and the physical environment. The information contained in the project application and its related environmental assessment application, responses to requests for comment, checklist, initial study narrative, and any attached thereto, combine to form the record indicating that an initial study has been completed in compliance with the California Environmental Quality Act and the CEQA Guidelines.

All new development activity and many non-physical projects contribute directly or indirectly toward cumulative impacts on the physical environment. It has been determined that the incremental effect contributed by this project toward cumulative impacts is not considered substantial or significant in itself, and/or that cumulative impacts accruing from this project may be mitigated to less than significant with application of feasible mitigation measures.

For some categories of potential impacts, the checklist may indicate that a specific adverse environmental effect has been identified which is of sufficient magnitude to be of concern. Such an effect may be inherent in nature and magnitude of the project. The completed environmental checklist form indicated whether an impact would be less than significant, or less than significant with mitigation. Effects so rated are not sufficient in themselves to require the preparation of an Environmental Impact Report, and have been mitigated to the extent feasible.

The project is not located on a site which is included on any of the lists enumerated under Section 65962.5 of the Government Code including, but not limited to, lists of hazardous waste facilities, land designated as hazardous waste property, hazardous waste disposal sites and others, and the information in the Hazardous Waste and Substance Statement required under subdivision (f) of that Section.

The initial study has concluded that the proposed project will not result in any adverse effects which fall within the "Mandatory Findings of Significance" contained in Section 15065 of the State CEQA Guidelines.

With the project specific mitigation imposed, there is no substantial evidence in the record that this project may have additional significant direct, indirect or cumulative effects on the environment that are significant and that were not identified and analyzed in the certified Program Environmental Impact Report (SCH No. 2010031106).

Additional information on the proposed project, including a copy of the proposed environmental findings, may be obtained from the City of Reedley, Community Development Department, City Hall, 1733 Ninth Street, Reedley, California 93654. Phone: 559-637-4200, Ext. 286, e-mail Kevin.Fabino@reedley.ca.gov.	
INITIAL STUDY PREPARED BY: Kevin E. Fabino, Director	SUBMITTED BY:
DATE: February 11, 2015	Kevin Fabino, Director Community Development Department CITY OF REEDLEY

Attachments: Notice of Intent to adopt a Mitigated Negative Declaration for Environmental Assessment (EA) No. 2014-21, dated February 12, 2015

Initial Study (including checklist from CEQA Guidelines Appendix G)

Project Specific Mitigation Measure Monitoring Plan

Program Environmental Impact Report (SCH No. 2010031106), Mitigation Monitoring Checklist

E201510000041

CITY OF REEDLEY

NOTICE OF INTENT TO ADOPT A FINDING OF A MITIGATED NEGATIVE DECLARATION

Environmental Assessment (EA) No. 2014-21

FILED WITH:

FRESNO COUNTY CLERK
2221 Kern Street
Fresno, California 93721-2600

FILED
FEB 11 2015
TIME 10:24AM
FRESNO COUNTY CLERK
By DEPUTY

APPLICANT:

Curt Johansen, Managing Member
Kings River Community Partners, LLC
625 2nd Street #110
Petaluma, California 94952

PROJECT LOCATION: The project site is approximately 38.7 acres with street frontage on East Dinuba Avenue, between Buttonwillow and Zumwalt Avenues.

Site Latitude: 36°35'21.30"N
Site Longitude: 119°25'35.20"W

Assessor's Parcel Numbers: 370-024-20, 370-024-21 and 370-024-24

PROJECT DESCRIPTION: The City of Reedley initiated Environmental Assessment No. 2014-21 for the purpose of assessing the environmental effects of Vesting Tentative Tract Map No. 6096 and Conditional Use Permit Application No. 2014-05, which requests authorization to construct a phased mixed use project, integrating various residential types, commercial/retail office and open space/recreational land uses. The proposed Kings River Village project is consistent with the Reedley General Plan 2030, Reedley Municipal Code (RMC), UR (*Urban Reserve*) Zone District, ML (*Light Industrial*) Zone District and RMC, Section 10-13-9, Mixed Use.

The project site is located in the southeastern sector of the City of Reedley. The project site consists of three contiguous parcels (APN: 370-024-20, 370-024-21 and 370-024-24). The ±38.7 gross acres are fallow and bound by existing residential development to the north, existing recreational facilities to the east, to the west is an existing commercial storage facility and to the south is a planned public facility. The Vesting Tentative Subdivision Map No. 6096 is requesting authorization to subdivide the property for residential and commercial uses. The Conditional Use Permit Application No. 2014-05 is requesting authorization of a mixed-use project, pursuant to RMC, §10-13-9, Mixed Use.

The Kings River Community Partners, LLC ("Applicant") proposes to construct a ±38.7-acre mixed use community known as Kings River Village (the "Village" or "KRV"). The Village will mix residential types, medical and professional office, commercial/retail, and recreational land uses. Proposed are 341 residential dwelling units of various types. Also proposed Is a combination of office and commercial/retail spaces of approximately 155,030 sq. ft. The applicant is proposing to build the Village in four phases.

The proposed residential density range for each of the housing types will exceed the required density ranges, pursuant to the RMC, §10-13-9 and is consistent with the Reedley's General Plan 2030, Land Use Element. Additional description of the project's features and attributes are set forth in more detail below. Final Project requirements will be included in the development conditions of the Vesting Tentative Subdivision Map, the Conditional Use Permit, the Community Design Guidelines, and the proposed Development Agreement.

Residential Uses: In accordance with RMC, §10-13-9, the Project promotes smart growth through compact infill development. The average residential density has been calculated and exceeds the minimum 20 dwelling units per acre requirement for all proposed residential housing types and styles to accommodate a wide spectrum of socio-economic levels. The anticipated mix of housing consists of: seven live/work units, 64 detached single-family homes, 70 single-family attached fee simple units ("town homes") with 40 units configured as two units with one common wall ("duplexes") and 30 units configured as attached by one or two common vertical walls with no common horizontal walls ("triplexes"), 120 apartments, and 80 independent (non-assisted care) senior living residences.

The Village is proposing seven live/work units will consist of 17,500 square feet of live/work space configured as a two to three bedroom unit upstairs, and space for either a commercial, professional or residential use below.

The 64 single-family detached homes are anticipated to be two-story, three and four bedroom units of 1,500 to 2,100 square feet each.

The 70 attached town homes are also planned to be two-story units ranging from 1,200 to 1,800 square feet each.

The 120 two-story garden apartment units, to be constructed as part of Phase Four, are anticipated to be 650 square feet each for the one-bedroom units, 900 square feet each for the two bedroom units and 1,100 square feet each for the three bedroom units. Most of these units will be two or three bedrooms.

The 80 senior living residences will average 750 square feet each, and will be constructed during Phase Three.

Commercial/Retail and Professional Office Uses: The "Village" proposes 106,900 square feet of medical and professional office space, and 48,130 square feet of commercial/retail space (including a 12,000 square foot grocery store). With the exception of the proposed grocery store, all Project retail space includes second-floor office above. The combined office and commercial/retail space is approximately 155,030 sq. ft. The medical and professional office space would be constructed as follows: 85,500 in Phase One, and 21,400 square feet in Phase Three. With respect to the commercial/retail space, 27,500 square feet will be constructed in Phase One and 20,630 square feet will be constructed in Phase Three. These uses would be supported by the Project's 990 proposed parking spaces (286 built in Phase One, 265 in Phase Two, 264 in Phase Three and 175 in Phase Four) and a transit center providing car-free access to the Kings River area, the Rail Trail, Downtown Reedley, Reedley College, public schools, and other employment areas.

Project commercial, retail and professional use buildings will emphasize an architecturally unified building forms, neighborhood scale, interesting urban elevations, parking lots hidden from main streets, and buffered residential areas from the Dinuba arterial. The retail areas of the Project are designed to complement and not replace Reedley's downtown retail area and to function as a commercial activity node for the Village community. Village office and retail uses will prioritize walkability with shade-covered promenades and plazas. The walk-friendly design will encourage a "park-once" strategy for visitors not arriving by transit and a walkable orientation for residents, all of which will reduce traffic, parking congestion and long-term impacts to air quality.

Open Space and Recreation Features: The proposed Village Green Park (±3-acres) is centrally located on the project site and it is proposed to be constructed as part of Phase Two. The Park is designed to provide active and passive recreation for residents and visitors. Park improvements will include a running track, barbeque area, gazebo, and barbeque/picnic area, a play area for toddlers, fountain, and dedicated spaces for a Farmers' Market and/or community garden. The Village Green Park will be maintained by Home Owners' Association fees; it is included in Phase Two to facilitate receipt of sufficient funds to maintain the park from primarily residential end users.

In addition to the park, the Village will offer two pools and two community centers, to be funded and maintained through a private assessment mechanism. Another common green area within the Village will create a place-making center space for the senior independent living neighborhood. Residents will have a comfortable sidewalk looping the green, which may be planted with a rose garden and extensive other flowering plants and trees. The small internal mini park within the apartment complex is intended to be a meeting spot with tables and chairs for apartment residents. For larger gatherings the apartments are immediately across Raspberry Road from the large Village Green Park.

The Project is immediately adjacent to the Reedley Sports Park, a 50-acre facility that, at full build out, will include a wide variety of playing fields. Connections will be made along South Peach Avenue to permit residents to walk or ride bicycles directly into the Sports Park, again helping to reduce vehicle miles traveled ("VMT") and greenhouse gas ("GHG") emissions. In addition, Reedley's Rail Trail project and its connecting pedestrian/bike trail system will be linked to the Project to encourage walking and biking across and into downtown Reedley and the Kings River recreation area.

Transit Center: The Village has been designed to accommodate conventional parking and traffic demands without the need for a Transit Center. Therefore, it is not an essential element of the Village that a Transit Center be built and operated. However, one of the project goals is to incorporate a Transit Oriented Development component with a project specific goal of 15% of Village residents living *and* working within the Village, and another 15% living in the Village and utilizing an integrated, embedded transit center, as opposed to private vehicles, to get to and from work. The Master Developer has independently committed to work with the Fresno County Rural Transit Authority (FCRTA) to find revenue sources for the construction and operation of the transit center through grants and transportation funding. Neither this process nor the funding will involve the City. Busses would enter and leave the Village on Dinuba Avenue, and proceed from/to Dinuba Avenue along a wide north-south local street to/from a dedicated, half circle bus driveway at the transit center where passengers, bikes and bags would be loaded and unloaded.

The transit center is also expected to provide access for Kings Canyon Unified School District busses, as well as para-transit vans. The availability of public transportation within the Village will encourage use of public transit by those both able and unable to drive, which will result in a reduction of automobile vehicle miles traveled when compared with business-as-usual development, as well as a potential reduction of ownership and use of private vehicles.

Development Agreement: The Applicant is proposing a Development Agreement with the City pursuant to Government Code 65864 *et seq*, to ensure the project proceeds in accordance with existing policies, rules and regulations, and subject to conditions of approval, to strengthen the public planning process, while encouraging private participation and investment. The Development Agreement is anticipated to include individual rights and obligations of both the City and the Master Developer with respect to the payment amount and timing of Project development impact fees and credits related thereto, the vesting tentative map and conditional use permit, conditions of approvals, the timing of the map recordation process and the commencement and termination of the development agreement itself, the process of issuance of grading and building permits and timing requirements for Project construction progress, the effective standards of the Project including the Design Guidelines and the design submittal approval process related thereto, dedication process of public streets, HOA (or CFD) obligations of private property owners, code requirements, and other matters typically addressed in similar project development agreements.

Project Phasing and Build-out Schedule: Applicant proposed to build the Village in four phases, as set forth below, each consisting of a "quadrant" of the approximately square, overall project. Phase One is approximately 7.64 acres; Phase Two is approximately 15.69 acres; Phase Three is approximately 9.20 acres; and Phase Four is approximately 5.67 acres (see Vesting Tentative Subdivision Map, Phasing Plan, Page 5 of 9). Note, however, that the construction phases are not necessarily listed in the order of construction, and can be implemented in a variety of configurations.

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Phase One: Phase One includes Lots 1 through 7 consisting of office, retail, medical and parking uses as well as the live/work units. Phase One will construct approximately 85,500 square feet of medical/office space, approximately 27,500 square feet of neighborhood serving retail, and 17,500 square feet of live/work space (seven live/work units). The retail component includes area for a medium-sized neighborhood grocery store. Other retail spaces will be targeted, to the extent possible, for underserved goods and services as identified in Reedley's retail leakage study (Buxton, 2010.) In order to support the uses constructed during Phase One, this phase includes the proposed installation of 286 parking spaces.

Phase Two: Phase Two includes Out Lots A and B, and Lots 19 through 161, consisting of single-family residential homes in courtyard and town home configurations in the southeast quadrant of the Project. This quadrant includes 64 detached courtyard cluster residential homes and the 70 attached residential town homes. In order to support these uses, Phase Two includes the proposed installation of 265 parking spaces. All homes are sited for one-car garages substantially out of view from public streets, utilizing courtyards. As noted above, Applicant also proposes to construct The Village Green Park and Transit Center as part of the Phase Two construction.

Phase Three: Phase Three includes Lots 8 through 14, consisting of office, retail, and senior independent living uses in the northwest quadrant of the Project. Phase Three will construct a mixed-use neighborhood consisting of approximately 21,400 square feet of second-floor office, 20,630 square feet of retail, and 80 single-story senior independent living homes age-restricted for residents over the age of 55. The senior independent living homes will be supported by a small common clubhouse, a small outdoor recreation and seating area and a small pool. In order to support the uses constructed in Phase Three, this phase includes the proposed installation of 264 parking spaces.

Phase Four: Phase Four includes Lots 15 through 18 in the southwest quadrant of the site. This quadrant will construct 120 two-story garden apartment units, a common facility clubhouse, a small pool, and a small, centrally located passive park area. In order to support the uses constructed in Phase Four, this phase includes the proposed installation of 175 parking spaces.

The proposed Kings River Village is consistent with the San Joaquin Valley Blueprint Council adopted 12 Growth Principles and recently adopted General Plan 2030, Land Use Element. The proposed Kings River Village project is also consistent with the Reedley Municipal Code, the UR (*Urban Reserve*) Zone District (RMC, §10-5), ML (*Light Industrial*) Zone District (RMC, §10-9A) and RMC, §10-13-9, Mixed Use.

Project Consistency With the Reedley General Plan 2030, Land Use Element: The Project as proposed achieves all of the City's Land Use Element Guiding Principles in the General Plan 2030, as follows:

(a) Protect the agricultural economic base of the Reedley area by encouraging the preservation of the maximum feasible amount of productive and potentially productive agricultural land.

(b) Plan for urban growth in a manner that minimizes impacts on agriculture and the consumption of agricultural land.

(c) Increase residential densities to reduce the impacts related to loss of agricultural lands.

(d) Establish a pattern of urban development which provides for the economically efficient provision of urban services with particular emphasis on sewer, water and storm drainage infrastructure.

(e) Seek a balanced and compatible land use pattern which accommodates projected population growth and encourages alternative transportation such as walking, bicycling or transit.

(f) Provide transitions between various land uses and intensities using high quality design.

(g) Integrate land use planning, transportation planning, and air quality planning to make the most efficient use of public resources.

(h) Development in the planning area shall occur in a fashion that protects and enhances air quality and water quality.

(i) Public open space shall be made an integral part of new development in the planning area.

The proposed Kings River Village project is consistent with the RMC, the UR (*Urban Reserve*) Zone District (RMC, §10-5), ML (*Light Industrial*) Zone District (RMC, §10-9A) and RMC, §10-13-9, Mixed Use.

The 19.72-acre easterly portion of the project site is classified as UR (*Urban Reserve*) Zone District (APN: 370-024-24) and has been fallow for at least ten years, has been by-passed for development, and continues to be reserved for future development. To minimize potential premature development of lands, the granting of a conditional use permit in lieu of requiring a change of zone to occur prior to actual development (RMC §10-5-1(B)). Therefore, the Kings River Village has submitted a conditional use permit, in accordance with RMC §10-5-3.

The remaining westerly portion of the subject property area is classified with a ML (*Light Industrial*) Zone District designation (APN: 370-024-20 & 370-024-21). Because the Kings River Village project is a mixed use project, the applicant has submitted the required conditional use permit to satisfy the requirements of the RMC, §10-13-9.

Project Consistency With RMC, §10-13-9: The legislative intent of RMC, §10-13-9 is to encourage more dense and orderly development of urban uses. Developments are consistent with this intent when they include gathering places where residents may interact, work, and obtain goods and services in the same general location and emphasize pedestrian activities and linkages, priority transit routes and facilities to serve the development. The statute makes clear that the inclusion of these attributes are intended to reduce the number of vehicular miles traveled by promoting alternative modes of transportation, including pedestrian pathways, bicycling pathways, and public transportation. To accomplish these goals, the statute sets minimum density requirements and permits mixed use development. The statute defines "mixed use" as,

> A concept and/or design that is a finite development project within whose boundaries residential uses are introduced and fully integrated with office, commercial and light industrial land uses, designed to offer more intensification and concentration of urban uses, and promote a walkable environment in a locale where residential uses are in close proximity to places of employment and commerce.

As shown below, the Project satisfies each of the requisite elements and Findings set forth in RMC, §10-13-9.C.1.b(1) through §10-13-9.C.1.b(5)[1].

The project shall be a minimum of four (4) acres. (RMC, §10-13-9.C.1.b(1).) As noted above, the Project is 38.7 acres. Therefore, the Project is well in excess of this minimum area requirement.

The integration of a residential use must be developed have a residential planned land use density of 20 units per acre (based on the Project's 38.2 acres). (RMC, §10-13-9.C.1.b(2).) The overall Village

[1] Only sections Reedley Municipal Code § 10-13-9.C.1.b(1) through 10-13-9.C.1.b(5) are discussed herein, as Reedley Municipal Code § 10-13-9.C.1.b(6) through 10-13-9.C.1.b(9) set forth affirmative obligations on the part of the City, and therefore are not relevant to the evaluation of the Project's consistency with Reedley Municipal Code § 10-13-9.

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residential density averages 21 units per acre, in excess of the minimum requirement.

The subject property shall not share a common property line on two (2) or more sides with a designated heavy industrial zone district. (RMC, §10-13-9.C.1.b(3).) There are no heavy industrial zoned properties adjoining the Project. Therefore, this element is satisfied.

The project shall be architecturally unified throughout the entire site and compatible with surrounding development. (RMC, §10-13-9.C.1.b(4).) As specified in the Master Development Guidelines, the various product types within the mixed use Village consistently embrace a culturally authentic design respecting rural archetypes while introducing a more urban appearance. The proposed architecture is compatible with the Village Commons affordable housing project immediately to the north. All other surrounding development is light industrial.

A project may be phased over time, however, each phase shall contain an integration of a minimum of two (2) of the mix of uses. (RMC, §10-13-9.C.1.b(5).) Three of the Village's four phases include creation of multiple uses. Phase One includes retail, medical office, professional service, and residential uses. Phase Two includes residential, recreational, and transit uses. Phase Three includes senior living, retail, and professional service uses. Phase Four includes only residential uses but will be immediately adjacent to Phase Three and its mix of uses and will integrate with the uses developed in Phases One through Three. At all times following the first stage of development, the Project will include a minimum of two or more uses.

Mixed use developments must also satisfy the development standards set forth in RMC, §10-13-9.D.1 through 10-13-9.D.4, which the Project does as follows:

The development standards of the underlying zone district shall generally guide the development of the subject property. (RMC, §10-13-9.D.1) As noted above, the site is zoned "ML" and the Project will satisfy every element required for mixed use in a "ML" zone.

The mix of residential use with permitted office/commercial/industrial uses shall occur both in the horizontal and vertical axes except that the director may waive the requirement for a vertical mix of use, if the design of the project, or the inclusion of a residential component to an existing development illustrates performance standards that meet the intent of the section by providing an integrated, well designed network of pedestrian pathways connecting the places of residences with places of work, commerce, and open space areas. (RMC, §10-13-9.D.2.) Phases One and Three of the Village will include a mix of use types both in the horizontal and vertical axes.

Each building within a mixed use development project shall have a minimum of two (2) stories. Notwithstanding the foregoing, any use for seniors' independent or congregate care living shall be permitted to limit their buildings to one story conditioned upon architectural compatibility with the remainder of the two-story buildings in the mixed use development project. (RMC, §10-13-9.D.3.) With the exception of the senior independent living units, which are proposed as one story, each of the buildings in the Project are proposed to have at least two stories. The architectural theme of the senior living units is fully compatible will all other adjoining uses within the Village.

If modifications to the development standards are proposed the applicant is required to provide supporting evidence for the modification of the general standards, which shall be submitted with the project application. (Ord. 2014-001, 5-13-2014 & RMC, §10-13-9.D.4.) The Master Developer shall remain the Applicant throughout build out for the purposes of any proposed modifications to the development standards.

SUMMARY OF FINDINGS: The City of Reedley has conducted an environmental analysis for the above-described project. The project has been determined to be a subsequent project that is not fully within the scope of the certified Program Environmental Impact Report (SCH No. 2010031106) prepared for the Reedley General Plan 2030 Update (GPU). Therefore, the City of Reedley, as the lead agency, proposes to adopt a Mitigated Negative Declaration for this project. See the attached Property Vicinity Map below.

The completed environmental impact checklist, its associated narrative, and any proposed mitigation measure(s) reflect applicable comments of responsible and trustee agencies, as well as research and analysis conducted to examine the interrelationship between the proposed project and the physical environment. The information contained in the project application and its related environmental assessment application, responses to requests for comment, checklist and initial study narrative combine to form the record indicating that an initial study has been completed in compliance with the California Environmental Quality Act and the CEQA Guidelines.

All new development activity and many non-physical projects contribute directly or indirectly toward cumulative impacts on the physical environment. It has been determined that the incremental effect contributed by this project toward cumulative impacts is not considered substantial or significant in itself, and/or that cumulative impacts accruing from this project may be mitigated to less than significant with application of feasible mitigation measures.

For some categories of potential impacts, the checklist may indicate that a specific adverse environmental effect has been identified which is of sufficient magnitude to be of concern. Such an effect may be inherent in nature and magnitude of the project. The completed environmental checklist form indicated whether an impact would be less than significant, or less than significant with mitigation Effects so rated are not sufficient in themselves to require the preparation of an Environmental Impact Report, and have been mitigated to the extent feasible.

The project is not located on a site which is included on any of the lists enumerated under Section 65962.5 of the Government Code including, but not limited to, lists of hazardous waste facilities, land designated as hazardous waste property, hazardous waste disposal sites and others and the information in the Hazardous Waste and Substance Statement required under subdivision (f) of that Section.

The initial study has concluded that the proposed project will not result in any adverse effects which fall within the "Mandatory Findings of Significance" contained in Section 15065 of the State CEQA Guidelines.

With the project specific mitigation imposed, there is no substantial evidence in the record that this project may have additional significant direct, indirect or cumulative effects on the environment that are significant and that were not identified and analyzed in the certified Program Environmental Impact Report prepared for the Reedley General Plan Update 2030. After conducting a review of the adequacy of the Program Environmental Impact Report (SCH No. 2010031106) pursuant to Public Resources Code Section 21083.3, as the lead agency, finds that no substantial changes have occurred with respect to circumstances under which the Program Environmental Impact Report (SCH No. 2010031106) was certified, and that no new information which was not known and could not have been know at the time that the Program Environmental Impact Report (SCH No. 2010031106) was certified, has become available.

Additional information on the proposed project, including a copy of the proposed environmental findings, may be obtained from the City of Reedley, Community Development Department, City Hall, 1733 Ninth Street, Reedley, California 93654.

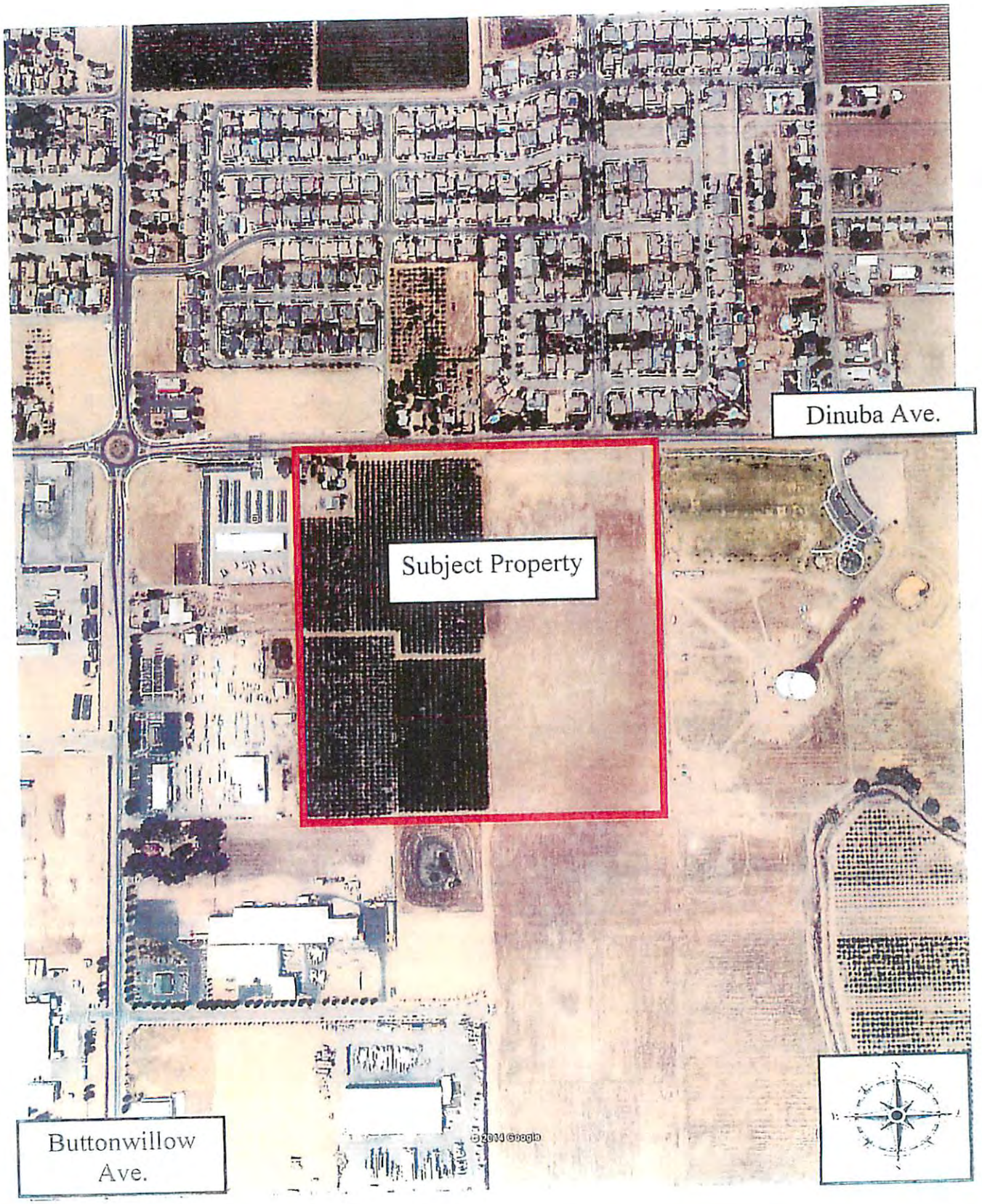
ANY INTERESTED PERSON may comment on the proposed environmental finding. Comments may be submitted at any time between the publication date of this notice and close of business on March 4, 2015. Please direct comments to Kevin Fabino, Director of the Community Development Department at City Hall, 1733 Ninth Street, Reedley, California 93654, or phone: 559-637-4200, Ext. 286, e-mail Kevin.Fabino@reedley.ca.gov.

INITIAL STUDY PREPARED BY: Kevin E. Fabino, Director	SUBMITTED BY: Kevin Fabino, Director Community Development Department CITY OF REEDLEY
DATE: February 11, 2015	

Attachments: Property Vicinity Map
Vesting Tentative Map No. 6096
Conditional Use Permit Application No. 2014-5, Site Plan

E20151000041

VICINITY MAP



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KINGS RIVER VILLAGE

SITE PLAN

4CREEKS

Notice of Intent, EA No. 2014-21 E20151 600004 1

KENNETH D. SCHMIDT AND ASSOCIATES
GROUNDWATER QUALITY CONSULTANTS
600 WEST SHAW, SUITE 250
FRESNO, CALIFORNIA 93704
TELEPHONE (559) 224-4412

September 30, 2014

Mr. Kevin E. Fabino
Community Development Director
City of Reedley
1733 Ninth Street
Reedley, CA 93654

Re: Urban Storm Runoff Basin

Dear Kevin:

The purpose of this letter is to discuss the usefulness of developing a basin for recharge of urban storm runoff in the City. Presently there is a 283-acre area in the south part of Reedley that drains to the Kings River. Experience indicates that about 40 percent of the rainfall falling on this area would end up entering the storm runoff basin. This amounts to about 110 acre-feet per year. A small amount of the water would be lost to evaporation. The net recharge expected would be about 105 acre-feet per year.

Soil borings have been done on lands in the southwest quarter of the southeast quarter of Section 34 (east of Reed Avenue and north of Floral Avenue). These borings indicate favorable conditions for a storm basin. For two of the borings northwest of the canal (No. 4 and 5), the deposits above a depth of 33 feet were indicated to be similar to those at the WWTF ponds west of the river. Coarse-grained deposits are predominant above this depth. A storm basin could be excavated to a depth of at least 10 to 20 feet deep. For a nine-acre site, assuming most of the storm runoff would be during November-April, the infiltration rate to handle this would need to be about 12 feet over a 180-day period, or only about 0.07 foot per day, which should be readily obtainable. This would reduce the existing water deficient of about 1,000 acre-feet per year in the City by about 10 percent. Development of desert landscaping in the future, or other means of decreasing the consumptive use, and recharge of storm runoff at this and other basins could substantially reduce this deficient.

Please call me if you have any questions.

Sincerely yours,

Kenneth D. Schmidt

KDS/cl

EXHIBIT A

INITIAL STUDY, USING CEQA GUIDELINES APPENDIX G CHECKLIST
analyzing a subsequent project under City of Reedley, certified Program Environmental Impact Report (SCH No. 2010031106) prepared for the Reedley General Plan Update 2030

Environmental Assessment No. 2014-21

February 11, 2015

1. **Project title:** Vesting Tentative Tract Map No. 6096 and Conditional Use Permit Application No. 2014-05

2. **Lead agency name and address:**

   City of Reedley
   Community Development Department
   1733 Ninth Street,
   Reedley, California 93654

3. **Contact person and phone number:**

   Kevin Fabino, Director
   Community Development Department
   1733 Ninth Street
   Reedley, California
   (559) 637-4200 ext. 286

   e-mail Kevin.Fabino@reedley.ca.gov

4. **Project location:** The project site is approximately 38.7 acres with street frontage on East Dinuba Avenue, between Buttonwillow and Zumwalt Avenues.

   Site Latitude: 36°35'21.30"N
   Site Longitude: 119°25'35.20"W

   Assessor's Parcel Numbers: 370-024-20, 370-024-21 and 370-024-24

5. **Project applicant/sponsor name and address:**

   Curt Johansen, Managing Member
   Kings River Community Partners, LLC
   625 2nd Street #110
   Petaluma, California 94952

6. **General plan designation:**
   Existing: Light Industrial

7. **Zoning:**
   Existing: ML (*Light Industrial*) zone district (RMC §10-9A)
   UR (*Urban Reserve*) zone district (RMC §10-5)

8 **Description of project:** The City of Reedley initiated Environmental Assessment No. 2014-21 for the purpose of assessing the environmental effects of Vesting Tentative Tract Map No. 6096 and Conditional Use Permit Application No. 2014-05, which requests authorization to construct a phased mixed use project, integrating various residential types, commercial/retail office and open space/recreational land uses. The proposed Kings River Village project is consistent with the Reedley General Plan 2030, Reedley Municipal Code (RMC), UR (*Urban Reserve*) Zone District, ML (*Light Industrial*) Zone District and RMC, Section 10-13-9, Mixed Use.

The project site is located in the southeastern sector of the City of Reedley. The project site consists of three contiguous parcels (APN: 370-024-20, 370-024-21 and 370-024-24). The ±38.7 gross acres are fallow and bound by existing residential development to the north, existing recreational facilities to the east, to the west is an existing commercial storage facility and to the south is a planned public facility. The Vesting Tentative Subdivision Map No. 6096 is requesting authorization to subdivide the property for residential and commercial uses. The Conditional Use Permit Application No. 2014-05 is requesting authorization of a mixed-use project, pursuant to RMC, §10-13-9, Mixed Use.

The Kings River Community Partners, LLC ("Applicant") proposes to construct a ±38.7-acre mixed use community known as Kings River Village (the "Village" or "KRV"). The Village will mix residential types, medical and professional office, commercial/retail, and recreational land uses. Proposed are 341 residential dwelling units of various types. Also proposed Is a combination of office and commercial/retail spaces of approximately 155,030 sq. ft. The applicant is proposing to build the Village in four phases.

The proposed residential density range for each of the housing types will exceed the required density ranges, pursuant to the RMC, §10-13-9 and is consistent with the Reedley's General Plan 2030, Land Use Element. Additional description of the project's features and attributes are set forth in more detail below. Final Project requirements will be included in the development conditions of the Vesting Tentative Subdivision Map, the Conditional Use Permit, the Community Design Guidelines, and the proposed Development Agreement.

Residential Uses: In accordance with RMC, §10-13-9, the Project promotes smart growth through compact infill development. The average residential density has been calculated and exceeds the minimum 20 dwelling units per acre requirement for all proposed residential housing types and styles to accommodate a wide spectrum of socio-economic levels. The anticipated mix of housing consists of: seven live/work units, 64 detached single-family homes, 70 single-family attached fee simple units ("town homes") with 40 units configured as two units with one common wall ("duplexes") and 30 units configured as attached by one or two common vertical walls with no common horizontal walls ("triplexes"), 120 apartments, and 80 independent (non-assisted care) senior living residences.

The Village is proposing seven live/work units will consist of 17,500 square feet of live/work space configured as a two to three bedroom unit upstairs, and space for either a commercial, professional or residential use below.

The 64 single-family detached homes are anticipated to be two-story, three and four bedroom units of 1,500 to 2,100 square feet each.

The 70 attached town homes are also planned to be two-story units ranging from 1,200 to 1,800 square feet each.

The 120 two-story garden apartment units, to be constructed as part of Phase Four, are anticipated to be 650 square feet each for the one-bedroom units, 900 square feet each for the two bedroom units and 1,100 square feet each for the three bedroom units. Most of these units will be two or three bedrooms.

The 80 senior living residences will average 750 square feet each, and will be constructed during Phase Three.

Commercial/Retail and Professional Office Uses: The Village proposes 106,900 square feet of medical and professional office space, and 48,130 square feet of commercial/retail space (including a 12,000 square foot grocery store). With the exception of the proposed grocery store, all Project retail space includes second-floor office above. The combined office and commercial/retail space is approximately 155,030 sq. ft. The medical and professional office space would be constructed as follows: 85,500 in Phase One, and 21,400 square feet in Phase Three. With respect to the commercial/retail space, 27,500 square feet will be constructed in Phase One and 20,630 square feet will be constructed in Phase Three. These uses would be supported by the Project's 990 proposed parking spaces (286 built in Phase One, 265 in Phase Two, 264 in Phase Three and 175 in Phase Four) and a transit center providing car-free access to the Kings River area, the Rail Trail, Downtown Reedley, Reedley College, public schools, and other employment areas.

Project commercial, retail and professional use buildings will emphasize an architecturally unified building forms, neighborhood scale, interesting urban elevations, parking lots hidden from main streets, and buffered residential areas from the Dinuba arterial. The retail areas of the Project are designed to complement and not replace Reedley's downtown retail area and to function as a commercial activity node for the Village community. Village office and retail uses will prioritize walkability with shade-covered promenades and plazas. The walk-friendly design will encourage a "park-once" strategy for visitors not arriving by transit and a walkable orientation for residents, all of which will reduce traffic, parking congestion and long-term impacts to air quality.

Open Space and Recreation Features: The proposed Village Green Park (±3-acres) is centrally located on the project site and it is proposed to be constructed as part of Phase Two. The Park is designed to provide active and passive recreation for residents and visitors. Park improvements will include a running track, barbeque area, gazebo, and barbeque/picnic area, a play area for toddlers, fountain, and dedicated spaces for a Farmers' Market and/or community garden. The Village Green Park will be maintained by Home Owners' Association fees; it is included in Phase Two to facilitate receipt of sufficient funds to maintain the park from primarily residential end users.

In addition to the park, the Village will offer two pools and two community centers, to be funded and maintained through a private assessment mechanism. Another common green area within the Village will create a place-making center space for the senior independent living neighborhood. Residents will have a comfortable sidewalk looping the green, which may be planted with a rose garden and extensive other flowering plants and trees. The small internal mini park within the apartment complex is intended to be a meeting spot with tables and chairs for apartment residents. For larger gatherings the apartments are immediately across Raspberry Road from the large Village Green Park.

The Project is immediately adjacent to the Reedley Sports Park, a 50-acre facility that, at full build out, will include a wide variety of playing fields. Connections will be made along South Peach Avenue to permit residents to walk or ride bicycles directly into the Sports Park, again helping to reduce vehicle miles traveled ("VMT") and greenhouse gas ("GHG") emissions. In

addition, Reedley's Rail Trail project and its connecting pedestrian/bike trail system will be linked to the Project to encourage walking and biking across and into downtown Reedley and the Kings River recreation area.

Transit Center: The Village has been designed to accommodate conventional parking and traffic demands without the need for a Transit Center. Therefore, it is not an essential element of the Village that a Transit Center be built and operated. However, one of the project goals is to incorporate a Transit Oriented Development component with a project specific goal of 15% of Village residents living *and* working within the Village, and another 15% living in the Village and utilizing an integrated, embedded transit center, as opposed to private vehicles, to get to and from work. The Master Developer has independently committed to work with the Fresno County Rural Transit Authority (FCRTA) to find revenue sources for the construction and operation of the transit center through grants and transportation funding. Neither this process nor the funding will involve the City. Busses would enter and leave the Village on Dinuba Avenue, and proceed from/to Dinuba Avenue along a wide north-south local street to/from a dedicated, half circle bus driveway at the transit center where passengers, bikes and bags would be loaded and unloaded.

The transit center is also expected to provide access for Kings Canyon Unified School District busses, as well as para-transit vans. The availability of public transportation within the Village will encourage use of public transit by those both able and unable to drive, which will result in a reduction of automobile vehicle miles traveled when compared with business-as-usual development, as well as a potential reduction of ownership and use of private vehicles.

Development Agreement: The Applicant is proposing a Development Agreement with the City pursuant to Government Code 65864 *et seq*, to ensure the project proceeds in accordance with existing policies, rules and regulations, and subject to conditions of approval, to strengthen the public planning process, while encouraging private participation and investment. The Development Agreement is anticipated to include individual rights and obligations of both the City and the Master Developer with respect to the payment amount and timing of Project development impact fees and credits related thereto, the vesting tentative map and conditional use permit, conditions of approvals, the timing of the map recordation process and the commencement and termination of the development agreement itself, the process of issuance of grading and building permits and timing requirements for Project construction progress, the effective standards of the Project including the Design Guidelines and the design submittal approval process related thereto, dedication process of public streets, HOA (or CFD) obligations of private property owners, code requirements, and other matters typically addressed in similar project development agreements.

Project Phasing and Build-out Schedule: Applicant proposed to build the Village in four phases, as set forth below, each consisting of a "quadrant" of the approximately square, overall project. Phase One is approximately 7.64 acres; Phase Two is approximately 15.69 acres; Phase Three is approximately 9.20 acres; and Phase Four is approximately 5.67 acres (see Vesting Tentative Subdivision Map, Phasing Plan, Page 5 of 9). Note, however, that the construction phases are not necessarily listed in the order of construction, and can be implemented in a variety of configurations.

Phase One: Phase One includes Lots 1 through 7 consisting of office, retail, medical and parking uses as well as the live/work units. Phase One will construct approximately 85,500 square feet of medical/office space, approximately 27,500 square feet of neighborhood serving retail, and 17,500 square feet of live/work space (seven live/work units). The retail component includes area for a medium-sized neighborhood grocery store. Other retail spaces will be targeted, to the extent possible, for underserved goods and services as

identified in Reedley's retail leakage study (Buxton, 2010.) In order to support the uses constructed during Phase One, this phase includes the proposed installation of 286 parking spaces.

Phase Two: Phase Two includes Out Lots A and B, and Lots 19 through 161, consisting of single-family residential homes in courtyard and town home configurations in the southeast quadrant of the Project. This quadrant includes 64 detached courtyard cluster residential homes and the 70 attached residential town homes. In order to support these uses, Phase Two includes the proposed installation of 265 parking spaces. All homes are sited for one-car garages substantially out of view from public streets, utilizing courtyards. As noted above, Applicant also proposes to construct The Village Green Park and Transit Center as part of the Phase Two construction.

Phase Three: Phase Three includes Lots 8 through 14, consisting of office, retail, and senior independent living uses in the northwest quadrant of the Project. Phase Three will construct a mixed-use neighborhood consisting of approximately 21,400 square feet of second-floor office, 20,630 square feet of retail, and 80 single-story senior independent living homes age-restricted for residents over the age of 55. The senior independent living homes will be supported by a small common clubhouse, a small outdoor recreation and seating area and a small pool. In order to support the uses constructed in Phase Three, this phase includes the proposed installation of 264 parking spaces.

Phase Four: Phase Four includes Lots 15 through 18 in the southwest quadrant of the site. This quadrant will construct 120 two-story garden apartment units, a common facility clubhouse, a small pool, and a small, centrally located passive park area. In order to support the uses constructed in Phase Four, this phase includes the proposed installation of 175 parking spaces.

The proposed Kings River Village is consistent with the San Joaquin Valley Blueprint Council adopted 12 Growth Principles and recently adopted General Plan 2030, Land Use Element. The proposed Kings River Village project is also consistent with the Reedley Municipal Code, the UR (*Urban Reserve*) Zone District (RMC, §10-5), ML (*Light Industrial*) Zone District (RMC, §10-9A) and RMC, §10-13-9, Mixed Use.

Project Consistency With the Reedley General Plan 2030, Land Use Element: The Project as proposed achieves all of the City's Land Use Element Guiding Principles in the General Plan 2030, as follows:

(a) Protect the agricultural economic base of the Reedley area by encouraging the preservation of the maximum feasible amount of productive and potentially productive agricultural land.

(b) Plan for urban growth in a manner that minimizes impacts on agriculture and the consumption of agricultural land.

(c) Increase residential densities to reduce the impacts related to loss of agricultural lands.

(d) Establish a pattern of urban development which provides for the economically efficient provision of urban services with particular emphasis on sewer, water and storm drainage infrastructure.

(e) Seek a balanced and compatible land use pattern which accommodates projected population growth and encourages alternative transportation such as walking, bicycling or transit.

(f) Provide transitions between various land uses and intensities using high quality design.

(g) Integrate land use planning, transportation planning, and air quality planning to make the most efficient use of public resources.

(h) Development in the planning area shall occur in a fashion that protects and enhances air quality and water quality.

(i) Public open space shall be made an integral part of new development in the planning area.

The proposed Kings River Village project is consistent with the RMC, the UR (*Urban Reserve*) Zone District (RMC, §10-5), ML (*Light Industrial*) Zone District (RMC, §10-9A) and RMC, §10-13-9, Mixed Use.

The 19.72-acre easterly portion of the project site is classified as UR (*Urban Reserve*) Zone District (APN: 370-024-24) and has been fallow for at least ten years, has been by-passed for development, and continues to be reserved for future development. To minimize potential premature development of lands, the granting of a conditional use permit in lieu of requiring a change of zone to occur prior to actual development (RMC §10-5-1(B)). Therefore, the Kings River Village has submitted a conditional use permit, in accordance with RMC §10-5-3.

The remaining westerly portion of the subject property area is classified with a ML (*Light Industrial*) Zone District designation (APN: 370-024-20 & 370-024-21). Because the Kings River Village project is a mixed use project, the applicant has submitted the required conditional use permit to satisfy the requirements of the RMC, §10-13-9.

Project Consistency With RMC, §10-13-9: The legislative intent of RMC, §10-13-9 is to encourage more dense and orderly development of urban uses. Developments are consistent with this intent when they include gathering places where residents may interact, work, and obtain goods and services in the same general location and emphasize pedestrian activities and linkages, priority transit routes and facilities to serve the development. The statute makes clear that the inclusion of these attributes are intended to reduce the number of vehicular miles traveled by promoting alternative modes of transportation, including pedestrian pathways, bicycling pathways, and public transportation. To accomplish these goals, the statute sets minimum density requirements and permits mixed use development. The statute defines "mixed use" as,

> A concept and/or design that is a finite development project within whose boundaries residential uses are introduced and fully integrated with office, commercial and light industrial land uses, designed to offer more intensification and concentration of urban uses, and promote a walkable environment in a locale where residential uses are in close proximity to places of employment and commerce.

As shown below, the Project satisfies each of the requisite elements and Findings set forth in RMC, §10-13-9.C.1.b(1) through §10-13-9.C.1.b(5)1.

> The project shall be a minimum of four (4) acres. (RMC, §10-13-9.C.1.b(1).) As noted above, the Project is 38.7 acres. Therefore, the Project is well in excess of this minimum area requirement.
>
> The integration of a residential use must be developed have a residential planned land use density of 20 units per acre (based on the Project's 38.2 acres). (RMC, §10-13-9.C.1.b(2).) The overall Village residential density averages 21 units per acre, in excess of the minimum requirement.
>
> The subject property shall not share a common property line on two (2) or more sides with a designated heavy industrial zone district. (RMC, §10-13-9.C.1.b(3).) There are no heavy industrial zoned properties adjoining the Project. Therefore, this element is satisfied.
>
> The project shall be architecturally unified throughout the entire site and compatible with surrounding development. (RMC, §10-13-9.C.1.b(4).) As specified in the Master Development Guidelines, the various product types within the mixed use Village consistently embrace a culturally authentic design respecting rural archetypes while introducing a more urban appearance. The proposed architecture is compatible with the Village Commons affordable housing project immediately to the north. All other surrounding development is light industrial.
>
> A project may be phased over time, however, each phase shall contain an integration of a minimum of two (2) of the mix of uses. (RMC, §10-13-9.C.1.b(5).) Three of the Village's four phases include creation of multiple uses. Phase One includes retail, medical office, professional service, and residential uses. Phase Two includes residential, recreational, and transit uses. Phase Three includes senior living, retail, and professional service uses. Phase Four includes only residential uses but will be immediately adjacent to Phase Three and its mix of uses and will integrate with the uses developed in Phases One through Three. At all times following the first stage of development, the Project will include a minimum of two or more uses.

Mixed use developments must also satisfy the development standards set forth in RMC, §10-13-9.D.1 through 10-13-9.D.4, which the Project does as follows:

> The development standards of the underlying zone district shall generally guide the development of the subject property. (RMC, §10-13-9.D.1) As noted above, the site is zoned "ML" and the Project will satisfy every element required for mixed use in a "ML" zone.
>
> The mix of residential use with permitted office/commercial/industrial uses shall occur both in the horizontal and vertical axes except that the director may waive the requirement for a vertical mix of use, if the design of the project, or the inclusion of a residential component to an existing development illustrates performance standards that meet the intent of the section by providing an integrated, well designed network of

1 Only sections Reedley Municipal Code § 10-13-9.C.1.b(1) through 10-13-9.C.1.b(5) are discussed herein, as Reedley Municipal Code § 10-13-9.C.1.b(6) through 10-13-9.C.1.b(9) set forth affirmative obligations on the part of the City, and therefore are not relevant to the evaluation of the Project's consistency with Reedley Municipal Code § 10-13-9.

pedestrian pathways connecting the places of residences with places of work, commerce, and open space areas. (RMC, §10-13-9.D.2.) Phases One and Three of the Village will include a mix of use types both in the horizontal and vertical axes.

Each building within a mixed use development project shall have a minimum of two (2) stories. Notwithstanding the foregoing, any use for seniors' independent or congregate care living shall be permitted to limit their buildings to one story conditioned upon architectural compatibility with the remainder of the two-story buildings in the mixed use development project. (RMC, §10-13-9.D.3.) With the exception of the senior independent living units, which are proposed as one story, each of the buildings in the Project are proposed to have at least two stories. The architectural theme of the senior living units is fully compatible will all other adjoining uses within the Village.

If modifications to the development standards are proposed, the applicant is required to provide supporting evidence for the modification of the general standards, which shall be submitted with the project application. (Ord. 2014-001, 5-13-2014 & RMC, §10-13-9.D.4.) The Master Developer shall remain the Applicant throughout build out for the purposes of any proposed modifications to the development standards.

The City of Reedley has conducted an environmental analysis for the above-described project, contained in this initial study. The City of Reedley, as the Lead Agency, proposes to adopt a Mitigated Negative Declaration for this project. This Mitigated Negative Declaration is tiered from the certified Program Environmental Impact Report (SCH No. 2010031106) (PEIR) prepared for the Reedley General Plan Update 2030 (GPU). The project has been determined to be a subsequent project that is not fully within the scope of the certified Program Environmental Impact Report prepared for the GPU. Pursuant to Public Resources Code §21083.3 and California Environmental Quality Act (CEQA Guidelines) §15168, this project has been evaluated with respect to each item on the attached environmental checklist to determine whether this project may cause any additional significant effect on the environment which was not previously examined in the Program Environmental Impact Report (SCH No. 2010031106).

9. **Surrounding land uses and setting:**

	Planned Land Use	Existing Zoning	Existing Land Use
North	Low Density Residential Planned Land Use & High Density Residential Planned Land Use	R-1 (One-Family Residential) zone district & RM-2 (Multiple-Family Residential) zone district	Existing residential development
East	Open Space Planned Land Use	RCO (*Resources Cons. & Open Space*) zone district	Reedley Regional Sports Park
South	Light Industrial Planned Land Use & Public Facilities	ML (*Light Industrial*) zone district & RCO (*Resources Cons. & Open Space*) zone district	Existing Industrial development & ponding basin
West	Commercial Service Planned Land Use & Light Industrial Planned Land Use	ML (*Light Industrial*) zone district	Existing Commercial & Industrial development

10. **Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement):**

San Joaquin Valley Air Pollution Control District
Alta Irrigation District

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

Pursuant to Public Resources Code Section 21001.1 and 21080, the purpose of this initial study is to analyze the potential environmental impacts of the project, to determine whether the project would have a significant adverse environmental impact requiring preparation of an Environmental Impact Report, or whether adverse impacts may be mitigated below a level of significance with features incorporated into a project and imposition of mitigation measures such that the project would not have a significant effect on the environment.

It is noted that the environmental setting for this project and a range of potential environmental impacts of development and use of land in the City of Reedley Sphere of Influence were described in the Program Environmental Impact Report (PEIR) certified in 2014.

Environmental factors checked below would be potentially affected by this project, although none of the impacts would be potentially significant with application of project-specific mitigation measures:

____	Aesthetics	____	Agriculture and Forestry Resources	X ____	Air Quality
____	Biological Resources	____	Cultural Resources	____	Geology /Soils
____	Greenhouse Gas Emissions	____	Hazards & Hazardous Materials	X ____	Hydrology/Water Quality
____	Land Use/Planning	____	Mineral Resources	____	Noise
____	Population /Housing	X ____	Public Services	X ____	Recreation
X ____	Transportation/Traffic	X ____	Utilities/Service Systems	____	Mandatory Findings of Significance

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation:

☒ I find that, although some aspects of these activities that would be allowed subsequent to the proposed project could have some adverse effects on the environment, those effects would not result in a significant adverse effect because revisions in the project have been made and project-specific mitigation measures will be applied, as agreed to by the project proponent. I further find that the project will not have additional significant adverse effects on the environment beyond those identified in the City of Reedley, certified Program Environmental Impact Report, prepared for the Reedley General Plan Update 2030.

Therefore, A MITIGATED NEGATIVE DECLARATION will be prepared.

X _____ 2/11/2015

Kevin E. Fabino, Director — February 11, 2015
Community Development Department

EVALUATION OF ADDITIONAL ENVIRONMENTAL IMPACTS:

1. For purposes of this Initial Study, the following answers have the corresponding meanings:

   a. "No Impact" means the subsequent project will not cause any additional significant effect related to the threshold under consideration which was not previously examined in the PEIR.

   b. "Less Than Significant Impact" means there is an impact related to the threshold under consideration that was not previously examined in the PEIR, but that impact is less than significant;

   c. "Less Than Significant with Mitigation Incorporation" means there is a potentially significant impact related to the threshold under consideration that was not previously examined in the PEIR, however, with the mitigation incorporated into the project, the impact is less than significant.

   d. "Potentially Significant Impact" means there is an additional potentially significant effect related to the threshold under consideration that was not previously examined in the PEIR.

2. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

3. All 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.

4. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

5. "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section XVII, "Earlier Analyses," may be cross-referenced).

6. Earlier analyses may be used where, pursuant to the tiering, PEIR or MEIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:

   a. Earlier Analysis Used. Identify and state where they are available for review.

   b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in the PEIR or another earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

   c. Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

7. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

8. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

9. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

10. The explanation of each issue should identify:

a. The significance criteria or threshold, if any, used to evaluate each question; and

b. The mitigation measure identified, if any, to reduce the impact to less than significance.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
I. AESTHETICS -- Would the project:				
a) Have a substantial adverse effect on a scenic vista?			X	
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?			X	
c) Substantially degrade the existing visual character or quality of the site and its surroundings?			X	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			X	

The project would not have a significant effect on scenic vistas or scenic resources in the City of Reedley, because the project is surrounded on at least two sides by buildings of similar height (in-fill), mass and bulk. The subject property does not include any scenic resources such as trees, rock outcropping, or historic structures. The subject territory will not damage any scenic resources nor will it degrade the visual character or quality of the site and its surroundings. Furthermore, the project will not create a new source of substantial light or glare which would affect day or night time views in the project area, given that during the entitlement process, staff will ensure that lights are located in areas that will minimize substantial light sources.

The Project will be subject to development conditions of approval for the Vesting Tentative Subdivision Map, the Conditional Use Permit and the Community Design Guidelines that obligate the Project to achieve high standards of architecturally unified design in building forms and neighborhood scale, along with interesting urban elevations, parking lots hidden from main streets, and buffered residential areas from the Dinuba arterial. Project visual design will be consistent with other construction within the City of Reedley and final design will be consistent with the Vesting Tentative Subdivision Map and Conditional Use Permit Conditions of Approval, and the Community Design Guidelines. Currently, the Applicant anticipates and intends that Project aesthetic-enhancing design features will include, at minimum, front porches, and reduced dominance of garages through the use of courtyards and screening for trashcans and rubbish generated by the commercial uses. The 286 parking spaces constructed in Phase One will be hidden from arterial view with structures and extensive use of street trees and hedge landscaping. The goal is for a unified architectural theme to be predominant through the commercial and office buildings and structures. Other aesthetic considerations in design will take into account the climatological, cultural, communitarian, and historical references. Design Guidelines will establish vertical development features with respect to these considerations, including the priority of a pedestrian-friendly environment for all Project residents and visitors.

As a result, the project will have a less than significant impact on aesthetics. The project will be subject to the aesthetics mitigation measures identified in the PEIR. Conditions of Approval will be applied to ensure that the project is aesthetically appealing and will be further refined during the entitlement process.

Therefore, no project-specific mitigation for aesthetics impacts is required beyond the mitigation measures related to potential aesthetic impacts set forth in the PEIR.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
II. AGRICULTURE AND FORESTRY RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information complied by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:			X	
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?			X	
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?			X	
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources 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))?				X
d) Result in the loss of forest land or conversion of forest land to non-forest use?				X

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?				X

The subject properties are located in close proximity to the urban core of the City of Reedley. The Dinuba Avenue corridor leads directly into the central business district and other major centers of commerce in the City. The subject properties are surrounded by existing development and well-established residential neighborhoods. A self-storage facility is to the immediate west of the site. Continuing east from the Project approximately six miles is the town of Dinuba. Immediately to the south is property owned by Kings Canyon Unified School District and is planned to be jointly constructed and operated with the City of Reedley. This land is to be developed as the Central Valley Transportation Center. To the east of the site is the approximately 50-acre Reedley Sports Park. To the north, across Dinuba Avenue, is the publicly funded, 60-unit affordable housing project, Kings River Commons. To the northeast is a subdivision consisting of single-family homes. Thus, the Project will not divide an existing community or reduce the availability of existing housing.

The project would not adversely affect agricultural or forestry resources. Historically, the western portion of the site was used for farming stone fruit, prior to the submittal of these applications all of the trees have been removed, as they were at the end of their productive life. The subject site is designated as "non-prime farmland" on the Fresno County Important Farmland 2010, Rural Land Mapping Edition, and Program Environmental Impact Report, Figure 6, Important Farmland Map, and thus is not considered to be prime farmland, farmland of statewide importance, or unique farmland. The subject site and surrounding property are not subject to contracts under the Williamson Act. Therefore, the project itself will not cause any premature conversation of agricultural lands or cause other tertiary impacts to agricultural lands.

The proposed Kings River Village, mixed use project does not conflict with any forest land or Timberland Production or result in any loss of forest land. The proposed subject property does not include any physical changes which will affect the existing environment.

Approval of Vesting Tentative Subdivision Map No. 6096 and Conditional Use Permit Application No. 2014-05, would constitute infill development which would prevent potential cumulative consumption of agricultural land for additional residential/commercial development in the City of Reedley.

Mitigation Measures

1. The proposed project incorporates and implements as applicable PEIR mitigation measures relating to agricultural land preservation (AG-1 & AG-2) as identified in the attached Exhibit C, Mitigation Monitoring Checklist for Final Environmental Impact Report (SCH No. 2010031106) & Reedley General Plan 2030, dated February 18, 2014.

Therefore, no project-specific mitigation for forestry impacts is required.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
III. AIR QUALITY AND GLOBAL CLIMATE CHANGE - Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan (*e.g.*, by having potential emissions of regulated criterion pollutants which exceed the San Joaquin Valley Air Pollution Control Districts (SJVAPCD) adopted thresholds for these pollutants)?		X		
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?		X		
c) 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 (including releasing emissions which exceed quantitative thresholds for ozone precursors)?		X		
d) Expose sensitive receptors to substantial pollutant concentrations?		X		
e) Create objectionable odors affecting a substantial number of people?		X		

Environmental and Regulatory Setting Regarding Air Quality

The project is located in Fresno County and within the San Joaquin Valley Air Basin (SJVAB). This region has had chronic non-attainment of federal and state clean air standards for ozone/oxidants and particulate matter due to a combination of topography and climate. The San Joaquin Valley (Valley) is hemmed in on three sides by mountain ranges, with prevailing winds carrying pollutants and pollutant precursors from urbanized areas to the north (and in turn contributing pollutants and precursors to downwind air basins). The Mediterranean climate of this region, with a high number of sunny days and little or no measurable precipitation for several months of the year, fosters photochemical reactions in the atmosphere, creating ozone and particulate matter. Some air pollutants are fairly consistent throughout the year and are changeable from day to day and even hour to hour, due to complex interactions of topography, climate, and weather.

Regional factors affect the accumulation and dispersion of air pollutants within the SJVAPD. The SJVAPD is approximately 250 miles long and averages 35 miles wide, and is the second largest air basin in the state. The SJVAPD is defined by the Sierra Nevada in the east (8,000 to 14,000 feet in elevation), the Coast Ranges in the west (averaging 3,000 feet in elevation), and the Tehachapi mountains in the south (6,000 to 8,000 feet in elevation). The Valley is basically flat with a slight downward gradient to the northwest. The Valley opens to the sea at the Carquinez Straits where the San Joaquin-Sacramento Delta empties into San Francisco Bay. The Valley, thus, could be considered a "bowl" open only to the north.

Summertime wind speed and direction data indicate that the Valley's air mass moves from the north end of the Valley and flows in a south-southeasterly direction through the Valley, through the Tehachapi Pass, into the Southeast Desert Air Basin.

During the winter, average high temperatures are in the 50s and the average daily low temperature is 45°F. Temperatures below freezing are unusual, but highs in the 30s and 40s can occur on days with persistent fog and low cloudiness. Wintertime wind speed and direction data indicate that prevailing winds flow occasionally reverse, with wind originating from the south end of the Valley and blowing in a north-northwesterly direction. While the Valley generally experiences light winds (less than 10 mph), more disturbed weather conditions with stronger ground level winds can generate fugitive dust and exacerbate particulate matter pollution. Winter also predisposes the SJVAPD to inversion layers, where warm air in the upper atmosphere caps cold air at lower elevations, with little or no normal convection to mix the air mass. Inversions can exist at the surface or at any height above the ground, and tend to act as a lid on the Valley, holding in the pollutants that are generated here.

Occurrences of high barometric pressure at any time of the year tend to cause the Valley atmosphere to stagnate and allow pollutants to concentrate. These factors create a climate conducive to elevated particulate matter (PM 10 and PM 2.5) concentrations and accumulations of carbon monoxide (CO).

Valley air quality has adverse impacts on human health, a situation rendered more serious due to the elevated proportion of sensitive persons (children and the elderly) in the local population. Childhood and adult asthma is prevalent and there is a high level of asthma mortality in the region. Outdoor recreation is often contraindicated, which has secondary cardiopulmonary effects from lack of physical activity.

The San Joaquin Valley Air Pollution Control District (SJVAPCD) is the local regional jurisdictional entity charged with attainment planning, rulemaking, rule enforcement, and monitoring under Federal and State Clean Air Acts and Clean Air Act Amendments. The regional SJVAPD has provided a means to undertake regional climatology studies for understanding transport and evolution of air pollutants, and a comprehensive approach to reducing air pollution in the entire Valley.

The SJVAPCD has promulgated a series of air quality attainment plans pursuant to requirements of Federal and state Clean Air Acts, complementing the efforts of the California Air Resources Board. These plans include a range of strategies to improve air quality through land use planning and transportation control measures, vehicle inspection programs, industrial point source permit controls, emission offsets, incentive programs to replace high-polluting equipment/vehicles with newer/cleaner technologies, and even regulations aimed at reducing the amount of pollutants transported in the Valley from the coastal (Bay) area. SJVAPCD Rulemaking efforts have focused on cost-effective technologies and measures which have aimed to reduce the most pollutants at the least cost on a regional basis.

Through these attainment plans and implementing regulations (e.g., Rules), the SJVAPCD has reduced emissions of pollutants and pollutants precursors overall and has achieved attainment of some national ambient air quality standards. However, ozone/oxidant air pollutant is a refractive problem. The SJVAPCD has a current designation of Extreme Non-Attainment. Full attainment is not projected until year 2024.

The Reedley General Plan Update 2030 and certified Program Environmental Impact Report, contains significant City goals, objectives, policies and mitigation measures to reduce potential air pollution and reduce emissions of greenhouse gases. While the PEIR was certified and adoption with an over-riding consideration for the intractable regional air pollution problems, policies of the General Plan, PEIR mitigation measures and conditions of approval will be applied to the project.

SJVAPCD Rules provide the main strategy for attaining National and State Ambient Clean Air Standards. Some SJVAPCD Rules would apply to aspects of using the subject property for the requested uses; for example, tenant activities, may involve applications of architectural coatings, use of mobile equipment,

boilers, bakery and grill facilities, etc. that generate the emissions of air pollutants.

The project will not occur at a scale of which the potential to contribute substantially to existing or projected air quality violations, impacts, or increases of criteria pollutants for which the San Joaquin Valley region is under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors). The proposed project is not proposing a use which will create objectionable odors.

The project seeks to minimize short-term impacts to air anticipated during construction, requirements to minimizing idling, use of water for dust suppression and other best practices will be implemented. Also, Project guidelines will incorporate strong encouragement for the use of indigenous materials that will reduce vehicle emissions and therefore carbon impacts in sourcing of materials during construction.

Long-term impacts to air will be further mitigated because of the pedestrian nature of Kings River Village, as opposed to a traditional project of comparable size. Specifically, the immediate access to grocery, retail, professional services, transportation, and recreation all within the residential community will result in far fewer vehicle miles traveled per resident on daily, weekly, monthly, and annual bases than in other sprawling, residential-only developments. Also, Village construction will follow the California Building Code in all respects, and Project guidelines will incorporate recommendations for builders to avoid VOCs (volatile organic carbons) in construction materials and encourage toxic-free building.

Finally, the Project will comply with all applicable air quality rules and regulations and will be conditioned, through the Project conditions of approval, to comply with San Joaquin Valley Air Pollution Control District Rule 9510 (the Indirect Source Review Rule).

Therefore, the project would have a less than significant impact with mitigation incorporated on air quality or global climate change.

Mitigation Measures

1. Project specific mitigation shall be compliance with the San Joaquin Valley Air Pollution Control District Rule 9510 (the Indirect Source Review Rule), as identified in the attached Exhibit B, Project Specific Mitigation Monitoring Checklist, dated March 5, 2015.

2. The proposed project incorporates and implements as applicable PEIR mitigation measures relating to air quality (AQ-1 & AQ-2), as identified in the attached Exhibit C, Mitigation Monitoring Checklist for Final Environmental Impact Report (SCH No. 2010031106) & Reedley General Plan Update 2030, dated February 18, 2014.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
IV. BIOLOGICAL RESOURCES – Would the project:				
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 project would not adversely habitat, wetlands, plants or wildlife, migratory routes, conservation plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?			X	
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 U.S. Fish and Wildlife Service?			X	
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?			X	
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?			X	
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?			X	
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?			X	

The project would not adversely affect habitat, wetlands, plants or wildlife, migratory routes, conservation plans, or other biological resources because no known resources of this type exist on the premises. There is no known threatened or endangered plant or animal species, or migratory fish or wildlife species on the site. Nor is there any wetland, riparian or other sensitive habitats on the site. The proposed development will not interfere with a tree preservation policy or ordinance, or conflict with any habitat conservation or natural community conservation plan. Historically, the site has been routinely disturbed and does not contain any known archeological resources, mineral resources, forest resources, or significant historical or paleontological resources. Nor does the site contain any known unique geologic

features or human remains. The site is not within the rupture of a known earthquake fault, nor subject to strong seismic ground shaking. The site is not within a floodplain or tsunami zone.

Because this project is located on an infill site within urbanized area of Reedley, the project would not have any impact on any protected habitat, wetlands, plants or wildlife, migratory routes, conservation plans, or other biological resources because no known resources of this type exist on the premises. The project has no vegetation or wetlands to provide habitat.

Mitigation Measures

1. The proposed project incorporates and implements as applicable PEIR mitigation measures relating to biological resources (BIO-1), as identified in the attached Exhibit C, Mitigation Monitoring Checklist for Final Environmental Impact Report (SCH No. 2010031106) & Reedley General Plan Update 2030, dated February 18, 2014.

Therefore, no project-specific mitigation for biological impacts is required.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
V. CULTURAL RESOURCES -- Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?				X
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?			X	
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?			X	
d) Disturb any human remains, including those interred outside of formal cemeteries?			X	

Currently, the western portion of the site consists of nothing more than routinely disturbed ground and a small house of no historical significance. There are no structures which exist on or within the immediate vicinity of the site that are listed on, or considered to be eligible for the National, State or Local Register of Historic Places, and the subject site is not within either a designated or proposed historic district. As such, this project will have no impacts on any historical resources.

There is no evidence that cultural resources of any type (including historical, archaeological, paleontological, or unique geologic features) exist within the subject territory. Past record searches for the region have not revealed the likelihood of cultural resources on the subject property or in its immediate vicinity. However, because of the slight possibility of hidden archeological or paleontological resources that may be uncovered during excavation required for this development, the project will adhere to the protocols established in CEQA and the PEIR to address delayed discovery of such resources.

Mitigation Measures

1. The proposed project incorporates and implements as applicable PEIR mitigation measures relating to cultural resources (CR-1 – CR-4), as identified in the attached Exhibit C, Mitigation Monitoring Checklist for Final Environmental Impact Report (SCH No. 2010031106) & Reedley General Plan Update 2030, dated February 18, 2014.

Therefore, no project-specific mitigation for cultural impacts is required.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VI. GEOLOGY AND SOILS -- Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:			X	
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.			X	
ii) Strong seismic ground shaking?			X	
iii) Seismic-related ground failure, including liquefaction?			X	
iv) Landslides?			X	
b) Result in substantial soil erosion or the loss of topsoil?			X	
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 off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			X	
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?			X	
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?			X	

The City of Reedley and the surrounding County of Fresno area has no known active earthquake faults, and is not in any Alquist-Priolo Special Studies Zone. The immediate Fresno area has extremely low seismic activity levels, although shaking may be felt from earthquakes whose epicenter lie to the east, west, and south. Known major faults are over 50 miles away and include the San Andreas Fault, Coalinga area blind thrust fault(s), the Long Valley, Owens Valley, and White Wolf/Tehachapi fault systems. The most serious threat to Reedley from a major earthquake in the Eastern Sierra would be flooding that could be caused by damage to dams on the upper reaches of the San Joaquin River.

Mitigation Measures

1. The proposed project incorporates and implements as applicable PEIR mitigation measures relating to geology and soils (GEO 1 – GEO 4), as identified in the attached Exhibit C, Mitigation Monitoring Checklist for Final Environmental Impact Report (SCH No. 2010031106) & Reedley General Plan Update 2030, dated February 18, 2014.

Therefore, no project-specific mitigation for geology and soils impacts is required.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VII. GREENHOUSE GAS EMISSIONS -- Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X	

Background

When sunlight strikes the Earth's surface, some of it is reflected back into space as infrared radiation. When the net amount of solar infrared energy reaching Earth's surface is about the same as the amount of energy radiated back into space, the average ambient temperature of the Earth's surface should remain more or less constant.

Global climate change (colloquially referred to as "global warming") is the term coined to describe very widespread climate change characterized by a rise in the Earth's ambient average temperatures with concomitant disturbances in weather patterns and resulting alteration of oceanic and terrestrial environs and biota. The predominant opinion within the scientific community is that global climate change is occurring, and that it is being caused and/or accelerated by human activities, primarily the generation of "greenhouse gases" (GHG).

GHGs are gases having properties that absorb and emit radiation within the thermal infrared range, and that would cause thermal energy (heat) to be trapped the earth's atmosphere. It is believed that increased levels of GHGs in the atmosphere can disturb the thermal equilibrium of the earth when natural carbon cycle processes (such as photosynthesis) are unable to absorb sufficient quantities of carbon dioxide and other GHGs in comparison with the amount of GHGs being emitted. It is believed that a

combination of factors related to human activities, such as deforestation, emissions of GHG into the atmosphere from carbon fuel combustion, etc. are causing climate change.

Some GHGs occur naturally and are emitted to the atmosphere through both natural processes and human activities. Other GHGs are created and emitted solely through human activities. Water vapor is the most predominant GHG, and is primarily a natural occurrence: approximately 85% of the water vapor in the atmosphere is created by evaporation from the oceans. The major anthropogenic GHGs (those that enter the atmosphere because of human activities) are carbon dioxide, methane, nitrous oxide and fluorinated gases.

GHGs were not generally thought of as traditional air pollutants because their impacts are global and diffuse in nature, while the criteria air pollutants and air toxins directly affect the health of people and other living things at ground level in the general region of their release to the atmosphere. However, it has been realized that GHGs and associated climate change could also drastically affect the health of populations not only in the U.S., but around the world through sea level rise that displaces populations, causes economic and infrastructure damage, disrupts agriculture, increases heat-related illnesses, exacerbates effects of criteria air pollutants, spreads infectious diseases through proliferation of mosquitoes and other vectors carrying "tropical" diseases into temperate climate zones, and alters/endangers natural flora and fauna in terrestrial and aquatic environments. One oft-cited example of a predicted change in global climate is that the Sierra snowpack could be reduced to as little as 20% of its historic levels, a dire consequence since it is estimated that over 70% of California's population relies on this "frozen reservoir" for its water supply.

The State of California has formally acknowledged these risks and has tasked state and local governments with working toward reduction of potential global climate change. The Governor issued Executive Order No. S-03-05, and subsequently signed Assembly Bill (AB) 32, the Global Warming Solutions Act of 2006, which was codified as Health & Safety Code Section 38501 *et seq.*

There are, at this time, no "attainment" concentration standards established by the federal or state government for GHGs (although several of the GHGs are regulated as precursors to criteria pollutants regulated by the federal and California Clean Air Acts). However, the State has codified a mandate to reduce GHG emissions to 1990 levels by the year 2020. In order to roll back GHG emissions to 1990 levels, a reduction of 174 million metric tons of CO2e would need to be achieved statewide—against the background of California's general population increase and the need for ongoing land and economic development. The combination of the need to reduce and the need to grow equate to a need to reduce per capita GHG emissions by some 290% from the "business as usual" scenario of continuing the former rate of escalated GHG emissions overtime.

It has been recognized that new development projects would potentially add GHG emissions and could exacerbate global climate change problems. In order to standardize evaluation of projects, Senate Bill 97 (codified as Public Resources Code Sections 21083.05 and 21097) requires the State Resources Agency to adopt guidelines for addressing climate change in environmental analysis pursuant to the California Environmental Quality Act (CEQA). The California Air Pollution Control Officers Association (CAPCOA) produced a comprehensive publication on this topic in August of 2010 titled *Quantifying Greenhouse Gas Mitigation Measures*. The Report provides methods for quantifying emission reductions from a specified list of mitigation measures, primarily focused on project-level mitigation. This document is intended to further support the efforts of local governments to address the impacts of GHG emissions in their environmental review of projects and in their planning efforts.

In order to standardize global climate change assessments within the San Joaquin Valley Air Basin, the SJVAPCD adopted a protocol for evaluating land use projects; the 2009 Guidance for Valley Land Use Agencies in Addressing GHG Emission Impacts for new project under CEQA. The District determined that the most appropriate assessment criteria would be oriented to performance based standards to

streamline the CEQA process for determining significance of project impacts, rather than numerical modeling of GHG emissions and emission reductions. Projects meeting the Best Performance Standards ("BPS") established by the SJVAPCD would be determined to have a less than significant cumulative impact on global climate change. If projects could not demonstrate compliance with BPS, then a quantification of GHG emissions and demonstration of a 29% reduction in GHG emissions below the "business as usual" level will be required to determine that a project would have a less than significant cumulative impact.

Long-term impacts to air will be further mitigated because of the pedestrian nature of Kings River Village, as opposed to a traditional project of comparable size. Specifically, the immediate access to grocery, retail, professional services, transportation, and recreation all within the residential community will result in far fewer vehicle miles traveled per resident on daily, weekly, monthly, and annual bases than in other sprawling, residential-only developments.

The multiple family residential buildings are proposed to be designed as two-story structures and all units will incorporate universal design elements. This includes Energy Star® appliances, no VOC paints, low emitting flooring, radiant barrier roof sheathing, high efficiency windows, energy efficient lighting exceeding Title 24 standards by 40% to achieve a Build it Green certification®. The incorporation of these features will reduce the project impacts on greenhouse gas emissions to less than significance.

The Project seeks to promote a high level of energy efficient design and construction. Builders will be strongly encouraged to include photovoltaic solar cells on all structures, whether commercial or residential. Design of all residential units and commercial/office buildings will be oriented as favorably as possible to support the rooftop solar systems. The Village Green Park and transit center will feature rooftop solar wherever possible with the goal to become a net zero energy park and transit facility. The park and transit center will also use high efficiency lighting. The installation of Energy-Star appliances, dual glazed low-E windows, high efficiency insulation, zoned HVAC, natural ventilation, passive solar heating and cooling, VOC-free materials, and other design elements will make the Project energy efficient and sustainable. The incorporation of these features throughout the project will reduce the project impacts on greenhouse gas emissions to less than significance.

Also, electric vehicle charging stations may be installed at the transit center and are expected to be included in the MOU with FCRT with respect to operations and maintenance. The City will have no responsibility for electric vehicle charging costs and maintenance.

The Project adjoins and is immediately west of Reedley's Sports Park, a 50-acre facility that, at build out, will include a wide variety of playing fields. Connections will be made along South Peach Avenue to permit residents to walk or ride bicycles directly into the Sports Park, again helping to reduce vehicle miles traveled ("VMT") and greenhouse gas ("GHG") emissions.

Mitigation Measures

1. The proposed project incorporates and implements as applicable PEIR mitigation measures relating to greenhouse gas emissions (GHC-1), as identified in the attached Exhibit C, Mitigation Monitoring Checklist for Final Environmental Impact Report (SCH No. 2010031106) & Reedley General Plan Update 2030, dated February 18, 2014.

Therefore, no project-specific mitigation for greenhouse gas emissions impacts is required.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VIII. HAZARDS AND HAZARDOUS MATERIAL – Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
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?			X	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			X	
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, would it create a significant hazard to the public or the environment?				X
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?			X	
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?			X	
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			X	
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?			X	

Hazardous Materials

The subject property is not on the CalEPA list of contained sites, and residential properties are not permitted to engage in industrial or commercial activities which would involve the use, transport, store, and dispose of hazardous materials (outside of those approved for household cleaning and yard & garden pest control). Because the above-noted regulation relating to toxic and hazardous materials is a

matter of law, the environmental assessment can rely on compliance without the need for specific mitigation.

Hazardous Facilities

The subject property is not located in any airport safety area, within two miles of a public airport, or directly adjacent to any freight rail lines. Urban areas have overhead and buried power, gas, rail and communication utility lines. Regulations require that contractors verify precise locations of these lines and avoid damaging them during construction activities; again, environmental assessment can rely on compliance without specific additional mitigation.

Therefore, no project-specific mitigation for hazardous materials and hazardous facilities impacts is required.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
IX. HYDROLOGY AND WATER QUALITY -- Would the project:				
a) Violate any water quality standards or waste discharge requirements?			X	
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?			X	
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?			X	
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?			X	
e) 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?			X	
f) Otherwise substantially degrade water quality?			X	

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
g) 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?			X	
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?			X	
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?			X	
j) Inundation by seiche, tsunami, or mudflow?			X	

Water Supply, Water Treatment and Delivery Maintenance

The City of Reedley lies directly over the Kings Basin from which the City extracts its domestic water supply. The Kings Basin is a large groundwater subbasin located within the southern part of the San Joaquin Valley Basin, in the Central Valley of California. The groundwater basin covers an area of 1,530 square miles.

The City of Reedley depends entirely on groundwater pumping from the Kings Basin. The topography of the Reedley area is relatively flat, and the primary slopes within the SOI are those found within the Kings River corridor. Subsurface lateral movement of runoff from the Sierra Nevada Mountains to the east and some general surface runoff in creeks, irrigation ditches and open space, percolation ponds and the Kings River are all a source of replenishment of the groundwater table. The City's groundwater supply is pumped from wells located entirely on the eastern side of the Kings River. The City does not pump or operate any groundwater wells on the westerly side of the Kings River.

The City has historically provided domestic water supply solely through groundwater extraction. The City operates six active water wells and three water storage towers. It is common practice for the City to drill its water production wells at depths greater than 800-feet to ensure sufficient supply and meet State Water Quality standards. This is because water quality in the Kings Basin is generally very good and groundwater quality in the Reedley vicinity is also generally good. In the City of Reedley 2011 Water Quality Report, the City reported that after testing for over 100 constituents, the City's groundwater supply met all health related standards established by the California Department of Public Health, and the U.S. Environmental Protection Agency.

The City of Reedley produced from 2003-2007, 11,474,563,400 gallons of water for public consumption. During the same period of time the average Annual Daily Per Capita Water Use (gpcd) was 290 gpcd (2010 Urban Water Management Plan, Table 3-3, Base Daily Per Capita Water Use – 5-Year Range). In 2008, the City used 1,959,531,000 gallons of water (City of Reedley, 2008 Water Quality Report). In 2010 the City used 1,538,500,000 gallons of water (City of Reedley, 2010 Water Quality Report), and in 2011, the City used 1,450,120,000 gallons of water (City of Reedley, 2011 Water Quality Report). As such, from 2008 to 2011, the City experienced a significant reduction in annual groundwater extraction of approximately 1,563 acre-feet. The projected per capita water use from 2008 to 2011 dropped to "180 gpcd" (Urban Water Management Plan, 3.2.2 Projected Water Deliveries, Page 3-6).

The 2010 Urban Water Management Plan (2013) states the following:

> "The City plans to achieve compliance with the water use targets through water conservation, including metering with commodity rates. The recent implementation of metering and use of commodity rates resulted in a significant reduction in per capita use, from approximately 249 gallons per capita per day (gpcd) in 2006 to 180 gpcd in 2011. The City adopted a tiered rate structure which became effective May 1, 2010. The inclining block structure encourages conservation and discourages waste of potable water supplies by charging higher prices from excessive water uses. (HDR, page 3-10)

This 28% reduction in gpcd exceeds the State mandated 20% reduction by 2020, pursuant to Senate Bill X7-7, also known as the 20x2020 Plan. Upon review of the City of Reedley, 2014 monthly residential water billing there appears to be a continued downward trend of residential consumption of water.

Through the Reedley Municipal Code (RMC) the City has implemented regulations for the conservation of potable water. Pursuant to RMC, Water Conservation, Section 8-1-12(A), the goals of this section are to minimize water use and reduce unnecessary use of potable water supplies. This section of the code provides a definition of "waste of water", irrigation design guidelines, watering schedules and the enforcement process and penalties.

The GPU goals, policies, RMC and supporting plans (UWMP) represent an effort to effectively manage a valued resource. To effectively manage this finite resource the GPU includes numerous goals and policies promoting public education, transparency, conservation and collaboration with other governmental agencies. Implementation of all of these water polices will not wholly mitigate the critical overdraft of the Kings Basin. However, the collective Public Utilities Goals and Policies were specifically designed as a comprehensive set of tools to ensure the avoidance of a critical overdraft and ensure the City's diligent oversight, management and use of a finite water resource.

The City did an initial assessment of the potential water impacts of the project. After evaluating the worst case scenario and discounting the City's immediate efforts to implement the General Plan policies that would further reduce its consumptive use, and/or applying any building standards related to low flow fixtures, it was concluded the project would have a less than significant impact.

In a worst case scenario the City presumed that each dwelling unit, irrespective of housing type consumed 180 gpcd. Therefore, the project's annual consumption would be approximately 54acre feet per year. Pursuant to the Consumptive Use report in the General Plan and relied upon in the Programmatic EIR the City has a current deficit of approximately 1,000 acre feet. Therefore, without considering any other variables as described above, or other water reduction efforts made to reduce the consumptive use in the City, the addition of 54 acre feet would increase the annual deficit by .054 percent. Therefore, it was reasonably concluded that the project would have minimal, if any impact to the City's water delivery system.

Wastewater Management

The City currently operates its own wastewater treatment plant (WWTP) located at 1701 West Huntsman Avenue, Reedley, California. The WWTP Phase 1 project was recently completed which expanded the plant's capacity to 5.0 million gallons per day (mgd) and constructed new percolation ponds. The wastewater plant has also been designed to readily expand to a total capacity of 7.0 mgd. At total plant build-out the plant could accommodate the anticipated growth for the next 20 years. The plant is currently operating at approximately 2.0 mgd and based upon a review of capacity and expertise of the City in

operating such a plan, it was concluded that the addition of 341 residential dwelling units would not exceed the total capacity of 5.0 mgd.

Additionally the WWTP site contains three additional stormwater basins. According to the City of Reedley, Waste Water Treatment Plant Draft Environmental Impact Report (2006), "New percolation ponds (approximately 20 acres total) will be constructed within the WWTP boundary, and will enable the plant to continue to provide 100 percent effluent reclamation via percolation" (Page 2-7). It is also noteworthy that part of the City's permit for the WWTP is that the City is required to discharge effluent reclamation waters between October and May, into three specific ponding basins for recharge purposes. According to WWTP records, the five-year average of effluent discharge used for percolation purposes is 704.4 million gallons; and, in 2012, 654.0 million gallons were discharged into these percolation ponds for groundwater recharge.

According to orders and permits issued by the California Water Quality Control Board for the City's WWTP, certain limits have been placed on discharge flows to percolation ponds and the Kings River. The WWTP is limited to a monthly average discharge flow of 3.5 million gallons per day (mgd) of waste water to approximately 39 acres of percolation ponds. The City is also limited to a monthly average discharge flow of 1.75 mgd of waste water into the Kings River. According to the Alta Irrigation District's Amended Groundwater Management Plan (2010), "effluent discharge by the City of Reedley ('Agency') from its sewer treatment plant into the Kings River should not be considered to be the prohibited exportation of groundwater, if such effluent recharges or benefits underground supplies available to landowners in the District"

Drainage, Stormwater Management and Flood Control

Storm water flows into street collection systems and enters the storm drain inlets where it is conveyed through sub-surface drainage piping to one of several storm water retention basins located throughout the City of Reedley. The design of the storm drainage collection system is based upon the peak flow that the pipeline collection system can carry and the topographic slope (or gradient) available in the area. The design of a storm water retention basin is based upon the total volume of runoff that the retention basin must be capable of storing. The estimate of peak flow and total runoff volumes includes calculations utilizing hydrological principals.

The City has ten drainage zones, nine permanent storm water retention basins, underground storm drains, storm drain inlets, a drainage ditch, and a pump station distributed throughout the City. For example, the Buttonwillow Irrigation Ditch is located on the east side of the City. Storm drains also carry water to one of three retention basins. The Camacho Park Retention Basin is located at the northeast corner of North and Columbia Avenues. Another retention basin is located at the end of Hemlock Avenue and Curtis Avenue, adjacent to the Reedley Parkway. Both of these retention basins are designed to use gravity to fill with water. Storm water is collected in these basins and percolates through the soil or evaporates into the air. The third retention basin is located at the intersection of Washington Avenue and Carolyn Lane. Storm water from this basin is pumped to an irrigation canal. See Figure 3.2 - Map of Retention Basin Sites. In addition, the Waste Water Treatment Plant is a significant source of groundwater recharge, as previously discussed above in the Public Utilities - Waste Water section.

There are also two well-defined areas in the City of Reedley that collect stormwater runoff, which flows directly to Alta Irrigation District (AID) facilities. The northern area is generally bound by Parlier, Frankwood, Manning and Hollywood Avenues. The second area is generally bound by North, East, and Dinuba Avenues. The two areas described above consist of approximately 20 acres of land. The amount of annual flow to the AID facility could be calculated based upon the annual rainfall level.

The storm drain runoff from this 20 acre area is an indirect source of groundwater recharge for AID. The collected stormwater runoff drains into irrigation ditches and canals which are an excellent opportunity for groundwater recharge. Any runoff not absorbed through seepage is available to AID for further recharge or delivery to their customers, which in turn reduces the potential need for drawing more water from the Basin for remaining service needs.

The National Pollutant Discharge Elimination System (NPDES) program controls and reduces pollutants to water bodies from point and non-point discharges. The NPDES Phase II Storm Water Program requires separate municipal storm sewer systems to obtain a permit and develop a storm water management program designed to prevent harmful pollutants from being washed by storm water runoff into local water bodies. The program must include public education, public participation and involvement, illicit discharge detection and elimination, construction site runoff control, post-construction runoff control and pollution prevention, and good housekeeping.

The City's Stormwater Management Implementation Plan (Starr Engineering 2007), represents the five-year management strategy for controlling the discharge of pollutants to the "maximum extent practicable" in stormwater runoff from the City urban area during the first NPDES stormwater permit term. The plan was prepared in support of the City's application for a Municipal Stormwater (MS4) Permit to the Central Valley Regional Water Quality Control Board. The plan includes information on federal, state, and local storm water quality regulations, stormwater quality control strategies and programs to be implemented in Reedley, storm water quality monitoring and assessment, and plan implementation requirements. The City is currently in compliance with all State Stormwater regulations and in the process of updating its Storm Drainage Master Planning Report. It is anticipated that the Master Plan will be complete during the early part of 2014.

The RMC, Stormwater Management Section 8-5-1, sets forth the local governing regulations for implementing stormwater quality management strategies consistent with its General Construction permit from the Central Valley Regional Water Quality Control Board. The regulations are applicable to all storm water generated on any developed or undeveloped urban land within the City or conveyed by the public storm drain system. The critical component of the regulations is as follows:

> All persons engaged in activities which will or may reasonably be expected to result in pollutants entering the public storm drain system shall undertake best management practices (BMPs) to minimize such pollutants, shall provide protection from accidental discharge of pollutants to the public storm drain system and comply with cleanup and notification requirements of this chapter. Such measures shall include the requirements imposed by federal, state, county, or local authorities. BMPs are site specific and are described in the documents "Storm Water Best Management Practice Handbook: Construction"; "Storm Water Best Management Practice Handbook: New Development and Redevelopment"; "Storm Water Best Management Practice Handbook: Industrial and Commercial"; "Storm Water Best Management Practice Handbook: Municipal"; or other guidance documents available from EPA and/or RWQCB. (RMC, Section 8-5-1)

To support these and other storm drainage facilities the City has created and implemented an impact fee program (Update of Development Impact Fee, dated January 17, 2005). The current drainage system is comprised of street gutters and underground pipes that convey the storm event runoff to detention basins, irrigation canals and the Kings River. $11,721,700 of the total cost constructing and maintaining the drainage system has been allocated to new development projects and is being spread to the various land uses in proportion to their need for storm water runoff capacity based on the following table of storm drainage runoff coefficients (Update of Development Impact Fee, dated January 17, 2005). The development impact fee is now being charged and collected at the time a building permit is issued.

The City has also recently purchased acreage for the purpose of groundwater recharge. As the City increases its groundwater recharge capability, the City has an opportunity to further reduce its consumptive use. The City has consulted with Kenneth D. Schmidt and Associates who has concluded that the recharge facility would reduce the existing water deficiency of approximately 1,000 acre-feet per year in the City by about 10 percent. Therefore, the project's projected 54-acre foot consumption would not exceed the expected 100 acre foot reduction in consumptive use. Over the build-out period of the project, the City will still realize a significant reduction in the consumptive use, even with the addition of the Kings River Village Project.

Based on a review of the project size and location, the project will not substantially alter the existing drainage pattern or cause drainage capacities to be exceeded. It is not located in a 100 year flood hazard area, nor does it propose structures within such an area. Given its location and existing infrastructure, the project does not expose people or structures to a significant risk of flooding or inundation.

Mitigation Measures

3. Project specific mitigation shall include the payment of Water Supply/Holding and Water Distribution Facilities, pursuant to the City's Development Impact Fee Program, as identified in the attached Exhibit B, Project Specific Mitigation Monitoring Checklist, dated January 26, 2015.

4. Project specific mitigation shall include the payment of Wastewater Treatment and Collection, pursuant to the City's Development Impact Fee Program, as identified in the attached Exhibit B, Project Specific Mitigation Monitoring Checklist, dated January 26, 2015.

5. Project specific mitigation shall include the payment of Storm Drainage Facilities, pursuant to the City's Development Impact Fee Program, as identified in the attached Exhibit B, Project Specific Mitigation Monitoring Checklist, dated January 26, 2015.

6. The proposed project incorporates and implements as applicable PEIR mitigation measures relating to hydrology and water quality (HYD-2), as identified in the attached Exhibit C, Mitigation Monitoring Checklist for Final Environmental Impact Report (SCH No. 2010031106) & Reedley General Plan Update 2030, dated February 18, 2014.

Therefore, no project-specific mitigation for hydrology and water quality impacts is required.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
X. LAND USE AND PLANNING - Would the project:				
a) Physically divide an established community?			X	
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?			X	

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?			X	

The City has actively been involved in the San Joaquin Valley Blueprint planning process since 2006. In 2010, the San Joaquin Valley Blueprint Council adopted 12 Growth Principles, which were incorporated into the process of updating the Reedley General Plan. These Growth Principles as well as goals and the policies within the General Plan Update are used to determine project consistency. The Kings River Village is consistent with the following San Joaquin Valley Blueprint Smart Growth Principles:

1. Create a range of housing opportunities and choices.

2. Create walkable neighborhoods.

3. Foster distinctive, attractive communities with a strong sense of place.

4. Make development decisions predictable, fair, and cost-effective.

5. Mix land uses.

6. Preserve open space, farmland, natural beauty, and critical environmental areas.

7. Provide a variety of transportation choices.

8. Strengthen and direct development towards existing communities.

9. Take advantage of compact building design.

10. Enhance the economic vitality of the region.

11. Support actions that encourage environmental resource management.

On February 25, 2014, the City Council approved the Reedley General Plan Update 2030 (GPU) and certified the environmental analysis. As much as the Council's affirmation was the culmination of a very long process, their action also initiated the next steps toward Reedley's future. The GPU goals and policies provide an overall direction for decision-making on development proposals and the day-to-day activities of the City's elected officials and staff. The GPU also provides developers of future proposed projects a sense of certainty regarding the City's development expectation. Implementation of the GPU's goals and policies will stimulate and cause a positive, broad reaching effect on the surrounding agricultural industries, the quality of life for its citizenry, delivery of public utilities, and impacts to the community's social and economic vitality throughout the entirety of the planning horizon (2030).

The overall guiding land use principles described in the General Plan are designed to provide an overall direction to assist decision-makers in determining the appropriateness of a request to changing either a planned land use or zone district designation. Those guiding principles are described in detailed statements of goals and polices outlined in the approved GPU (GPU, 2.3 Land Use Element Guiding Principles). The Project as proposed achieves all of the City's Land Use Element Guiding Principles in the General Plan 2030. These principles, and the ways in which the Project satisfies them, are as follows:

(a) Protect the agricultural economic base of the Reedley area by encouraging the preservation of the maximum feasible amount of productive and potentially productive agricultural land. *The Project is within City boundaries on regularly disturbed, essentially vacant land zoned industrial/mixed use and that does not currently support any agriculture. Additionally, approximately 50% of the project sits on land that is designated for priority development as a by-passed parcel in Reedley's General Plan 2030 (LU2.5E). Thus, the project will not result in any impacts to agriculture.*

(b) Plan for urban growth in a manner that minimizes impacts on agriculture and the consumption of agricultural land. *The Project is within City boundaries on highly disturbed, essentially vacant land zoned industrial/mixed use and that does not currently support any agriculture. Thus, the project will not result in any impacts to agriculture.*

(c) Increase residential densities to reduce the impacts related to loss of agricultural lands. *The Project includes single-family residential housing at an average density of 21 units per acre, well above the lower densities of most existing neighborhoods in Reedley and the Project is within City boundaries on highly disturbed, essentially vacant land zoned industrial/mixed use and that does not currently support any agriculture. Thus, the project increases average residential densities and will not result in the loss of any agricultural lands.*

(d) Establish a pattern of urban development which provides for the economically efficient provision of urban services with particular emphasis on sewer, water and storm drainage infrastructure. *The Project is served at its perimeter boundaries by existing sewer and water infrastructure with sufficient capacity to accommodate the Project. Storm drainage will be sustainably reclaimed through a dedicated retention basin and harvesting of rainwater for irrigation. Project wastewater will be sent to the City sewer system. Groundwater recharge will result from the use of pervious pavement in the park, minimization of paved asphalt areas that have a high runoff co-efficient and infiltration of winter rains in excess of storage capacity. The Project will also incorporate existing public bus services through a public/private partnership with the FCRTA and to which the FCRTA has verbally committed as well as Kings Canyon Unified School District buses based on a strong commitment by the School District.*

(e) Seek a balanced and compatible land use pattern which accommodates projected population growth and encourages alternative transportation such as walking, bicycling or transit. *The Project includes an internal jobs/housing balance and includes walking, bicycling and transit priorities including a transit center and a compact, mixed-use composition, to encourage alternative transportation. Housing densities are greater than that anticipated in Reedley's General Plan 2030 and analyzed in the associated FEIR. City population totals are projected to increase by almost 4,000 people during project build out (2016 through 2021), with the project contributing approximately 950 of those residents (based upon an average 2.8 persons per home - adjusted for seniors/apartments).*

(f) Provide transitions between various land uses and intensities using high quality design. *The Project is utilizing a Vesting Tentative Subdivision Map with development conditions and a Conditional Use Permit with Community Design Guidelines to ensure a high level of architectural design quality and thematic consistency.*

(g) Integrate land use planning, transportation planning, and air quality planning to make the most efficient use of public resources. *The Project includes a commitment to a balanced mix of uses, walkable streets, renewable resource energy features, storm water reclamation, water conservation, and transit. The Project includes energy and water-saving features and avoids all impacts to land currently used for agriculture or zoned for agricultural uses. The Project includes features to integrate existing mass transit services, and has a verbal commitment from*

the providing agencies (FCRTA and the Kings Canyon Unified School District) for such integration.

(h) Development in the planning area shall occur in a fashion that protects and enhances air quality and water quality. *The Project will enhance air quality through aggressive measures to reduce auto dependency for residents and visitors alike, which will result in minimizing long-term emissions when compared to conventional development. See Greenhouse Gas Section. Water quality is enhanced through reduced residential consumption, particularly stormwater capture and irrigation re-use, reducing the demand on potable water for the project, as well as bio swales that include a filtration membrane to ensure the quality of stormwater input to a dedicated retention basin.*

(i) Public open space shall be made an integral part of new development in the planning area. *The Project immediately adjoins Reedley's 50-acre sports park and further includes a ±3-acre Village Green Park for active and passive community use, two common green areas for the use of the associated units, two pools, and multiple community courtyards.*

Moreover there are also specific Land Use Element goals and policies, which when applied, would further indicate the appropriateness of the request. In this case, these goals and policies further support the zone district reclassification, as well as, the potential future approval of the vesting tentative tract map and conditional use permit applications. Below are those directly applicable policy statements:

LU 2.4.2 Develop well-designed and landscaped major gateways or entrances to the City at the following locations:

(d) East Dinuba Avenue

LU 2.5.12: New urban development should occur in an orderly manner with initial development occurring on the available undeveloped properties within the City's limits which would be considered in-fill, by-passed parcels or in parcels in close proximity to the urban core, places of employment and established neighborhoods.

LU 2.5.13: The City should promote and provide urban services to development within the City as a means of controlling and directing growth.

LU 2.5.15: Provide transitional design between land use types and high quality urban uses.

LU 2.5.16: The City shall encourage in-fill projects that incorporate pedestrian-oriented design.

LU 2.5.17: The City shall propose plan areas and zone districts that can accommodate mixed use planning that will provide a combination of residential, commercial services and employment opportunities all within close proximity.

LU 2.7.3 Guide new development into compact neighborhoods around commercial centers, public open space and schools.

LU 2.7.4 Incorporate interface design standards (e.g. setbacks, fencing) into each residential and commercial zone district to ensure compatibility.

LU 2.7.6 Ensure that residential development occurs in areas that have sufficient infrastructure to accommodate the density of residential development being proposed.

LU 2.7.7 Residential development shall be designed in a manner so that new development is well connected to the surrounding area and to encourage pedestrian and bicycle transportation.

LU 2.7.8 Provide incentives for development, such as reduced lot size, setbacks, and narrower street widths for developments, and include amenities such as front porches, increased front yard landscaping, and reduced dominance of the front yard by garages and driveways.

LU 2.7.9 New subdivisions shall annex into or form a landscape and lighting district to maintain public improvements including but not limited to walls, street trees and lighting.

LU 2.7.16 Multiple-family developments shall be designed with the following features:

(a) Units fronting on streets shall have entryways that face the public street with doorways and windows.

(b) Units shall include details that add to the appeal of buildings, such as painted trim, shutters, and arbors.

LU 2.7.18 Multiple-family residential projects shall include provisions to ensure the safety and security of residents, the maintenance of buildings and landscaped areas, and effective and responsible management.

LU 2.7.21 Mixing of residential uses, densities and lot sizes shall be encouraged, while maintaining traditional neighborhood values and emphasizing concepts for livable, walkable neighborhoods.

LU 2.7.23 Future commercial development in the planning area shall be well designed to respect neighborhood scale and traditional architectural design. Toward that end, commercial development will be reviewed utilizing the following design standards:

(a) Parking space requirements shall be minimized for commercial developments. Parking lots should be segmented to minimize the impact of parking on the streetscape. In particular, parking should be located to the rear or to the side of commercial and office buildings.

(b) Incorporate interface design standards (e.g.; setbacks, fencing) into each residential and commercial zone district to ensure compatibility.

(c) Commercial development shall be designed to facilitate pedestrian and bicycle access and function, featuring outdoor seating, pedestrian plazas and wide, shade-covered walkways.

(d) Landscaping, particularly shade trees and drought tolerant plants, shall be maximized in all commercial developments.

LU 2.7.24 Ensure that all commercial land uses are developed and maintained in a manner complementary to and compatible with adjacent residential land uses, to minimize interface problems with the surrounding environment, and to be compatible with public facilities and services. As part of the City's project review process, major emphasis will be given to site and building design in order to ensure and/or preserve functionality and community aesthetics.

(a) Development projects shall appropriately interface with adjacent properties.

(b) Shopping Centers shall embrace a unified building, landscaping and signage design.

(c) Building facades with visible sides of buildings shall not develop with featureless, "blank walls".

(d) Adequate screen roof-mounted mechanical equipment, and ensure that such equipment adhere to noise standard set forth in the General Plan Noise Element.

LU 2.7.25 Off-street parking for commercial areas shall be designed to adequately support surrounding land use pattern. Off-street parking areas shall also include landscaping to provide shading for at least 50 percent of the surfaced area within 10 years from planting.

LU 2.7.26 Encourage efficient use of land by allowing a percentage of compact car parking spaces.

The proposed Kings River Village project is consistent with the RMC, the UR (*Urban Reserve*) Zone District (RMC, §10-5), ML (*Light Industrial*) Zone District (RMC, §10-9A) and RMC, §10-13-9, Mixed Use.

The 19.72-acre easterly portion of the project site is classified as UR (*Urban Reserve) zone* district (APN: 370-024-24) and has been fallow for at least ten years, has been by-passed for development, and continues to be reserved for future development. To minimize potential premature development of lands, the granting of a conditional use permit in lieu of requiring a change of zone may occur prior to actual development (RMC §10-5-1(B)). Therefore, the Kings River Village has submitted a conditional use permit, in accordance with RMC §10-5-3.

The remaining westerly portion of the subject property area is classified with a ML (*Light Industrial*) Zone District designation (APN: 370-024-20 & 370-024-21). Because the Kings River Village project is a mixed use project, the applicant has submitted the required conditional use permit to satisfy the requirements of the RMC.

Project Consistency With Reedley Municipal Code §10-13-9

The legislative intent of RMC, §10-13-9 is to encourage more dense and orderly development of urban uses. Developments are consistent with this intent when they include gathering places where residents may interact, work, and obtain goods and services in the same general location and emphasize pedestrian activities and linkages, priority transit routes and facilities to serve the development. The statute makes clear that the inclusion of these attributes is intended to reduce the number of vehicular miles traveled by promoting alternative modes of transportation, including pedestrian pathways, bicycling pathways, and public transportation. To accomplish these goals, the statute sets minimum density requirements and permits mixed use development. The statute defines "mixed use" as,

> A concept and/or design that is a finite development project within whose boundaries residential uses are introduced and fully integrated with office, commercial and light industrial land uses, designed to offer more intensification and concentration of urban uses, and promote a walkable environment in a locale where residential uses are in close proximity to places of employment and commerce.

As shown below, the Project satisfies each of the requisite elements and Findings set forth in RMC, §10-13-9.C.1.b(1) through §10-13-9.C.1.b(5)2.

(a) The project shall be a minimum of four (4) acres. (RMC, §10-13-9.C.1.b(1).) As noted above, the Project is 38.2 acres. Therefore, the Project is well in excess of this minimum area requirement.

(b) The integration of a residential use must be developed have a residential planned land use density of 20 units per acre (based on the Project's 38.7 acres). (RMC, §10-13-9.C.1.b(2)) The overall Village residential density averages 21 units per acre, in excess of the minimum requirement.

(c) The subject property shall not share a common property line on two (2) or more sides with a designated heavy industrial zone district. (RMC, §10-13-9.C.1.b(3)) There are no heavy industrial zoned properties adjoining the Project. Therefore, this element is satisfied.

(d) The project shall be architecturally unified throughout the entire site and compatible with surrounding development. (RMC, §10-13-9.C.1.b(4)) As specified in the Master Development Guidelines, the various product types within the mixed use Village consistently embrace a culturally authentic design respecting rural archetypes while introducing a more urban appearance. The proposed architecture is compatible with the Village Commons affordable housing project immediately to the north. All other surrounding development is light industrial.

(e) A project may be phased over time, however, each phase shall contain an integration of a minimum of two (2) of the mix of uses. (RMC, §10-13-9.C.1.b(5)) Three of the Village's four phases include creation of multiple uses. Phase One includes retail, medical office, professional service, and residential uses. Phase Two includes residential, recreational, and transit uses. Phase Three includes senior living, retail, and professional service uses. Phase Four includes only residential uses but will be immediately adjacent to Phase Three and its mix of uses and will integrate with the uses developed in Phases One through Three. At all times following the first stage of development, the Project will include a minimum of two or more uses.

Mixed use developments must also satisfy the development standards set forth in RMC, §10-13-9.D.1 through §10-13-9.D.4, which the Project does as follows:

(f) The development standards of the underlying zone district shall generally guide the development of the subject property. (Reedley Municipal Code § 10-13-9.D.1) As noted above, the Project will satisfy every element required for mixed use in a "ML" zone.

(g) The mix of residential use with permitted office/commercial/industrial uses shall occur both in the horizontal and vertical axes except that the director may waive the requirement for a vertical mix of use, if the design of the project, or the inclusion of a residential component to an existing development illustrates performance standards that meet the intent of the section by providing an integrated, well designed network of pedestrian pathways connecting the places of residences with places of work, commerce, and open space areas. (RMC, §10-13-9.D.2.) Phases One and Three of the Village will include a mix of use types both in the horizontal and vertical axes.

(h) Each building within a mixed use development project shall have a minimum of two (2) stories. Notwithstanding the foregoing, any use for seniors' independent or congregate care living shall be permitted to limit their buildings to one story conditioned upon architectural compatibility with the remainder of the two-story buildings in the mixed use development project. (RMC, §10-13-9.D.3.)

2 Only sections Reedley Municipal Code § 10-13-9.C.1.b(1) through 10-13-9.C.1.b(5) are discussed herein, as Reedley Municipal Code § 10-13-9.C.1.b(6) through 10-13-9.C.1.b(9) set forth affirmative obligations on the part of the City, and therefore are not relevant to the evaluation of the Project's consistency with Reedley Municipal Code § 10-13-9.

With the exception of the senior independent living units, which are proposed as one story, each of the buildings in the Project are proposed to have at least two stories. The architectural theme of the senior living units is fully compatible will all other adjoining uses within the Village.

(i) If modifications to the development standards are proposed, the applicant is required to provide supporting evidence for the modification of the general standards, which shall be submitted with the project application. (Ord. 2014-001, 5-13-2014 & RMC, §10-13-9.D.4.) The Master Developer shall remain the Applicant throughout build out for the purposes of any proposed modifications to the development standards.

In order to approve future development projects, each project must be substantially consistent with the GPU goals and policies. To ensure that future projects do not significantly affect the environment the City's implementation of the GPU goals and policies will serve as a mitigation tool for avoiding or reducing project-specific and cumulative environmental effects of resulting from build out of the City pursuant to the GPU. The mitigation measures themselves are designed to fill "gaps" that may exist between the level of impact avoidance or reduction provided by implementation of GPU goals and policies, and the level of impact avoidance or reduction needed to mitigate significant impacts to a "less than significant level".

These policies and mitigation measures were designed as an enforceable commitment and not merely adopted to be disregarded as a formality, pursuant to Resolution No. 2014-015. Within this Resolution, the Findings of Fact states:

"To the extent that these findings conclude that various mitigation measures outlined in the Final EIR are feasible and have not been modified, superseded or withdrawn, the City hereby binds itself to implement these measures. These findings, in other words, are not merely informational, but rather constitute a binding set of obligations that will come into effect when the City Council adopts a resolution approving the Project."

On March 11, 2014, the City Council approved Resolution No. 2014-020, which approved the Reedley General Plan 2030 Update-Work/Implementation Plan (WIP). The purpose of this Plan is to outline the timelines of new policies and legislation necessary to move toward full implementation of the GPU. The WIP lists the new policies to be undertaken, timing of initiation and anticipated completion, responsible Department, and potential funding source. For the WIP, staff reviewed all of the GPU policies and selected only polices which were time sensitive and specifically state implementation within one year from the adoption of the GPU. Therefore, each proposed policies and/or proposed legislative action will require consideration and approval by the City Council over the duration of the 2014-2015 Plan period.

It should be also noted that there are many policies which will be implemented on an ongoing basis and are relevant and part of the evaluation of any future entitlement submitted for approval.

The WIP was also developed because it may take several years to develop the new policies as well as implementation of the various annual reviews that are required. The WIP will may also serve as a performance based report card for Council, as City staff is required to prepare an annual report "describing progress made toward the development, adoption and implementation of these policies" (e.g., GPU-CIR 3.10.18, CIR 3.10.19A, COSP 4.3.3).

The subject property is located within the boundaries of the GPU. The proposed Kings River Village is consistent with the San Joaquin Valley Blueprint Council adopted 12 Growth Principles and recently adopted General Plan 2030, Land Use Element, as described above. The Kings River Village is also consistent with the RMC zone district designation and the applicant has appropriately filed a conditional use application, also described at length above. Therefore, this project is consistent with the required

Findings, set forth in the Reedley Municipal Code and State law (Subdivision Map Act, California Government Code Section 66400 et. seq.).

Therefore, the appropriateness of the proposed project has been examined with respect to its consistency with guiding land use principles, goals and policies of the Reedley General Plan Update 2030 and regulatory standards set forth in the Reedley Municipal Code and its compatibility with surrounding existing or proposed uses. These factors have been evaluated as described above. Upon consideration of this evaluation, it can be concluded that Vesting Tentative Map No. 6096 and Conditional Use Permit Application No. 2014-05 are appropriate for the subject property. Based upon this analysis, staff has determined that this project is consistent will all applicable goals, policies and objectives in the GPU and any applicable regulations.

Therefore, no project-specific mitigation for land use impacts is required.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XI. MINERAL RESOURCES -- Would the project:				
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?				X
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?				X

The subject site is not located in an area designated for mineral resource preservation or recovery, and there are no mining or mineral extraction being proposed.

Therefore, no project-specific mitigation for mineral resource impacts is required.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XII. NOISE -- Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			X	
b) Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?			X	

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?			X	
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?			X	
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 expose people residing or working in the project area to excessive noise levels?			X	
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?			X	

Noise is an important factor which can influence the quality of life in the City of Reedley. Such exposure to excessive noise levels can adversely affect human health. Therefore, we must recognize the interrelationship of the noise element to land use, housing, circulation and open space. The purpose of the General Plan Noise Element is to identify noise sources that exist within the City and proposed Planning Area. The Noise Element also establishes goals and policies to minimize potential adverse impacts from transportation and stationary noise to sensitive land uses such as residences, schools, churches and hospitals.

The methods used in the preparation of the Noise Element are defined by California Government Code Section 65302 (f) and the Guidelines for the Preparation and Contents of Noise Elements of the General Plan, adopted and published by the California Office of Noise Control (ONC). The ONC Guidelines provide definitions related to major noise sources, noise-sensitive uses (receptors), and identifies the types of major sources to be quantified. The current adopted guidelines give local governments' flexibility in identifying local levels of concern, in identifying sensitive uses, and in tailoring the noise element to local conditions.

A noise assessment was completed in Reedley in 2010 as part of the general plan update. Through that study it was determined that there are four major sources of community noise within the Planning Area: traffic on major local roadways, rail operations on the San Joaquin Valley Railroad (SJVRR), commercial/industrial facilities and aircraft operations at the Reedley Municipal Airport. Due to Reedley's location in a major agricultural area, noise from farming activities is also a concern.

According to the Government Code and ONC Guidelines, noise exposure information should be developed in terms of the Day-Night Average Level (DNL) or Community Noise Equivalent Level (CNEL) for transportation related noise sources. Analytical noise modeling techniques are typically used to measure major noise sources (traffic and railroads) within the study area. The CNEL descriptor was developed for the quantification of aircraft noise and used to measure noise sources at the Reedley Municipal Airport. These noise sources are then quantified for evaluating their impacts on sensitive

receivers and land uses. This noise element was prepared in accordance with State law, ONC and an Environmental Noise Assessment, prepared by Brown-Buntin Associates, Inc.

Noise sensitive land uses identified in the Government Code and applicable in the City of Reedley would be residential development, schools, hospitals, churches and libraries. Sensitive noise sources and receivers are listed in Table 6-1 - Noise Sensitive Receivers Reference and further illustrated on Figure 6.1 - Noise Sensitive Receivers Map (GPU, Pages 166 & 167).

Noise is generally defined as "unwanted sound", which is a subjective determination of measureable physical phenomena. Ambient noise levels are a major determinant of "quality of life". Noise levels not only affect the utility and enjoyment of property, they directly affect property values and affect human health.

The City Noise Element establishes a land use compatibility criterion of 60dB DNL for exterior noise levels in outdoor activity areas of new residential developments. Outdoor activity areas generally include backyards of single family residences and patios and common open space areas in multi-family developments. The intent of the exterior noise level requirement is to provide an acceptable noise environment for outdoor activities and recreation. Furthermore, the Noise Element also requires that interior noise levels attributable to exterior noise sources not exceed 45 dB DNL. The intent of the interior noise level standard is to provide an acceptable noise environment for indoor communication and sleep.

Table 6.1.2-A – Allowable City-Wide Noise Exposure

ALLOWABLE TRANSPORTATION SOURCE NOISE EXPOSURE		
	Noise Sensitive Land Uses	**New Transportation Noise Sources**
Indoor	45	45
Outdoor	60	60
1. This table is applicable to noise sources created by either new development and/or new transportation projects. 2. Based on an evaluation of the existing condition and proposed project, the Community Development Director may allow exterior exposure up to 65 dB DNL where practical application of construction practices has been used to mitigate exterior noise exposure.		

Table 6.1.2-B - Allowable Noise Exposure

ALLOWABLE STATIONARY SOURCE NOISE EXPOSURE		
	Daytime (7:00 a.m. to 10:00 p.m.)	**Nighttime (10:00 p.m. to 7 a.m.)**
Hourly Leq, dBA	55	50
Maximum Level, dBA	70	65

1. As determined within outdoor activity areas of existing or planned noise-sensitive uses, if outdoor activity area locations are unknown, the allowable noise exposure shall be determined at the property line of the noise sensitive use.

2. Based on an evaluation of the existing condition and proposed project, the Community Development Director may allow exterior exposure up to 65 dB DNL where practical application of construction practices has been used to mitigate exterior noise exposure.

The City of Reedley is bisected, in part, by the Exeter Branch of the San Joaquin Valley Railroad (formerly Southern Pacific Railroad). The rail line is located on a northwest-southeast corridor through the center of Reedley. The community's major industrial belt is concentrated on both sides of the rail corridor, both through the central core and through the southeastern quadrant of the Planning Area. This combined rail and industrial corridor is the principal noise generator within Reedley. The corridor's impact on residential uses and on sensitive receivers is minimized, however, due to the attenuation provided by the existing Central Business and Service Commercial uses located immediately northeast of the tracks and by the Service Commercial strip located along the southwest side of "I" Street.

Further, practical application of construction practices and daily construction scheduling between the hours of 7:00 a.m. and 5:00 p.m. will be used to mitigate exterior noise exposure, and the project will incorporate and implement, as applicable, the PEIR mitigation measures relating to noise and General Plan Noise Element Polices. The City therefore concludes that, even if construction-related exterior noise exposure in excess of 65 db occurs, the impacts will be intermittent and less than significant. This conclusion is bolstered by the fact that the project is located sufficiently far from sensitive receptors, including schools, workers and residents, that construction phase noise even in excess of threshold levels will result in be less than significant impacts.

The project is not located within an airport land use plan or within two miles of an airport or private airstrip. The project is located in proximity to an active railroad line.

Mitigation Measures

1. The proposed project incorporates and implements as applicable PEIR mitigation measures relating to noise (N-1), as identified in the attached Exhibit C, Mitigation Monitoring Checklist for Final Environmental Impact Report (SCH No. 2010031106) & Reedley General Plan Update 2030, dated February 18, 2014. Prior to approval of the Site Plan Review application, the applicant will be required to provide evidence of compliance with allowable noise exposure (GPU, Table 6.1.2-B-Allowable Noise Exposure, Page 170) and all other applicable Noise Element Policies, (GPU, Chapter Six, Noise Element, Page 165).

Therefore, no project-specific mitigation for noise impacts is required.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIII. POPULATION AND HOUSING -- Would the project:				
a) Induce substantial 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)?			X	
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?			X	
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?			X	

On February 11, 2014, the City Council adopted the 2008-2015 Housing Element, The Housing Element is intended to provide citizens, public officials, and the general public with an understanding of the housing needs in the community and set forth an integrated set of policies and programs aimed at the attainment of defined goals to meet those needs.

According to California Government Code Section 65581, it is the intent of the Legislature in enacting Housing Element Law:

(a) To assure that counties and cities recognize their responsibilities in contributing to the attainment of the State housing goal

(b) To assure that counties and cities will prepare and implement housing elements that, along with federal and state programs, will move toward attainment of the state housing goal

(c) To recognize that each locality is best capable of determining what efforts are required by it to contribute to the attainment of the state housing goal, provided such a determination is compatible with the state housing goal and regional housing needs

(d) To ensure that each local government cooperates with other local governments in order to address regional housing needs

The Housing Element was prepared pursuant to Sections 65580 through 65589 of the California Government Code and contains a statement of goals, policies, objectives and programs for the development of housing in the community. State housing law mandates that local governments adequately plan to meet the existing and projected housing needs of all economic segments of the community. The law acknowledges that, in order for the private market to adequately address housing needs and demand, local governments must adopt land use plans and regulatory systems that provide opportunities for, and do not unduly constrain, housing development.

The approved Housing Element was submitted to the HCD for their review on December 6, 2013. HCD did provide written findings which outline areas which if adjusted, or if further clarification was provided, the Element would be in statutory compliance. On January 24 and February 3, 2014 staff provided

additional revisions to the HCD comments. Staff has worked with HCD staff over the past months and made the required clarifications.

On February 4, 2014 the City of Reedley received a letter from the HCD indicating that the City of Reedley 2008-2015 Housing Element meets the statutory requirements of State housing element law.

The project will provide for anticipated growth (GPU, Land Use, Section 2.1, Page 18) and anticipated development consistent with the regulatory environment. Although future development will be phased and intensifying the use of the currently undeveloped site, there is no significant distinction between the existing and proposed land use designations, which are identified in the GPU. Additionally, all future development applications must have consistency between the planned land use designation and corresponding zone district (GPU Planned Land Use and Zoning District Consistency Matrix (GPU, Table 2-4, Page 30). Properties within the vicinity of the subject territory have been developed and continue to develop at the intensity and scale designated by the GPU. Therefore, the proposed project will not directly or indirectly induce substantial population growth in the area, nor will it displace substantial number of people or housing.

It should also be noted that there are a total of 341 dwelling units within the Project, which does not exceed the 500 dwelling unit threshold set by CEQA § 15155. Therefore the Project is not considered to be a water-demand project.

The City also did a worst case scenario evaluation of the residential population increase that could be a result of the project. The applicant has proposed a phased project over a minimum period of five years. If the average (higher) calculation for the average family size of 3.84 persons (United States Census Bureau, American Fact Finder) was multiplied times the total number of proposed residential dwelling units (341) it would arrive at the potential total population increase. The result could be a potential increase of approximately 1,310 persons to the Reedley community.

This would not exceed any single year forecast as presented in the GPU, Table 2-2 Population Forecast, or any projection over a several year period. This is also assuming that all of the residential dwelling units were constructed at the same time and made available to the general public at the same time, and all of the residents came from outside Reedley and no current residents would occupy any of the proposed 341.

A more realistic scenario would include 20 new single family residential starts in one year and 50 multiple family dwelling units. The result could be a potential increase of approximately 270 persons to the Reedley community. Again, assuming no residents of Reedley occupied these new dwelling units.

In either the worst case scenario or the phased, more realistic scenario, the potential increase in population would not exceed either the historic population data or population forecast that is currently represented in the General Plan Update (GPU, Table 2-1-Historic Population Date, Page 18 & Table 2-2 Population Forecast, Page 19).

Therefore, no project-specific mitigation for population and housing impacts is required.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIV. PUBLIC SERVICES --				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, 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 public services:				
Fire protection?			X	
Police protection?			X	
Drainage and flood control?			X	
Parks?			X	
Schools?			X	
Other public services?			X	

The project provides for additional construction and thus would add a small increment of service demand for fire protection, wastewater treatment, police services, drainage/flood control, parks, schools, libraries, and other public services. Project conditions of approval and applying development impact fees to the project serve to mitigate any incremental impact caused by the project.

The Village's design will discourage crime by consisting of gridded streets (no dead ends) to allow for multiple points for fire and police to access to each residence and business. The Project includes three points of ingress/egress at Dinuba Avenue and an emergency vehicle access roadway at the eastern boundary of the community. No single residence or business will be more than 100 feet from an access point. Long, unobstructed lines of site along streets and from parks and community gathering places follows the "eyes on the streets" concept proven to reduce crime by allowing residents to assist in policing the Village by allowing them to see, and report, any suspicious or dangerous behavior or conditions. Crime will also be discouraged through the provision of adequate lighting in the central park, though this lighting will be shielded so as to avoid light pollution and obscuring of the night sky. Lighting in the central park will be paid for through a privately funded, special assessment HOA for landscaping and lighting that will eliminate City expense and responsibility for the park's landscaping and lighting. (The City will have responsibility to provide roadway, landscaping and lighting maintenance along Village streets because of the public nature of these roadways. But as specified in the Master Development Guidelines, the narrower width of the Village streets will keep the roadway and lighting requirements and associated costs of these areas below that of conventional streets.)

Therefore, the project would have a less than significant impact with the project specific mitigation measures imposed, as the project is required to participate in the City's development Impact Fee Program.

Mitigation Measures

1. Project specific mitigation shall include the payment of Fire Facilities, pursuant to the City's Development Impact Fee Program, as identified in the attached Exhibit B, Project Specific Mitigation Monitoring Checklist, dated January 26, 2015.

2. Project specific mitigation shall include the payment of Law Enforcement Facilities, pursuant to the City's Development Impact Fee Program, as identified in the attached Exhibit B, Project Specific Mitigation Monitoring Checklist, dated January 26, 2015.

3. Project specific mitigation shall include the payment of Park & Recreation, and Open Space, pursuant to the City's Development Impact Fee Program, as identified in the attached Exhibit B, Project Specific Mitigation Monitoring Checklist, dated January 26, 2015.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XV. RECREATION:				
a) Would the project 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?			X	
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?			X	

The proposed project does not remove any existing recreational facility; and adds a small increment of service demand for recreational facilities, which are being fully provided for as part of the project.

The proposed Village Green Park (±3-acres) is centrally located on the project site and it is proposed to be constructed as part of Phase Two, providing active and passive recreation for residents and visitors. Improvements to the park may include a running track, barbeque area, gazebo, and barbeque/picnic area, a play area for toddlers, fountain, and dedicated spaces for a Farmers' Market and/or community garden. As the Village Green Park will be maintained by Home Owners' Association fees, it is included in Phase Two to facilitate receipt of sufficient funds to maintain the park from primarily residential end users.

In addition to the park, the Village will offer two pools and two community centers, to be funded and maintained through a private assessment mechanism. The common green creates a place-making center space for the senior independent living neighborhood. Residents will have a comfortable sidewalk looping the green, which may be planted with a rose garden and extensive other flowering plants and trees. The small internal mini park within the apartment complex is intended to be a meeting spot with tables and chairs for apartment residents. For larger gatherings the apartments are immediately across Raspberry Road from the large Village Green Park.

The Project adjoins and is immediately west of Reedley's Sports Park, a 50-acre facility that, at build out, will include a wide variety of playing fields. Connections will be made along South Peach Avenue to

permit residents to walk or ride bicycles directly into the Sports Park, again helping to reduce vehicle miles traveled ("VMT") and greenhouse gas ("GHG") emissions. In addition, Reedley's Rail Trail project and its connecting pedestrian/bike trail system will be linked to the Project to encourage walking and biking across and into downtown Reedley and the Kings River recreation area.

Project conditions of approval and applying development impact fees to the project serve to mitigate any incremental impact caused by the project.

Therefore, no project-specific mitigation for recreation impacts is required.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVI. TRANSPORTATION/TRAFFIC -- Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths and mass transit?		X		
b) Conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures or other standards established by the county congestion management agency for designated roads or highways?		X		
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that result in substantial safety risks?			X	
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X	
e) Result in inadequate emergency access?		X		
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?		X		

Reedley's surface transportation system is composed of numerous city streets, which, in some cases, connect to county roads on the peripheral of the City. Other system modalities include public transit

system, fixed route transit services, para transit services, general aviation and freight rail services. Where service is available, public transportation is utilized primarily by a transit-dependent population; i.e., the elderly, students, low-income residents and the physically handicapped. These segments of the population generally have limited access to automobiles. Implementation of the Reedley General Plan Circulation Element will improve the existing regional transportation and circulation system.

The Circulation Element identifies a hierarchy of roads based upon their intended function and projected travel levels. The City's surface transportation system of streets and highways is based on a functional classification system providing four levels of service: major arterials, arterials, collectors, and local roads. The hierarchy of roadways is listed and briefly described below in Table 3-1 -Roadway Classifications.

Major Arterial roadways are typically designed with four through lanes, two transition/right-turn lanes and are divided by a raised median providing left-turn lanes. Major Arterial roadways are intended to provide a high capacity in selected high volume corridors. Major arterial roadways are designed with required right-of-way, as described in the City of Reedley, Standard Plans and Specifications.

Table 3-1-Roadway Classifications

Facility Type	Functional Emphasis
Freeway/Highway	Mobility with no direct land access and access limited to interchanges.
Expressway	Mobility with more frequent access to "arterial" but no direct land access.
Arterial	Mobility with access to "collectors", some "local" streets and major traffic generators.
Collector	Connects "local" streets to "arterials", also provides access to adjacent land uses; balances mobility and access. May be "major" or "minor" collector streets.
Local	Access to adjacent land uses only; no mobility function.
Alley	Access to adjacent land use only, no mobility function.

Arterial roadways are typically designed with four through lanes and two shoulder/transition lanes and can be divided or undivided by a median. Arterial roadways provide connection to collector streets and access to major traffic generators. Arterial roadways are designed with required right-of-way, as described in the City of Reedley, Standard Plans and Specifications.

Collector roadways are typically designed with four through lanes and two parking/transition lanes and provide connection between arterial streets to local streets. Collector streets can provide some limited access to private properties. Collector roadways are designed with required right-of-way as described in the City of Reedley, Standard Plans and Specifications.

Local streets are typically designed for either industrial or residential carrying capacity. Local streets are intended exclusively to provide direct access to properties and designed to discourage through traffic between major streets. Typically designed for either industrial or residential carrying capacity, these street cross-sections can be found in the City of Reedley, Standard Plans and Specifications. However, local streets are typically not planned by the General Plan 2030 Update, Land Use and/or Circulation Elements, but existing local streets may be shown on exhibits for informational purposes.

The City has also developed surface transportation standards for alleys, frontage roads, secondary and emergency/maintenance access road standards. These standards can be found in the City of Reedley, Standard Plans and Specifications.

Level of Service

"Level of Service" (LOS) is a description of the ability of a street segment or intersection to accommodate levels of traffic demand. 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 (See Table 3-2 - Level of Service Description). LOS A, typically represents unrestricted free flow of traffic and excellent comfort for motorists, while LOS F, which represents highly congested forced flow conditions where traffic exceeds the capacities of streets. The adopted LOS in the General Plan 2030, Circulation Element is LOS C.

Table 3-2- Level of Service Description

LOS	Conditions	Description	Intersections		
			Signalized	Unsignalized	All-Way Stop
A	Free Flow	Very slight delay. Progression is very favorable, with turning movements easily made.	≤10.0	≤10.0	≤10.0
B	Stable Operation	Good progression and/or short cycle lengths. Vehicle platooned are formed. Many drivers begin to fell somewhat restricted within groups of vehicles.	>10 and ≤20.0	>10 and ≤15.0	>10 and ≤15.0
C	Stable Operation	Higher delays resulting from fair progression and/or longer cycle lengths. Back-ups may develop behind turning vehicles. The number of vehicles stopping is significant and drivers feel somewhat restricted.	>20 and ≤35.0	>15 and ≤25.0	>15 and ≤25.0
D	Approaching Unstable	The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volume-to-capacity ratios.	>35 and ≤55.0	>25 and ≤35.0	>25 and ≤35.0
E	Unstable Operations	Generally considered to be unacceptable to most drivers. Jammed conditions. Back-ups from other locations restrict or prevent movement. May also occur at high volume-to-capacity ratios.	>55 and ≤80.0	>35 and ≤50.0	>35 and ≤50.0
F	Forced Flow	Generally considered to be unacceptable to most drivers. Often occurs with over saturation. Jammed conditions. May also occur at high volume-to-capacity ratios. There are many individual cycle failures. Poor progression and long cycle lengths.	>80.0	>50.0	>50.0

Sources: Highway Capacity Manual 2000

In addition to the transit center discussed above, additional Village features will minimize vehicle miles traveled and therefore long-term impacts to traffic and air quality. Specifically, street trees for shade and edible landscaping (stone fruit and berries) for picking by pedestrians will flank the Village's walkways to encourage inter-Village travel though non-vehicular means. Other anticipated design elements to reduce

traffic impacts and thus impacts to air quality include calming/shared parking roadway designs known as complete streets (e.g., narrowed widths, smaller turning radii, textured pedestrian pavements, efficient emergency vehicle access) and the compact, mixed-use nature of the Project.

The Project density and combination of shared-parking uses results in a reduction of necessary parking supply in order to meet overall parking peak demand. For example, senior independent living residents typically reduce vehicle miles traveled, as without children in the home the need for daily trips are significantly diminished. Many seniors eventually discontinue car ownership when they are conveniently served by transit, as they will be in Kings River Village. Senior living retirement couples rarely maintain more than one vehicle as the need for multiple automobiles is substantially removed. In the single-family residential neighborhoods, while sufficient parking is available for two cars per home, the Project is intended to appeal to young families and single apartment dwellers that value the transit option. The Project Information Center will educate potential residents on the potential cost savings to them of reducing down to one family car, all made possible through active community programs enabling transit passes, ride-sharing databanks for residents to use with work/shopping/school trips, bike-friendly services including rentals/sharing and connectivity to key Reedley locations, and para-transit services. Overall, even with an aggressive campaign to offer cost-effective options to conventional VMT, the Project includes approximately 990 total parking spaces.

The City does require Traffic Impact Studies for new development projects which have a significant impact based upon the number of vehicle trips generated by the project, location of the project relative to the existing circulation system, and actual or assumed level-of-service of surrounding streets or intersection. The General Plan policy is stated below:

CIR 3.2.28 Development resulting in any of the following shall be required, as part of the special permit approval process, to have a licensed engineer complete a traffic impacts study. The scope of that study shall be determined by the City Engineer and paid for by the developer.

(a) 500 vehicle trips per day; or
(b) 250 a.m. or p.m. peak hour trips; or
(c) 25 Percent increase to existing traffic conditions from the development project.

The proposed project exceeded these thresholds. Therefore, pursuant to GPU Policy CIR 3.2.28, Traffic Impact Study was prepared under the direction of the City Engineer. After consultation with the traffic consultant, the City Engineer shall have the authority, based upon his/her professional judgment, to apply, modify and incorporate mitigation measures to ensure the surface transportation systems operates at an acceptable LOS, as required by the Reedley General Plan Update 2030. The City's General Plan Goal CIR 3.2B: "Maintain a level of service (LOS) of "C" or better, as the established threshold of significance.

In consultation with the City Engineer, the consultant identified and studied the following intersections for analysis in the Kings River Village, Traffic Impact Study, dated December 11, 2014 ("TIS"):

1. Dinuba Avenue at Zumwalt Avenue
2. Dinuba Avenue at Project Driveway
3. Dinuba Avenue at Buttonwillow Avenue
4. Dinuba Avenue at I Street
5. Dinuba Avenue at Frankwood Avenue
6. I Street at Frankwood Avenue

The study locations were based on the Project's trip distribution (using trip traces provided by FCOG) and through consultation with the City of Reedley. The following study time periods included in the analysis were:

- AM Peak Hour (highest 1 hour period between 7-9 AM)
- PM Peak Hour (highest 1 hour period between 4-6 PM)

The following analysis scenarios were analyzed based on City of Reedley guidelines and in consultation with City staff:

- Existing
- 2019 Plus Approved Projects (Without Project)
- 2019 Plus Approved Projects Plus Project (Phases 1 & 2)
- 2021 Plus Approved Projects Plus Project (All Phases)
- 2035 Plus Project (All Phases)

The years 2019 and 2021 were chosen based on the potential build out years of certain phases of the Project. The projected completion date for Phases 1 and 2 is 2019, while 2021 is the projected completion of Phases 3 and 4. The years 2019 and 2021 represent the significant construction phase years used to determine the timing of potential roadway improvements. The year 2035 is the proposed build out year of the City's General Plan, and represents the cumulative analysis year. A 2035 No Project scenario was not included because that scenario was analyzed in the PEIR and the Project is consistent with the General Plan land use designation.

The TIS (at Table 3, Page 8) shows the levels of service (LOS) for the study intersections for the various scenarios. The LOS methodology, calculations, and thresholds are also discussed in further detail in the TIS Appendix A, section A.7. Intersections with movements currently, or projected, to operate below the City of Reedley adopted level of service standard are shown shaded in the TIS at Table 3. The LOS and delay are shaded if either the AM or PM peak hour, or both, fall below the appropriate adopted LOS standard. The two-way stop controlled (TWSC) intersection levels of service are representative of the intersection's approach with the worst LOS and delay. The signalized and all-way stop controlled (AWSC) intersection LOS is representative of the whole intersection. Individual intersection movements or approaches at signalized and AWSC intersections may operate above or below the intersection level of service or delay shown in this report.

The TIS indicates that traffic generated by the project will contribute to or create traffic impacts at three locations:

1. The project's primary entrance on Dinuba Avenue;
2. The roundabout at Dinuba and Buttonwillow Avenues; and
3. The collection of intersections at Dinuba Avenue at Frankwood Avenue, Dinuba Avenue at I
4. Street and Frankwood Avenue at I Street.

It should be noted that the Village project is not the only project that will affect traffic operations at these locations. The Traffic Impact Study determined this project's share of the impacts at these three locations. The traffic impacts contributed to or created by this project are also likely to occur at different times and are expected to take different forms. Table 1, below, describes the form of the likely impacts, when the impact is likely to be created and the percentage of the cost of the improvements for which the Kings River Village project would be responsible.

TABLE 1: IMPACT AND MITIGATION SUMMARY (FROM TIS, PAGE 1)

Location	Recommended Improvement	Year Needed	KRV Proportionate Share
Project Entrance at Dinuba Avenue	Install a traffic signal or roundabout	2015	100%
Dinuba/Buttonwillow Roundabout	Open second circulating lane (internal) in existing roundabout	2035	43.3%
Dinuba & I Street, Frankwood & I Street Dinuba & Frankwood	1. All-way stop at Dinuba & I St.	2019	21.9%
	2. Restrict all left turns at Dinuba & I St.	2021	21.9%
	3. Frankwood & I St. – make NB Frankwood and SB I St. the primary movement and NB I would stop at Frankwood	2021	21.9%
	4. Install roundabout at Dinuba & Frankwood	2021	21.9%

The TIS indicates that the Dinuba Avenue at Buttonwillow Avenue roundabout is likely to operate at an acceptable level of service for nearly 20 years before modifications are needed. The study also indicates that the three intersections at Dinuba at I Street, Frankwood at I Street and Dinuba at Frankwood need near-term improvements with or without this project and that a roundabout that consolidates all three intersections in some fashion is the appropriate improvement to maintain long-term acceptable levels of service.

COST SHARING, NEEDED IMPROVEMENTS:

KRV Project Main Entrance at Dinuba Avenue

The Kings River Village project creates 100% of the impacts on Dinuba Avenue, at the Project drive entrances, therefore it is appropriate and required that the project pay for 100% of the costs of the required improvements with the initial phase of the project.

Cost Sharing Per Trip Generation by Project Phasing for "Off-site" Improvements

Table 2 represents the proportionate share that each phase of the Kings River Village project creates at the Dinuba and Buttonwillow roundabout and the future roundabout at the Dinuba and I Streets, Frankwood and I and Dinuba and Frankwood area.

TABLE 2: PROJECT PROPORTIONATE SHARE BY PHASE (FROM TIS, PAGE 2)

Phase	Land Use Type	Daily Trips[1]	Proportionate Share
One	Office	1,522	
	Retail	2,513	
	Residential	35	
	Phase 1 Total	**4,070**	**56.5%**
Two	Residential	760	
	Phase 2 Total	**760**	**10.5%**
Three	Office	304	
	Retail	1,203	

	Residential	304	
	Phase 3 Total	**1,782**	**24.7%**
Four	Residential	597	
	Phase 4 Total	**597**	**8.3%**

[1] *Daily trips based on New Trips plus Pass-By Trips per use*

Second Circulating Lane, Existing Roundabout, Dinuba / Buttonwillow Avenues

It is anticipated that the Kings River Village project will contribute 43.3% of the future (minus existing) traffic at the intersection of Dinuba Avenue at Buttonwillow Avenue. The project should therefore contribute 43.3% of the cost to open the second circulating lane within the existing roundabout, which is currently estimated at $100,000, though a detailed engineer's estimate will be needed to determine actual cost of this project. As each phase of the Village project is developed, that phase should contribute a share consistent with the above table at the time of development in the form of an additional impact fee to the Kings River Village project.

Roundabout at Dinuba and I, Frankwood and I, and Dinuba and Frankwood

It is anticipated that the project will contribute 21.9% of the future (minus existing) traffic at the intersection of Dinuba Avenue at Buttonwillow Avenue. The project should therefore contribute 21.9% of the cost to the recommended improvements, which are currently estimated at $2.25 million; though a detailed engineer's estimate will be needed to determine actual cost of this project. As each phase of the Kings River Village project is developed, that phase should contribute a share of the cost for the roundabout improvement consistent with the above table at the time of development in the form of an additional impact fee to the Kings River Village project.

However, with mitigation measures set forth below, the project will have a less than significant impact on transportation/traffic, air quality and global climate change.

Mitigation Measures

1. Project specific mitigation shall include the payment of Streets & Thoroughfares fees, and Traffic Control Facilities fees, pursuant to the City's Development Impact Fee Program.

2. Project specific mitigation shall include the Kings River Village paying 100% of the costs of all required public improvements in taking access from Dinuba Avenue with the initial phase of the project. (This includes the three primary points of access, as depicted on Tentative Tract Map No. 6096 and Conditional Use Permit Application No. 2014-05, Site Plan, as identified in the attached Exhibit B, Project Specific Mitigation Monitoring Checklist, dated March 5, 2015.

3. As identified in the attached Exhibit B, Project Specific Mitigation Monitoring Checklist, dated January 26, 2015, project specific mitigation for the future impacts to "off-site" improvements, the KRV will pay a share of the costs for improvements to the Dinuba and Buttonwillow roundabout and the future roundabout at the Dinuba and I Streets, Frankwood and I and Dinuba and Frankwood area shall pay proportionate to the impacts that result from the project. To determine the appropriate proportionate share, a detailed engineer's estimate shall be prepared by a California licensed engineer, using Caltrans's methodology to calculate proportionate share as follows:

$$P = \frac{T}{T^{3S} - T^{E}} * 100\% \qquad \text{sample: } P = \frac{350}{5000-1500} * 100\% = 10\%$$

- P = Project's Proportionate Share
- T = Project peak hour trips entering the intersection

- T^{35} = 2035 Plus Project peak hour trips entering the intersection
- T^{E} = Existing peak hour trips entering the intersection

The proportionate share for the intersections of Dinuba Avenue / Frankwood Avenue / I Street are calculated as a single location, utilizing trips entering the "3-intersection area". Additionally, the AM and PM peak hour trips are added together for the calculations to achieve the average. Table 3 shows the proportionate fair share calculations for the intersections with recommended improvements.

TABLE 3: PROJECT PROPORTIONATE SHARE CALCULATION (TIS, PAGE 38)

Intersection	Project Trips[1]	Existing Trips[1]	2035 Plus Project Trips[1]	Share
Dinuba Avenue at Project Driveway	---	---	---	100%
Dinuba Avenue at Buttonwillow Avenue	737	2,347	4,051	43.3%
Dinuba Avenue / Frankwood Avenue / I Street	438	2,741	4,743	21.9%

[1] *All trips are the sum of the AM and PM peak hours*

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVII. UTILITIES AND SERVICE SYSTEMS -- Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?			X	
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?			X	
e) 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?			X	

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			X	
g) Comply with federal, state, and local statutes and regulations related to solid waste?			X	

The City of Reedley, General Plan Update 2030 (approved February 2014), Urban Water Management Plan (approved September 2013) and Integrated Master Plan for Potable Water, Sanitary Sewer, and Storm Drainage Systems (approved May 2014) demonstrate the City has an adequate water supply to support urban growth for future decades, including the small increment of growth that may be created by the this proposed development project.

The Village will conserve potable water and achieve minimal water consumption and maximize water conservation through a variety of mechanisms. In partnership with the City of Reedley and the Kings Canyon Unified School District, the Project will include construction of an unlined retention basin on the School District property immediately south of the site. The retention basin will provide approximately 14 acre-feet of water storage. The retention basin will be constructed along with Phase One, as its spoils will be used for surcharge on-site and to make the facility immediately available for Project use. The anticipated 23,000 cubic yards of soil removed during excavation of the retention basin will be used for necessary fill during construction of the Village. The retention basin will be fed by rainwater, in addition to stormwater runoff from the Village that will pass through bio swales prior to entering piping to the basin. It is the City's goal to tie both ponding basins to the Traver Ditch, whereby Alta Irrigation District can convey water to maximize ground water recharge. The bio swales will be located in landscaped strips along public streets that will filter the water as it transitions to underground pipes that will transport the stormwater from the Village to the retention basin. These features mitigate sediments from entering the retention basin. The Village Green Park eliminates the need for individual yards to plant lawns and thereby reduces the Project's water demand to below what would be required by traditional mixed-use developments of comparable size and composition.

Water conservation will also be achieved by requiring builders to meet all low-flow fixture requirements under the California Building Code 2013 (CBC), and by requiring builders to exceed CBC minimums through the use of computerized weather-sensitive irrigation, water efficient landscaping practices through the reduction of turf grass by at least 40% and increasing the amount of plants that are native or adapted to the region by at least 25%, water-efficient washing machines and dishwashers, and plumb-ready laterals to permit individual homeowners to install home grey water recycling systems for irrigation. Applicant also plans to encourage builders to plumb rainwater into grey water recycling systems consisting of appropriately small underground tanks associated with, and located within the private property footprint of, the single-family attached and detached residential living units. These tanks will be managed by the homeowner's association. Ideally, these systems would pay for themselves over time by allowing the capture of rainwater during the wet months to be stored for use to water plants associated with the same units during the dry season, effectively reducing homeowner's water costs while conserving potable supply.

Village public health and safety will be enhanced by a looped water system so that each phase has a minimum two points of connection with the City's water main such that the fire suppression and response system will meet or exceed City requirements for fire flows, while ensuring a constant potable water system that meets or exceeds State Drinking Water Standards.

The combined result of the water-saving features the Applicant plans to build is that use of City potable water for the Village's landscape strip irrigation will be minimal and the Village's consumptive use will be less than that anticipated by Reedley's General Plan 2030 and analyzed in the associated FEIR. A Water Service Assessment is unnecessary because the Village is not a "project" under California Water Code § 10912.

The proposed development project is required to connect to the water, sewage collection, wastewater treatment, and storm drainage systems. The small increment of additional service demand will be *de minimis* and well within the available capacities of each of the public utility systems.

Therefore, no project-specific mitigation for utilities and service system impacts is required.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVIII. MANDATORY FINDINGS OF SIGNIFICANCE --				
a) Does the project have the potential to 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, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?			X	
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?			X	
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			X	

In summary, given the preceding analysis, conditions of approval applied to the project and Program Environmental Impact Report (SCH No. 2010031106), Mitigation Monitoring Checklist, being incorporated into, the Vesting Tentative Tract Map No. 6096 and Conditional Use Permit Application No. 2014-05, it may be concluded that the proposed development project:

- does not have environmental impacts which will cause substantial adverse effects on human beings,

either directly nor indirectly.

- does not have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish/wildlife or native plant species (or cause their population to drop below self-sustaining levels), does not threaten to eliminate a native plant or animal community, and does not threaten or restrict the range of a rare or endangered plant or animal.

- does not eliminate important examples of elements of California history or prehistory.

- does not have impacts which would be cumulatively considerable even though individually limited.

Therefore, there are no mandatory findings of significance and the preparation of a Mitigated Negative Declaration or an Environmental Impact Report is warranted for this project.

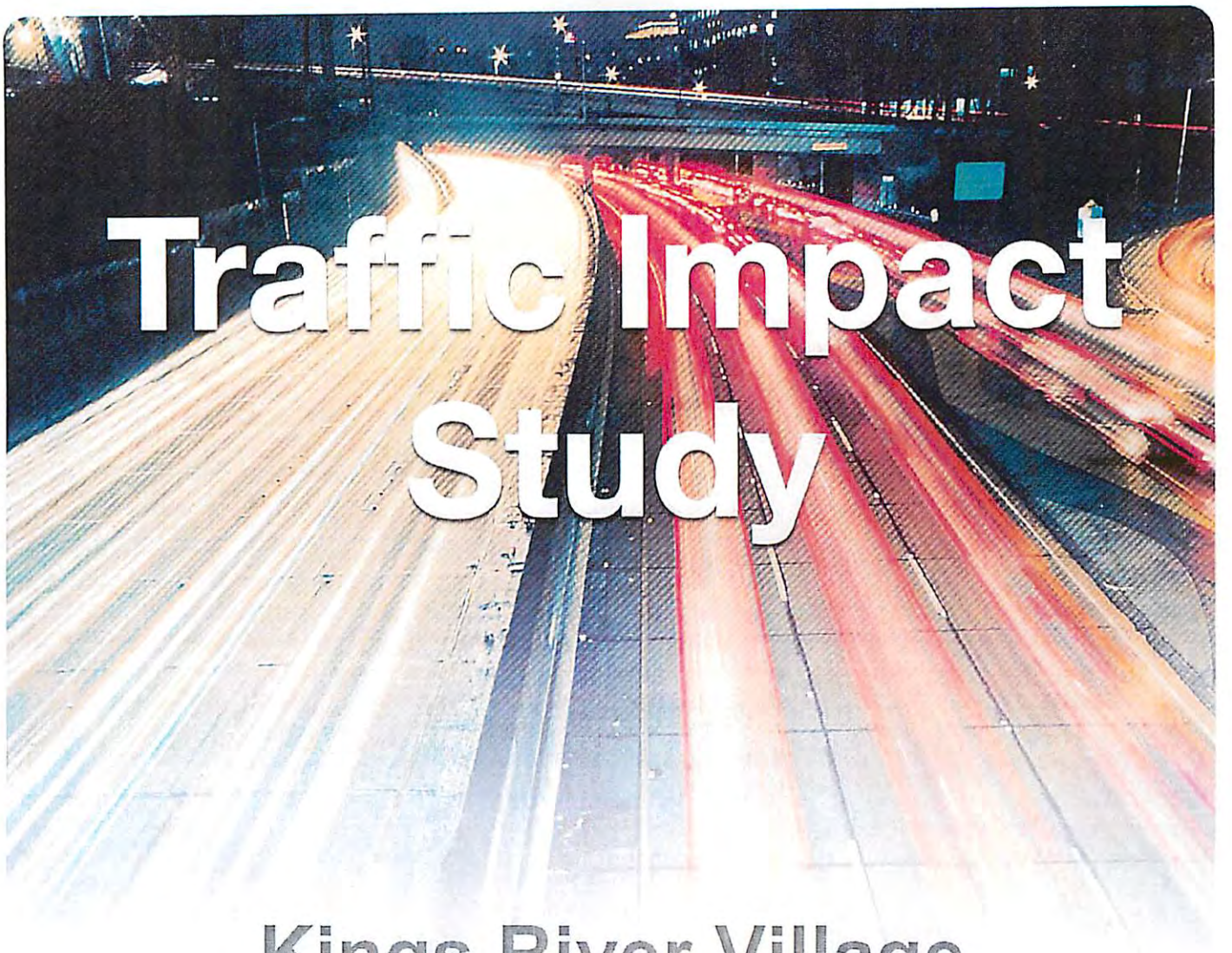
Attachments:

1. Kenneth D. Schmidt and Associates, Letter dated September 30, 2014
2. Kings River Village, Traffic Impact Study, dated December 11, 2014

Exhibit A: City of Reedley, General Plan Land Use Map (Adopted by City Council Resolution No. 2014-018)

Exhibit B: Project Specific Mitigation Monitoring Checklist, dated February 12, 2014.

Exhibit C: Mitigation Monitoring Checklist for Final Environmental Impact Report (SCH No. 2010031106) & Reedley General Plan Update 2030 dated February 18, 2014.



Traffic Impact Study

Kings River Village

December 11, 2014

RECEIVED
DEC 17 2014
CITY OF REEDLEY
COMMUNITY DEVELOPMENT DEPT.

CITY OF REEDLEY CALIFORNIA
THE WORLD'S FRUIT BASKET

4CREEKS

KINGS RIVER VILLAGE

Owner:

Kings River Village

Traffic Impact Study Preparation Date:

12/2/2014

Prepared By:

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Acronyms and Abbreviations

Caltrans	California Department of Transportation
CIP	Capital Improvement Program
EB	eastbound
HCM2010	Highway Capacity Manual 2010
LOS	level of service
NB	northbound
MUTCD	California Manual on Uniform Traffic Control Devices for Streets and Highways
RTP	Regional Transportation Plan
SB	southbound
sf	square feet
SR	State Route
FCOG	Fresno Council of Governments
TIF	Transportation Impact Fee
TIS	Traffic Impact Study
TOD	Transit Oriented Development
WB	westbound
vph	vehicles per hour

SECTION 1: EXECUTIVE SUMMARY

1.1 ANALYSIS RESULTS

The proposed Kings River Village (KRV) project, located on the south side of Dinuba Avenue between Buttonwillow and Tobu Avenues, will understandably create some impacts on the City of Reedley's transportation system. The proposed project will be "mixed use" and will consist of the following types of land uses when fully built out:

- Phase One – 91,700 square feet of office; 31,130 square feet of retail; and 7 two-story live/work units with 8,750 on each floor.
- Phase Two – 64 two-story detached and 70 two-story "townhouse" single-family homes.
- Phase Three – 15,200 square feet of second-story office; 17,000 square feet of ground-level retail; 80 one-story senior apartments; and a senior activity center.
- Phase Four – 120 two-story garden apartments and a one-story activity center.

This Traffic Impact Study (TIS) prepared for the project indicates that traffic generated by this project will contribute to or create traffic impacts at three locations:

1. The project's primary entrance on Dinuba Avenue;
2. The roundabout at Dinuba and Buttonwillow Avenues; and
3. The collection of intersections at Dinuba Avenue at Frankwood Avenue, Dinuba Avenue at I Street and Frankwood Avenue at I Street.

It should be noted that the Kings River Village project is not the only project that will affect traffic operations at these locations. The Traffic Impact Study has determined this project's share of the impacts at these three locations. The traffic impacts contributed to or created by this project are also likely to occur at different times and are expected to take different forms. The Table 1 describes the form of the likely impacts, when the impacts are likely to be created and the percentage of the cost of the improvements for which the Kings River Village project would be responsible.

TABLE 1: IMPACT AND MITIGATION SUMMARY

Location	Recommended Improvement	Year Needed	KRV Proportionate Fair Share
Project Entrance at Dinuba Avenue	Install a traffic signal or roundabout	2015	100%
Dinuba/Buttonwillow Roundabout	Open second circulating lane (internal) in existing roundabout	2035	43.3%
Dinuba & I Street, Frankwood & I Street Dinuba & Frankwood	1. All-way stop at Dinuba & I St.	2019	21.9%
	2. Restrict all left turns at Dinuba & I St.	2021	21.9%
	3. Frankwood & I St. – make NB Frankwood and SB I St. the primary movement and NB I would stop at Frankwood	2021	21.9%
	4. Install roundabout at Dinuba & Frankwood	2021	21.9%

The Traffic Impact Study indicates that the Dinuba Avenue at Buttonwillow Avenue roundabout is likely to operate at an acceptable level of service for nearly 20 years before modifications are needed. The study also indicates that the three intersections at Dinuba at I Street, Frankwood at I Street and Dinuba at Frankwood need near-term improvements with or without this project and that a roundabout that consolidates all three intersections in some fashion is the appropriate improvement to maintain long-term acceptable levels of service.

1.2 COST SHARING, NEEDED IMPROVEMENTS:

KRV Project Main Entrance at Dinuba Avenue

The Kings River Village project creates 100% of the impacts on Dinuba Avenue, at the Project Driveway, therefore it is appropriate that the project pay for 100% of the costs of the required improvements with the initial phase of the project.

Cost Sharing Per Trip Generation by Project Phasing for "Off-site" Improvements

Table 2represents the proportionate fair share that each phase of the Kings River Village project creates at the Dinuba and Buttonwillow roundabout and the future roundabout at the Dinuba and I, Frankwood and I and Dinuba and Frankwood area.

TABLE 1: PROJECT PROPORTIONATE SHARE BY PHASE

Phase	Land Use Type	Daily Trips[1]	Proportionate Share
One	Office	1,522	
	Retail	2,513	
	Residential	35	
	Phase 1 Total	**4,070**	**56.5%**
Two	Residential	760	
	Phase 2 Total	**760**	**10.5%**
Three	Office	304	
	Retail	1,203	
	Residential	304	
	Phase 3 Total	**1,782**	**24.7%**
Four	Residential	597	
	Phase 4 Total	**597**	**8.3%**

[1] *Daily trips based on New Trips plus Pass-By Trips per use (see Section 3)*

Second Circulating Lane, Existing Roundabout, Dinuba / Buttonwillow Avenues

The Kings River Village project contributes 43.3% of the future (minus existing) traffic at the intersection of Dinuba Avenue at Buttonwillow Avenue. The project should the contribute 43.3% of the cost to open the second circulating lane within the existing roundabout, which has an order of magnitude cost estimated at $100,000; a detailed engineers estimate will be needed to determine the actual cost of this project. As each phase of the Kings River Village project is developed, that phase should contribute their corresponding share consistent with the above table at the time it develops in the form of an additional impact fee to the Kings River Village project.

Roundabout at Dinuba and I, Frankwood and I and Dinuba and Frankwood

The Kings River Village project contributes 21.9% of the future (minus existing) traffic at the intersection of Dinuba Avenue at Buttonwillow Avenue. The project should the contribute 21.9% of the cost to the improvements recommended above, which has an order of magnitude cost estimated at $2.2 million; a detailed engineers estimate will be needed to determine the actual cost of this project. As each phase of the Kings River Village project is developed, that phase should contribute their corresponding share of this roundabout consistent with the about table at the time it develops in the form of an additional impact fee to the Kings River Village project.

SECTION 2: INTRODUCTION

2.1 ANALYSIS METHODOLOGY

This Traffic Impact Study (TIS) provides an analysis of the surrounding roadway system and the effects of the proposed Kings River Village (Project) on the City of Reedley's existing and planned infrastructure. The Project is located south of Dinuba Avenue, between Buttonwillow Avenue and Tobu Avenue, in the City of Reedley, CA. Figure 1 shows the Project area. The proposed Project is a multi-use development with the following uses:

- Phase One: Mixed Use Medical/Office/Retail site:
  - 91,700 square feet of medical/office
  - 31,130 square feet of retail
  - 7 live/work units total 8,750 square feet of ground floor office/retail and 8,750 square feet of second floor residential
- Phase Two: Single Family Residential (detached and attached) sites:
  - 64 single family two-story detached courtyard cluster homes
  - 70 single family two-story attached town homes
- Phase Three: Mixed Use Senior Independent Living and Retail/Office site:
  - 15,200 square feet of second floor office
  - 17,000 square feet of retail
  - 80 single story attached senior restricted living units
    - Single story recreational/office building
- Phase Four: Market Rate Apartment site:
  - 120 two-story garden apartments averaging 950 square feet
    - Single story recreational/office building

This TIS has been prepared in consultation with City of Reedley staff. This TIS is prepared based on the City of Reedley General Plan Policy CIR 3.2.28[1], as follows:

> "Development resulting in any of the following shall be required, as part of the special permit approval process, to have a licensed engineer complete a traffic impacts study. The scope of that study shall be determined by the City Engineer and paid for by the developer.
>
> a) 500 vehicles per day; or
> b) 250 am or pm peak hour trips; or
> c) 25 percent increase to existing traffic conditions from the development project."

As shown below in Table 12, the Kings River Village Project is anticipated to meet conditions "a" and "b" of the City's Policy. Further details of the analysis methodologies and assumptions are included in Appendix A.

[1] *City of Reedley General Plan 2030*, City of Reedley, February 18, 2014, Page 61.

4CREEKS	Kings River Community Vicinity Map	Figure 1

2.1.1 Analysis Locations

The following study intersections have been identified for analysis in this TIS:

1. Dinuba Avenue at Zumwalt Avenue
2. Dinuba Avenue at Project Driveway
3. Dinuba Avenue at Buttonwillow Avenue
4. Dinuba Avenue at I Street
5. Dinuba Avenue at Frankwood Avenue
6. I Street at Frankwood Avenue

The study locations are based on the Project's trip distribution (using trip traces provided by FCOG) and through consultation with the City of Reedley.

2.1.2 Analysis Time Periods and Scenarios

The following study time periods are included in this analysis:

- AM Peak Hour (highest 1 hour period between 7-9 AM)
- PM Peak Hour (highest 1 hour period between 4-6 PM)

The following analysis scenarios are analyzed based on City of Reedley guidelines and in consultation with City staff:

- Existing
- 2019 Plus Approved Projects (Without Project)
- 2019 Plus Approved Projects Plus Project (Phases 1 & 2)
- 2021 Plus Approved Projects Plus Project (All Phases)
- 2035 Plus Project (All Phases)

The years 2019 and 2021 were chosen based on the potential buildout years of certain phases of the Project. 2019 is the projected completion of Phases 1 and 2, while 2021 is the projected completion of Phases 3 and 4. 2019 and 2021 represent the significant construction phase years used to determine the timing of potential roadway improvements. 2035 is the proposed buildout year of the City's General Plan, and represents the cumulative analysis year. A 2035 No Project scenario is not included since the Project is consistent with the General Plan land use designation.

2.1.3 Thresholds of Significance

City of Reedley General Plan Goal CIR 3.2B: "Maintain a level of service (LOS) of "C" or better."[2]

[2] *City of Reedley General Plan 2030*, City of Reedley, February 18, 2014, Page 53.

2.2 Analysis Summary

Table 3 shows the levels of service (LOS) for the study intersections for the various scenarios. The LOS methodology, calculations, and thresholds are discussed in further detail in Appendix A, section A.7. Intersections with movements currently or projected to operate below the City of Reedley adopted level of service standard are shown shaded in Table 3. The LOS and delay are shaded if either the AM or PM peak hour, or both, fall below the appropriate adopted LOS standard. The two-way stop controlled (TWSC) intersection levels of service are representative of the intersection's approach with the worst LOS and delay. The signalized and all-way stop controlled (AWSC) intersection levels of service are representative of the whole intersection. Individual intersection movements or approaches at signalized and AWSC intersections may operate above or below the intersection level of service or delay shown in this report.

TABLE 3: LEVEL OF SERVICE SUMMARY

Intersection	Existing		2019 Plus Approved Projects		2019 Plus Approved Projects Plus Project (Phases 1 & 2)		2021 Plus Approved Projects Plus Project (All Phases)		2035 Plus Project	
	LOS (AM/PM)	Delay[1] (AM/PM)	LOS (AM/PM)	Delay[1] (AM/PM)	LOS (AM/PM)	Delay[1] (AM/PM)	LOS (AM/PM)	Delay[1] (AM/PM)	LOS (AM/PM)	Delay[1] (AM/PM)
Dinuba Avenue at Zumwalt Avenue	B/C	13.2/15.5	B/C	13.7/16.9	B/C	14.5/18.9	C/C	15.2/20.5	C/C	17.3/21.5
Dinuba Avenue at Project Driveway	n/a	n/a	n/a	n/a	C/F	20.8/81.5	---	---	---	---
• Roundabout	---	---	---	---	---	---	A/A	7.6/10.0	A/B	8.5/11.9
• Traffic Signal	---	---	---	---	---	---	B/C	11.4/26.6	B/C	11.6/33.1
Dinuba Avenue at Buttonwillow Avenue	A/A	7.5/9.1	A/B	8.2/10.1	B/C	10.1/15.1	B/C	11.7/20.2	C/E	16.9/43.9
Dinuba Avenue at I Street	C/C	21.9/24.0	E/E	36.7/43.0	F/F	65.9/99.1	F/F	128.6/244.1	F/F	--/--
Dinuba Avenue at Frankwood Avenue	B/B	13.9/14.6	C/C	15.5/17.4	C/C	17.5/23.5	C/D	19.7/32.7	E/E	36.1/46.3
I Street at Frankwood Avenue	B/B	13.7/13.2	C/C	15.5/15.2	C/C	16.8/16.7	C/C	18.4/18.7	D/E	37.1/46.1

[1] *average seconds of delay per vehicle*
n/a = not applicable, does not exist
--- = Delay exceeds reasonable calculation

Table 4 shows the results of the Peak Hour Traffic Signal Warrant analysis. Table 4 lists the time period (analysis scenario) in which the traffic signal warrant is first met at the study intersection. Once an intersection meets the warrant, it is projected to continue to meet warrants for all subsequent scenarios due to overall traffic volume growth.

TABLE 4: SIGNAL WARRANT SUMMARY

Intersection	Analysis Scenario Warranted
Dinuba Avenue at Zumwalt Avenue	Does not meet warrants
Dinuba Avenue at Project Driveway	2019 Plus Approved Projects Plus Project (Phases 1 & 2)
Dinuba Avenue at Buttonwillow Avenue	Roundabout – Not Analyzed
Dinuba Avenue at I Street	2035 Plus Project
Dinuba Avenue at Frankwood Avenue	2035 Plus Project
I Street at Frankwood Avenue	2035 Plus Project

Appendix D includes the volumes, calculations and figures used to calculate the warrant(s). The intersection of Dinuba Avenue at Buttonwillow Avenue is not analyzed for traffic signal warrants since it is already constructed as a roundabout and may be expanded to a 2-lane roundabout in the future when traffic volumes dictate.

2.3 RECOMMENDED IMPROVEMENTS

In order to mitigate the intersections currently operating or are projected to operate below the adopted LOS standard(s) and/or meet the Peak Hour Traffic Signal Warrant, the following improvements are recommended:

2019 Plus Approved Projects

- Dinuba Avenue at I Street
    - Due to the proximity of the Dinuba/Frankwood and I/Frankwood intersections, an overall traffic control strategy should be considered for these three intersections.
        - This strategy is discussed below.
    - In the short-term, an all-way stop controlled intersection may be considered at this location.
        - With all-way stop control in place, this intersection is projected to operate at or above the City's LOS standard. See Table 5 below.

2019 Plus Approved Projects Plus Project (Phases 1 & 2)

- Dinuba Avenue at Project Driveway
    - Install a traffic signal or roundabout

2021 Plus Approved Projects Plus Project (All Phases)

- Dinuba Avenue at Frankwood Avenue
  - As previously discussed, this intersection, along with 2 others, form a triangle of closely spaced intersections which cannot be easily redesigned or signalized to mitigate LOS deficiencies.
  - Based on discussions with City staff, a long-term configuration for this area is analyzed as follows:
    - Dinuba Avenue at I Street
      - Restrict left-turn and through movements on I Street at the intersection
      - Restrict left-turn movements on Dinuba Avenue at the intersection
    - Dinuba Avenue at Frankwood Avenue
      - Install a roundabout
        - May require significant right-of-way encroachment in the area of the existing intersection.
    - I Street at Frankwood Avenue
      - Convert NB Frankwood Avenue and SB I Street to the primary (non-stop controlled) movements
        - May require revised curb lines or channelization to re-orient approaches to ensure that the primary movements are recognized as such
      - Install stop signs for Northwestbound (NWB) I Street

2035 Project

- Dinuba Avenue at Buttonwillow Avenue
  - Open the second internal circulating lane within the existing roundabout
- Dinuba Avenue at Frankwood Avenue
  - In addition to the previously recommended improvements;
  - Open the second internal circulating lane within the existing roundabout

Table 5 shows the LOS for the study intersections as a result of the proposed improvements.

TABLE 5: MITIGATED LEVEL OF SERVICE SUMMARY

Intersection	2019 Plus Approved Projects		2019 Plus Approved Projects Plus Project (Phases 1 & 2)		2021 Plus Approved Projects Plus Project (All Phases)		2035 Plus Project	
	LOS (AM/PM)	Delay[1] (AM/PM)	LOS (AM/PM)	Delay[1] (AM/PM)	LOS (AM/PM)	Delay[1] (AM/PM)	LOS (AM/PM)	Delay[1] (AM/PM)
Dinuba Avenue at Project Driveway								
• Roundabout	---	---	A/A	6.9/8.2	A/A	7.6/10.0	A/B	8.5/11.9
• Traffic Signal	---	---	A/B	9.4/14.9	B/C	11.4/26.6	B/C	11.6/33.1
Dinuba Avenue at Buttonwillow Avenue	---	---	---	---	---	---	A/A	7.7/9.5
Dinuba Avenue at I Street	B/B	13.3/13.6	B/B	15.4/16.3	B/B	11.1/10.8	B/B	13.0/12.1
Dinuba Avenue at Frankwood Avenue	---	---	---	---	B/B	13.2/14.5	A/B	8.9/10.1
I Street at Frankwood Avenue	---	---	---	---	B/B	12.1/12.7	B/B	11.4/13.9

[1] *average seconds of delay per vehicle*
--- = Improvements not required in this scenario

2.4 Project Requirements

The Project is directly responsible for the improvements required at the Dinuba Avenue at Project Driveway intersection. As shown in Table 1, the Project Driveway will require enhanced traffic control to improve LOS to the City's standard with completion of Phases 1 & 2. The LOS calculations for installation of both a traffic signal and roundabout have been included to provide alternatives to the City and Applicant. As shown in Table 5, both alternatives are projected to allow the intersection to operate at an acceptable LOS for all of the study scenarios.

The Project also contributes to the impacts identified at the following intersections:

- Dinuba Avenue at Buttonwillow Avenue
- Dinuba Avenue at I Street
- Dinuba Avenue at Frankwood Avenue
- I Street at Frankwood Avenue

As previously identified (Table 1), the Project is not the sole cause of the impacts to these intersections, but does contribute to the overall sub-standard LOS. As such, the Project is responsible for its proportionate fair share of the improvements. The Project's proportionate fair share for the above improvements are calculated based on Caltrans methodologies, as follows:

$$P = \frac{T}{T^{35} - T^{E}} * 100\% \qquad \text{sample: } P = \frac{350}{5000-1500} * 100\% = 10\%$$

- P = Project's Proportionate Share
- T = Project peak hour trips entering the intersection
- T^{35} = 2035 Plus Project peak hour trips entering the intersection
- T^{E} = Existing peak hour trips entering the intersection

The proportionate fair share for the intersections of Dinuba Avenue / Frankwood Avenue / I Street are calculated as a single location, utilizing trips entering the "3-intersection area". Additionally, the AM and PM peak hour trips are added together for the calculations to achieve the average. Table 6 shows the proportionate fair share calculations for the intersections with recommended improvements.

Table 6: Project Proportionate Fair Share Calculation

Intersection	Project Trips[1]	Existing Trips[1]	2035 Plus Project Trips[1]	Fair Share
Dinuba Avenue at Project Driveway	---	---	---	100%
Dinuba Avenue at Buttonwillow Avenue	737	2,347	4,051	43.3%
Dinuba Avenue / Frankwood Avenue / I Street	438	2,741	4,743	21.9%

[1] *all trips are the sum of the AM and PM peak hours*

SECTION 3: PROJECT INFORMATION

3.1 PROJECT SUMMARY

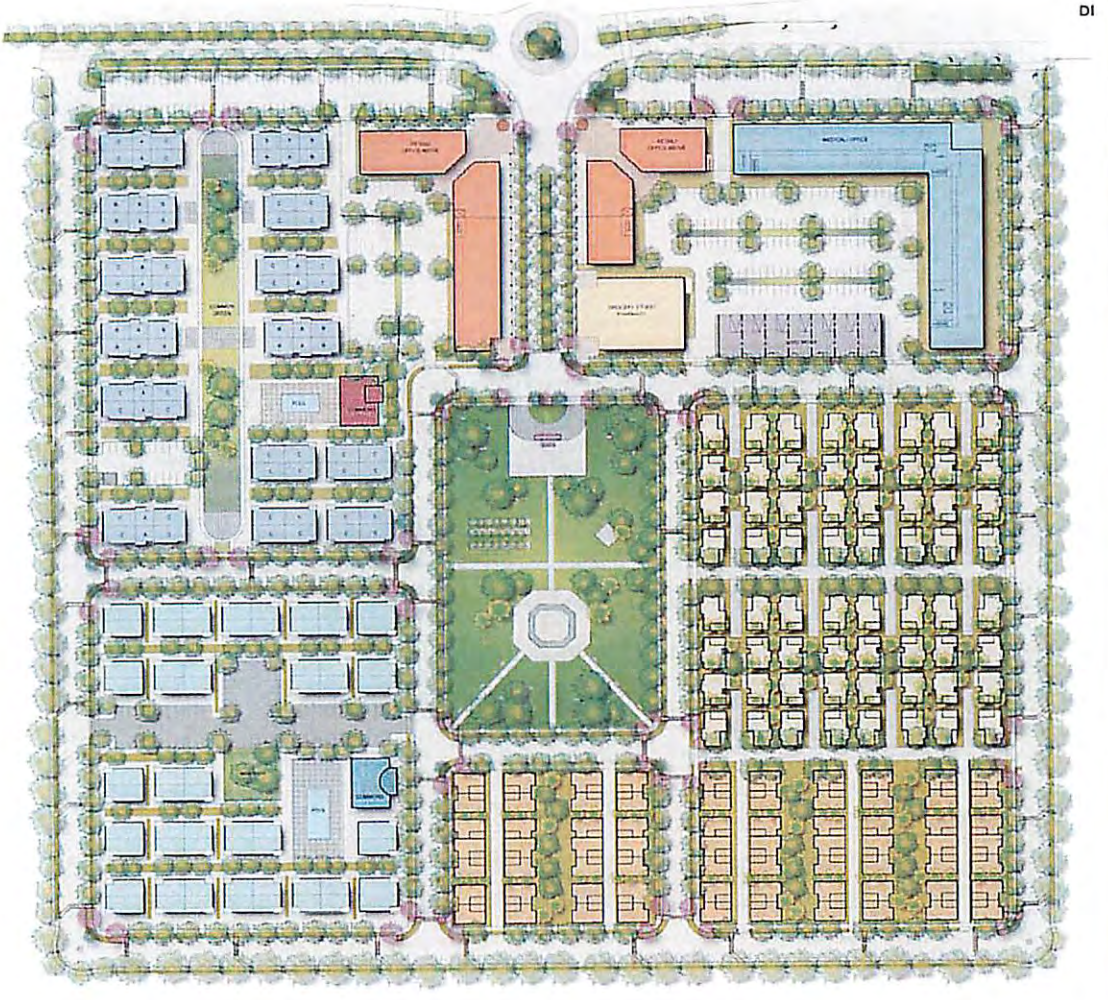
The proposed Project is a multi-use development with the following uses:

- Phase One: Mixed Use Medical/Office/Retail site:
  - 91,700 square feet of medical/office
    - 67% General Office (61,133 sf)
    - 33% Medical Office (30,567 sf)
  - 31,130 square feet of retail
    - 100% Shopping Center
  - 7 live/work units total 8,750 square feet of ground floor office/retail and 8,750 square feet of second floor residential
    - 50% Shopping Center (4,375 sf)
    - 50% General Office (4,375 sf)
- Phase Two: Single Family Residential (detached and attached) sites:
  - 64 single family two-story detached courtyard cluster homes with single car garages averaging 1,800 square feet
  - 70 single family two-story attached town homes with single car garages averaging 1,500 square feet
- Phase Three: Mixed Use Senior Independent Living and Retail/Office site:
  - 15,200 square feet of second floor office
    - 50% General Office (7,600 sf)
    - 50% Medical Office (7,600 sf)
  - 17,000 square feet of retail
    - 100% Shopping Center
  - 80 single story attached senior restricted living units with no garages averaging 850 square feet
  - Single story recreational/office building of approximately 7,500 square feet with pool
- Phase Four: Market Rate Apartment site:
  - 120 two-story garden apartments averaging 950 square feet
  - Single story recreational/office building of approximately 7,500 square feet with pool

As previously discussed, Phases 1 and 2 are anticipated to be constructed together with a projected completion date of 2019. Phases 3 and 4 are projected to be completed by 2021. The calculations and tables included in this section include totals for Phases 1 and 2 as well as for the entire Project.

3.1.1 PROJECT LOCATION

The Project Site is located on the south side of Dinuba Avenue, between Buttonwillow Avenue and Tobu Avenue. The Project Site Plan is shown in Figure 2.



4CREEKS	Kings River Community Project Site Plan	Figure 2

3.1.1 Project Access

The Project will have 3 access points on Dinuba Avenue. The main Project Driveway will be located on the midpoint of the frontage and will allow all traffic movements to/from the Project site. Additionally, there are right-in/right-out only access roads on the east and west sides of the Project site. The right-in/right-out access roads are not analyzed in this TIS due to their low traffic volumes and restricted movements. All Project driveway intersections are initially assumed to be stop-controlled on the Project driveways, with free-flow movements on Dinuba Avenue.

3.1.2 Project Trip Generation

Vehicle trips generated by the Project are calculated using the industry-standard Trip Generation Manual published by the Institute of Transportation Engineers (ITE). Vehicle trips are calculated using ITE average rates (equations used for the Shopping Center) and Project-related independent variables (units, square footage, etc.). Table 7 shows the ITE land uses and variables used to calculate the Project's trip generation. The sizes of the land uses shown in Table 7 include the sum of all similar land use types as described and noted above in section 2.1.

Table 7: Project Land Uses and Units

Project Land Use	ITE Land Use	Size	Unit
Phases 1 & 2			
Residential Condo/Townhouse	230	70	dwelling units
Senior Adult Housing-Attached	252	0	dwelling units
Apartments	220	7	dwelling units
Single Family Dwelling Units	210	64	dwelling units
Shopping Center	820	35.51	ksf
General Office	710	65.51	ksf
Medical Office	720	30.57	ksf
All Phases			
Residential Condo/Townhouse	230	70	dwelling units
Senior Adult Housing-Attached	252	80	dwelling units
Apartments	220	127	dwelling units
Single Family Dwelling Units	210	64	dwelling units
Shopping Center	820	46.5	ksf
General Office	710	73.1	ksf
Medical Office	720	38.2	ksf

Table 8 shows the unadjusted daily, AM, and PM peak hour trip generation estimates for the Project uses.

TABLE 8: UNADJUSTED PROJECT TRIP GENERATION

Project Land Use	Daily[1]	AM Peak Hour			PM Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total
Phases 1 & 2							
Residential Condo/Townhouse	407	5	26	31	24	12	36
Apartments	47	1	3	4	3	1	4
Single Family Dwelling Units	609	12	36	48	40	24	64
Shopping Center	3,464	51	32	83	144	155	299
General Office	723	90	12	102	17	81	98
Medical Office	1,104	58	15	73	31	78	109
Phases 1 & 2 Project Trips	**6,354**	**217**	**124**	**341**	**259**	**351**	**610**
All Phases							
Residential Condo/Townhouse	407	5	26	31	24	12	36
Senior Adult Housing-Attached	275	5	11	16	11	9	20
Apartments	845	13	52	65	51	28	79
Single Family Dwelling Units	609	12	36	48	40	24	64
Shopping Center	4,468	65	40	105	187	202	389
General Office	806	100	14	114	19	90	109
Medical Office	1,379	72	19	91	38	98	136
Total Project Trips	**8,789**	**272**	**198**	**470**	**370**	**463**	**833**

[1] *Total Number of one-directional trips*

3.1.3 PROJECT TRIP CAPTURE

Captured trips involve vehicles that enter the Project site and utilize more than one of the proposed uses. These trips are effectively captured within the Project site and do not create multiple trips on the adjacent roadways. In order to calculate the captured trips for the Project, the ITE methodology is used. Tables 7.1 and 7.2 of the *ITE Trip Generation Handbook* show the PM peak hour capture rates between each type of land use (office, retail, and residential). Since there are no AM peak hour capture rates, the PM peak hour capture rate is used for the AM peak hour as well. No captured trips are assumed for the senior housing. Using these rates and the ITE methodology results in a 6.4% (AM) and 16.1% (PM) overall capture for the Project site. Table 9 shows the calculated trips captured, by use, within the Project. Appendix B includes the captured trip calculation worksheet.

TABLE 9: PROJECT TRIP CAPTURE

Project Land Use	AM Peak Hour			PM Peak Hour		
	Enter	Exit	Total	Enter	Exit	Total
Phases 1 & 2						
Residential	4	5	9	21	13	34
Senior Adult Housing-Attached	0	0	0	0	0	0
Shopping Center	7	6	13	19	29	48
General Office	1	1	2	6	5	11
Medical Office	1	1	2	6	5	11
Total Project Trips	**13**	**13**	**26**	**52**	**52**	**104**
All Phases						
Residential	5	6	11	28	17	45
Senior Adult Housing-Attached	0	0	0	0	0	0
Shopping Center	8	7	15	25	36	61
General Office	1	1	2	7	7	14
Medical Office	1	1	2	7	7	14
Total Project Trips	**15**	**15**	**30**	**67**	**67**	**134**

3.1.4 PROJECT PASS-BY TRIPS

Once captured trips have been calculated and excluded from the Project trip generation, Pass-By trips may be calculated. Pass-By trips include vehicles that already travel on the adjacent roadways on their primary trip purpose (such as home to work), but choose to access the Project since they are "passing by." The *ITE Trip Generation Handbook* shows PM peak hour pass-by rates for the Shopping Center land use. The remaining uses are assumed to have 0% pass-by for the purposes of this study. The PM Peak Hour pass-by rate is used for the AM Peak Hour as well. Table 10 shows the ITE Trip Generation Pass-By rates used in this study.

TABLE 10: PASS-BY RATES

Project Land Use	ITE Pass-By Rate
Shopping Center	34%
All Other Uses	0%

Pass-by rates, where applicable, are applied to the volumes shown in Table 8 minus the volumes shown in Table 9 to calculate the total trip reductions for Pass-By. Pass-By trips are calculated based on the Total AM or PM Peak Hour trips, then distributed 50% entering and 50% exiting. Table 11 shows the calculated Pass-By trips.

TABLE 11: PASS-BY TRIPS

Project Land Use	AM Peak Hour			PM Peak Hour		
	Enter	Exit	Total	Enter	Exit	Total
Phases 1 & 2						
Shopping Center Raw Trips	51	32	83	144	155	299
Shopping Center Captured Trips	7	6	13	19	29	48
Shopping Center (Raw – Capture)			70			251
Phases 1 & 2 Pass-By Trips	**12**	**12**	**24**	**43**	**42**	**85**
All Phases						
Shopping Center Raw Trips	65	40	105	187	202	389
Shopping Center Captured Trips	8	7	15	25	36	61
Shopping Center (Raw – Capture)			90			328
Total Pass-By Trips	**16**	**15**	**31**	**56**	**56**	**112**

The Pass-By trips do not occur as a result of the Project, thus do not increase traffic on the surrounding roadway. However, they do utilize the Project driveways, thus creating turning movements where there would previously only be through movements on Dinuba Avenue. Typically only Project driveways are affected by pass-by trips and adjacent intersections do not see any measurable change in traffic patterns.

3.1.5 NEW PROJECT TRIPS

The total number of New Project Trips is then calculated by subtracting the number of Captured Trips (Table 9) and Pass-By Trips (Table 10) from the Unadjusted ITE Trip Generation Calculation (Table 8). Table 12 shows the New Project trips that are added to the surrounding roadways during the Plus Project scenarios in this TIS.

TABLE 12: NEW PROJECT TRIPS

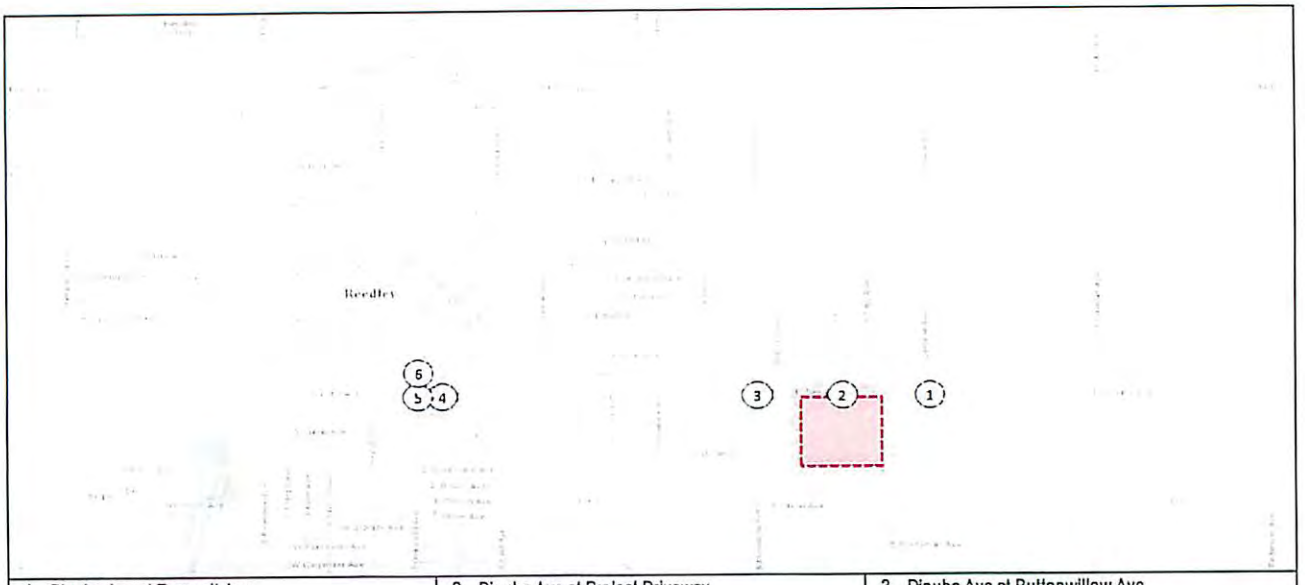
Project Land Use	AM Peak Hour			PM Peak Hour		
	Enter	Exit	Total	Enter	Exit	Total
Phases 1 & 2						
Unadjusted Project Trips	217	124	341	259	351	610
Captured Trips	13	13	26	52	52	104
Pass-By Trips	12	12	24	43	42	85
Phases 1 & 2 New Project Trips	**192**	**99**	**291**	**164**	**257**	**421**
All Phases						
Unadjusted Project Trips	272	198	470	370	463	833
Captured Trips	15	15	30	67	67	134
Pass-By Trips	16	15	31	56	56	112
Total New Project Trips	**241**	**168**	**409**	**247**	**340**	**587**

3.1.6 TOD TRIP GENERATION REDUCTIONS

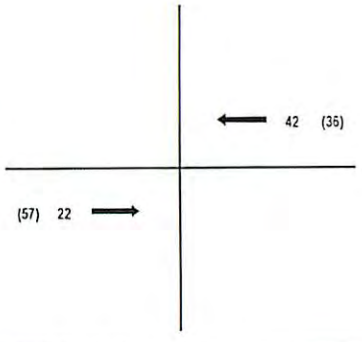
The ITE trip generation methodology does not completely account for potential trip reductions associated with TOD designs (such as those proposed with this Project). ITE rates and calculations are based on actual surveys for similar land uses which may or may not include alternative transportation features. The Project will construct a small transit station capable of accommodating multiple buses and is currently working with the City and Fresno County Rural Transit Agency to ensure that existing and future transit services can easily use the proposed station. However, since there is not sufficient evidence to support further reductions in trip generation due to the TOD designs, no additional reductions beyond those previously described (capture and pass-by) are included in this TIS.

3.1.7 PROJECT TRIP DISTRIBUTION

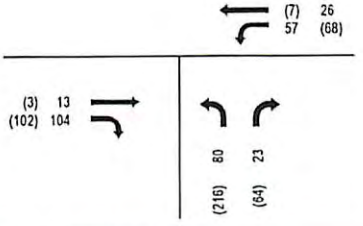
The Project trips shown in Table 12 are distributed on the nearby roadway network based a trip trace (select TAZ model run) prepared by FCOG staff and using the FCOG traffic model. The model uses the locations of most likely origins and destinations of the Project uses. Figures 3 and 4 show the Project trip assignment used in this TIS.



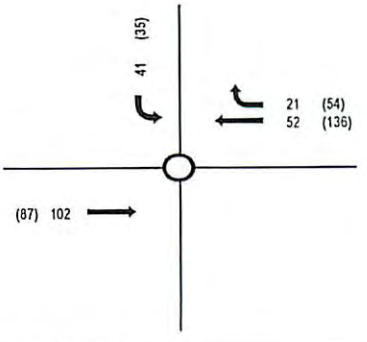
1 Dinuba Ave at Zumwalt Ave



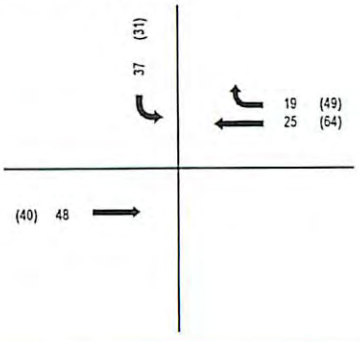
2 Dinuba Ave at Project Driveway



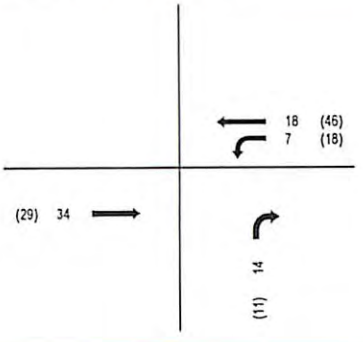
3 Dinuba Ave at Buttonwillow Ave



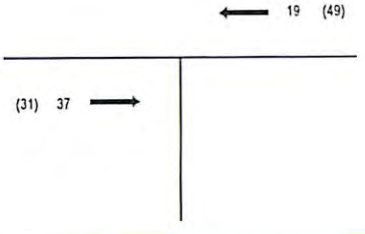
4 Dinuba Ave at I Street



5 Dinuba Ave at Frankwood Ave



6 I Street at Frankwood Ave



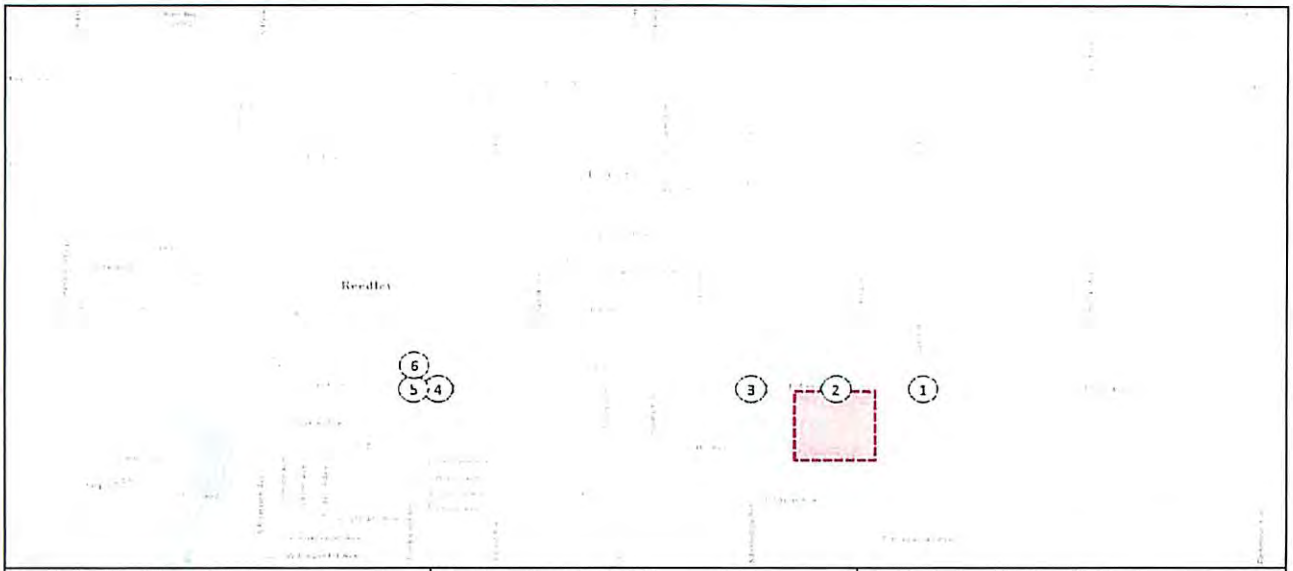
Legend

- Project Site
- # Study Intersection
- xx (xx) AM (PM) Peak Hour Volumes
- Stop Sign
- Traffic Signal
- Roundabout

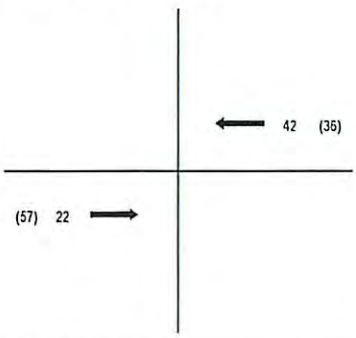
4CREEKS

Kings River Village
Project Trip Distribution (Phases 1 & 2)

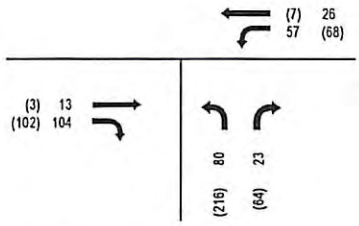
Figure 3



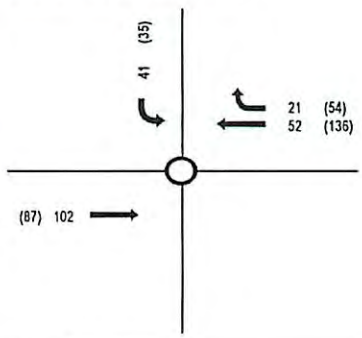
1 Dinuba Ave at Zumwalt Ave



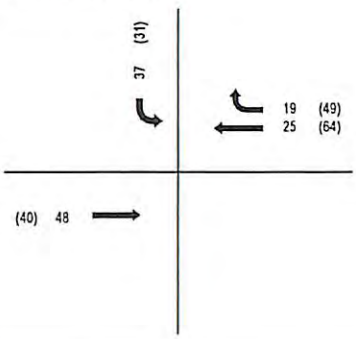
2 Dinuba Ave at Project Driveway



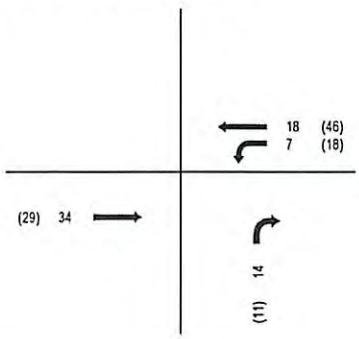
3 Dinuba Ave at Buttonwillow Ave



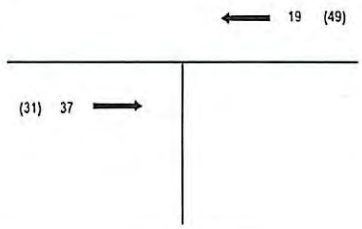
4 Dinuba Ave at I Street



5 Dinuba Ave at Frankwood Ave



6 I Street at Frankwood Ave



Legend

- Project Site
- # Study Intersection
- xx (xx) AM (PM) Peak Hour Volumes
- Stop Sign
- Traffic Signal
- Roundabout

4CREEKS

Kings River Village
Project Trip Distribution (All Phases)

Figure 4

SECTION 4: EXISTING CONDITIONS

4.1 TRAFFIC VOLUMES

Traffic counts were conducted at all existing study intersections on weekdays during the weeks of August 25 and September 1 of 2014. The Existing peak hour traffic volumes are shown on Figure 5.

4.2 OPERATIONAL ANALYSIS

The study intersection lane configurations and intersection controls are shown on Figure 5. Using the traffic volumes and the roadway geometry from Figure 5, the Existing conditions LOS and delay are calculated. Table 13 shows the results of the LOS calculations. The LOS calculation worksheets are included in Appendix C.

TABLE 13: EXISTING CONDITIONS LEVEL OF SERVICE SUMMARY

Intersection	LOS (AM/PM)	Delay[1] (AM/PM)
Dinuba Avenue at Zumwalt Avenue	B/C	13.2/15.5
Dinuba Avenue at Project Driveway	n/a	n/a
Dinuba Avenue at Buttonwillow Avenue	A/A	7.5/9.1
Dinuba Avenue at I Street	C/C	21.9/24.0
Dinuba Avenue at Frankwood Avenue	B/B	13.9/14.6
I Street at Frankwood Avenue	B/B	13.7/13.2

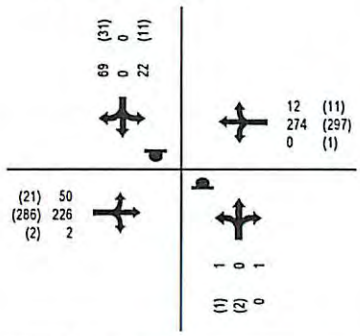
[1] *average seconds of delay per vehicle*

As shown in Table 13, all of the study intersections currently operate at or above the City's adopted LOS standard.

4.3 TRAFFIC SIGNAL WARRANTS

Peak-hour traffic signal warrants are prepared for the unsignalized study intersections. Based on the warrant analysis, a traffic signal is not warranted at any of the unsignalized study intersections in the Existing conditions scenario. The signal warrant analysis is included in Appendix D.

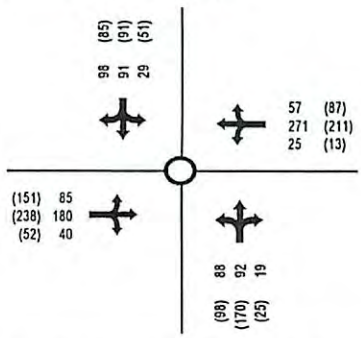
1 Dinuba Ave at Zumwalt Ave



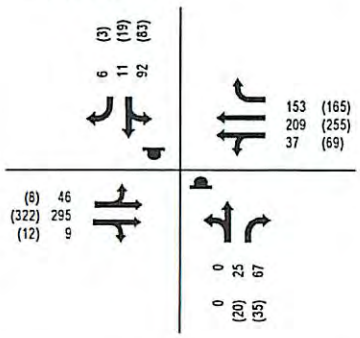
2 Dinuba Ave at Project Driveway

Intersection Does Not Exist

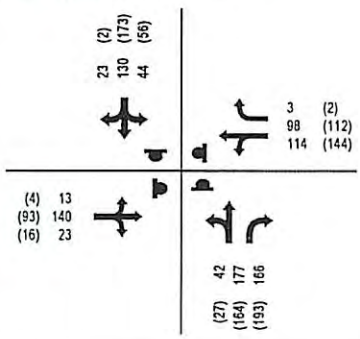
3 Dinuba Ave at Buttonwillow Ave



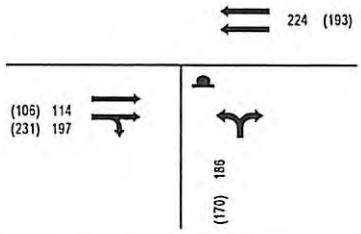
4 Dinuba Ave at I Street



5 Dinuba Ave at Frankwood Ave



6 I Street at Frankwood Ave



Legend

- Project Site
- # Study Intersection
- xx (xx) AM (PM) Peak Hour Volumes
- Stop Sign
- Traffic Signal
- Roundabout

4CREEKS

Kings River Village
Existing Conditions

Figure 5

4.4 Pedestrian and Bicycle Network

Pedestrian walkways and amenities (benches, shade, sidewalks) will be created on-site to facilitate convenient access between distinct uses. The Project will also construct frontage according to City standards, which includes curb, gutter, and sidewalk. As development continues to occur along Dinuba Avenue, those projects will construct pedestrian paths of travel, providing continuous access between the Project site and the rest of Reedley.

The Project will also construct on-site bicycle amenities, including bicycle racks and appropriate travel paths (bike lanes, shared use paths, etc.). Additionally, Dinuba Avenue, along the Project frontage is designated as a future bikeway. Existing bikeways in the area include Class II bike lanes on Dinuba Avenue between Reed Avenue and Buttonwillow Avenue and a Class I shared use path traveling between northwest and southeast Reedley.

4.5 Transit Network

The City of Reedley does not operate a fixed route transit system. However, there are currently two transit routes operating in the City of Reedley.

1. Orange Cove Transit (OCT) provides multiple scheduled round trip inter-city service through Orange Cove, Reedley, Parlier, Sanger to the Fresno-Clovis Metropolitan Area between the hours of 8:15 am to 5:05 pm Monday through Friday.
2. Dinuba Transit (DART) provides regional transit service between the City of Dinuba (Tulare County) and the City of Reedley (Fresno County) between the hours of 7:05 am to 8:55 pm Monday through Friday. Stops include the Dinuba Vocational Center, Sierra-Kings Hospital (Reedley), Reedley College, Palm Village Retirement Community (Reedley), and Walmart (Dinuba).

Additionally, the Project will construct a transit station centrally located within the development. Rest areas and covers will be provided for riders. The Project, Fresno County Rural Transit Agency, and the City of Reedley will work together to determine the best routes to use the proposed transit station.

SECTION 5: 2019 PLUS APPROVED PROJECTS CONDITIONS

5.1 TRAFFIC VOLUMES

The 2019 Plus Approved Projects traffic volumes are developed by calculating vehicle trips for Approved Projects identified by the City of Reedley. The Projects identified by the City of Reedley include:

- Kings River Commons – 60 apartment units located on the northeast corner of Dinuba Avenue at Orange Avenue.
- Reedley Family Apartments – 80 apartment units located east of I Street, south of Dinuba Avenue.

Trip generation was then calculated for those Approved Projects (using ITE methodology described in Section 2) and distributed to the study intersections using the origins and destinations of the Project trips from the FCOG trip trace.

In addition, 5 years or background growth are added to the Existing traffic volumes along with the Approved Project trips in order to complete the 2019 Plus Approved Projects traffic volumes. The 5 years of growth utilizes straight line growth between the Existing traffic volumes and the calculated 2035 traffic volumes.The 2019 Plus Approved Projects traffic volumes are shown in Figure 6.

5.2 OPERATIONAL ANALYSIS

Using the traffic volumes and the roadway geometry from Figure 6, the 2019 Plus Approved Projects conditions LOS and delay are calculated. Table 14 shows the results of the LOS calculations. The LOS calculation worksheets are included in Appendix E.

TABLE 14: 2019 PLUS APPROVED PROJECTS CONDITIONS LEVEL OF SERVICE SUMMARY

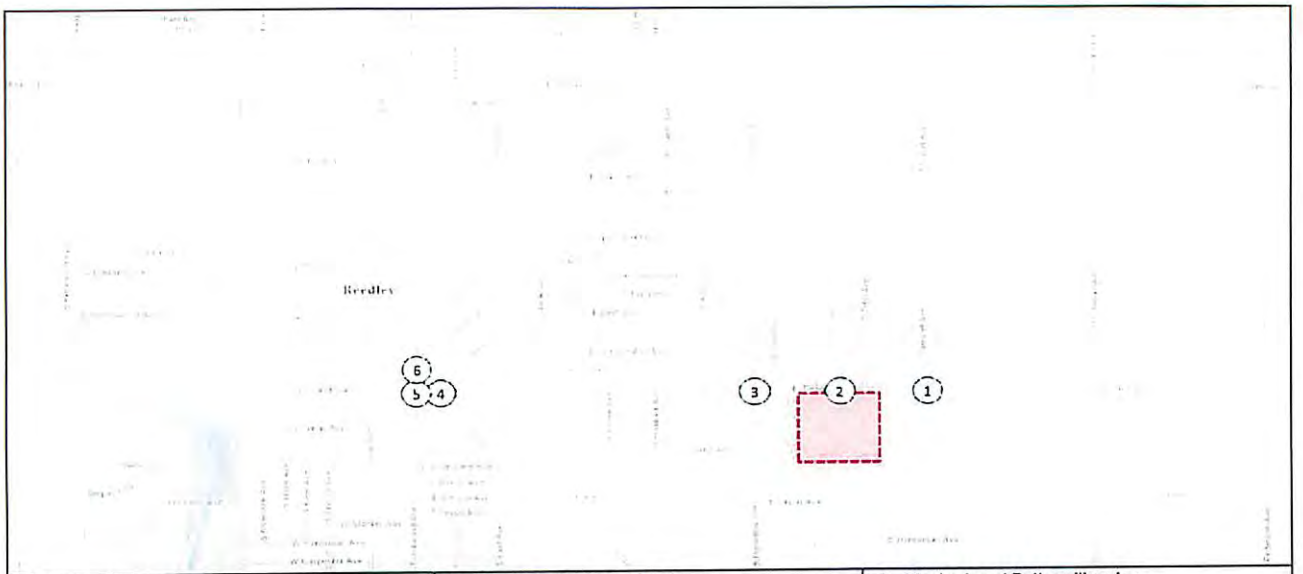
Intersection	LOS (AM/PM)	Delay[1] (AM/PM)
Dinuba Avenue at Zumwalt Avenue	B/C	13.7/16.9
Dinuba Avenue at Project Driveway	n/a	n/a
Dinuba Avenue at Buttonwillow Avenue	A/B	8.2/10.1
Dinuba Avenue at I Street	E/E	35.7/43.0
Dinuba Avenue at Frankwood Avenue	C/C	15.5/17.4
I Street at Frankwood Avenue	C/C	15.5/15.2

[1] *average seconds of delay per vehicle*

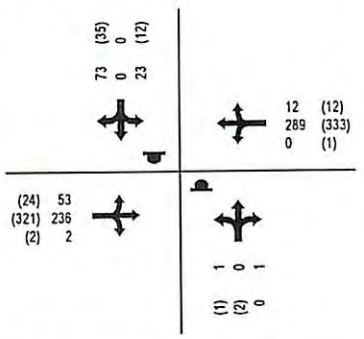
As shown in Table 14, one of the study intersections, shaded, is projected to operate below the City's adopted LOS standard.

5.3 TRAFFIC SIGNAL WARRANTS

Peak-hour traffic signal warrants are again prepared for the unsignalized study intersections. Based on the warrant analysis, a traffic signal is not warranted at any of the unsignalized study intersections in the 2019 Plus Approved Projects conditions scenario. The signal warrant analysis is included in Appendix D.



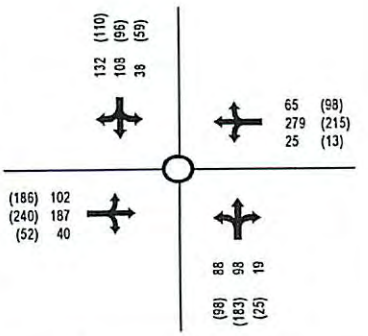
1 Dinuba Ave at Zumwalt Ave



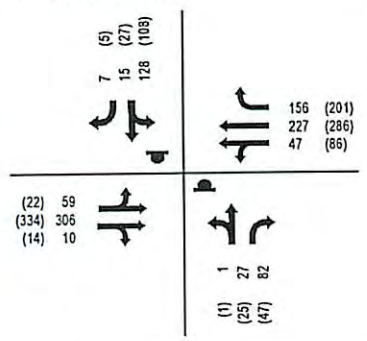
2 Dinuba Ave at Project Driveway

Intersection Does Not Exist

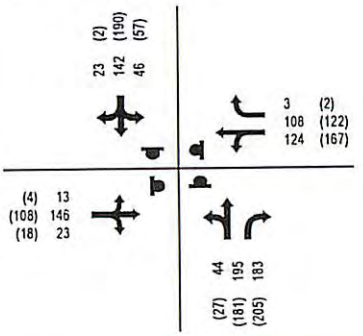
3 Dinuba Ave at Buttonwillow Ave



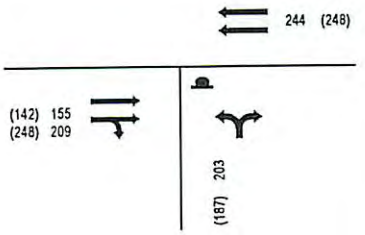
4 Dinuba Ave at I Street



5 Dinuba Ave at Frankwood Ave



6 I Street at Frankwood Ave



Legend

- Project Site
- (#) Study Intersection
- xx (xx) AM (PM) Peak Hour Volumes
- Stop Sign
- Traffic Signal
- Roundabout

4CREEKS

Kings River Village
2019 + Approved Projects Conditions

Figure 6

5.4 Recommended Improvements

Based on the LOS impacts identified in this scenario, the following improvements are recommended:

- Dinuba Avenue at I Street
    - Due to the proximity of the Dinuba/Frankwood and I/Frankwood intersections, an overall traffic control strategy should be considered for these three intersections
        - This strategy is discussed in subsequent sections
    - In the short-term, an all-way stop controlled intersection may be considered at this location.
        - With all-way stop control in place, this intersection is projected to operate at or above the City's LOS standard.

The LOS calculation worksheets are included in Appendix F.

SECTION 6: 2019 PLUS APPROVED PROJECTS PLUS PROJECT (PHASES 1 & 2) CONDITIONS

6.1 TRAFFIC VOLUMES

The 2019 Plus Approved Projects Plus Project (Phases 1 & 2) traffic volumes are developed by adding the Phases 1 & 2 Project trips (Figure 3) to the 2019 Plus Approved Project volumes (Figure 6). The 2019 Plus Approved Projects Plus Project (Phases 1 & 2) traffic volumes are shown in Figure 7.

6.2 OPERATIONAL ANALYSIS

Using the traffic volumes and the roadway geometry from Figure 7, the 2019 Plus Approved Projects conditions LOS and delay are calculated. Table 15 shows the results of the LOS calculations. The LOS calculation worksheets are included in Appendix G.

TABLE 15: 2019 PLUS APPROVED PROJECTS PLUS PROJECT (PHASES 1 & 2) CONDITIONS LEVEL OF SERVICE SUMMARY

Intersection	LOS (AM/PM)	Delay[1] (AM/PM)
Dinuba Avenue at Zumwalt Avenue	B/C	14.5/18.9
Dinuba Avenue at Project Driveway	C/F	20.8/81.5
Dinuba Avenue at Buttonwillow Avenue	B/C	10.1/15.1
Dinuba Avenue at I Street	F/F	65.9/99.1
Dinuba Avenue at Frankwood Avenue	C/C	17.5/23.5
I Street at Frankwood Avenue	C/C	16.8/16.7

[1] *average seconds of delay per vehicle*

As shown in Table 15, one of the study intersections, shaded, is projected to continue to operate below the City's adopted LOS standard.

6.3 TRAFFIC SIGNAL WARRANTS

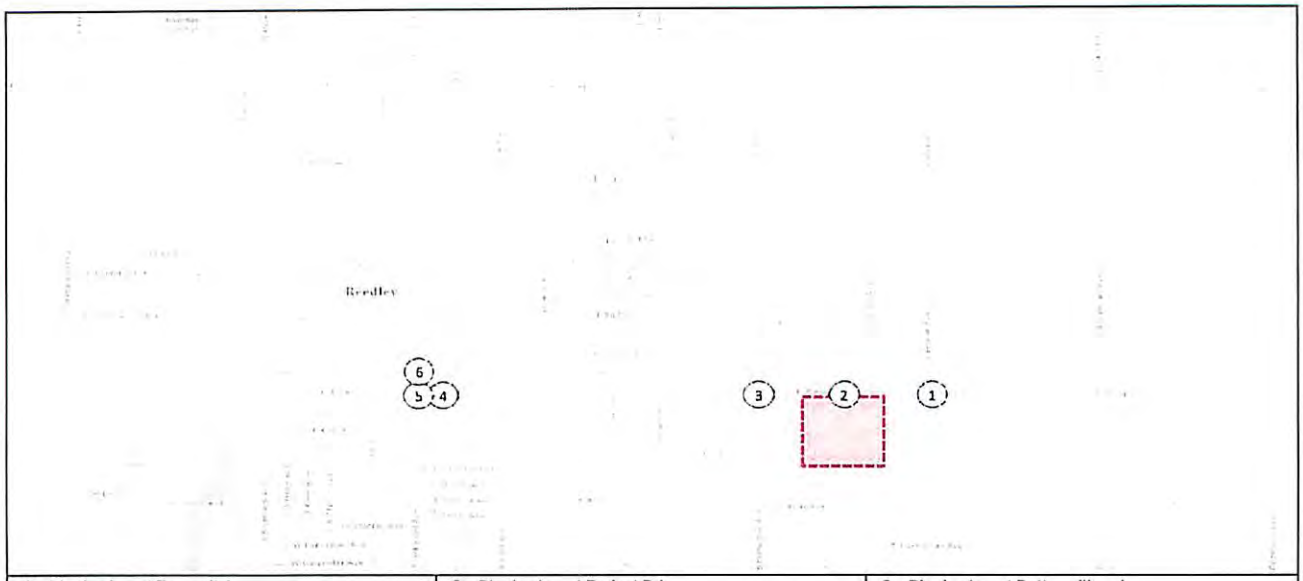
Peak-hour traffic signal warrants are again prepared for the unsignalized study intersections. Based on the warrant analysis, a traffic signal is warranted at the Project Driveway. The signal warrant analysis is included in Appendix D.

6.4 RECOMMENDED IMPROVEMENTS

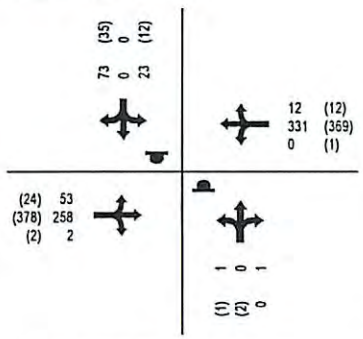
Based on the LOS impacts identified in this scenario, no additional improvements are recommended. Those improvements recommended in previous scenarios continue to be recommended. However, the Project will install a roundabout at the Project driveway.

- Dinuba Avenue at Project Driveway
    - Install a traffic signal or roundabout

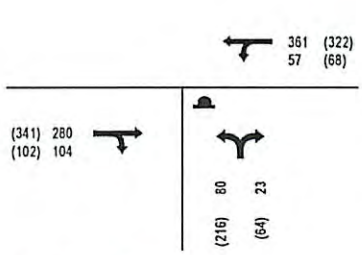
The LOS calculation worksheets are included in Appendix H.



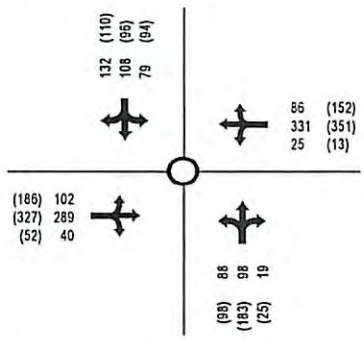
1 Dinuba Ave at Zumwalt Ave



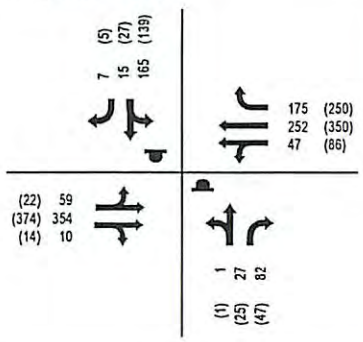
2 Dinuba Ave at Project Driveway



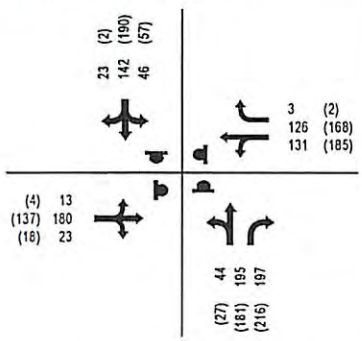
3 Dinuba Ave at Buttonwillow Ave



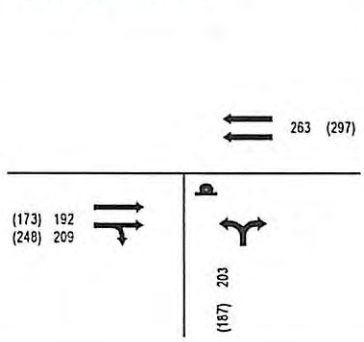
4 Dinuba Ave at I Street



5 Dinuba Ave at Frankwood Ave



6 I Street at Frankwood Ave



Legend

- Project Site
- (#) Study Intersection
- xx (xx) AM (PM) Peak Hour Volumes
- Stop Sign
- Traffic Signal
- Roundabout

4CREEKS

Kings River Village
2019 + Approved Projects + Project (Phases 1 & 2) Conditions

Figure 7

SECTION 7: 2021 PLUS APPROVED PROJECTS PLUS PROJECT (ALL PHASES) CONDITIONS

7.1 TRAFFIC VOLUMES

The 2021 Plus Approved Projects Plus Project (All Phases) traffic volumes are developed by adding the Total Project trips (Figure 4) to the 2021 background traffic volumes. The 2021 background traffic volumes are calculated the same as the 2019, described previously. The 2021 Plus Approved Projects Plus Project (Phases 1 & 2) traffic volumes are shown in Figure 8.

7.2 OPERATIONAL ANALYSIS

Using the traffic volumes and the roadway geometry from Figure 8, the 2021 Plus Approved Projects conditions LOS and delay are calculated. Table 16 shows the results of the LOS calculations. The LOS calculation worksheets are included in Appendix I.

TABLE 16: 2021 PLUS APPROVED PROJECTS PLUS PROJECT (ALL PHASES) CONDITIONS LEVEL OF SERVICE SUMMARY

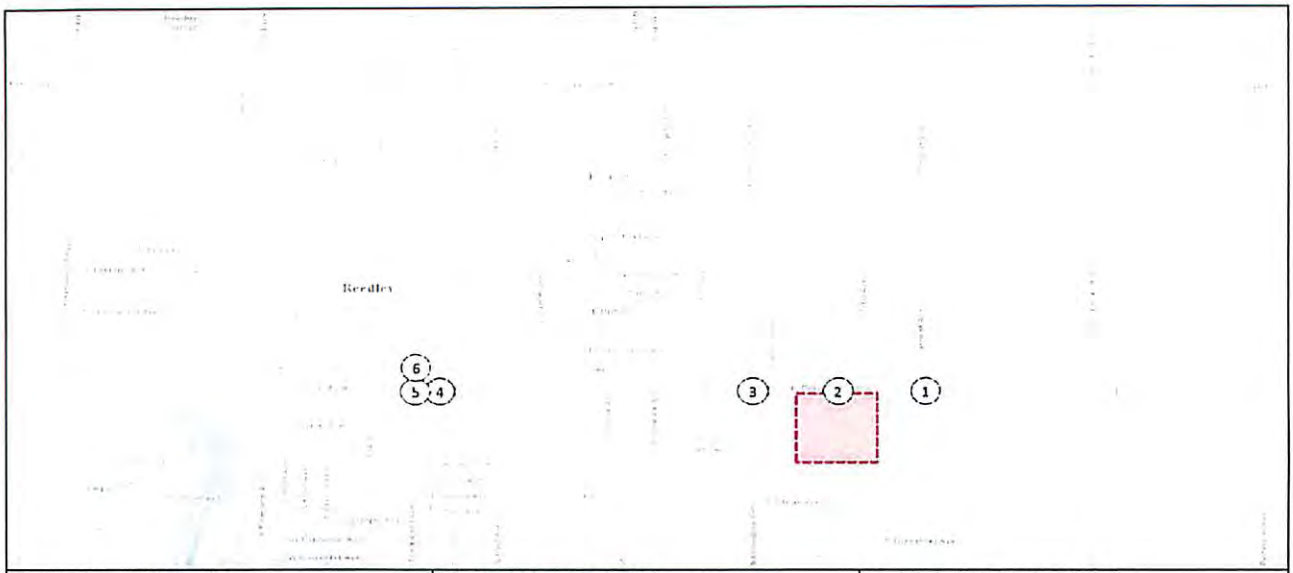
Intersection	LOS (AM/PM)	Delay[1] (AM/PM)
Dinuba Avenue at Zumwalt Avenue	C/C	15.2/20.5
Dinuba Avenue at Project Driveway		
• Roundabout	A/A	7.6/10.0
• Traffic Signal	B/C	11.4/26.6
Dinuba Avenue at Buttonwillow Avenue	B/C	11.7/20.2
Dinuba Avenue at I Street	F/F	128.6/244.1
Dinuba Avenue at Frankwood Avenue	C/D	19.7/32.7
I Street at Frankwood Avenue	C/C	18.4/18.7

[1] *average seconds of delay per vehicle*

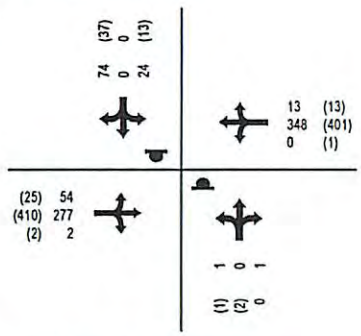
As shown in Table 16, two of the study intersections, shaded, are projected to operate below the City's adopted LOS standard.

7.3 TRAFFIC SIGNAL WARRANTS

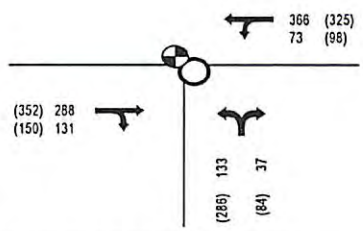
Peak-hour traffic signal warrants are again prepared for the unsignalized study intersections. Based on the warrant analysis, a traffic signal is warranted at the Project Driveway. The signal warrant analysis is included in Appendix D.



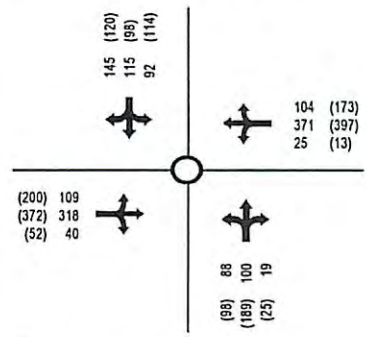
1 Dinuba Ave at Zumwalt Ave



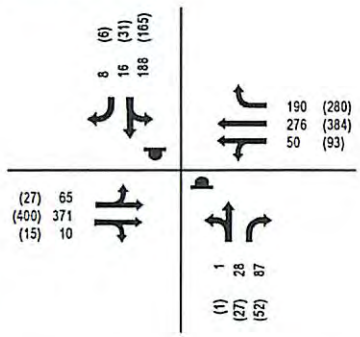
2 Dinuba Ave at Project Driveway



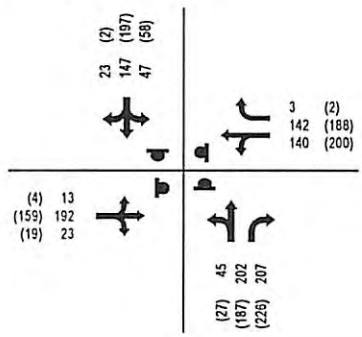
3 Dinuba Ave at Buttonwillow Ave



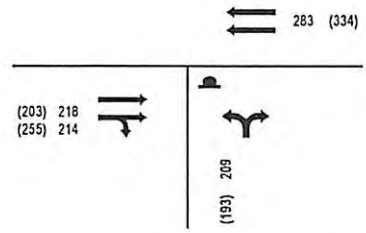
4 Dinuba Ave at I Street



5 Dinuba Ave at Frankwood Ave



6 I Street at Frankwood Ave



Legend

- Project Site
- (#) Study Intersection
- xx (xx) AM (PM) Peak Hour Volumes
- Stop Sign
- Traffic Signal
- Roundabout

4CREEKS

Kings River Village
2021 + Approved Projects + Project (All Phases) Conditions

Figure 8

7.4 Recommended Improvements

Based on the LOS impacts identified in this scenario, no additional improvements are recommended. Those improvements recommended in previous scenarios continue to be recommended. However, the Project will install a roundabout at the Project driveway.

- Dinuba Avenue at Frankwood Avenue
    - As previously discussed, this intersection, along with 2 others, form a triangle of closely spaced intersections which cannot be easily redesigned or signalized to mitigate LOS deficiencies.
    - Based on discussions with City staff, a long-term configuration for this area is analyzed as follows:
        - Dinuba Avenue at I Street
            - Restrict left-turn and through movements on I Street at the intersection
            - Restrict left-turn movements on Dinuba Avenue at the intersection
        - Dinuba Avenue at Frankwood Avenue
            - Install a roundabout
                - May require significant right-of-way encroachment in the area of the existing intersection.
        - I Street at Frankwood Avenue
            - Convert NB Frankwood Avenue and SB I Street to the primary (non-stop controlled) movements
                - May require revised curb lines or channelization to re-orient approaches to ensure that the primary movements are recognized as such
            - Install stop signs for Northwestbound (NWB) I Street

The LOS calculation worksheets are included in Appendix J.

SECTION 8: 2035 PLUS PROJECT CONDITIONS

8.1 TRAFFIC VOLUMES

The 2035 Project traffic volumes are developed by calculating the 2035 background traffic volumes using the FCOG traffic models (see Appendix A) and adding the Project trips (Figure 4) The 2035 Plus Project traffic volumes are shown in Figure 9.

8.2 OPERATIONAL ANALYSIS

Using the traffic volumes and the roadway geometry from Figure 9, the 2035 Plus Project conditions LOS and delay are calculated. Table 17 shows the results of the LOS calculations. The LOS calculation worksheets are included in Appendix K.

TABLE 17: 2035 PLUS PROJECT CONDITIONS LEVEL OF SERVICE SUMMARY

Intersection	LOS (AM/PM)	Delay[1] (AM/PM)
Dinuba Avenue at Zumwalt Avenue	C/C	17.3/21.5
Dinuba Avenue at Project Driveway		
• Roundabout	A/B	8.5/11.9
• Traffic Signal	B/C	11.6/33.1
Dinuba Avenue at Buttonwillow Avenue	C/E	18.9/43.9
Dinuba Avenue at I Street	F/F	---/---
Dinuba Avenue at Frankwood Avenue	E/E	36.1/46.3
I Street at Frankwood Avenue	D/E	37.1/46.1

[1] *average seconds of delay per vehicle*

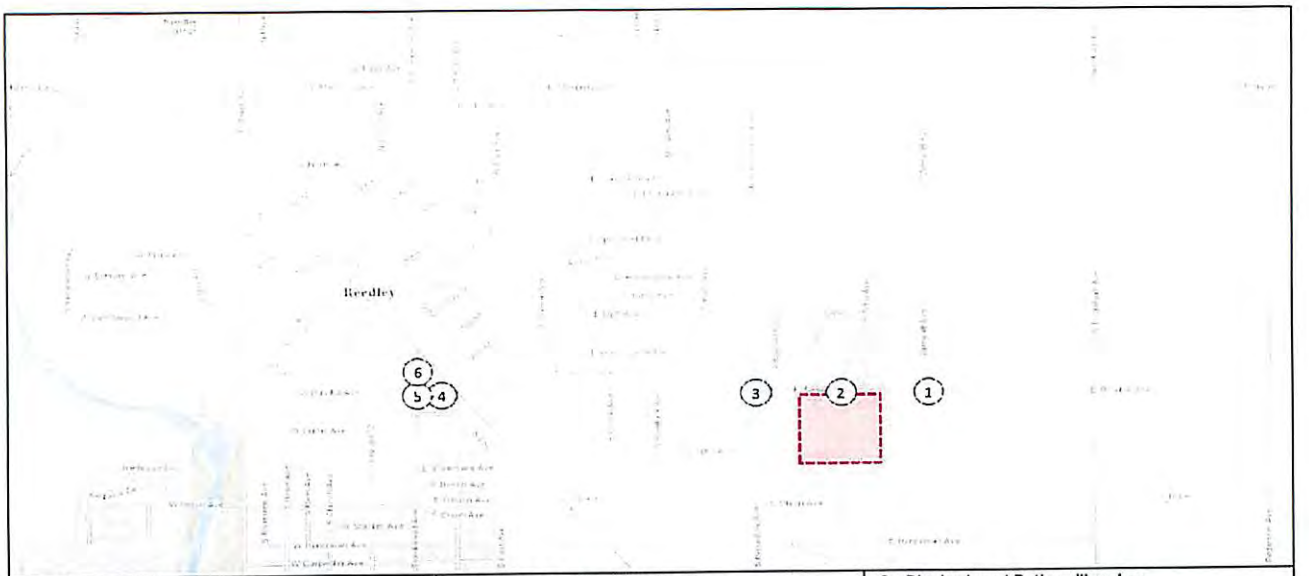
As shown in Table 17, four of the study intersections, shaded, are projected to operate below the City's adopted LOS standard during the 2035 Plus Project scenario.

8.3 TRAFFIC SIGNAL WARRANTS

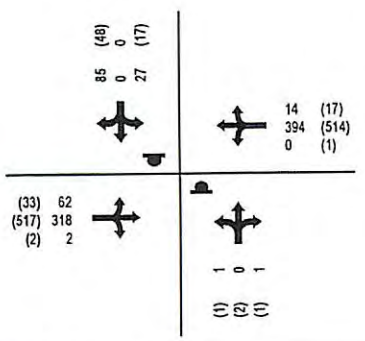
Peak-hour traffic signal warrants are again prepared for the unsignalized study intersections. Based on the warrant analysis, a traffic signal is warranted at the following intersections during the 2035 Plus Project scenario:

- Dinuba Avenue at I Street
- Dinuba Avenue at Frankwood Avenue
- I Street at Frankwood Avenue

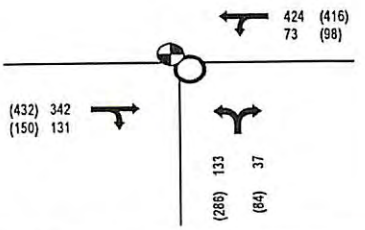
The signal warrant analysis is included in Appendix D.



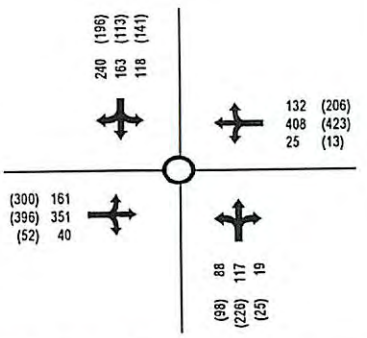
1 Dinuba Ave at Zumwalt Ave



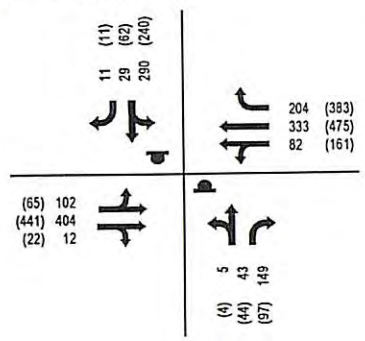
2 Dinuba Ave at Project Driveway



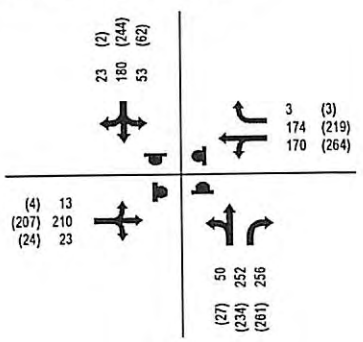
3 Dinuba Ave at Buttonwillow Ave



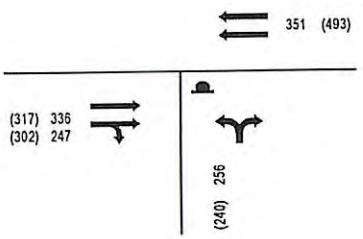
4 Dinuba Ave at I Street



5 Dinuba Ave at Frankwood Ave



6 I Street at Frankwood Ave



Legend

- Project Site
- # Study Intersection
- xx (xx) AM (PM) Peak Hour Volumes
- Stop Sign
- Traffic Signal
- Roundabout

4CREEKS

Kings River Village
2035 Plus Project Conditions

Figure 9

8.4 Recommended Improvements

Based on the LOS impacts identified in this scenario, the following improvements are recommended:

- Dinuba Avenue at Buttonwillow Avenue
  - Open the second internal circulating lane within the existing roundabout
- Dinuba Avenue at Frankwood Avenue
  - In addition to the previously recommended improvements;
  - Open the second internal circulating lane within the existing roundabout

The LOS calculation worksheets are included in Appendix L.

SECTION 9: CONCLUSIONS AND RECOMMENDATIONS

9.1 ANALYSIS SUMMARY

The analysis presented in this report has identified several intersections which either exceed the adopted LOS standards or meet the Peak-hour Traffic Signal Warrant. Those intersections include:

1. Dinuba Avenue at Project Driveway
    - Exceeds LOS Standard
    - Meets the Peak-hour Traffic Signal Warrant
2. Dinuba Avenue at Buttonwillow Avenue
    - Exceeds LOS Standard
3. Dinuba Avenue at I Street
    - Exceeds LOS Standard
    - Meets the Peak-hour Traffic Signal Warrant
4. Dinuba Avenue at Frankwood Avenue
    - Exceeds LOS Standard
    - Meets the Peak-hour Traffic Signal Warrant
5. I Street at Frankwood Avenue
    - Exceeds LOS Standard
    - Meets the Peak-hour Traffic Signal Warrant

9.2 RECOMMENDED IMPROVEMENTS

In order to mitigate the intersections currently operating or are projected to operate below the adopted LOS standard(s) and/or meet the Peak Hour Traffic Signal Warrant, the following improvements are recommended:

2019 Plus Approved Projects

- Dinuba Avenue at I Street
    - Due to the proximity of the Dinuba/Frankwood and I/Frankwood intersections, an overall traffic control strategy should be considered for these three intersections.
        - This strategy is discussed below.
    - In the short-term, an all-way stop controlled intersection may be considered at this location.
        - With all-way stop control in place, this intersection is projected to operate at or above the City's LOS standard. See Table 5 below.

2019 Plus Approved Projects Plus Project (Phases 1 & 2)

- Dinuba Avenue at Project Driveway
    - Install a traffic signal or roundabout

2021 Plus Approved Projects Plus Project (All Phases)

- Dinuba Avenue at Frankwood Avenue
    - As previously discussed, this intersection, along with 2 others, form a triangle of closely spaced intersections which cannot be easily redesigned or signalized to mitigate LOS deficiencies.
    - Based on discussions with City staff, a long-term configuration for this area is analyzed as follows:
        - Dinuba Avenue at I Street
            - Restrict left-turn and through movements on I Street at the intersection
            - Restrict left-turn movements on Dinuba Avenue at the intersection
        - Dinuba Avenue at Frankwood Avenue
            - Install a roundabout
                - May require significant right-of-way encroachment in the area of the existing intersection.
        - I Street at Frankwood Avenue
            - Convert NB Frankwood Avenue and SB I Street to the primary (non-stop controlled) movements
                - May require revised curb lines or channelization to re-orient approaches to ensure that the primary movements are recognized as such
            - Install stop signs for Northwestbound (NWB) I Street

2035 Project

- Dinuba Avenue at Buttonwillow Avenue
    - Open the second internal circulating lane within the existing roundabout
- Dinuba Avenue at Frankwood Avenue
    - In addition to the previously recommended improvements;
    - Open the second internal circulating lane within the existing roundabout

9.3 Project Requirements

The Project is directly responsible for the improvements required at the Dinuba Avenue at Project Driveway intersection. As shown in Table 1, the Project Driveway will require enhanced traffic control to improve LOS to the City's standard with completion of Phases 1 & 2. The LOS calculations for installation of both a traffic signal and roundabout have been included to provide alternatives to the City and Applicant. As shown in Table 5, both alternatives are projected to allow the intersection to operate at an acceptable LOS for all of the study scenarios.

The Project also contributes to the impacts identified at the following intersections:

- Dinuba Avenue at Buttonwillow Avenue
- Dinuba Avenue at I Street
- Dinuba Avenue at Frankwood Avenue
- I Street at Frankwood Avenue

As previously identified (Table 1), the Project is not the sole cause of the impacts to these intersections, but does contribute to the overall sub-standard LOS. As such, the Project is responsible for its proportionate fair share of the improvements. The Project's proportionate fair share for the above improvements are calculated based on Caltrans methodologies, as follows:

$$P = \frac{T}{T^{35} - T^{E}} * 100\% \qquad \text{sample: } P = \frac{350}{5000-1500} * 100\% = 10\%$$

- P = Project's Proportionate Share
- T = Project peak hour trips entering the intersection
- T^{35} = 2035 Plus Project peak hour trips entering the intersection
- T^{E} = Existing peak hour trips entering the intersection

The proportionate fair share for the intersections of Dinuba Avenue / Frankwood Avenue / I Street are calculated as a single location, utilizing trips entering the "3-intersection area". Additionally, the AM and PM peak hour trips are added together for the calculations to achieve the average. Table 18 shows the proportionate fair share calculations for the intersections with recommended improvements.

TABLE 18: PROJECT PROPORTIONATE FAIR SHARE CALCULATION

Intersection	Project Trips[1]	Existing Trips[1]	2035 Plus Project Trips[1]	Fair Share
Dinuba Avenue at Project Driveway	---	---	---	100%
Dinuba Avenue at Buttonwillow Avenue	737	2,347	4,051	43.3%
Dinuba Avenue / Frankwood Avenue / I Street	438	2,741	4,743	21.9%

[1] *all trips are the sum of the AM and PM peak hours*

APPENDIX A

ANALYSIS METHODOLOGY

APPENDIX A: ANALYSIS METHODOLOGY

A variety of data and technical assumptions were developed for this TIS and are defined in this appendix.

A.1 SOURCES

This report is prepared using information taken from the following sources:

- *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
- *California Manual on Uniform Traffic Control Devices for Streets and Highway*, 2012 Edition, California Department of Transportation, Division of Traffic Operations, January 13, 2012.
- *City of Reedley General Plan 2030*, City of Reedley, February 18, 2014.
- FCOG Traffic Model, Fresno Council of Governments, August 2014.
- *Guide for the Preparation of Traffic Impact Studies*, State of California Department of Transportation, December, 2002.
- Kai Han, Associate Planner, Fresno Council of Governments, email conversations, July-September 2014.
- Kevin Fabino, Director of Community Development, City of Reedley, email conversations, July-September 2014.
- John Robertson, City Engineer, City of Reedley, email conversations, August-September 2014.
- *Trip Generation Handbook*, 2nd Edition, Institute of Transportation Engineers, 2003.
- *Trip Generation Manual*, 9th Edition, Institute of Transportation Engineers, 2012.
- Synchro 8.0, Trafficware, 2013.

A.2 ANALYSIS TIME PERIODS

According to Traffic Impact Analyses for Site Development, the overall purpose of a traffic impact study is to determine the project impacts that are likely to occur to the surrounding street system. In order to accomplish this purpose you need to determine what occurs when the peak of the project generated traffic overlays the peak of the street traffic. Traffic Impact Analyses for Site Development states "the peak periods [of the adjacent street and highway system] are generally the weekday morning (7-9 a.m.) and evening (4-6 p.m.) peak hours, although local area characteristics occasionally result in other peaks (e.g., at major shopping or recreational centers)". The peak hours analyzed in this study are:

- 7:00 to 9:00 AM
- 4:00 to 6:00 PM

These are the standard AM and PM peak hours of the street typically used for study in the City of Reedley.

A.3 Traffic Counts

According to the Caltrans Guide for the Preparation of Traffic Impact Studies, one of the common rules for counting vehicular traffic is:

> "Vehicle counts should be conducted on Tuesdays, Wednesdays, or Thursdays during weeks not containing a holiday and conducted in favorable weather conditions."[1]

Traffic counts for the study intersections were conducted on the weeks of August 25 and September 1 of 2014. Counts were not taken on September 1 or 2 due to the Labor Day holiday.

A.4 Fresno County Traffic Model

A.4.1 Background

FCOG is the State Regional Transportation Planning Agency and the federal Metropolitan Planning Organization for Fresno County. As a transportation planning agency, FCOG is responsible for developing and maintaining a microcomputer-based traffic simulation model that represents Fresno County.

A.4.2 Project Model Use

The Model was used in this study to develop the following pieces of information:

- 2035 background growth increments
    - The 2014 and 2035 model years were used to create the growth increments

Straight line growth increments are used to determine the 2035 background traffic volumes. This methodology determines the difference between the 2014 and 2035 traffic model roadway volumes and adds that increment to the Existing traffic counts for each leg of each study intersection. In the event that the Models predict a negative growth, 1-2% per year growth was used. These approach and departure volumes are then converted to intersection turning movements using the future volumes and the existing turning movements, using the TurnsW32 software.

A.5 Intersection Analysis and Volume Adjustments

Heavy vehicle percentages were assumed to be 3% for all study locations. These percentages are used in all scenarios. The peak hour factor of 0.92 is used at all intersection locations in all scenarios.

A.6 Signal Warrant Analysis

Peak-hour signal warrants (Warrant 3, Part B) are prepared for all unsignalized intersections based on the methodology presented in the *California MUTCD 2012 Edition*, pages 833-834. A copy of this warrant

[1] *Guide for the Preparation of Traffic Impact Studies*, State of California Department of Transportation, December 2002, page 4.

analysis is included in Appendix C. According to the MUTCD, "the satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal." Therefore prior to making a final determination on installation of a proposed signal, a thorough engineering investigation, including collision history, should be conducted. Although an intersection may meet the traffic signal warrant, a signal is not recommended unless the intersection also operates (or is projected to operate) below the appropriate adopted LOS standard.

A.7 Level of Service Analysis Methods

Unsignalized, signalized, and roundabout intersection analyses are completed using Synchro 8.0, which incorporates the HCM 2010 methodologies. HCM 2010 reports and calculations were used for all LOS and delay calculations.

Table A2 shows the six levels of service and their corresponding ranges of average control delay for both signalized and unsignalized intersections. Table A2 also contains a brief traffic flow description for signalized intersections for each level of service category. The level of service diagrams provided throughout the report show the levels of service for the study intersections. The levels of service shown for signalized intersections are representative of the overall level of service for that intersection. For TWSC intersections, the level of service shown on the maps is the level of service for the worst operating movement at that intersection as opposed to the overall intersection level of service.

Table A2: Intersection Level Of Service Description			Intersections	
			Signalized	Roundabout Unsignalized[1]
Level of Service	Conditions	Signalized Intersection Description	Delay (sec/veh)	Delay (sec/veh)
"A"	Free Flow	Users experience very low delay. Progression is favorable and most vehicles do not stop at all.	<10.0	<10.0
"B"	Stable Operations	Vehicles travel with good progression. Some vehicles stop, causing slight delay.	>10.0 – 20.0	>10.0 – 15.0
"C"	Stable Operations	Higher delays result from fair progression. A significant number of vehicles stop, although many continue to pass through the intersection without stopping.	>20.0 to 35.0	>15.0 – 25.0
"D"	Approaching Unstable	Congestion is noticeable. Progression is unfavorable, with more vehicles stopping rather than passing through the intersection.	>35.0 – 55.0	>25.0 – 35.0
"E"	Unstable Operations	Traffic volumes are at capacity. Users experience poor progression and long delays.	>55.0 – 80.0	>35.0 – 50.0
"F"	Forced Flow	Intersection's capacity is oversaturated, causing poor progression and unusually long delays.	>80.0 or v/c > 1.0	>50.0

APPENDIX B

CAPTURED TRIPS CALCULATION WORKSHEET

Kings River Community Project - Trip Capture Calculations
Construction Phase 1 - Phases 1 & 2

Unadjusted Trip Generation

Land Use	AM Enter	AM Exit	PM Enter	PM Exit
Residential	18	65	67	37
Senior Adult Housing-Attached				
Shopping Center	51	32	144	155
General Office	90	12	17	81
Medical Dental Office	58	15	31	78
Total	217	124	259	351

Catpture Reductions by Use

	AM Enter (To)	AM Exit (From)	PM Enter (To)	PM Exit (From)
Residential	4	5	21	13
Senior Adult Housing-Attached	0	0	0	0
Shopping Center	7	6	19	29
General Office	1	1	6	5
Medical Dental Office	1	1	6	5
	13	13	52	52

New Project Trips - (Capture)

AM Enter	AM Exit	PM Enter	PM Exit
14	60	46	24
0	0	0	0
44	26	125	126
89	11	11	76
57	14	25	73
204	111	207	299
7.6%		17.0%	

Captured Pairings		AM Enter	AM Exit	PM Enter	PM Exit	Capture Rates AM Enter (To)	AM Exit (From)	PM Enter (To)	PM Exit (From)	Captured Trips AM Enter	AM Exit	PM Enter	PM Exit	Balanced Captured Trips AM Enter	AM Exit	PM Enter	PM Exit
From Residential	To Shopping Center	18	65	67	37		53%		53%		34		20		5		13
To Shopping Center	From Residential	51	32	144	155	9%		9%		5		13		5		13	
From Shopping Center	To Residential	51	32	144	155		12%		12%		4		19		4		19
To Residential	From Shopping Center	18	65	67	37	31%		31%		6		21		4		19	
From Residential	To General Office	18	65	67	37		0%		0%		0		0		0		0
To General Office	From Residential	90	12	17	81	0%		0%		0		0		0		0	
From General Office	To Residential	90	12	17	81		2%		2%		0		2		0		1
To Residential	From General Office	18	65	67	37	2%		2%		0		1		0		1	
From Residential	To Medical Dental Office	18	65	67	37		0%		0%		0		0		0		0
To Medical Dental Office	From Residential	58	15	31	78	0%		0%		0		0		0		0	
From Medical Dental Office	To Residential	58	15	31	78		2%		2%		0		2		0		1
To Residential	From Medical Dental Office	18	65	67	37	2%		2%		0		1		0		1	
From Shopping Center	To General Office	51	32	144	155		3%		3%		1		5		1		5
To General Office	From Shopping Center	90	12	17	81	31%		31%		28		5		1		5	
From General Office	To Shopping Center	90	12	17	81		23%		23%		3		19		1		3
To Shopping Center	From General Office	51	32	144	155	2%		2%		1		3		1		3	
From Shopping Center	To Medical Dental Office	51	32	144	155		3%		3%		1		5		1		5
To Medical Dental Office	From Shopping Center	58	15	31	78	31%		31%		18		10		1		5	
From Medical Dental Office	To Shopping Center	58	15	31	78		23%		23%		3		18		1		3
To Shopping Center	From Medical Dental Office	51	32	144	155	2%		2%		1		3		1		3	
From General Office	To Medical Dental Office	90	12	17	81		1%		1%		0		1		0		1
To Medical Dental Office	From General Office	58	15	31	78	6%		6%		3		2		0		1	
From Medical Dental Office	To General Office	58	15	31	78		1%		1%		0		1	0		1	
To General Office	From Medical Dental Office	90	12	17	81	6%		6%		5		1		0		1	

Table 7.1 Unconstrained Internal Capture Rates for Trip Origins within a Multi-Use Development

	to Office	3%	1%	2%
	to Retail	20%	23%	22%
	to Residential	0%	2%	2%
	to Office	3%	3%	3%
	to Retail	20%	20%	20%
	to Residential	2%	12%	11%
	to Office	N/A	N/A	N/A
	to Retail	34%	43%	39%
	to Residential	N/A	N/A	N/A

Table 7.2 Unconstrained Internal Capture Rates for Trip Destinations Within a Multi-Use Development

to OFFICE	from Office	6%	6%	2%
	from Retail	38%	31%	33%
	from Residential	0%	0%	N/A
to RETAIL	from Office	1%	2%	4%
	from Retail	20%	20%	20%
	from Residential	1%	9%	9%
to RESIDENTIAL	from Office	0%	2%	3%
	from Retail	20%	31%	33%
	from Residential	N/A	N/A	N/A

Kings River Community Project - Trip Capture Calculations
Complete Project - Phases 1-4

Unadjusted Trip Generation

Land Use	AM Enter	AM Exit	PM Enter	PM Exit
Residential	30	114	115	64
Senior Adult Housing-Attached	5	11	11	9
Shopping Center	65	40	187	202
General Office	100	14	19	90
Medical Dental Office	72	19	38	98
Total	272	198	370	463

Catpture Reductions by Use

	AM Enter (To)	AM Exit (From)	PM Enter (To)	PM Exit (From)
Residential	5	6	28	17
Senior Adult Housing-Attached	0	0	0	0
Shopping Center	8	7	25	38
General Office	1	1	7	7
Medical Dental Office	1	1	7	7
	15	15	67	67

New Project Trips - (Capture)

AM Enter	AM Exit	PM Enter	PM Exit
25	108	87	47
5	11	11	9
57	33	162	166
99	13	12	83
71	18	31	91
257	183	303	396
6.4%		16.1%	

Captured Pairings		AM Enter	AM Exit	PM Enter	PM Exit
From Residential	To Shopping Center	30	114	115	64
To Shopping Center	From Residential	65	40	187	202
From Shopping Center	To Residential	65	40	187	202
To Residential	From Shopping Center	30	114	115	64
From Residential	To General Office	30	114	115	64
To General Office	From Residential	100	14	19	90
From General Office	To Residential	100	14	19	90
To Residential	From General Office	30	114	115	64
From Residential	To Medical Dental Office	30	114	115	64
To Medical Dental Office	From Residential	72	19	38	98
From Medical Dental Office	To Residential	72	19	38	98
To Residential	From Medical Dental Office	30	114	115	64
From Shopping Center	To General Office	65	40	187	202
To General Office	From Shopping Center	100	14	19	90
From General Office	To Shopping Center	100	14	19	90
To Shopping Center	From General Office	65	40	187	202
From Shopping Center	To Medical Dental Office	65	40	187	202
To Medical Dental Office	From Shopping Center	72	19	38	98
From Medical Dental Office	To Shopping Center	72	19	38	98
To Shopping Center	From Medical Dental Office	65	40	187	202
From General Office	To Medical Dental Office	100	14	19	90
To Medical Dental Office	From General Office	72	19	38	98
From Medical Dental Office	To General Office	72	19	38	98
To General Office	From Medical Dental Office	100	14	19	90

Capture Rates

AM Enter (To)	AM Exit (From)	PM Enter (To)	PM Exit (From)
	53%		53%
9%		9%	
	12%		12%
31%		31%	
	0%		0%
0%		0%	
	2%		2%
2%		2%	
	0%		0%
0%		0%	
	2%		2%
2%		2%	
	3%		3%
31%		31%	
	23%		23%
2%		2%	
	3%		3%
31%		31%	
	23%		23%
2%		2%	
	1%		1%
6%		6%	
	1%		1%
6%		6%	

Captured Trips

AM Enter	AM Exit	PM Enter	PM Exit
	60		34
6		17	
	5		24
9		36	
	0		0
0		0	
	0		2
1		2	
	0		0
0		0	
	0		2
1		2	
	1		6
31		6	
	3		21
1		4	
	1		6
22		12	
	4		23
1		4	
	0		1
4		2	
	0		1
6		1	

Balanced Captured Trips

AM Enter	AM Exit	PM Enter	PM Exit
	6		17
6		17	
	5		24
6		24	
	0		0
0		0	
	0		2
0		2	
	0		0
0		0	
	0		2
0		2	
	1		6
1		6	
	1		4
1		4	
	1		6
1		4	
	0		1
0		1	
	0		1
0		1	

Table 7.1 Unconstrained Internal Capture Rates for Trip Origins within a Multi-Use Development

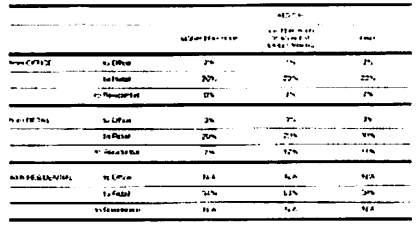
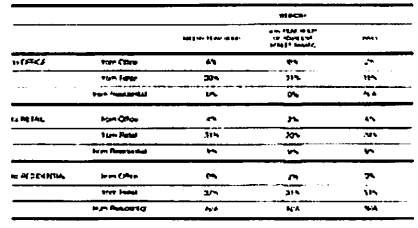


Table 7.2 Unconstrained Internal Capture Rates for Trip Destinations Within a Multi-Use Development



APPENDIX C

EXISTING CONDITIONS LOS CALCULATIONS

Existing AM Peak Hour
1: Zumwalt Ave & Dinuba Ave

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	50	226	2	0	274	12	1	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3
Mvmt Flow	54	246	2	0	298	13	1	0	1

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	311	0	0	248	0	0	697	666	247
Stage 1	-	-	-	-	-	-	355	355	-
Stage 2	-	-	-	-	-	-	342	311	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327
Pot Cap-1 Maneuver	1244	-	-	1312	-	-	354	379	789
Stage 1	-	-	-	-	-	-	660	628	-
Stage 2	-	-	-	-	-	-	671	656	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	1244	-	-	1312	-	-	306	360	789
Mov Cap-2 Maneuver	-	-	-	-	-	-	306	360	-
Stage 1	-	-	-	-	-	-	627	597	-
Stage 2	-	-	-	-	-	-	602	656	-

Approach	EB	WB	NB
HCM Control Delay, s	1.4	0	13.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	441	1244	-	-	1312	-	-	586
HCM Lane V/C Ratio	0.005	0.044	-	-	-	-	-	0.169
HCM Control Delay (s)	13.2	8	0	-	0	-	-	12.4
HCM Lane LOS	B	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	0	0.1	-	-	0	-	-	0.6

Intersection

Int Delay, s/veh

Movement	SBL	SBT	SBR
Vol, veh/h	22	0	69
Conflicting Peds, #/hr	0	0	0
Sign Control	Stop	Stop	Stop
RT Channelized	-	-	None
Storage Length	-	-	-
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	92	92	92
Heavy Vehicles, %	3	3	3
Mvmt Flow	24	0	75

Major/Minor	Minor2		
Conflicting Flow All	660	661	304
Stage 1	304	304	-
Stage 2	356	357	-
Critical Hdwy	7.13	6.53	6.23
Critical Hdwy Stg 1	6.13	5.53	-
Critical Hdwy Stg 2	6.13	5.53	-
Follow-up Hdwy	3.527	4.027	3.327
Pot Cap-1 Maneuver	375	381	733
Stage 1	703	661	-
Stage 2	659	627	-
Platoon blocked, %			
Mov Cap-1 Maneuver	360	362	733
Mov Cap-2 Maneuver	360	362	-
Stage 1	668	661	-
Stage 2	625	596	-

Approach	SB
HCM Control Delay, s	12.4
HCM LOS	B

Minor Lane/Major Mvmt

Existing AM Peak Hour
3: Buttonwillow Ave & Dinuba Ave

Intersection	
Intersection Delay, s/veh	7.5
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	331	384	217	238
Demand Flow Rate, veh/h	341	396	224	245
Vehicles Circulating, veh/h	163	297	330	431
Vehicles Exiting, veh/h	513	257	174	262
Follow-Up Headway, s	2.900	2.900	2.900	2.900
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	6.7	8.8	6.5	7.7
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	4.700	4.700	4.700	4.700
Entry Flow, veh/h	341	396	224	245
Cap Entry Lane, veh/h	1072	949	922	841
Entry HV Adj Factor	0.971	0.970	0.969	0.972
Flow Entry, veh/h	331	384	217	238
Cap Entry, veh/h	1040	921	893	817
V/C Ratio	0.318	0.417	0.243	0.291
Control Delay, s/veh	6.7	8.8	6.5	7.7
LOS	A	A	A	A
95th %tile Queue, veh	1	2	1	1

Intersection	
Int Delay, s/veh	5.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	46	295	9	37	209	153	0	25	67
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3
Mvmt Flow	50	321	10	40	227	166	0	27	73

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	393	0	0	330	0	0	626	900	165
Stage 1	-	-	-	-	-	-	426	426	-
Stage 2	-	-	-	-	-	-	200	474	-
Critical Hdwy	4.16	-	-	4.16	-	-	7.56	6.56	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-	6.56	5.56	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.56	5.56	-
Follow-up Hdwy	2.23	-	-	2.23	-	-	3.53	4.03	3.33
Pot Cap-1 Maneuver	1155	-	-	1219	-	-	367	275	847
Stage 1	-	-	-	-	-	-	574	582	-
Stage 2	-	-	-	-	-	-	780	554	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	1155	-	-	1219	-	-	327	249	847
Mov Cap-2 Maneuver	-	-	-	-	-	-	327	249	-
Stage 1	-	-	-	-	-	-	544	551	-
Stage 2	-	-	-	-	-	-	725	530	-

Approach	EB	WB	NB
HCM Control Delay, s	1.3	0.8	12.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	249	847	1155	-	-	1219	-	-	269	808
HCM Lane V/C Ratio	0.109	0.086	0.043	-	-	0.033	-	-	0.416	0.008
HCM Control Delay (s)	21.2	9.7	8.3	0.2	-	8.1	0.1	-	27.6	9.5
HCM Lane LOS	C	A	A	A	-	A	A	-	D	A
HCM 95th %tile Q(veh)	0.4	0.3	0.1	-	-	0.1	-	-	1.9	0

Existing AM Peak Hour
4: Dinuba Ave & I Street

Intersection	
Int Delay, s/veh	

Movement	SBL	SBT	SBR
Vol, veh/h	92	11	6
Conflicting Peds, #/hr	0	0	0
Sign Control	Stop	Stop	Stop
RT Channelized	-	-	None
Storage Length	-	-	0
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	92	92	92
Heavy Vehicles, %	3	3	3
Mvmt Flow	100	12	7

Major/Minor	Minor2		
Conflicting Flow All	665	821	197
Stage 1	391	391	-
Stage 2	274	430	-
Critical Hdwy	7.56	6.56	6.96
Critical Hdwy Stg 1	6.56	5.56	-
Critical Hdwy Stg 2	6.56	5.56	-
Follow-up Hdwy	3.53	4.03	3.33
Pot Cap-1 Maneuver	344	306	808
Stage 1	602	603	-
Stage 2	706	579	-
Platoon blocked, %			
Mov Cap-1 Maneuver	268	277	808
Mov Cap-2 Maneuver	268	277	-
Stage 1	570	577	-
Stage 2	581	548	-

Approach	SB
HCM Control Delay, s	26.6
HCM LOS	D

Minor Lane/Major Mvmt

Existing AM Peak Hour
5: Frankwood Ave & Dinuba Ave

Intersection	
Intersection Delay, s/veh	13.9
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	13	140	23	0	114	98	3	0	42	177	166
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	14	152	25	0	124	107	3	0	46	192	180
Number of Lanes	0	0	1	0	0	0	1	1	0	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	2	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	1	2
HCM Control Delay	13.9	15.5	12.7
HCM LOS	B	C	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	19%	0%	7%	54%	0%	22%
Vol Thru, %	81%	0%	80%	46%	0%	66%
Vol Right, %	0%	100%	13%	0%	100%	12%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	219	166	176	212	3	197
LT Vol	177	0	140	98	0	130
Through Vol	0	166	23	0	3	23
RT Vol	42	0	13	114	0	44
Lane Flow Rate	238	180	191	230	3	214
Geometry Grp	7	7	6	7	7	6
Degree of Util (X)	0.431	0.286	0.365	0.451	0.005	0.4
Departure Headway (Hd)	6.521	5.712	6.866	7.048	6.06	6.731
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	548	624	520	507	586	531
Service Time	4.308	3.498	4.963	4.838	3.849	4.83
HCM Lane V/C Ratio	0.434	0.288	0.367	0.454	0.005	0.403
HCM Control Delay	14.2	10.8	13.9	15.6	8.9	14.3
HCM Lane LOS	B	B	B	C	A	B
HCM 95th-tile Q	2.2	1.2	1.7	2.3	0	1.9

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	44	130	23
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	3
Mvmt Flow	0	48	141	25
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	14.3
HCM LOS	B

Lane

Existing AM Peak Hour
6: Frankwood Ave & I Street

Intersection	
Int Delay, s/veh	3.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	114	197	0	224	186	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	124	214	0	243	202	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	338	0	353	169
Stage 1	-	-	-	-	231	-
Stage 2	-	-	-	-	122	-
Critical Hdwy	-	-	4.16	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	-	-	2.23	-	3.53	3.33
Pot Cap-1 Maneuver	-	-	1211	-	616	842
Stage 1	-	-	-	-	782	-
Stage 2	-	-	-	-	887	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1211	-	616	842
Mov Cap-2 Maneuver	-	-	-	-	616	-
Stage 1	-	-	-	-	782	-
Stage 2	-	-	-	-	887	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	13.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	616	-	-	1211	-
HCM Lane V/C Ratio	0.328	-	-	-	-
HCM Control Delay (s)	13.7	-	-	0	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	1.4	-	-	0	-

Existing PM Peak Hour
1: Zumwalt Ave & Dinuba Ave

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	21	286	2	1	297	11	1	2	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3
Mvmt Flow	23	311	2	1	323	12	1	2	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	335	0	0	313	0	0	706	695	312
Stage 1	-	-	-	-	-	-	358	358	-
Stage 2	-	-	-	-	-	-	348	337	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327
Pot Cap-1 Maneuver	1219	-	-	1242	-	-	349	365	726
Stage 1	-	-	-	-	-	-	658	626	-
Stage 2	-	-	-	-	-	-	666	639	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	1219	-	-	1242	-	-	326	356	726
Mov Cap-2 Maneuver	-	-	-	-	-	-	326	356	-
Stage 1	-	-	-	-	-	-	643	612	-
Stage 2	-	-	-	-	-	-	634	638	-

Approach	EB	WB	NB
HCM Control Delay, s	0.5	0	15.5
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	345	1219	-	-	1242	-	-	559
HCM Lane V/C Ratio	0.009	0.019	-	-	0.001	-	-	0.082
HCM Control Delay (s)	15.5	8	0	-	7.9	0	-	12
HCM Lane LOS	C	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0	0.1	-	-	0	-	-	0.3

Existing PM Peak Hour
1: Zumwalt Ave & Dinuba Ave

Intersection	
Int Delay, s/veh	

Movement	SBL	SBT	SBR
Vol, veh/h	11	0	31
Conflicting Peds, #/hr	0	0	0
Sign Control	Stop	Stop	Stop
RT Channelized	-	-	None
Storage Length	-	-	-
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	92	92	92
Heavy Vehicles, %	3	3	3
Mvmt Flow	12	0	34

Major/Minor	Minor2		
Conflicting Flow All	690	690	329
Stage 1	331	331	-
Stage 2	359	359	-
Critical Hdwy	7.13	6.53	6.23
Critical Hdwy Stg 1	6.13	5.53	-
Critical Hdwy Stg 2	6.13	5.53	-
Follow-up Hdwy	3.527	4.027	3.327
Pot Cap-1 Maneuver	358	367	710
Stage 1	680	643	-
Stage 2	657	625	-
Platoon blocked, %			
Mov Cap-1 Maneuver	350	358	710
Mov Cap-2 Maneuver	350	358	-
Stage 1	664	642	-
Stage 2	640	611	-

Approach	SB
HCM Control Delay, s	12
HCM LOS	B

Minor Lane/Major Mvmt

Intersection	
Intersection Delay, s/veh	9.1
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	480	338	319	246
Demand Flow Rate, veh/h	495	348	329	254
Vehicles Circulating, veh/h	173	470	493	360
Vehicles Exiting, veh/h	441	352	175	458
Follow-Up Headway, s	2.900	2.900	2.900	2.900
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	8.8	10.1	10.0	7.2
Approach LOS	A	B	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	4.700	4.700	4.700	4.700
Entry Flow, veh/h	495	348	329	254
Cap Entry Lane, veh/h	1062	812	795	897
Entry HV Adj Factor	0.970	0.972	0.971	0.969
Flow Entry, veh/h	480	338	319	246
Cap Entry, veh/h	1030	789	772	869
V/C Ratio	0.466	0.428	0.414	0.283
Control Delay, s/veh	8.8	10.1	10.0	7.2
LOS	A	B	A	A
95th %tile Queue, veh	3	2	2	1

Existing PM Peak Hour
4: Dinuba Ave & I Street

Intersection	
Int Delay, s/veh	4.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	8	322	12	69	255	165	0	20	35
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3
Mvmt Flow	9	350	13	75	277	179	0	22	38

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	457	0	0	363	0	0	673	981	182
Stage 1	-	-	-	-	-	-	374	374	-
Stage 2	-	-	-	-	-	-	299	607	-
Critical Hdwy	4.16	-	-	4.16	-	-	7.56	6.56	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-	6.56	5.56	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.56	5.56	-
Follow-up Hdwy	2.23	-	-	2.23	-	-	3.53	4.03	3.33
Pot Cap-1 Maneuver	1093	-	-	1185	-	-	339	246	826
Stage 1	-	-	-	-	-	-	616	614	-
Stage 2	-	-	-	-	-	-	682	482	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	1093	-	-	1185	-	-	293	222	826
Mov Cap-2 Maneuver	-	-	-	-	-	-	293	222	-
Stage 1	-	-	-	-	-	-	610	608	-
Stage 2	-	-	-	-	-	-	594	440	-

Approach	EB	WB	NB
HCM Control Delay, s	0.2	1.3	14.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	222	826	1093	-	-	1185	-	-	255	772
HCM Lane V/C Ratio	0.098	0.046	0.008	-	-	0.063	-	-	0.435	0.004
HCM Control Delay (s)	23	9.6	8.3	0	-	8.2	0.2	-	29.6	9.7
HCM Lane LOS	C	A	A	A	-	A	A	-	D	A
HCM 95th %tile Q(veh)	0.3	0.1	0	-	-	0.2	-	-	2.1	0

Existing PM Peak Hour
4: Dinuba Ave & I Street

Intersection	
Int Delay, s/veh	

Movement	SBL	SBT	SBR
Vol, veh/h	83	19	3
Conflicting Peds, #/hr	0	0	0
Sign Control	Stop	Stop	Stop
RT Channelized	-	-	None
Storage Length	-	-	0
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	92	92	92
Heavy Vehicles, %	3	3	3
Mvmt Flow	90	21	3

Major/Minor	Minor2		
Conflicting Flow All	720	897	228
Stage 1	517	517	-
Stage 2	203	380	-
Critical Hdwy	7.56	6.56	6.96
Critical Hdwy Stg 1	6.56	5.56	-
Critical Hdwy Stg 2	6.56	5.56	-
Follow-up Hdwy	3.53	4.03	3.33
Pot Cap-1 Maneuver	313	276	772
Stage 1	507	529	-
Stage 2	777	610	-
Platoon blocked, %			
Mov Cap-1 Maneuver	256	249	772
Mov Cap-2 Maneuver	256	249	-
Stage 1	502	483	-
Stage 2	708	604	-

Approach	SB
HCM Control Delay, s	29
HCM LOS	D

Minor Lane/Major Mvmt

Existing PM Peak Hour
5: Frankwood Ave & Dinuba Ave

Intersection	
Intersection Delay, s/veh	14.6
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	4	93	16	0	144	112	2	0	27	164	193
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	4	101	17	0	157	122	2	0	29	178	210
Number of Lanes	0	0	1	0	0	0	1	1	0	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	2	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	1	2
HCM Control Delay	12.5	17.8	12.3
HCM LOS	B	C	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	14%	0%	4%	56%	0%	24%
Vol Thru, %	86%	0%	82%	44%	0%	75%
Vol Right, %	0%	100%	14%	0%	100%	1%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	191	193	113	256	2	231
LT Vol	164	0	93	112	0	173
Through Vol	0	193	16	0	2	2
RT Vol	27	0	4	144	0	56
Lane Flow Rate	208	210	123	278	2	251
Geometry Grp	7	7	6	7	7	6
Degree of Util (X)	0.376	0.334	0.246	0.542	0.004	0.469
Departure Headway (Hd)	6.519	5.734	7.212	7.009	6.009	6.826
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	548	621	501	512	590	532
Service Time	4.316	3.532	5.212	4.8	3.8	4.826
HCM Lane V/C Ratio	0.38	0.338	0.246	0.543	0.003	0.472
HCM Control Delay	13.2	11.4	12.5	17.9	8.8	15.7
HCM Lane LOS	B	B	B	C	A	C
HCM 95th-tile Q	1.7	1.5	1	3.2	0	2.5

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	56	173	2
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	3
Mvmt Flow	0	61	188	2
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	15.7
HCM LOS	C

Lane

Intersection	
Int Delay, s/veh	3.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	106	231	0	193	170	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	115	251	0	210	185	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	366	0	346	183
Stage 1	-	-	-	-	241	-
Stage 2	-	-	-	-	105	-
Critical Hdwy	-	-	4.16	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	-	-	2.23	-	3.53	3.33
Pot Cap-1 Maneuver	-	-	1182	-	622	825
Stage 1	-	-	-	-	774	-
Stage 2	-	-	-	-	905	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1182	-	622	825
Mov Cap-2 Maneuver	-	-	-	-	622	-
Stage 1	-	-	-	-	774	-
Stage 2	-	-	-	-	905	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	13.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	622	-	-	1182	-
HCM Lane V/C Ratio	0.297	-	-	-	-
HCM Control Delay (s)	13.2	-	-	0	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	1.2	-	-	0	-

APPENDIX D

TRAFFIC SIGNAL WARRANT ANALYSIS

Peak Hour Traffic Signal Warrants ***MUTCD Warrant 3, Part B***

Intersections		Approach Lanes N-S	Approach Lanes E-W	Approach Speed N-S	Approach Speed E-W	Figure	Existing Major Street	Existing Minor Street	Existing Warrant Met?	2019 Plus Approved Major Street	2019 Plus Approved Minor Street	2019 Plus Approved Warrant Met?
Dinuba Ave at Zumwalt Ave	AM	1	1	25	45	4C-4	564 - E/W	91 - N/S	N	592 - E/W	96 - N/S	N
	PM						618 - E/W	42 - N/S	N	693 - E/W	47 - N/S	N
Dinuba Ave at Project Driveway	AM	1	1	NPS	45	4C-4	Does Not Exist			Does Not Exist		
	PM											
Dinuba Ave at Buttonwillow Ave	AM	1	1	40	40	4C-3	Roundabout			Roundabout		
	PM											
Dinuba Ave at I Street	AM	2	2	30	30	4C-3	749 - E/W	109 - N/S	N	805 - E/W	150 - N/S	N
	PM						831 - E/W	105 - N/S	N	943 - E/W	140 - N/S	N
Dinuba Ave at Frankwood Ave	AM	1	1	35	30	4C-3	582 - N/S	215 - E/W	N	633 - N/S	235 - E/W	N
	PM						615 - N/S	258 - E/W	N	662 - N/S	291 - E/W	N
I Street at Frankwood Ave	AM	1	2	30	30	4C-3	535 - E/W	186 - N/S	N	608 - E/W	203 - N/S	N
	PM						530 - E/W	170 - N/S	N	638 - E/W	187 - N/S	N

Intersections		Approach Lanes N-S	Approach Lanes E-W	Approach Speed N-S	Approach Speed E-W	Figure	2019 Plus Approved Plus Project Major Street	2019 Plus Approved Plus Project Minor Street	2019 Plus Approved Plus Project Warrant Met?	2021 Plus Approved Plus Project Major Street	2021 Plus Approved Plus Project Minor Street	2021 Plus Approved Plus Project Warrant Met?
Dinuba Ave at Zumwalt Ave	AM	1	1	25	45	4C-4	656 - E/W	96 - N/S	N	694 - E/W	98 - N/S	N
	PM						786 - E/W	47 - N/S	N	852 - E/W	50 - N/S	N
Dinuba Ave at Project Driveway	AM	1	1	NPS	45	4C-4	802 - E/W	103 - N/S	Y	858 - E/W	170 - N/S	Y
	PM						833 - E/W	280 - N/S	Y	925 - E/W	370 - N/S	Y
Dinuba Ave at Buttonwillow Ave	AM	1	1	40	40	4C-3	Roundabout			Roundabout		
	PM											
Dinuba Ave at I Street	AM	2	2	30	30	4C-3	897 - E/W	187 - N/S	N	962 - E/W	212 - N/S	N
	PM						1096 - E/W	171 - N/S	N	1199 - E/W	202 - N/S	N
Dinuba Ave at Frankwood Ave	AM	1	1	35	30	4C-3	647 - N/S	260 - E/W	N	671 - N/S	285 - E/W	N
	PM						673 - N/S	355 - E/W	N	697 - N/S	390 - E/W	N
I Street at Frankwood Ave	AM	1	2	30	30	4C-3	664 - E/W	203 - N/S	N	715 - E/W	209 - N/S	N
	PM						718 - E/W	187 - N/S	N	792 - E/W	193 - N/S	N

Intersections		Approach Lanes N-S	Approach Lanes E-W	Approach Speed N-S	Approach Speed E-W	Figure	2035 Plus Project Major Street	2035 Plus Project Minor Street	2035 Plus Project Warrant Met?
Dinuba Ave at Zumwalt Ave	AM	2	2	25	45	4C-4	790 - E/W	112 - N/S	N
	PM						1084 - E/W	65 - N/S	N
Dinuba Ave at Project Driveway	AM	2	2	NPS	45	4C-4	970 - E/W	170 - N/S	Y
	PM						1096 - E/W	370 - N/S	Y
Dinuba Ave at Buttonwillow Ave	AM	2	2	40	40	4C-3	Roundabout		
	PM								
Dinuba Ave at I Street	AM	2	2	30	30	4C-3	1137 - E/W	330 - N/S	Y
	PM						1547 - E/W	313 - N/S	Y
Dinuba Ave at Frankwood Ave	AM	1	1	35	30	4C-3	814 - N/S	347 - E/W	Y
	PM						830 - N/S	486 - E/W	Y
I Street at Frankwood Ave	AM	1	2	30	30	4C-3	934 - E/W	256 - N/S	N
	PM						1112 - E/W	240 - N/S	Y

2019 Plus Approved Projects AM Peak Hour
1: Zumwalt Ave & Dinuba Ave

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	53	236	2	0	289	12	1	0	1	23	0	73
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	58	257	2	0	314	13	1	0	1	25	0	79

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	327	0	0	259	0	0	733	700	258	694	695	321
Stage 1	-	-	-	-	-	-	373	373	-	321	321	-
Stage 2	-	-	-	-	-	-	360	327	-	373	374	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1227	-	-	1300	-	-	335	362	778	356	365	718
Stage 1	-	-	-	-	-	-	646	617	-	689	650	-
Stage 2	-	-	-	-	-	-	656	646	-	646	616	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1227	-	-	1300	-	-	285	342	778	341	345	718
Mov Cap-2 Maneuver	-	-	-	-	-	-	285	342	-	341	345	-
Stage 1	-	-	-	-	-	-	610	583	-	651	650	-
Stage 2	-	-	-	-	-	-	584	646	-	610	582	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.5	0	13.7	12.8
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	417	1227	-	-	1300	-	-	568
HCM Lane V/C Ratio	0.005	0.047	-	-	-	-	-	0.184
HCM Control Delay (s)	13.7	8.1	0	-	0	-	-	12.8
HCM Lane LOS	B	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	0	0.1	-	-	0	-	-	0.7

Intersection	
Intersection Delay, s/veh	8.2
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	357	401	224	301
Demand Flow Rate, veh/h	367	413	231	310
Vehicles Circulating, veh/h	191	323	365	439
Vehicles Exiting, veh/h	558	273	193	297
Follow-Up Headway, s	2.900	2.900	2.900	2.900
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	7.2	9.4	6.9	8.9
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	4.700	4.700	4.700	4.700
Entry Flow, veh/h	367	413	231	310
Cap Entry Lane, veh/h	1045	927	893	835
Entry HV Adj Factor	0.973	0.971	0.969	0.973
Flow Entry, veh/h	357	401	224	301
Cap Entry, veh/h	1016	900	865	812
V/C Ratio	0.351	0.445	0.259	0.371
Control Delay, s/veh	7.2	9.4	6.9	8.9
LOS	A	A	A	A
95th %tile Queue, veh	2	2	1	2

2019 Plus Approved Projects AM Peak Hour
4: Dinuba Ave & I Street

Intersection	
Int Delay, s/veh	7.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	59	306	10	47	227	156	1	27	82	128	15	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	150	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	64	333	11	51	247	170	1	29	89	139	16	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	247	0	0	343	0	0	700	815	172	658	821	123
Stage 1	-	-	-	-	-	-	466	466	-	349	349	-
Stage 2	-	-	-	-	-	-	234	349	-	309	472	-
Critical Hdwy	4.16	-	-	4.16	-	-	7.56	6.56	6.96	7.56	6.56	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-	6.56	5.56	-	6.56	5.56	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.56	5.56	-	6.56	5.56	-
Follow-up Hdwy	2.23	-	-	2.23	-	-	3.53	4.03	3.33	3.53	4.03	3.33
Pot Cap-1 Maneuver	1309	-	-	1206	-	-	324	308	839	348	306	902
Stage 1	-	-	-	-	-	-	543	558	-	638	629	-
Stage 2	-	-	-	-	-	-	745	629	-	673	555	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1309	-	-	1206	-	-	280	273	839	261	271	902
Mov Cap-2 Maneuver	-	-	-	-	-	-	280	273	-	261	271	-
Stage 1	-	-	-	-	-	-	510	524	-	599	594	-
Stage 2	-	-	-	-	-	-	678	594	-	533	521	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.4	0.9	12.3	35.7
HCM LOS			B	E

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	273	839	1309	-	-	1206	-	-	262	902
HCM Lane V/C Ratio	0.111	0.106	0.049	-	-	0.042	-	-	0.593	0.008
HCM Control Delay (s)	19.8	9.8	7.9	0.2	-	8.1	0.1	-	37	9
HCM Lane LOS	C	A	A	A	-	A	A	-	E	A
HCM 95th %tile Q(veh)	0.4	0.4	0.2	-	-	0.1	-	-	3.5	0

Intersection	
Intersection Delay, s/veh	15.5
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	13	146	23	0	124	108	3	0	44	195	183
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	14	159	25	0	135	117	3	0	48	212	199
Number of Lanes	0	0	1	0	0	0	1	1	0	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	2	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	1	2
HCM Control Delay	15.1	17.7	14.2
HCM LOS	C	C	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	18%	0%	7%	53%	0%	22%
Vol Thru, %	82%	0%	80%	47%	0%	67%
Vol Right, %	0%	100%	13%	0%	100%	11%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	239	183	182	232	3	211
LT Vol	44	0	13	124	0	46
Through Vol	195	0	146	108	0	142
RT Vol	0	183	23	0	3	23
Lane Flow Rate	260	199	198	252	3	229
Geometry Grp	7	7	6	7	7	6
Degree of Util (X)	0.493	0.333	0.4	0.517	0.006	0.453
Departure Headway (Hd)	6.832	6.024	7.274	7.385	6.396	7.107
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	527	597	495	489	559	507
Service Time	4.575	3.766	5.322	5.129	4.139	5.155
HCM Lane V/C Ratio	0.493	0.333	0.4	0.515	0.005	0.452
HCM Control Delay	16.1	11.8	15.1	17.8	9.2	15.9
HCM Lane LOS	C	B	C	C	A	C
HCM 95th-tile Q	2.7	1.5	1.9	2.9	0	2.3

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	46	142	23
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	3
Mvmt Flow	0	50	154	25
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	15.9
HCM LOS	C

Lane

Intersection

Int Delay, s/veh 3.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	155	209	0	244	203	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	168	227	0	265	221	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	396	0	415	198
Stage 1	-	-	-	-	282	-
Stage 2	-	-	-	-	133	-
Critical Hdwy	-	-	4.16	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	-	-	2.23	-	3.53	3.33
Pot Cap-1 Maneuver	-	-	1152	-	563	807
Stage 1	-	-	-	-	738	-
Stage 2	-	-	-	-	876	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1152	-	563	807
Mov Cap-2 Maneuver	-	-	-	-	563	-
Stage 1	-	-	-	-	738	-
Stage 2	-	-	-	-	876	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	15.5
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	563	-	-	1152	-
HCM Lane V/C Ratio	0.392	-	-	-	-
HCM Control Delay (s)	15.5	-	-	0	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	1.9	-	-	0	-

2019 Plus Approved Projects PM Peak Hour
1: Zumwalt Ave & Dinuba Ave

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	24	321	2	1	333	12	1	2	0	12	0	35
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	26	349	2	1	362	13	1	2	0	13	0	38

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	375	0	0	351	0	0	792	779	350	774	774	368
Stage 1	-	-	-	-	-	-	402	402	-	371	371	-
Stage 2	-	-	-	-	-	-	390	377	-	403	403	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1178	-	-	1202	-	-	306	326	691	314	328	675
Stage 1	-	-	-	-	-	-	623	599	-	647	618	-
Stage 2	-	-	-	-	-	-	632	614	-	622	598	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1178	-	-	1202	-	-	283	317	691	306	319	675
Mov Cap-2 Maneuver	-	-	-	-	-	-	283	317	-	306	319	-
Stage 1	-	-	-	-	-	-	606	583	-	630	617	-
Stage 2	-	-	-	-	-	-	596	613	-	603	582	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0	16.9	12.7
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	305	1178	-	-	1202	-	-	516
HCM Lane V/C Ratio	0.011	0.022	-	-	0.001	-	-	0.099
HCM Control Delay (s)	16.9	8.1	0	-	8	0	-	12.7
HCM Lane LOS	C	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0	0.1	-	-	0	-	-	0.3

Intersection	
Intersection Delay, s/veh	10.1
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	520	355	333	288
Demand Flow Rate, veh/h	536	365	343	297
Vehicles Circulating, veh/h	187	523	543	365
Vehicles Exiting, veh/h	475	363	180	523
Follow-Up Headway, s	2.900	2.900	2.900	2.900
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	9.7	11.3	11.1	7.9
Approach LOS	A	B	B	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	4.700	4.700	4.700	4.700
Entry Flow, veh/h	536	365	343	297
Cap Entry Lane, veh/h	1049	774	760	893
Entry HV Adj Factor	0.970	0.973	0.971	0.969
Flow Entry, veh/h	520	355	333	288
Cap Entry, veh/h	1018	753	738	865
V/C Ratio	0.511	0.471	0.451	0.333
Control Delay, s/veh	9.7	11.3	11.1	7.9
LOS	A	B	B	A
95th %tile Queue, veh	3	3	2	1

2019 Plus Approved Projects PM Peak Hour
4: Dinuba Ave & I Street

Intersection	
Int Delay, s/veh	7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	22	334	14	86	286	201	1	25	47	108	27	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	150	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	24	363	15	93	311	218	1	27	51	117	29	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	311	0	0	378	0	0	775	916	189	741	924	155
Stage 1	-	-	-	-	-	-	418	418	-	498	498	-
Stage 2	-	-	-	-	-	-	357	498	-	243	426	-
Critical Hdwy	4.16	-	-	4.16	-	-	7.56	6.56	6.96	7.56	6.56	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-	6.56	5.56	-	6.56	5.56	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.56	5.56	-	6.56	5.56	-
Follow-up Hdwy	2.23	-	-	2.23	-	-	3.53	4.03	3.33	3.53	4.03	3.33
Pot Cap-1 Maneuver	1239	-	-	1170	-	-	286	269	818	303	266	860
Stage 1	-	-	-	-	-	-	580	587	-	520	540	-
Stage 2	-	-	-	-	-	-	631	540	-	736	582	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1239	-	-	1170	-	-	230	232	818	232	229	860
Mov Cap-2 Maneuver	-	-	-	-	-	-	230	232	-	232	229	-
Stage 1	-	-	-	-	-	-	566	572	-	507	477	-
Stage 2	-	-	-	-	-	-	520	477	-	641	567	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	1.4	14.3	43
HCM LOS			B	E

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	232	818	1239	-	-	1170	-	-	231	860
HCM Lane V/C Ratio	0.122	0.062	0.019	-	-	0.08	-	-	0.635	0.006
HCM Control Delay (s)	22.7	9.7	8	0.1	-	8.3	0.2	-	44.3	9.2
HCM Lane LOS	C	A	A	A	-	A	A	-	E	A
HCM 95th %tile Q(veh)	0.4	0.2	0.1	-	-	0.3	-	-	3.8	0

2019 Plus Approved Projects PM Peak Hour
5: Frankwood Ave & Dinuba Ave

Intersection	
Intersection Delay, s/veh	17.4
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	4	108	18	0	167	122	2	0	27	181	205
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	4	117	20	0	182	133	2	0	29	197	223
Number of Lanes	0	0	1	0	0	0	1	1	0	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	2	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	1	2
HCM Control Delay	14	22.7	14
HCM LOS	B	C	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	13%	0%	3%	58%	0%	23%
Vol Thru, %	87%	0%	83%	42%	0%	76%
Vol Right, %	0%	100%	14%	0%	100%	1%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	208	205	130	289	2	249
LT Vol	27	0	4	167	0	57
Through Vol	181	0	108	122	0	190
RT Vol	0	205	18	0	2	2
Lane Flow Rate	226	223	141	314	2	271
Geometry Grp	7	7	6	7	7	6
Degree of Util (X)	0.439	0.384	0.3	0.646	0.004	0.543
Departure Headway (Hd)	6.984	6.202	7.634	7.406	6.395	7.219
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	515	579	469	487	559	498
Service Time	4.734	3.952	5.698	5.156	4.144	5.272
HCM Lane V/C Ratio	0.439	0.385	0.301	0.645	0.004	0.544
HCM Control Delay	15.1	12.8	14	22.8	9.2	18.6
HCM Lane LOS	C	B	B	C	A	C
HCM 95th-tile Q	2.2	1.8	1.2	4.5	0	3.2

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	57	190	2
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	3
Mvmt Flow	0	62	207	2
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	18.6
HCM LOS	C

Lane

Intersection	
Int Delay, s/veh	3.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	142	248	0	248	187	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	154	270	0	270	203	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	424	0	424	212
Stage 1	-	-	-	-	289	-
Stage 2	-	-	-	-	135	-
Critical Hdwy	-	-	4.16	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	-	-	2.23	-	3.53	3.33
Pot Cap-1 Maneuver	-	-	1125	-	556	790
Stage 1	-	-	-	-	732	-
Stage 2	-	-	-	-	874	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1125	-	556	790
Mov Cap-2 Maneuver	-	-	-	-	556	-
Stage 1	-	-	-	-	732	-
Stage 2	-	-	-	-	874	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	15.2
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	556	-	-	1125	-
HCM Lane V/C Ratio	0.366	-	-	-	-
HCM Control Delay (s)	15.2	-	-	0	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	1.7	-	-	0	-

APPENDIX F

MITIGATED 2019 PLUS APPROVED PROJECTS LOS CALCULATIONS

Mitigated 2019 Plus Approved Projects AM Peak Hour
4: Dinuba Ave & I Street

Intersection	
Intersection Delay, s/veh	13.3
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	59	306	10	0	47	227	156	0	1	27	82
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	64	333	11	0	51	247	170	0	1	29	89
Number of Lanes	0	0	2	0	0	0	2	1	0	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	2	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	2	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	2	3
HCM Control Delay	14.5	12.1	11.3
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	4%	0%	28%	0%	38%	0%	0%	90%	0%
Vol Thru, %	96%	0%	72%	94%	62%	100%	0%	10%	0%
Vol Right, %	0%	100%	0%	6%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	28	82	212	163	123	151	156	143	7
LT Vol	1	0	59	0	47	0	0	128	0
Through Vol	27	0	153	153	76	151	0	15	0
RT Vol	0	82	0	10	0	0	156	0	7
Lane Flow Rate	30	89	230	177	133	164	170	155	8
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.067	0.177	0.452	0.338	0.262	0.314	0.29	0.35	0.015
Departure Headway (Hd)	7.888	7.157	7.062	6.877	7.069	6.874	6.163	8.102	6.936
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	454	501	512	523	509	523	583	445	516
Service Time	5.633	4.902	4.798	4.613	4.803	4.608	3.897	5.843	4.677
HCM Lane V/C Ratio	0.066	0.178	0.449	0.338	0.261	0.314	0.292	0.348	0.016
HCM Control Delay	11.2	11.4	15.5	13.1	12.3	12.7	11.4	15.2	9.8
HCM Lane LOS	B	B	C	B	B	B	B	C	A
HCM 95th-tile Q	0.2	0.6	2.3	1.5	1	1.3	1.2	1.5	0

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	128	15	7
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	3
Mvmt Flow	0	139	16	8
Number of Lanes	0	0	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	14.9
HCM LOS	B

Lane

Mitigated 2019 Plus Approved Projects PM Peak Hour
4: Dinuba Ave & I Street

Intersection	
Intersection Delay, s/veh	13.6
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	22	334	14	0	86	286	201	0	1	25	47
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	24	363	15	0	93	311	218	0	1	27	51
Number of Lanes	0	0	2	0	0	0	2	1	0	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	2	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	2	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	2	3
HCM Control Delay	14.2	13.1	11.2
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	4%	0%	12%	0%	47%	0%	0%	80%	0%
Vol Thru, %	96%	0%	88%	92%	53%	100%	0%	20%	0%
Vol Right, %	0%	100%	0%	8%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	26	47	189	181	181	191	201	135	5
LT Vol	1	0	22	0	86	0	0	108	0
Through Vol	25	0	167	167	95	191	0	27	0
RT Vol	0	47	0	14	0	0	201	0	5
Lane Flow Rate	28	51	205	197	197	207	218	147	5
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.064	0.106	0.404	0.381	0.374	0.379	0.357	0.336	0.011
Departure Headway (Hd)	8.176	7.442	7.082	6.968	6.957	6.716	6.006	8.234	7.115
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	439	483	509	517	520	539	603	439	505
Service Time	5.902	5.168	4.799	4.685	4.657	4.416	3.706	5.956	4.837
HCM Lane V/C Ratio	0.064	0.106	0.403	0.381	0.379	0.384	0.362	0.335	0.01
HCM Control Delay	11.5	11.1	14.5	13.9	13.8	13.5	12	15.1	9.9
HCM Lane LOS	B	B	B	B	B	B	B	C	A
HCM 95th-tile Q	0.2	0.4	1.9	1.8	1.7	1.8	1.6	1.5	0

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	108	27	5
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	3
Mvmt Flow	0	117	29	5
Number of Lanes	0	0	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	14.9
HCM LOS	B

Lane

APPENDIX G

2019 PLUS APPROVED PROJECTS PLUS PROJECT (PHASES 1 & 2) CONDITIONS LOS CALCULATIONS

2019 Plus Approved Projects Plus Project (Phases 1&2) AM Peak Hour
1: Zumwalt Ave & Dinuba Ave

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	53	258	2	0	331	12	1	0	1	23	0	73
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	58	280	2	0	360	13	1	0	1	25	0	79

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	373	0	0	283	0	0	803	770	282	763	764	366
Stage 1	-	-	-	-	-	-	397	397	-	366	366	-
Stage 2	-	-	-	-	-	-	406	373	-	397	398	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1180	-	-	1274	-	-	301	330	755	320	333	677
Stage 1	-	-	-	-	-	-	627	602	-	651	621	-
Stage 2	-	-	-	-	-	-	620	617	-	627	601	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1180	-	-	1274	-	-	254	311	755	305	314	677
Mov Cap-2 Maneuver	-	-	-	-	-	-	254	311	-	305	314	-
Stage 1	-	-	-	-	-	-	591	567	-	613	621	-
Stage 2	-	-	-	-	-	-	547	617	-	590	566	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.4	0	14.5	13.6
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	380	1180	-	-	1274	-	-	524
HCM Lane V/C Ratio	0.006	0.049	-	-	-	-	-	0.199
HCM Control Delay (s)	14.5	8.2	0	-	0	-	-	13.6
HCM Lane LOS	B	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	0	0.2	-	-	0	-	-	0.7

Intersection

Int Delay, s/veh 2.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	280	104	57	361	80	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	304	113	62	392	87	25

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	417	0	877	361
Stage 1	-	-	-	-	361	-
Stage 2	-	-	-	-	516	-
Critical Hdwy	-	-	4.13	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.227	-	3.527	3.327
Pot Cap-1 Maneuver	-	-	1137	-	318	681
Stage 1	-	-	-	-	703	-
Stage 2	-	-	-	-	597	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1137	-	296	681
Mov Cap-2 Maneuver	-	-	-	-	296	-
Stage 1	-	-	-	-	703	-
Stage 2	-	-	-	-	555	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.1	20.8
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	339	-	-	1137	-
HCM Lane V/C Ratio	0.33	-	-	0.054	-
HCM Control Delay (s)	20.8	-	-	8.3	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	1.4	-	-	0.2	-

Intersection	
Intersection Delay, s/veh	10.1
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	468	480	224	346
Demand Flow Rate, veh/h	481	495	231	357
Vehicles Circulating, veh/h	238	323	526	498
Vehicles Exiting, veh/h	617	434	193	320
Follow-Up Headway, s	2.900	2.900	2.900	2.900
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	9.5	11.2	8.3	10.7
Approach LOS	A	B	A	B

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	4.700	4.700	4.700	4.700
Entry Flow, veh/h	481	495	231	357
Cap Entry Lane, veh/h	1001	927	772	792
Entry HV Adj Factor	0.972	0.970	0.969	0.971
Flow Entry, veh/h	468	480	224	346
Cap Entry, veh/h	973	900	748	769
V/C Ratio	0.480	0.534	0.299	0.451
Control Delay, s/veh	9.5	11.2	8.3	10.7
LOS	A	B	A	B
95th %tile Queue, veh	3	3	1	2

2019 Plus Approved Projects Plus Project (Phases 1&2) AM Peak Hour
4: Dinuba Ave & I Street

Intersection	
Int Delay, s/veh	12.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	59	354	10	47	252	175	1	27	82	165	15	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	150	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	64	385	11	51	274	190	1	29	89	179	16	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	274	0	0	396	0	0	765	894	198	711	900	137
Stage 1	-	-	-	-	-	-	518	518	-	376	376	-
Stage 2	-	-	-	-	-	-	247	376	-	335	524	-
Critical Hdwy	4.16	-	-	4.16	-	-	7.56	6.56	6.96	7.56	6.56	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-	6.56	5.56	-	6.56	5.56	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.56	5.56	-	6.56	5.56	-
Follow-up Hdwy	2.23	-	-	2.23	-	-	3.53	4.03	3.33	3.53	4.03	3.33
Pot Cap-1 Maneuver	1279	-	-	1152	-	-	291	277	807	318	275	883
Stage 1	-	-	-	-	-	-	506	529	-	615	612	-
Stage 2	-	-	-	-	-	-	732	612	-	650	526	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1279	-	-	1152	-	-	249	243	807	233	242	883
Mov Cap-2 Maneuver	-	-	-	-	-	-	249	243	-	233	242	-
Stage 1	-	-	-	-	-	-	474	495	-	576	575	-
Stage 2	-	-	-	-	-	-	662	575	-	509	492	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.3	0.9	13	65.9
HCM LOS			B	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	243	807	1279	-	-	1152	-	-	234	883
HCM Lane V/C Ratio	0.125	0.11	0.05	-	-	0.044	-	-	0.836	0.009
HCM Control Delay (s)	21.9	10	8	0.2	-	8.3	0.1	-	68.1	9.1
HCM Lane LOS	C	B	A	A	-	A	A	-	F	A
HCM 95th %tile Q(veh)	0.4	0.4	0.2	-	-	0.1	-	-	6.5	0

2019 Plus Approved Projects Plus Project (Phases 1&2) AM Peak Hour
5: Frankwood Ave & Dinuba Ave

Intersection	
Intersection Delay, s/veh	17.5
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	13	180	23	0	131	126	3	0	44	195	197
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	14	196	25	0	142	137	3	0	48	212	214
Number of Lanes	0	0	1	0	0	0	1	1	0	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	2	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	1	2
HCM Control Delay	17.7	20.8	15.5
HCM LOS	C	C	C

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	18%	0%	6%	51%	0%	22%
Vol Thru, %	82%	0%	83%	49%	0%	67%
Vol Right, %	0%	100%	11%	0%	100%	11%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	239	197	216	257	3	211
LT Vol	44	0	13	131	0	46
Through Vol	195	0	180	126	0	142
RT Vol	0	197	23	0	3	23
Lane Flow Rate	260	214	235	279	3	229
Geometry Grp	7	7	6	7	7	6
Degree of Util (X)	0.518	0.379	0.491	0.591	0.006	0.479
Departure Headway (Hd)	7.176	6.366	7.525	7.616	6.637	7.515
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	501	563	477	472	537	477
Service Time	4.94	4.128	5.593	5.379	4.399	5.588
HCM Lane V/C Ratio	0.519	0.38	0.493	0.591	0.006	0.48
HCM Control Delay	17.5	13	17.7	20.9	9.4	17.4
HCM Lane LOS	C	B	C	C	A	C
HCM 95th-tile Q	2.9	1.8	2.7	3.7	0	2.5

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	46	142	23
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	3
Mvmt Flow	0	50	154	25
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	17.4
HCM LOS	C

Lane

2019 Plus Approved Projects Plus Project (Phases 1&2) AM Peak Hour
6: Frankwood Ave & I Street

Intersection	
Int Delay, s/veh	3.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	192	209	0	263	203	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	209	227	0	286	221	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	436	0	465	218
Stage 1	-	-	-	-	322	-
Stage 2	-	-	-	-	143	-
Critical Hdwy	-	-	4.16	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	-	-	2.23	-	3.53	3.33
Pot Cap-1 Maneuver	-	-	1113	-	524	783
Stage 1	-	-	-	-	704	-
Stage 2	-	-	-	-	866	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1113	-	524	783
Mov Cap-2 Maneuver	-	-	-	-	524	-
Stage 1	-	-	-	-	704	-
Stage 2	-	-	-	-	866	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	16.8
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	524	-	-	1113	-
HCM Lane V/C Ratio	0.421	-	-	-	-
HCM Control Delay (s)	16.8	-	-	0	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	2.1	-	-	0	-

Intersection

Int Delay, s/veh 1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	24	378	2	1	369	12	1	2	0	12	0	35
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	26	411	2	1	401	13	1	2	0	13	0	38

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	414	0	0	413	0	0	893	880	412	875	875	408
Stage 1	-	-	-	-	-	-	464	464	-	410	410	-
Stage 2	-	-	-	-	-	-	429	416	-	465	465	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1140	-	-	1141	-	-	261	285	638	269	287	641
Stage 1	-	-	-	-	-	-	576	562	-	617	594	-
Stage 2	-	-	-	-	-	-	602	590	-	576	561	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1140	-	-	1141	-	-	240	276	638	261	278	641
Mov Cap-2 Maneuver	-	-	-	-	-	-	240	276	-	261	278	-
Stage 1	-	-	-	-	-	-	559	545	-	598	593	-
Stage 2	-	-	-	-	-	-	566	589	-	556	544	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0	18.9	13.7
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	263	1140	-	-	1141	-	-	467
HCM Lane V/C Ratio	0.012	0.023	-	-	0.001	-	-	0.109
HCM Control Delay (s)	18.9	8.2	0	-	8.2	0	-	13.7
HCM Lane LOS	C	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0	0.1	-	-	0	-	-	0.4

Intersection	
Int Delay, s/veh	21

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	341	102	68	322	216	64
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	371	111	74	350	235	70

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	482	0	924	426
Stage 1	-	-	-	-	426	-
Stage 2	-	-	-	-	498	-
Critical Hdwy	-	-	4.13	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.227	-	3.527	3.327
Pot Cap-1 Maneuver	-	-	1075	-	298	626
Stage 1	-	-	-	-	657	-
Stage 2	-	-	-	-	609	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1075	-	273	626
Mov Cap-2 Maneuver	-	-	-	-	273	-
Stage 1	-	-	-	-	657	-
Stage 2	-	-	-	-	557	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.5	81.5
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	313	-	-	1075	-
HCM Lane V/C Ratio	0.972	-	-	0.069	-
HCM Control Delay (s)	81.5	-	-	8.6	0
HCM Lane LOS	F	-	-	A	A
HCM 95th %tile Q(veh)	10.2	-	-	0.2	-

Intersection	
Intersection Delay, s/veh	15.1
Intersection LOS	C

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	614	561	333	326
Demand Flow Rate, veh/h	633	577	343	336
Vehicles Circulating, veh/h	226	523	679	517
Vehicles Exiting, veh/h	627	499	180	583
Follow-Up Headway, s	2.900	2.900	2.900	2.900
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	12.7	21.1	13.7	10.5
Approach LOS	B	C	B	B

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	4.700	4.700	4.700	4.700
Entry Flow, veh/h	633	577	343	336
Cap Entry Lane, veh/h	1012	774	672	778
Entry HV Adj Factor	0.971	0.971	0.971	0.970
Flow Entry, veh/h	614	561	333	326
Cap Entry, veh/h	982	752	653	755
V/C Ratio	0.625	0.745	0.510	0.432
Control Delay, s/veh	12.7	21.1	13.7	10.5
LOS	B	C	B	B
95th %tile Queue, veh	5	7	3	2

Intersection

Int Delay, s/veh 14.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	22	374	14	86	350	250	1	25	47	139	27	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	150	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	24	407	15	93	380	272	1	27	51	151	29	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	380	0	0	422	0	0	854	1029	211	832	1037	190
Stage 1	-	-	-	-	-	-	462	462	-	567	567	-
Stage 2	-	-	-	-	-	-	392	567	-	265	470	-
Critical Hdwy	4.16	-	-	4.16	-	-	7.56	6.56	6.96	7.56	6.56	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-	6.56	5.56	-	6.56	5.56	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.56	5.56	-	6.56	5.56	-
Follow-up Hdwy	2.23	-	-	2.23	-	-	3.53	4.03	3.33	3.53	4.03	3.33
Pot Cap-1 Maneuver	1168	-	-	1127	-	-	251	231	791	260	228	816
Stage 1	-	-	-	-	-	-	546	561	-	473	503	-
Stage 2	-	-	-	-	-	-	601	503	-	715	556	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1168	-	-	1127	-	-	194	194	791	191	192	816
Mov Cap-2 Maneuver	-	-	-	-	-	-	194	194	-	191	192	-
Stage 1	-	-	-	-	-	-	531	546	-	460	435	-
Stage 2	-	-	-	-	-	-	481	435	-	618	541	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	1.2	15.9	99.1
HCM LOS			C	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	194	791	1168	-	-	1127	-	-	191	816
HCM Lane V/C Ratio	0.146	0.065	0.02	-	-	0.083	-	-	0.945	0.007
HCM Control Delay (s)	26.7	9.9	8.1	0.1	-	8.5	0.2	-	101.8	9.4
HCM Lane LOS	D	A	A	A	-	A	A	-	F	A
HCM 95th %tile Q(veh)	0.5	0.2	0.1	-	-	0.3	-	-	7.6	0

Intersection	
Intersection Delay, s/veh	23.5
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	4	137	18	0	185	168	2	0	27	181	216
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	4	149	20	0	201	183	2	0	29	197	235
Number of Lanes	0	0	1	0	0	0	1	1	0	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	2	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	1	2
HCM Control Delay	16.6	36.7	16
HCM LOS	C	E	C

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	13%	0%	3%	52%	0%	23%
Vol Thru, %	87%	0%	86%	48%	0%	76%
Vol Right, %	0%	100%	11%	0%	100%	1%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	208	216	159	353	2	249
LT Vol	27	0	4	185	0	57
Through Vol	181	0	137	168	0	190
RT Vol	0	216	18	0	2	2
Lane Flow Rate	226	235	173	384	2	271
Geometry Grp	7	7	6	7	7	6
Degree of Util (X)	0.475	0.442	0.396	0.818	0.004	0.591
Departure Headway (Hd)	7.566	6.78	8.251	7.679	6.692	7.962
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	473	526	439	468	531	457
Service Time	5.363	4.576	6.251	5.465	4.477	5.962
HCM Lane V/C Ratio	0.478	0.447	0.394	0.821	0.004	0.593
HCM Control Delay	17.1	14.9	16.6	36.9	9.5	21.8
HCM Lane LOS	C	B	C	E	A	C
HCM 95th-tile Q	2.5	2.2	1.9	7.8	0	3.7

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	57	190	2
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	3
Mvmt Flow	0	62	207	2
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	21.8
HCM LOS	C

Lane

Intersection	
Int Delay, s/veh	3.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	173	248	0	297	187	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	188	270	0	323	203	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	458	0	484	229
Stage 1	-	-	-	-	323	-
Stage 2	-	-	-	-	161	-
Critical Hdwy	-	-	4.16	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	-	-	2.23	-	3.53	3.33
Pot Cap-1 Maneuver	-	-	1092	-	509	770
Stage 1	-	-	-	-	703	-
Stage 2	-	-	-	-	848	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1092	-	509	770
Mov Cap-2 Maneuver	-	-	-	-	509	-
Stage 1	-	-	-	-	703	-
Stage 2	-	-	-	-	848	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	16.7
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	509	-	-	1092	-
HCM Lane V/C Ratio	0.399	-	-	-	-
HCM Control Delay (s)	16.7	-	-	0	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	1.9	-	-	0	-

APPENDIX H

MITIGATED 2019 PLUS APPROVED PROJECTS PLUS PROJECT (PHASES 1 & 2) CONDITIONS LOS CALCULATIONS

2: Project Driveway & Dinuba Ave

Intersection	
Intersection Delay, s/veh	6.9
Intersection LOS	A

Approach	EB	WB	NB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	417	454	112
Demand Flow Rate, veh/h	429	468	116
Vehicles Circulating, veh/h	64	90	313
Vehicles Exiting, veh/h	494	339	180
Follow-Up Headway, s	2.900	2.900	2.900
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	6.8	7.5	5.2
Approach LOS	A	A	A

Lane	Left	Left	Left
Designated Moves	TR	LT	LR
Assumed Moves	TR	LT	LR
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	4.700	4.700	4.700
Entry Flow, veh/h	429	468	116
Cap Entry Lane, veh/h	1172	1145	936
Entry HV Adj Factor	0.972	0.971	0.966
Flow Entry, veh/h	417	454	112
Cap Entry, veh/h	1139	1111	904
V/C Ratio	0.366	0.409	0.124
Control Delay, s/veh	6.8	7.5	5.2
LOS	A	A	A
95th %tile Queue, veh	2	2	0

Mitigated 2019 Plus Approved Projects Plus Project (Phases 1&2) AM Peak Hour - Signal Alternative 2: Project Driveway & Dinuba Ave

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	280	104	57	361	80	23
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1748	1800	1748	1748	1748	1800
Adj Flow Rate, veh/h	304	113	62	392	87	25
Adj No. of Lanes	1	0	1	1	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	0	0
Cap, veh/h	486	181	88	1060	107	31
Arrive On Green	0.40	0.40	0.05	0.61	0.09	0.09
Sat Flow, veh/h	1216	452	1664	1748	1249	359
Grp Volume(v), veh/h	0	417	62	392	113	0
Grp Sat Flow(s),veh/h/ln	0	1668	1664	1748	1622	0
Q Serve(g_s), s	0.0	6.4	1.2	3.6	2.2	0.0
Cycle Q Clear(g_c), s	0.0	6.4	1.2	3.6	2.2	0.0
Prop In Lane		0.27	1.00		0.77	0.22
Lane Grp Cap(c), veh/h	0	667	88	1060	139	0
V/C Ratio(X)	0.00	0.63	0.70	0.37	0.81	0.00
Avail Cap(c_a), veh/h	0	1366	423	2144	565	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	7.6	14.8	3.2	14.3	0.0
Incr Delay (d2), s/veh	0.0	1.0	9.7	0.2	10.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.0	3.1	0.8	1.7	1.4	0.0
LnGrp Delay(d),s/veh	0.0	8.6	24.6	3.4	25.1	0.0
LnGrp LOS		A	C	A	C	
Approach Vol, veh/h	417			454	113	
Approach Delay, s/veh	8.6			6.3	25.1	
Approach LOS	A			A	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		7.6	6.6	17.6				24.2
Change Period (Y+Rc), s		4.9	4.9	4.9				4.9
Max Green Setting (Gmax), s		11.1	8.1	26.1				39.1
Max Q Clear Time (g_c+I1), s		4.2	3.2	8.4				5.6
Green Ext Time (p_c), s		0.1	0.0	4.4				5.1

Intersection Summary	
HCM 2010 Ctrl Delay	9.4
HCM 2010 LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

4: Dinuba Ave & I Street

Intersection	
Intersection Delay, s/veh	15.4
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Vol, veh/h	0	59	354	10	0	47	252	175	0	1	27	82	0	165	15	7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	64	385	11	0	51	274	190	0	1	29	89	0	179	16	8
Number of Lanes	0	0	2	0	0	0	2	1	0	0	1	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	2
HCM Control Delay	17	13.6	12.3	18.2
HCM LOS	C	B	B	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	4%	0%	25%	0%	36%	0%	0%	92%	0%
Vol Thru, %	96%	0%	75%	95%	64%	100%	0%	8%	0%
Vol Right, %	0%	100%	0%	5%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	28	82	236	187	131	168	175	180	7
LT Vol	1	0	59	0	47	0	0	165	0
Through Vol	27	0	177	177	84	168	0	15	0
RT Vol	0	82	0	10	0	0	175	0	7
Lane Flow Rate	30	89	257	203	142	183	190	196	8
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.072	0.192	0.533	0.413	0.297	0.371	0.349	0.464	0.016
Departure Headway (Hd)	8.493	7.757	7.479	7.313	7.504	7.321	6.608	8.533	7.352
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	421	461	482	492	478	491	542	423	486
Service Time	6.265	5.529	5.237	5.071	5.261	5.078	4.364	6.298	5.116
HCM Lane V/C Ratio	0.071	0.193	0.533	0.413	0.297	0.373	0.351	0.463	0.016
HCM Control Delay	11.9	12.4	18.5	15.2	13.4	14.4	12.9	18.5	10.2
HCM Lane LOS	B	B	C	C	B	B	B	C	B
HCM 95th-tile Q	0.2	0.7	3.1	2	1.2	1.7	1.6	2.4	0

Intersection	
Intersection Delay, s/veh	8.2
Intersection LOS	A

Approach	EB	WB	NB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	482	424	305
Demand Flow Rate, veh/h	496	436	314
Vehicles Circulating, veh/h	76	242	382
Vehicles Exiting, veh/h	603	454	190
Follow-Up Headway, s	2.900	2.900	2.900
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	7.7	8.8	8.3
Approach LOS	A	A	A

Lane	Left	Left	Left
Designated Moves	TR	LT	LR
Assumed Moves	TR	LT	LR
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	4.700	4.700	4.700
Entry Flow, veh/h	496	436	314
Cap Entry Lane, veh/h	1159	998	879
Entry HV Adj Factor	0.972	0.971	0.971
Flow Entry, veh/h	482	424	305
Cap Entry, veh/h	1126	969	854
V/C Ratio	0.428	0.437	0.357
Control Delay, s/veh	7.7	8.8	8.3
LOS	A	A	A
95th %tile Queue, veh	2	2	2

Mitigated 2019 Plus Approved Projects Plus Project (Phases 1&2) PM Peak Hour - Signal Alternative 2: Project Driveway & Dinuba Ave

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	341	102	68	322	216	64
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1748	1800	1748	1748	1748	1800
Adj Flow Rate, veh/h	371	111	74	350	235	70
Adj No. of Lanes	1	0	1	1	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	0	0
Cap, veh/h	483	144	91	945	290	86
Arrive On Green	0.37	0.37	0.05	0.54	0.23	0.23
Sat Flow, veh/h	1293	387	1664	1748	1244	371
Grp Volume(v), veh/h	0	482	74	350	306	0
Grp Sat Flow(s),veh/h/ln	0	1679	1664	1748	1620	0
Q Serve(g_s), s	0.0	10.9	1.9	5.0	7.7	0.0
Cycle Q Clear(g_c), s	0.0	10.9	1.9	5.0	7.7	0.0
Prop In Lane		0.23	1.00		0.77	0.23
Lane Grp Cap(c), veh/h	0	627	91	945	377	0
V/C Ratio(X)	0.00	0.77	0.82	0.37	0.81	0.00
Avail Cap(c_a), veh/h	0	856	204	1302	669	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	11.9	20.3	5.7	15.7	0.0
Incr Delay (d2), s/veh	0.0	2.9	16.0	0.2	4.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.0	5.5	1.3	2.4	3.8	0.0
LnGrp Delay(d),s/veh	0.0	14.9	36.3	6.0	19.9	0.0
LnGrp LOS		B	D	A	B	
Approach Vol, veh/h	482			424	306	
Approach Delay, s/veh	14.9			11.3	19.9	
Approach LOS	B			B	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		15.0	7.3	21.1				28.3
Change Period (Y+Rc), s		4.9	4.9	4.9				4.9
Max Green Setting (Gmax), s		17.9	5.3	22.1				32.3
Max Q Clear Time (g_c+I1), s		9.7	3.9	12.9				7.0
Green Ext Time (p_c), s		0.6	0.0	3.3				5.1

Intersection Summary	
HCM 2010 Ctrl Delay	14.9
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Intersection Delay, s/veh	16.3
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Vol, veh/h	0	22	374	14	0	86	350	250	0	1	25	47	0	139	27	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	24	407	15	0	93	380	272	0	1	27	51	0	151	29	5
Number of Lanes	0	0	2	0	0	0	2	1	0	0	1	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	2
HCM Control Delay	16.9	15.9	12.1	18.2
HCM LOS	C	C	B	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	4%	0%	11%	0%	42%	0%	0%	84%	0%
Vol Thru, %	96%	0%	89%	93%	58%	100%	0%	16%	0%
Vol Right, %	0%	100%	0%	7%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	26	47	209	201	203	233	250	166	5
LT Vol	1	0	22	0	86	0	0	139	0
Through Vol	25	0	187	187	117	233	0	27	0
RT Vol	0	47	0	14	0	0	250	0	5
Lane Flow Rate	28	51	227	218	220	254	272	180	5
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.07	0.116	0.481	0.456	0.448	0.501	0.482	0.442	0.012
Departure Headway (Hd)	8.922	8.183	7.619	7.516	7.32	7.105	6.392	8.814	7.673
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	400	437	473	478	491	507	563	408	465
Service Time	6.698	5.959	5.377	5.273	5.073	4.858	4.145	6.58	5.438
HCM Lane V/C Ratio	0.07	0.117	0.48	0.456	0.448	0.501	0.483	0.441	0.011
HCM Control Delay	12.4	12	17.3	16.5	15.9	16.8	15	18.4	10.5
HCM Lane LOS	B	B	C	C	C	C	B	C	B
HCM 95th-tile Q	0.2	0.4	2.6	2.3	2.3	2.8	2.6	2.2	0

APPENDIX I

2021 PLUS APPROVED PROJECTS PLUS PROJECT (ALL PHASES) CONDITIONS LOS CALCULATIONS

2021 Plus Approved Projects Plus Project (All Phases) AM Peak Hour
1: Zumwalt Ave & Dinuba Ave

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	54	277	2	0	348	13	1	0	1	24	0	74
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	59	301	2	0	378	14	1	0	1	26	0	80

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	392	0	0	303	0	0	846	812	302	805	806	385
Stage 1	-	-	-	-	-	-	420	420	-	385	385	-
Stage 2	-	-	-	-	-	-	426	392	-	420	421	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1161	-	-	1252	-	-	281	312	735	300	314	660
Stage 1	-	-	-	-	-	-	609	588	-	636	609	-
Stage 2	-	-	-	-	-	-	604	605	-	609	587	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1161	-	-	1252	-	-	235	293	735	286	295	660
Mov Cap-2 Maneuver	-	-	-	-	-	-	235	293	-	286	295	-
Stage 1	-	-	-	-	-	-	572	552	-	597	609	-
Stage 2	-	-	-	-	-	-	530	605	-	571	551	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.3	0	15.2	14.1
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	356	1161	-	-	1252	-	-	500
HCM Lane V/C Ratio	0.006	0.051	-	-	-	-	-	0.213
HCM Control Delay (s)	15.2	8.3	0	-	0	-	-	14.1
HCM Lane LOS	C	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	0	0.2	-	-	0	-	-	0.8

2021 Plus Approved Projects Plus Project (All Phases) AM Peak Hour
2: Project Driveway & Dinuba Ave

Intersection	
Int Delay, s/veh	6.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	288	131	73	366	133	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	313	142	79	398	145	40

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	455	0	941	384
Stage 1	-	-	-	-	384	-
Stage 2	-	-	-	-	557	-
Critical Hdwy	-	-	4.13	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.227	-	3.527	3.327
Pot Cap-1 Maneuver	-	-	1100	-	291	661
Stage 1	-	-	-	-	686	-
Stage 2	-	-	-	-	572	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1100	-	264	661
Mov Cap-2 Maneuver	-	-	-	-	264	-
Stage 1	-	-	-	-	686	-
Stage 2	-	-	-	-	519	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.4	33.6
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	304	-	-	1100	-
HCM Lane V/C Ratio	0.608	-	-	0.072	-
HCM Control Delay (s)	33.6	-	-	8.5	0
HCM Lane LOS	D	-	-	A	A
HCM 95th %tile Q(veh)	3.7	-	-	0.2	-

Intersection	
Intersection Delay, s/veh	11.7
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	507	543	226	383
Demand Flow Rate, veh/h	522	559	233	395
Vehicles Circulating, veh/h	260	333	581	542
Vehicles Exiting, veh/h	677	481	201	350
Follow-Up Headway, s	2.900	2.900	2.900	2.900
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	10.6	13.1	9.0	12.6
Approach LOS	B	B	A	B

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	4.700	4.700	4.700	4.700
Entry Flow, veh/h	522	559	233	395
Cap Entry Lane, veh/h	982	919	735	761
Entry HV Adj Factor	0.971	0.971	0.969	0.970
Flow Entry, veh/h	507	543	226	383
Cap Entry, veh/h	953	893	712	738
V/C Ratio	0.532	0.608	0.317	0.519
Control Delay, s/veh	10.6	13.1	9.0	12.6
LOS	B	B	A	B
95th %tile Queue, veh	3	4	1	3

2021 Plus Approved Projects Plus Project (All Phases) AM Peak Hour
4: Dinuba Ave & I Street

Intersection	
Int Delay, s/veh	23.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	65	371	10	50	276	190	1	28	87	188	16	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	150	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	71	403	11	54	300	207	1	30	95	204	17	9

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	300	0	0	414	0	0	817	959	207	767	964	150
Stage 1	-	-	-	-	-	-	550	550	-	409	409	-
Stage 2	-	-	-	-	-	-	267	409	-	358	555	-
Critical Hdwy	4.16	-	-	4.16	-	-	7.56	6.56	6.96	7.56	6.56	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-	6.56	5.56	-	6.56	5.56	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.56	5.56	-	6.56	5.56	-
Follow-up Hdwy	2.23	-	-	2.23	-	-	3.53	4.03	3.33	3.53	4.03	3.33
Pot Cap-1 Maneuver	1251	-	-	1134	-	-	267	254	796	290	252	866
Stage 1	-	-	-	-	-	-	484	512	-	588	592	-
Stage 2	-	-	-	-	-	-	713	592	-	630	509	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1251	-	-	1134	-	-	222	219	796	205	217	866
Mov Cap-2 Maneuver	-	-	-	-	-	-	222	219	-	205	217	-
Stage 1	-	-	-	-	-	-	448	474	-	544	552	-
Stage 2	-	-	-	-	-	-	637	552	-	481	471	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.3	0.9	13.6	128.6
HCM LOS			B	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	219	796	1251	-	-	1134	-	-	206	866
HCM Lane V/C Ratio	0.144	0.119	0.056	-	-	0.048	-	-	1.076	0.01
HCM Control Delay (s)	24.2	10.1	8.1	0.2	-	8.3	0.1	-	133.3	9.2
HCM Lane LOS	C	B	A	A	-	A	A	-	F	A
HCM 95th %tile Q(veh)	0.5	0.4	0.2	-	-	0.2	-	-	10.2	0

Intersection	
Intersection Delay, s/veh	19.7
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	13	192	23	0	140	142	3	0	45	202	207
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	14	209	25	0	152	154	3	0	49	220	225
Number of Lanes	0	0	1	0	0	0	1	1	0	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	2	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	1	2
HCM Control Delay	19.7	24.7	16.9
HCM LOS	C	C	C

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	18%	0%	6%	50%	0%	22%
Vol Thru, %	82%	0%	84%	50%	0%	68%
Vol Right, %	0%	100%	10%	0%	100%	11%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	247	207	228	282	3	217
LT Vol	45	0	13	140	0	47
Through Vol	202	0	192	142	0	147
RT Vol	0	207	23	0	3	23
Lane Flow Rate	268	225	248	307	3	236
Geometry Grp	7	7	6	7	7	6
Degree of Util (X)	0.555	0.415	0.537	0.665	0.006	0.513
Departure Headway (Hd)	7.445	6.633	7.795	7.812	6.837	7.836
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	483	540	461	460	521	458
Service Time	5.227	4.415	5.885	5.591	4.616	5.931
HCM Lane V/C Ratio	0.555	0.417	0.538	0.667	0.006	0.515
HCM Control Delay	19.2	14.1	19.7	24.9	9.7	19
HCM Lane LOS	C	B	C	C	A	C
HCM 95th-tile Q	3.3	2	3.1	4.8	0	2.9

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	47	147	23
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	3
Mvmt Flow	0	51	160	25
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	19
HCM LOS	C

Lane

Intersection	
Int Delay, s/veh	4.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	218	214	0	283	209	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	237	233	0	308	227	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	470	0	507	235
Stage 1	-	-	-	-	353	-
Stage 2	-	-	-	-	154	-
Critical Hdwy	-	-	4.16	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	-	-	2.23	-	3.53	3.33
Pot Cap-1 Maneuver	-	-	1081	-	493	764
Stage 1	-	-	-	-	679	-
Stage 2	-	-	-	-	855	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1081	-	493	764
Mov Cap-2 Maneuver	-	-	-	-	493	-
Stage 1	-	-	-	-	679	-
Stage 2	-	-	-	-	855	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	18.4
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	493	-	-	1081	-
HCM Lane V/C Ratio	0.461	-	-	-	-
HCM Control Delay (s)	18.4	-	-	0	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	2.4	-	-	0	-

Intersection

Int Delay, s/veh 1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	25	410	2	1	401	13	1	2	0	13	0	37
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	27	446	2	1	436	14	1	2	0	14	0	40

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	450	0	0	448	0	0	966	953	447	947	947	443
Stage 1	-	-	-	-	-	-	501	501	-	445	445	-
Stage 2	-	-	-	-	-	-	465	452	-	502	502	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1105	-	-	1107	-	-	233	258	609	240	260	613
Stage 1	-	-	-	-	-	-	550	541	-	590	573	-
Stage 2	-	-	-	-	-	-	576	569	-	550	540	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1105	-	-	1107	-	-	212	249	609	232	251	613
Mov Cap-2 Maneuver	-	-	-	-	-	-	212	249	-	232	251	-
Stage 1	-	-	-	-	-	-	532	523	-	571	572	-
Stage 2	-	-	-	-	-	-	538	568	-	530	522	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0	20.5	14.6
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	235	1105	-	-	1107	-	-	430
HCM Lane V/C Ratio	0.014	0.025	-	-	0.001	-	-	0.126
HCM Control Delay (s)	20.5	8.3	0	-	8.3	0	-	14.6
HCM Lane LOS	C	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0	0.1	-	-	0	-	-	0.4

2021 Plus Approved Projects Plus Project (All Phases) PM Peak Hour
2: Project Driveway & Dinuba Ave

Intersection	
Int Delay, s/veh	85.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	352	150	98	325	286	84
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	383	163	107	353	311	91

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	546	0	1030	464
Stage 1	-	-	-	-	464	-
Stage 2	-	-	-	-	566	-
Critical Hdwy	-	-	4.13	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.227	-	3.527	3.327
Pot Cap-1 Maneuver	-	-	1018	-	~ 258	596
Stage 1	-	-	-	-	631	-
Stage 2	-	-	-	-	566	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1018	-	~ 224	596
Mov Cap-2 Maneuver	-	-	-	-	~ 224	-
Stage 1	-	-	-	-	631	-
Stage 2	-	-	-	-	492	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.1	296.6
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	261	-	-	1018	-
HCM Lane V/C Ratio	1.541	-	-	0.105	-
HCM Control Delay (s)	296.6	-	-	8.9	0
HCM Lane LOS	F	-	-	A	A
HCM 95th %tile Q(veh)	23.9	-	-	0.4	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Intersection Delay, s/veh	20.2
Intersection LOS	C

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	678	634	339	361
Demand Flow Rate, veh/h	699	653	349	372
Vehicles Circulating, veh/h	252	545	768	569
Vehicles Exiting, veh/h	689	572	183	629
Follow-Up Headway, s	2.900	2.900	2.900	2.900
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	15.8	31.4	16.2	12.4
Approach LOS	C	D	C	B

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	4.700	4.700	4.700	4.700
Entry Flow, veh/h	699	653	349	372
Cap Entry Lane, veh/h	989	759	621	743
Entry HV Adj Factor	0.970	0.971	0.971	0.970
Flow Entry, veh/h	678	634	339	361
Cap Entry, veh/h	959	737	603	720
V/C Ratio	0.707	0.860	0.562	0.501
Control Delay, s/veh	15.8	31.4	16.2	12.4
LOS	C	D	C	B
95th %tile Queue, veh	6	10	3	3

2021 Plus Approved Projects Plus Project (All Phases) PM Peak Hour
4: Dinuba Ave & I Street

Intersection	
Int Delay, s/veh	35

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	27	400	15	93	384	280	1	27	52	165	31	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	150	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	29	435	16	101	417	304	1	29	57	179	34	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	417	0	0	451	0	0	930	1122	226	911	1130	209
Stage 1	-	-	-	-	-	-	502	502	-	620	620	-
Stage 2	-	-	-	-	-	-	428	620	-	291	510	-
Critical Hdwy	4.16	-	-	4.16	-	-	7.56	6.56	6.96	7.56	6.56	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-	6.56	5.56	-	6.56	5.56	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.56	5.56	-	6.56	5.56	-
Follow-up Hdwy	2.23	-	-	2.23	-	-	3.53	4.03	3.33	3.53	4.03	3.33
Pot Cap-1 Maneuver	1131	-	-	1099	-	-	221	203	774	228	201	794
Stage 1	-	-	-	-	-	-	517	538	-	440	476	-
Stage 2	-	-	-	-	-	-	572	476	-	690	533	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1131	-	-	1099	-	-	158	164	774	~ 156	163	794
Mov Cap-2 Maneuver	-	-	-	-	-	-	158	164	-	~ 156	163	-
Stage 1	-	-	-	-	-	-	499	520	-	425	398	-
Stage 2	-	-	-	-	-	-	435	398	-	583	515	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	1.2	17.7	244.1
HCM LOS			C	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	164	774	1131	-	-	1099	-	-	157	794
HCM Lane V/C Ratio	0.186	0.073	0.026	-	-	0.092	-	-	1.357	0.008
HCM Control Delay (s)	31.9	10	8.3	0.1	-	8.6	0.3	-	251.3	9.6
HCM Lane LOS	D	B	A	A	-	A	A	-	F	A
HCM 95th %tile Q(veh)	0.7	0.2	0.1	-	-	0.3	-	-	13.1	0

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Intersection Delay, s/veh	32.7
Intersection LOS	D

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	4	159	19	0	200	188	2	0	27	187	226
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	4	173	21	0	217	204	2	0	29	203	246
Number of Lanes	0	0	1	0	0	0	1	1	0	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	2	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	1	2
HCM Control Delay	19.7	58.7	18.5
HCM LOS	C	F	C

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	13%	0%	2%	52%	0%	23%
Vol Thru, %	87%	0%	87%	48%	0%	77%
Vol Right, %	0%	100%	10%	0%	100%	1%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	214	226	182	388	2	257
LT Vol	27	0	4	200	0	58
Through Vol	187	0	159	188	0	197
RT Vol	0	226	19	0	2	2
Lane Flow Rate	233	246	198	422	2	279
Geometry Grp	7	7	6	7	7	6
Degree of Util (X)	0.526	0.502	0.48	0.947	0.004	0.659
Departure Headway (Hd)	8.147	7.359	8.736	8.082	7.096	8.492
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	442	489	411	447	504	425
Service Time	5.911	5.122	6.811	5.834	4.848	6.56
HCM Lane V/C Ratio	0.527	0.503	0.482	0.944	0.004	0.656
HCM Control Delay	19.7	17.4	19.7	59	9.9	26.6
HCM Lane LOS	C	C	C	F	A	D
HCM 95th-tile Q	3	2.8	2.5	11.2	0	4.6

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	58	197	2
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	3
Mvmt Flow	0	63	214	2
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	26.6
HCM LOS	D

Lane

Intersection	
Int Delay, s/veh	3.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	203	255	0	334	193	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	221	277	0	363	210	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	498	0	541	249
Stage 1	-	-	-	-	359	-
Stage 2	-	-	-	-	182	-
Critical Hdwy	-	-	4.16	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	-	-	2.23	-	3.53	3.33
Pot Cap-1 Maneuver	-	-	1055	-	469	748
Stage 1	-	-	-	-	674	-
Stage 2	-	-	-	-	828	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1055	-	469	748
Mov Cap-2 Maneuver	-	-	-	-	469	-
Stage 1	-	-	-	-	674	-
Stage 2	-	-	-	-	828	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	18.7
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	469	-	-	1055	-
HCM Lane V/C Ratio	0.447	-	-	-	-
HCM Control Delay (s)	18.7	-	-	0	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	2.3	-	-	0	-

APPENDIX J

MITIGATED 2021 PLUS APPROVED PROJECTS PLUS PROJECT (ALL PHASES) CONDITIONS LOS CALCULATIONS

Mitigated 2021 Plus Approved Projects Plus Project (All Phases) AM Peak Hour - Roundabout Alternative
2: Project Driveway & Dinuba Ave

Intersection	
Intersection Delay, s/veh	7.6
Intersection LOS	A

Approach	EB	WB	NB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	455	477	185
Demand Flow Rate, veh/h	468	491	190
Vehicles Circulating, veh/h	81	149	322
Vehicles Exiting, veh/h	559	363	227
Follow-Up Headway, s	2.900	2.900	2.900
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	7.4	8.5	6.0
Approach LOS	A	A	A

Lane	Left	Left	Left
Designated Moves	TR	LT	LR
Assumed Moves	TR	LT	LR
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	4.700	4.700	4.700
Entry Flow, veh/h	468	491	190
Cap Entry Lane, veh/h	1154	1085	928
Entry HV Adj Factor	0.971	0.972	0.974
Flow Entry, veh/h	455	477	185
Cap Entry, veh/h	1121	1054	904
V/C Ratio	0.406	0.452	0.205
Control Delay, s/veh	7.4	8.5	6.0
LOS	A	A	A
95th %tile Queue, veh	2	2	1

Mitigated 2021 Plus Approved Projects Plus Project (All Phases) AM Peak Hour - Signal Alternative 2: Project Driveway & Dinuba Ave

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	288	131	73	366	133	37
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1748	1800	1748	1748	1748	1800
Adj Flow Rate, veh/h	313	142	79	398	145	40
Adj No. of Lanes	1	0	1	1	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	0	0
Cap, veh/h	448	203	100	1025	187	52
Arrive On Green	0.39	0.39	0.06	0.59	0.15	0.15
Sat Flow, veh/h	1139	517	1664	1748	1265	349
Grp Volume(v), veh/h	0	455	79	398	186	0
Grp Sat Flow(s),veh/h/ln	0	1656	1664	1748	1623	0
Q Serve(g_s), s	0.0	8.5	1.7	4.5	4.1	0.0
Cycle Q Clear(g_c), s	0.0	8.5	1.7	4.5	4.1	0.0
Prop In Lane		0.31	1.00		0.78	0.22
Lane Grp Cap(c), veh/h	0	651	100	1025	240	0
V/C Ratio(X)	0.00	0.70	0.79	0.39	0.78	0.00
Avail Cap(c_a), veh/h	0	1038	321	1664	665	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	9.4	17.1	4.1	15.1	0.0
Incr Delay (d2), s/veh	0.0	1.4	12.8	0.2	5.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.0	4.0	1.1	2.2	2.2	0.0
LnGrp Delay(d),s/veh	0.0	10.7	29.9	4.3	20.4	0.0
LnGrp LOS		B	C	A	C	
Approach Vol, veh/h	455			477	186	
Approach Delay, s/veh	10.7			8.6	20.4	
Approach LOS	B			A	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		10.3	7.1	19.4				26.5
Change Period (Y+Rc), s		4.9	4.9	4.9				4.9
Max Green Setting (Gmax), s		15.1	7.1	23.1				35.1
Max Q Clear Time (g_c+I1), s		6.1	3.7	10.5				6.5
Green Ext Time (p_c), s		0.3	0.0	4.0				5.4

Intersection Summary	
HCM 2010 Ctrl Delay	11.4
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Mitigated 2021 Plus Approved Projects Plus Project (All Phases) AM Peak Hour - Signal Alternative 4: Dinuba Ave & I Street

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	0	559	10	0	326	190	0	0	87	0	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	150	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	608	11	0	354	207	0	0	95	0	0	9

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	354	0	0	618	0	0	790	967	309	658	972	177
Stage 1	-	-	-	-	-	-	613	613	-	354	354	-
Stage 2	-	-	-	-	-	-	177	354	-	304	618	-
Critical Hdwy	4.16	-	-	4.16	-	-	7.56	6.56	6.96	7.56	6.56	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-	6.56	5.56	-	6.56	5.56	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.56	5.56	-	6.56	5.56	-
Follow-up Hdwy	2.23	-	-	2.23	-	-	3.53	4.03	3.33	3.53	4.03	3.33
Pot Cap-1 Maneuver	1194	-	-	951	-	-	279	251	684	348	249	832
Stage 1	-	-	-	-	-	-	444	479	-	633	626	-
Stage 2	-	-	-	-	-	-	805	626	-	678	477	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1194	-	-	951	-	-	276	251	684	300	249	832
Mov Cap-2 Maneuver	-	-	-	-	-	-	276	251	-	300	249	-
Stage 1	-	-	-	-	-	-	444	479	-	633	626	-
Stage 2	-	-	-	-	-	-	797	626	-	584	477	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	11.1	9.4
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	684	1194	-	-	951	-	-	832
HCM Lane V/C Ratio	0.138	-	-	-	-	-	-	0.01
HCM Control Delay (s)	11.1	0	-	-	0	-	-	9.4
HCM Lane LOS	B	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.5	0	-	-	0	-	-	0

Mitigated 2021 Plus Approved Projects Plus Project (All Phases) AM Peak Hour - Signal Alternative 5: Frankwood Ave & Dinuba Ave

Intersection	
Intersection Delay, s/veh	13.2
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	248	363	525	457
Demand Flow Rate, veh/h	256	374	542	471
Vehicles Circulating, veh/h	658	398	493	423
Vehicles Exiting, veh/h	236	637	421	349
Follow-Up Headway, s	2.900	2.900	2.900	2.900
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	10.5	9.6	17.4	12.5
Approach LOS	B	A	C	B

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	4.700	4.700	4.700	4.700
Entry Flow, veh/h	256	374	542	471
Cap Entry Lane, veh/h	685	867	795	847
Entry HV Adj Factor	0.968	0.972	0.970	0.970
Flow Entry, veh/h	248	363	525	457
Cap Entry, veh/h	664	842	771	822
V/C Ratio	0.374	0.432	0.681	0.556
Control Delay, s/veh	10.5	9.6	17.4	12.5
LOS	B	A	C	B
95th %tile Queue, veh	2	2	5	3

Mitigated 2021 Plus Approved Projects Plus Project (All Phases) AM Peak Hour - Signal Alternative 6: Frankwood Ave & I Street

Intersection	
Int Delay, s/veh	2.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	190	302	0	22	410
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	207	328	0	24	446

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	821	328	0	0	328	0
Stage 1	328	-	-	-	-	-
Stage 2	493	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227	-
Pot Cap-1 Maneuver	343	711	-	-	1226	-
Stage 1	728	-	-	-	-	-
Stage 2	612	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	336	711	-	-	1226	-
Mov Cap-2 Maneuver	336	-	-	-	-	-
Stage 1	728	-	-	-	-	-
Stage 2	600	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.1	0	0.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	711	1226	-
HCM Lane V/C Ratio	-	-	0.29	0.02	-
HCM Control Delay (s)	-	-	12.1	8	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	1.2	0.1	-

Intersection	
Intersection Delay, s/veh	10.0
Intersection LOS	A

Approach	EB	WB	NB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	546	460	402
Demand Flow Rate, veh/h	562	474	414
Vehicles Circulating, veh/h	110	320	394
Vehicles Exiting, veh/h	684	488	278
Follow-Up Headway, s	2.900	2.900	2.900
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	9.1	10.6	10.5
Approach LOS	A	B	B

Lane	Left	Left	Left
Designated Moves	TR	LT	LR
Assumed Moves	TR	LT	LR
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	4.700	4.700	4.700
Entry Flow, veh/h	562	474	414
Cap Entry Lane, veh/h	1124	930	870
Entry HV Adj Factor	0.971	0.971	0.971
Flow Entry, veh/h	546	460	402
Cap Entry, veh/h	1091	903	845
V/C Ratio	0.500	0.510	0.476
Control Delay, s/veh	9.1	10.6	10.5
LOS	A	B	B
95th %tile Queue, veh	3	3	3

Mitigated 2021 Plus Approved Projects Plus Project (All Phases) PM Peak Hour - Signal Alternative 2: Project Driveway & Dinuba Ave

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	352	150	98	325	286	84
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1748	1800	1748	1748	1748	1800
Adj Flow Rate, veh/h	383	163	107	353	311	91
Adj No. of Lanes	1	0	1	1	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	0	0
Cap, veh/h	422	180	133	932	356	104
Arrive On Green	0.36	0.36	0.08	0.53	0.28	0.28
Sat Flow, veh/h	1165	496	1664	1748	1251	366
Grp Volume(v), veh/h	0	546	107	353	403	0
Grp Sat Flow(s),veh/h/ln	0	1660	1664	1748	1620	0
Q Serve(g_s), s	0.0	16.8	3.4	6.4	12.8	0.0
Cycle Q Clear(g_c), s	0.0	16.8	3.4	6.4	12.8	0.0
Prop In Lane		0.30	1.00		0.77	0.23
Lane Grp Cap(c), veh/h	0	601	133	932	462	0
V/C Ratio(X)	0.00	0.91	0.80	0.38	0.87	0.00
Avail Cap(c_a), veh/h	0	619	170	989	592	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	16.3	24.4	7.4	18.3	0.0
Incr Delay (d2), s/veh	0.0	17.0	19.0	0.3	11.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.0	10.4	2.2	3.1	7.1	0.0
LnGrp Delay(d),s/veh	0.0	33.4	43.3	7.6	29.5	0.0
LnGrp LOS		C	D	A	C	
Approach Vol, veh/h	546			460	403	
Approach Delay, s/veh	33.4			15.9	29.5	
Approach LOS	C			B	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		20.3	9.2	24.4				33.6
Change Period (Y+Rc), s		4.9	4.9	4.9				4.9
Max Green Setting (Gmax), s		19.7	5.5	20.1				30.5
Max Q Clear Time (g_c+I1), s		14.8	5.4	18.8				8.4
Green Ext Time (p_c), s		0.6	0.0	0.7				5.5

Intersection Summary	
HCM 2010 Ctrl Delay	26.6
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Mitigated 2021 Plus Approved Projects Plus Project (All Phases) PM Peak Hour - Signal Alternative 4: Dinuba Ave & I Street

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	0	565	15	0	477	280	0	0	52	0	0	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	150	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	614	16	0	518	304	0	0	57	0	0	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	518	0	0	630	0	0	881	1140	315	825	1148	259
Stage 1	-	-	-	-	-	-	622	622	-	518	518	-
Stage 2	-	-	-	-	-	-	259	518	-	307	630	-
Critical Hdwy	4.16	-	-	4.16	-	-	7.56	6.56	6.96	7.56	6.56	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-	6.56	5.56	-	6.56	5.56	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.56	5.56	-	6.56	5.56	-
Follow-up Hdwy	2.23	-	-	2.23	-	-	3.53	4.03	3.33	3.53	4.03	3.33
Pot Cap-1 Maneuver	1037	-	-	942	-	-	239	198	678	263	196	737
Stage 1	-	-	-	-	-	-	439	475	-	506	529	-
Stage 2	-	-	-	-	-	-	720	529	-	675	471	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1037	-	-	942	-	-	237	198	678	241	196	737
Mov Cap-2 Maneuver	-	-	-	-	-	-	237	198	-	241	196	-
Stage 1	-	-	-	-	-	-	439	475	-	506	529	-
Stage 2	-	-	-	-	-	-	714	529	-	619	471	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	10.8	9.9
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	678	1037	-	-	942	-	-	737
HCM Lane V/C Ratio	0.083	-	-	-	-	-	-	0.009
HCM Control Delay (s)	10.8	0	-	-	0	-	-	9.9
HCM Lane LOS	B	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0

Mitigated 2021 Plus Approved Projects Plus Project (All Phases) PM Peak Hour - Signal Alternative 5: Frankwood Ave & Dinuba Ave

Intersection	
Intersection Delay, s/veh	14.5
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	198	523	509	492
Demand Flow Rate, veh/h	204	539	524	506
Vehicles Circulating, veh/h	832	306	431	568
Vehicles Exiting, veh/h	242	649	605	277
Follow-Up Headway, s	2.900	2.900	2.900	2.900
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	11.4	11.9	14.5	18.3
Approach LOS	B	B	B	C

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	4.700	4.700	4.700	4.700
Entry Flow, veh/h	204	539	524	506
Cap Entry Lane, veh/h	586	942	841	743
Entry HV Adj Factor	0.969	0.970	0.971	0.971
Flow Entry, veh/h	198	523	509	492
Cap Entry, veh/h	568	914	817	722
V/C Ratio	0.348	0.572	0.623	0.681
Control Delay, s/veh	11.4	11.9	14.5	18.3
LOS	B	B	B	C
95th %tile Queue, veh	2	4	4	5

Intersection	
Int Delay, s/veh	3.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	280	247	0	23	435
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	304	268	0	25	473

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	791	268	0	0	268	0
Stage 1	268	-	-	-	-	-
Stage 2	523	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227	-
Pot Cap-1 Maneuver	357	768	-	-	1290	-
Stage 1	775	-	-	-	-	-
Stage 2	593	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	350	768	-	-	1290	-
Mov Cap-2 Maneuver	350	-	-	-	-	-
Stage 1	775	-	-	-	-	-
Stage 2	582	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.7	0	0.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	768	1290	-
HCM Lane V/C Ratio	-	-	0.396	0.019	-
HCM Control Delay (s)	-	-	12.7	7.8	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	1.9	0.1	-

APPENDIX K

2035 PLUS PROJECT CONDITIONS LOS CALCULATIONS

2035 Plus Project AM Peak Hour
1: Zumwalt Ave & Dinuba Ave

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	62	318	2	0	394	14	1	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3
Mvmt Flow	67	346	2	0	428	15	1	0	1

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	443	0	0	348	0	0	964	925	347
Stage 1	-	-	-	-	-	-	482	482	-
Stage 2	-	-	-	-	-	-	482	443	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327
Pot Cap-1 Maneuver	1112	-	-	1205	-	-	234	268	694
Stage 1	-	-	-	-	-	-	564	552	-
Stage 2	-	-	-	-	-	-	564	574	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	1112	-	-	1205	-	-	188	248	694
Mov Cap-2 Maneuver	-	-	-	-	-	-	188	248	-
Stage 1	-	-	-	-	-	-	522	511	-
Stage 2	-	-	-	-	-	-	480	574	-

Approach	EB	WB	NB
HCM Control Delay, s	1.4	0	17.3
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	296	1112	-	-	1205	-	-	445
HCM Lane V/C Ratio	0.007	0.061	-	-	-	-	-	0.274
HCM Control Delay (s)	17.3	8.4	0	-	0	-	-	16.1
HCM Lane LOS	C	A	A	-	A	-	-	C
HCM 95th %tile Q(veh)	0	0.2	-	-	0	-	-	1.1

Intersection

Int Delay, s/veh

Movement	SBL	SBT	SBR
Vol, veh/h	27	0	85
Conflicting Peds, #/hr	0	0	0
Sign Control	Stop	Stop	Stop
RT Channelized	-	-	None
Storage Length	-	-	-
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	92	92	92
Heavy Vehicles, %	3	3	3
Mvmt Flow	29	0	92

Major/Minor	Minor2		
Conflicting Flow All	918	919	436
Stage 1	436	436	-
Stage 2	482	483	-
Critical Hdwy	7.13	6.53	6.23
Critical Hdwy Stg 1	6.13	5.53	-
Critical Hdwy Stg 2	6.13	5.53	-
Follow-up Hdwy	3.527	4.027	3.327
Pot Cap-1 Maneuver	251	270	618
Stage 1	597	578	-
Stage 2	564	551	-
Platoon blocked, %			
Mov Cap-1 Maneuver	236	250	618
Mov Cap-2 Maneuver	236	250	-
Stage 1	552	578	-
Stage 2	521	510	-

Approach	SB
HCM Control Delay, s	16.1
HCM LOS	C

Minor Lane/Major Mvmt

Intersection	
Int Delay, s/veh	6.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	321	184	73	424	133	50
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	349	200	79	461	145	54

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	549	0	1069	449
Stage 1	-	-	-	-	449	-
Stage 2	-	-	-	-	620	-
Critical Hdwy	-	-	4.13	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.227	-	3.527	3.327
Pot Cap-1 Maneuver	-	-	1016	-	244	608
Stage 1	-	-	-	-	641	-
Stage 2	-	-	-	-	535	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1016	-	218	608
Mov Cap-2 Maneuver	-	-	-	-	218	-
Stage 1	-	-	-	-	641	-
Stage 2	-	-	-	-	479	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.3	38.8
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	218	608	-	-	1016	-
HCM Lane V/C Ratio	0.663	0.089	-	-	0.078	-
HCM Control Delay (s)	49	11.5	-	-	8.8	0
HCM Lane LOS	E	B	-	-	A	A
HCM 95th %tile Q(veh)	4.1	0.3	-	-	0.3	-

Intersection	
Intersection Delay, s/veh	18.9
Intersection LOS	C

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	600	613	244	566
Demand Flow Rate, veh/h	617	631	252	583
Vehicles Circulating, veh/h	342	410	705	583
Vehicles Exiting, veh/h	824	547	254	458
Follow-Up Headway, s	2.900	2.900	2.900	2.900
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	15.5	19.0	11.1	25.7
Approach LOS	C	C	B	D

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	4.700	4.700	4.700	4.700
Entry Flow, veh/h	617	631	252	583
Cap Entry Lane, veh/h	912	857	657	733
Entry HV Adj Factor	0.972	0.971	0.969	0.970
Flow Entry, veh/h	600	613	244	566
Cap Entry, veh/h	886	833	637	712
V/C Ratio	0.677	0.736	0.384	0.795
Control Delay, s/veh	15.5	19.0	11.1	25.7
LOS	C	C	B	D
95th %tile Queue, veh	5	7	2	8

2035 Plus Project AM Peak Hour
4: Dinuba Ave & I Street

Intersection	
Int Delay, s/veh	381.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	102	404	12	82	333	204	5	43	149
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3
Mvmt Flow	111	439	13	89	362	222	5	47	162

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	584	0	0	452	0	0	1042	1429	226
Stage 1	-	-	-	-	-	-	667	667	-
Stage 2	-	-	-	-	-	-	375	762	-
Critical Hdwy	4.16	-	-	4.16	-	-	7.56	6.56	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-	6.56	5.56	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.56	5.56	-
Follow-up Hdwy	2.23	-	-	2.23	-	-	3.53	4.03	3.33
Pot Cap-1 Maneuver	980	-	-	1098	-	-	183	132	774
Stage 1	-	-	-	-	-	-	412	453	-
Stage 2	-	-	-	-	-	-	615	409	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	980	-	-	1098	-	-	115	98	774
Mov Cap-2 Maneuver	-	-	-	-	-	-	115	98	-
Stage 1	-	-	-	-	-	-	349	384	-
Stage 2	-	-	-	-	-	-	488	358	-

Approach	EB	WB	NB
HCM Control Delay, s	2.2	1.4	26.5
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	100	774	980	-	-	1098	-	-	68	701
HCM Lane V/C Ratio	0.522	0.209	0.113	-	-	0.081	-	-	5.099	0.017
HCM Control Delay (s)	74.9	10.9	9.1	0.5	-	8.6	0.4	-	$ 1966.2	10.2
HCM Lane LOS	F	B	A	A	-	A	A	-	F	B
HCM 95th %tile Q(veh)	2.3	0.8	0.4	-	-	0.3	-	-	38.2	0.1

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection

Int Delay, s/veh

Movement	SBL	SBT	SBR
Vol, veh/h	290	29	11
Conflicting Peds, #/hr	0	0	0
Sign Control	Stop	Stop	Stop
RT Channelized	-	-	None
Storage Length	-	-	0
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	92	92	92
Heavy Vehicles, %	3	3	3
Mvmt Flow	315	32	12

Major/Minor	Minor2		
Conflicting Flow All	1116	1325	292
Stage 1	651	651	-
Stage 2	465	674	-
Critical Hdwy	7.56	6.56	6.96
Critical Hdwy Stg 1	6.56	5.56	-
Critical Hdwy Stg 2	6.56	5.56	-
Follow-up Hdwy	3.53	4.03	3.33
Pot Cap-1 Maneuver	~ 161	153	701
Stage 1	421	460	-
Stage 2	544	449	-
Platoon blocked, %			
Mov Cap-1 Maneuver	~ 65	114	701
Mov Cap-2 Maneuver	~ 65	114	-
Stage 1	357	403	-
Stage 2	320	381	-

Approach	SB
HCM Control Delay, s	$ 1901
HCM LOS	F

Minor Lane/Major Mvmt

2035 Plus Project AM Peak Hour
5: Frankwood Ave & Dinuba Ave

Intersection	
Intersection Delay, s/veh	36.1
Intersection LOS	E

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	13	210	23	0	170	174	3	0	50	252	256
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	14	228	25	0	185	189	3	0	54	274	278
Number of Lanes	0	0	1	0	0	0	1	1	0	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	2	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	1	2
HCM Control Delay	29.8	55.1	29.2
HCM LOS	D	F	D

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	17%	0%	5%	49%	0%	21%
Vol Thru, %	83%	0%	85%	51%	0%	70%
Vol Right, %	0%	100%	9%	0%	100%	9%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	302	256	246	344	3	256
LT Vol	252	0	210	174	0	180
Through Vol	0	256	23	0	3	23
RT Vol	50	0	13	170	0	53
Lane Flow Rate	328	278	267	374	3	278
Geometry Grp	7	7	6	7	7	6
Degree of Util (X)	0.779	0.597	0.68	0.913	0.007	0.705
Departure Headway (Hd)	8.54	7.728	9.149	8.795	7.813	9.119
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	423	465	393	411	456	395
Service Time	6.33	5.518	7.247	6.572	5.589	7.218
HCM Lane V/C Ratio	0.775	0.598	0.679	0.91	0.007	0.704
HCM Control Delay	35.8	21.4	29.8	55.5	10.6	31.5
HCM Lane LOS	E	C	D	F	B	D
HCM 95th-tile Q	6.7	3.8	4.9	9.8	0	5.3

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	53	180	23
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	3
Mvmt Flow	0	58	196	25
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	31.5
HCM LOS	D

Lane

2035 Plus Project AM Peak Hour
6: Frankwood Ave & I Street

Intersection	
Int Delay, s/veh	8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	336	247	0	351	256	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	365	268	0	382	278	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	634	0	690	317
Stage 1	-	-	-	-	499	-
Stage 2	-	-	-	-	191	-
Critical Hdwy	-	-	4.16	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	-	-	2.23	-	3.53	3.33
Pot Cap-1 Maneuver	-	-	938	-	377	676
Stage 1	-	-	-	-	572	-
Stage 2	-	-	-	-	819	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	938	-	377	676
Mov Cap-2 Maneuver	-	-	-	-	377	-
Stage 1	-	-	-	-	572	-
Stage 2	-	-	-	-	819	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	37.1
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	377	-	-	938	-
HCM Lane V/C Ratio	0.738	-	-	-	-
HCM Control Delay (s)	37.1	-	-	0	-
HCM Lane LOS	E	-	-	A	-
HCM 95th %tile Q(veh)	5.8	-	-	0	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	33	517	2	1	514	17	0	2	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3
Mvmt Flow	36	562	2	1	559	18	0	2	1

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	577	0	0	564	0	0	1231	1214	563
Stage 1	-	-	-	-	-	-	635	635	-
Stage 2	-	-	-	-	-	-	596	579	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327
Pot Cap-1 Maneuver	992	-	-	1003	-	-	153	181	524
Stage 1	-	-	-	-	-	-	465	471	-
Stage 2	-	-	-	-	-	-	488	499	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	992	-	-	1003	-	-	132	171	524
Mov Cap-2 Maneuver	-	-	-	-	-	-	132	171	-
Stage 1	-	-	-	-	-	-	440	446	-
Stage 2	-	-	-	-	-	-	439	499	-

Approach	EB	WB	NB
HCM Control Delay, s	0.5	0	21.5
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	221	992	-	-	1003	-	-	318
HCM Lane V/C Ratio	0.015	0.036	-	-	0.001	-	-	0.222
HCM Control Delay (s)	21.5	8.8	0	-	8.6	0	-	19.5
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0	0.1	-	-	0	-	-	0.8

Intersection

Int Delay, s/veh

Movement	SBL	SBT	SBR
Vol, veh/h	17	0	48
Conflicting Peds, #/hr	0	0	0
Sign Control	Stop	Stop	Stop
RT Channelized	-	-	None
Storage Length	-	-	-
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	92	92	92
Heavy Vehicles, %	3	3	3
Mvmt Flow	18	0	52

Major/Minor	Minor2		
Conflicting Flow All	1206	1206	568
Stage 1	570	570	-
Stage 2	636	636	-
Critical Hdwy	7.13	6.53	6.23
Critical Hdwy Stg 1	6.13	5.53	-
Critical Hdwy Stg 2	6.13	5.53	-
Follow-up Hdwy	3.527	4.027	3.327
Pot Cap-1 Maneuver	160	183	520
Stage 1	505	504	-
Stage 2	464	470	-
Platoon blocked, %			
Mov Cap-1 Maneuver	152	173	520
Mov Cap-2 Maneuver	152	173	-
Stage 1	478	503	-
Stage 2	436	445	-

Approach	SB
HCM Control Delay, s	19.5
HCM LOS	C

Minor Lane/Major Mvmt

2035 Plus Project PM Peak Hour
2: Project Driveway & Dinuba Ave

Intersection	
Int Delay, s/veh	87.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	406	205	98	416	286	110
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	441	223	107	452	311	120

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	664	0	1218	553
Stage 1	-	-	-	-	553	-
Stage 2	-	-	-	-	665	-
Critical Hdwy	-	-	4.13	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.227	-	3.527	3.327
Pot Cap-1 Maneuver	-	-	920	-	~ 198	531
Stage 1	-	-	-	-	574	-
Stage 2	-	-	-	-	509	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	920	-	~ 167	531
Mov Cap-2 Maneuver	-	-	-	-	~ 167	-
Stage 1	-	-	-	-	574	-
Stage 2	-	-	-	-	430	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.8	$ 333.4
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	167	531	-	-	920	-
HCM Lane V/C Ratio	1.861	0.225	-	-	0.116	-
HCM Control Delay (s)	$ 456.3	13.7	-	-	9.4	0
HCM Lane LOS	F	B	-	-	A	A
HCM 95th %tile Q(veh)	23	0.9	-	-	0.4	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

2035 Plus Project PM Peak Hour
3: Buttonwillow Ave & Dinuba Ave

Intersection	
Intersection Delay, s/veh	43.9
Intersection LOS	E

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	813	698	380	489
Demand Flow Rate, veh/h	838	719	391	504
Vehicles Circulating, veh/h	299	699	937	598
Vehicles Exiting, veh/h	803	629	200	820
Follow-Up Headway, s	2.900	2.900	2.900	2.900
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	29.6	86.7	27.5	19.5
Approach LOS	D	F	D	C

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	4.700	4.700	4.700	4.700
Entry Flow, veh/h	838	719	391	504
Cap Entry Lane, veh/h	948	660	533	724
Entry HV Adj Factor	0.970	0.971	0.971	0.971
Flow Entry, veh/h	813	698	380	489
Cap Entry, veh/h	920	641	517	702
V/C Ratio	0.884	1.089	0.734	0.697
Control Delay, s/veh	29.6	86.7	27.5	19.5
LOS	D	F	D	C
95th %tile Queue, veh	12	20	6	6

2035 Plus Project PM Peak Hour
4: Dinuba Ave & I Street

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	65	441	22	161	475	383	4	44	97
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3
Mvmt Flow	71	479	24	175	516	416	4	48	105

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	933	0	0	503	0	0	1275	1916	252
Stage 1	-	-	-	-	-	-	633	633	-
Stage 2	-	-	-	-	-	-	642	1283	-
Critical Hdwy	4.16	-	-	4.16	-	-	7.56	6.56	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-	6.56	5.56	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.56	5.56	-
Follow-up Hdwy	2.23	-	-	2.23	-	-	3.53	4.03	3.33
Pot Cap-1 Maneuver	723	-	-	1051	-	-	123	66	745
Stage 1	-	-	-	-	-	-	432	469	-
Stage 2	-	-	-	-	-	-	427	232	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	723	-	-	1051	-	-	-	~ 35	745
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	~ 35	-
Stage 1	-	-	-	-	-	-	373	405	-
Stage 2	-	-	-	-	-	-	161	143	-

Approach	EB	WB	NB
HCM Control Delay, s	1.8	1.9	
HCM LOS			-

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	745	723	-	-	1051	-	-	-	541
HCM Lane V/C Ratio	-	0.142	0.098	-	-	0.167	-	-	-	0.022
HCM Control Delay (s)	-	10.6	10.5	0.6	-	9.1	1	-	-	11.8
HCM Lane LOS	-	B	B	A	-	A	A	-	-	B
HCM 95th %tile Q(veh)	-	0.5	0.3	-	-	0.6	-	-	-	0.1

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

2035 Plus Project PM Peak Hour
4: Dinuba Ave & I Street

Intersection	
Int Delay, s/veh	

Movement	SBL	SBT	SBR
Vol, veh/h	240	62	11
Conflicting Peds, #/hr	0	0	0
Sign Control	Stop	Stop	Stop
RT Channelized	-	-	None
Storage Length	-	-	0
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	92	92	92
Heavy Vehicles, %	3	3	3
Mvmt Flow	261	67	12

Major/Minor	Minor2		
Conflicting Flow All	1479	1719	466
Stage 1	1074	1074	-
Stage 2	405	645	-
Critical Hdwy	7.56	6.56	6.96
Critical Hdwy Stg 1	6.56	5.56	-
Critical Hdwy Stg 2	6.56	5.56	-
Follow-up Hdwy	3.53	4.03	3.33
Pot Cap-1 Maneuver	~ 87	88	541
Stage 1	~ 233	292	-
Stage 2	591	463	-
Platoon blocked, %			
Mov Cap-1 Maneuver	-	~ 47	541
Mov Cap-2 Maneuver	-	~ 47	-
Stage 1	~ 201	180	-
Stage 2	386	400	-

Approach	SB
HCM Control Delay, s	
HCM LOS	-

Minor Lane/Major Mvmt

Intersection	
Intersection Delay, s/veh	46.3
Intersection LOS	E

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	4	207	24	0	264	219	3	0	27	234	261
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	4	225	26	0	287	238	3	0	29	254	284
Number of Lanes	0	0	1	0	0	0	1	1	0	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	2	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	1	2
HCM Control Delay	29.9	75.4	26.5
HCM LOS	D	F	D

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	10%	0%	2%	55%	0%	20%
Vol Thru, %	90%	0%	88%	45%	0%	79%
Vol Right, %	0%	100%	10%	0%	100%	1%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	261	261	235	483	3	308
LT Vol	234	0	207	219	0	244
Through Vol	0	261	24	0	3	2
RT Vol	27	0	4	264	0	62
Lane Flow Rate	284	284	255	525	3	335
Geometry Grp	7	7	6	7	7	6
Degree of Util (X)	0.692	0.633	0.671	1	0.007	0.849
Departure Headway (Hd)	8.783	8.03	9.461	9.007	7.996	9.127
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	411	448	381	404	446	398
Service Time	6.547	5.794	7.537	6.792	5.78	7.186
HCM Lane V/C Ratio	0.691	0.634	0.669	1.3	0.007	0.842
HCM Control Delay	29.2	23.7	29.9	75.8	10.8	46.5
HCM Lane LOS	D	C	D	F	B	E
HCM 95th-tile Q	5.1	4.3	4.7	12.2	0	8.1

2035 Plus Project PM Peak Hour
5: Frankwood Ave & Dinuba Ave

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	62	244	2
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	3
Mvmt Flow	0	67	265	2
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	46.5
HCM LOS	E

Lane

2035 Plus Project PM Peak Hour
6: Frankwood Ave & I Street

Intersection	
Int Delay, s/veh	8.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	317	302	0	493	240	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	345	328	0	536	261	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	673	0	777	336
Stage 1	-	-	-	-	509	-
Stage 2	-	-	-	-	268	-
Critical Hdwy	-	-	4.16	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	-	-	2.23	-	3.53	3.33
Pot Cap-1 Maneuver	-	-	907	-	332	657
Stage 1	-	-	-	-	566	-
Stage 2	-	-	-	-	750	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	907	-	332	657
Mov Cap-2 Maneuver	-	-	-	-	332	-
Stage 1	-	-	-	-	566	-
Stage 2	-	-	-	-	750	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	46.1
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	332	-	-	907	-
HCM Lane V/C Ratio	0.786	-	-	-	-
HCM Control Delay (s)	46.1	-	-	0	-
HCM Lane LOS	E	-	-	A	-
HCM 95th %tile Q(veh)	6.4	-	-	0	-

APPENDIX L

MITIGATED 2035 PLUS PROJECT CONDITIONS LOS CALCULATIONS

Mitigated 2035 Plus Approved Projects Plus Project AM Peak Hour - Roundabout Alternative 2: Project Driveway & Dinuba Ave

Intersection	
Intersection Delay, s/veh	8.5
Intersection LOS	A

Approach	EB	WB	NB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	514	540	185
Demand Flow Rate, veh/h	529	556	190
Vehicles Circulating, veh/h	81	149	383
Vehicles Exiting, veh/h	624	424	227
Follow-Up Headway, s	2.900	2.900	2.900
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	8.2	9.5	6.4
Approach LOS	A	A	A

Lane	Left	Left	Left
Designated Moves	TR	LT	LR
Assumed Moves	TR	LT	LR
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	4.700	4.700	4.700
Entry Flow, veh/h	529	556	190
Cap Entry Lane, veh/h	1154	1085	878
Entry HV Adj Factor	0.971	0.972	0.974
Flow Entry, veh/h	514	540	185
Cap Entry, veh/h	1121	1054	855
V/C Ratio	0.458	0.512	0.216
Control Delay, s/veh	8.2	9.5	6.4
LOS	A	A	A
95th %tile Queue, veh	2	3	1

Mitigated 2035 Plus Approved Projects Plus Project AM Peak Hour - Signal Alternative 2: Project Driveway & Dinuba Ave

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	342	131	73	424	133	37
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1748	1800	1748	1748	1748	1800
Adj Flow Rate, veh/h	372	142	79	461	145	40
Adj No. of Lanes	1	0	1	1	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	0	0
Cap, veh/h	513	196	97	1061	186	51
Arrive On Green	0.43	0.43	0.06	0.61	0.15	0.15
Sat Flow, veh/h	1206	460	1664	1748	1265	349
Grp Volume(v), veh/h	0	514	79	461	186	0
Grp Sat Flow(s),veh/h/ln	0	1666	1664	1748	1623	0
Q Serve(g_s), s	0.0	10.2	1.9	5.6	4.4	0.0
Cycle Q Clear(g_c), s	0.0	10.2	1.9	5.6	4.4	0.0
Prop In Lane		0.28	1.00		0.78	0.22
Lane Grp Cap(c), veh/h	0	709	97	1061	238	0
V/C Ratio(X)	0.00	0.73	0.81	0.43	0.78	0.00
Avail Cap(c_a), veh/h	0	1051	255	1585	575	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	9.5	18.5	4.2	16.4	0.0
Incr Delay (d2), s/veh	0.0	1.4	14.6	0.3	5.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.0	4.9	1.2	2.6	2.3	0.0
LnGrp Delay(d),s/veh	0.0	10.9	33.1	4.5	21.9	0.0
LnGrp LOS		B	C	A	C	
Approach Vol, veh/h	514			540	186	
Approach Delay, s/veh	10.9			8.7	21.9	
Approach LOS	B			A	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		10.7	7.2	21.8				29.1
Change Period (Y+Rc), s		4.9	4.9	4.9				4.9
Max Green Setting (Gmax), s		14.1	6.1	25.1				36.1
Max Q Clear Time (g_c+I1), s		6.4	3.9	12.2				7.6
Green Ext Time (p_c), s		0.3	0.0	4.7				6.4

Intersection Summary	
HCM 2010 Ctrl Delay	11.6
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Mitigated 2035 Plus Approved Projects Plus Project AM Peak Hour - Signal Alternative 3: Buttonwillow Ave & Dinuba Ave

Intersection	
Intersection Delay, s/veh	7.7
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	2	2	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	600	613	244	566
Demand Flow Rate, veh/h	617	631	252	583
Vehicles Circulating, veh/h	342	410	705	583
Vehicles Exiting, veh/h	824	547	254	458
Follow-Up Headway, s	2.900	2.900	2.900	2.900
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	7.1	7.7	6.7	8.7
Approach LOS	A	A	A	A

Lane	Left	Right	Left	Right	Left	Right	Left	Right
Designated Moves	LT	TR	LT	TR	LT	TR	LT	TR
Assumed Moves	LT	TR	LT	TR	LT	TR	LT	TR
RT Channelized								
Lane Util	0.470	0.530	0.471	0.529	0.468	0.532	0.470	0.530
Critical Headway, s	3.800	4.113	3.800	4.113	3.800	4.113	3.800	4.113
Entry Flow, veh/h	290	327	297	334	118	134	274	309
Cap Entry Lane, veh/h	993	964	950	917	783	737	848	807
Entry HV Adj Factor	0.972	0.972	0.970	0.972	0.973	0.966	0.970	0.970
Flow Entry, veh/h	282	318	288	325	115	129	266	300
Cap Entry, veh/h	965	937	921	891	762	712	823	783
V/C Ratio	0.292	0.339	0.313	0.364	0.151	0.182	0.323	0.383
Control Delay, s/veh	6.7	7.5	7.2	8.2	6.3	7.1	8.1	9.3
LOS	A	A	A	A	A	A	A	A
95th %tile Queue, veh	1	2	1	2	1	1	1	2

Mitigated 2035 Plus Approved Projects Plus Project AM Peak Hour - Signal Alternative 4: Dinuba Ave & I Street

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	0	694	12	0	415	204	0	0	149	0	0	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	150	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	754	13	0	451	222	0	0	162	0	0	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	451	0	0	767	0	0	987	1212	384	828	1218	226
Stage 1	-	-	-	-	-	-	761	761	-	451	451	-
Stage 2	-	-	-	-	-	-	226	451	-	377	767	-
Critical Hdwy	4.16	-	-	4.16	-	-	7.56	6.56	6.96	7.56	6.56	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-	6.56	5.56	-	6.56	5.56	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.56	5.56	-	6.56	5.56	-
Follow-up Hdwy	2.23	-	-	2.23	-	-	3.53	4.03	3.33	3.53	4.03	3.33
Pot Cap-1 Maneuver	1099	-	-	836	-	-	200	179	611	262	178	774
Stage 1	-	-	-	-	-	-	362	410	-	555	567	-
Stage 2	-	-	-	-	-	-	753	567	-	614	407	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1099	-	-	836	-	-	197	179	611	193	178	774
Mov Cap-2 Maneuver	-	-	-	-	-	-	197	179	-	193	178	-
Stage 1	-	-	-	-	-	-	362	410	-	555	567	-
Stage 2	-	-	-	-	-	-	741	567	-	451	407	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	13	9.7
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	611	1099	-	-	836	-	-	774
HCM Lane V/C Ratio	0.265	-	-	-	-	-	-	0.015
HCM Control Delay (s)	13	0	-	-	0	-	-	9.7
HCM Lane LOS	B	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	1.1	0	-	-	0	-	-	0

Mitigated 2035 Plus Approved Projects Plus Project AM Peak Hour - Signal Alternative 5: Frankwood Ave & Dinuba Ave

Intersection	
Intersection Delay, s/veh	8.9
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	2	2	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	267	461	659	625
Demand Flow Rate, veh/h	276	475	679	644
Vehicles Circulating, veh/h	900	522	634	534
Vehicles Exiting, veh/h	278	791	542	463
Follow-Up Headway, s	2.900	2.900	2.900	2.900
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	8.2	7.4	10.3	9.0
Approach LOS	A	A	B	A

Lane	Left	Right	Left	Right	Left	Right	Left	Right
Designated Moves	LT	TR	LT	TR	LT	TR	LT	TR
Assumed Moves	LT	TR	L	TR	LT	TR	L	TR
RT Channelized								
Lane Util	0.471	0.529	0.594	0.406	0.470	0.530	0.596	0.404
Critical Headway, s	3.800	4.113	3.800	4.113	3.800	4.113	3.800	4.113
Entry Flow, veh/h	130	146	282	193	319	360	384	260
Cap Entry Lane, veh/h	690	638	883	844	821	777	876	836
Entry HV Adj Factor	0.967	0.971	0.972	0.971	0.971	0.971	0.971	0.970
Flow Entry, veh/h	126	142	274	187	310	349	373	252
Cap Entry, veh/h	667	619	858	820	797	754	851	811
V/C Ratio	0.188	0.229	0.319	0.229	0.389	0.464	0.438	0.311
Control Delay, s/veh	7.6	8.7	7.8	6.8	9.3	11.2	9.7	8.0
LOS	A	A	A	A	A	B	A	A
95th %tile Queue, veh	1	1	1	1	2	2	2	1

Mitigated 2035 Plus Approved Projects Plus Project AM Peak Hour - Signal Alternative 6: Frankwood Ave & I Street

Intersection	
Int Delay, s/veh	2.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	206	401	0	29	554
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	224	436	0	32	602

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1101	218	0	0	436	0
Stage 1	436	-	-	-	-	-
Stage 2	665	-	-	-	-	-
Critical Hdwy	6.645	6.945	-	-	4.16	-
Critical Hdwy Stg 1	5.845	-	-	-	-	-
Critical Hdwy Stg 2	5.445	-	-	-	-	-
Follow-up Hdwy	3.5285	3.3285	-	-	2.23	-
Pot Cap-1 Maneuver	219	784	-	-	1113	-
Stage 1	618	-	-	-	-	-
Stage 2	508	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	213	784	-	-	1113	-
Mov Cap-2 Maneuver	213	-	-	-	-	-
Stage 1	618	-	-	-	-	-
Stage 2	493	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.4	0	0.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	784	1113	-
HCM Lane V/C Ratio	-	-	0.286	0.028	-
HCM Control Delay (s)	-	-	11.4	8.3	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	1.2	0.1	-

Mitigated 2035 Plus Approved Projects Plus Project PM Peak Hour - Roundabout Alternative
2: Project Driveway & Dinuba Ave

Intersection	
Intersection Delay, s/veh	11.9
Intersection LOS	B

Approach	EB	WB	NB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	633	559	402
Demand Flow Rate, veh/h	652	576	414
Vehicles Circulating, veh/h	110	320	484
Vehicles Exiting, veh/h	786	578	278
Follow-Up Headway, s	2.900	2.900	2.900
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	10.7	13.3	12.0
Approach LOS	B	B	B

Lane	Left	Left	Left
Designated Moves	TR	LT	LR
Assumed Moves	TR	LT	LR
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	4.700	4.700	4.700
Entry Flow, veh/h	652	576	414
Cap Entry Lane, veh/h	1124	930	802
Entry HV Adj Factor	0.971	0.971	0.971
Flow Entry, veh/h	633	559	402
Cap Entry, veh/h	1091	903	779
V/C Ratio	0.580	0.619	0.516
Control Delay, s/veh	10.7	13.3	12.0
LOS	B	B	B
95th %tile Queue, veh	4	4	3

Mitigated 2035 Plus Approved Projects Plus Project PM Peak Hour - Signal Alternative 2: Project Driveway & Dinuba Ave

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	432	150	98	416	286	84
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1748	1800	1748	1748	1748	1800
Adj Flow Rate, veh/h	470	163	107	452	311	91
Adj No. of Lanes	1	0	1	1	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	0	0
Cap, veh/h	488	169	134	974	345	101
Arrive On Green	0.39	0.39	0.08	0.56	0.28	0.28
Sat Flow, veh/h	1241	430	1664	1748	1251	366
Grp Volume(v), veh/h	0	633	107	452	403	0
Grp Sat Flow(s),veh/h/ln	0	1672	1664	1748	1620	0
Q Serve(g_s), s	0.0	21.7	3.7	9.1	14.1	0.0
Cycle Q Clear(g_c), s	0.0	21.7	3.7	9.1	14.1	0.0
Prop In Lane		0.26	1.00		0.77	0.23
Lane Grp Cap(c), veh/h	0	658	134	974	447	0
V/C Ratio(X)	0.00	0.96	0.80	0.46	0.90	0.00
Avail Cap(c_a), veh/h	0	658	147	988	469	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	17.4	26.5	7.8	20.5	0.0
Incr Delay (d2), s/veh	0.0	26.0	24.3	0.3	19.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.0	14.6	2.6	4.4	8.7	0.0
LnGrp Delay(d),s/veh	0.0	43.4	50.8	8.1	40.3	0.0
LnGrp LOS		D	D	A	D	
Approach Vol, veh/h	633			559	403	
Approach Delay, s/veh	43.4			16.3	40.3	
Approach LOS	D			B	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		21.1	9.6	28.0				37.6
Change Period (Y+Rc), s		4.9	4.9	4.9				4.9
Max Green Setting (Gmax), s		17.0	5.2	23.1				33.2
Max Q Clear Time (g_c+I1), s		16.1	5.7	23.7				11.1
Green Ext Time (p_c), s		0.2	0.0	0.0				6.9

Intersection Summary	
HCM 2010 Ctrl Delay	33.1
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Mitigated 2035 Plus Approved Projects Plus Project PM Peak Hour - Signal Alternative 3: Buttonwillow Ave & Dinuba Ave

Intersection	
Intersection Delay, s/veh	9.5
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	2	2	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	813	698	380	489
Demand Flow Rate, veh/h	838	719	391	504
Vehicles Circulating, veh/h	299	699	937	598
Vehicles Exiting, veh/h	803	629	200	820
Follow-Up Headway, s	2.900	2.900	2.900	2.900
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	8.4	11.6	9.8	8.1
Approach LOS	A	B	A	A

Lane	Left	Right	Left	Right	Left	Right	Left	Right
Designated Moves	LT	TR	LT	TR	LT	TR	LT	TR
Assumed Moves	LT	TR	LT	TR	LT	TR	LT	TR
RT Channelized								
Lane Util	0.470	0.530	0.470	0.530	0.471	0.529	0.470	0.530
Critical Headway, s	3.800	4.113	3.800	4.113	3.800	4.113	3.800	4.113
Entry Flow, veh/h	394	444	338	381	184	207	237	267
Cap Entry Lane, veh/h	1021	995	787	740	673	621	840	798
Entry HV Adj Factor	0.970	0.971	0.971	0.971	0.970	0.972	0.970	0.971
Flow Entry, veh/h	382	431	328	370	178	201	230	259
Cap Entry, veh/h	991	966	764	719	653	603	815	775
V/C Ratio	0.386	0.446	0.430	0.515	0.273	0.333	0.282	0.335
Control Delay, s/veh	7.8	8.9	10.4	12.8	8.9	10.6	7.6	8.6
LOS	A	A	B	B	A	B	A	A
95th %tile Queue, veh	2	2	2	3	1	1	1	1

Mitigated 2035 Plus Approved Projects Plus Project PM Peak Hour - Signal Alternative 4: Dinuba Ave & I Street

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	0	681	22	0	636	383	0	0	97	0	0	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	150	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	740	24	0	691	416	0	0	105	0	0	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	691	0	0	764	0	0	1098	1443	382	1061	1455	346
Stage 1	-	-	-	-	-	-	752	752	-	691	691	-
Stage 2	-	-	-	-	-	-	346	691	-	370	764	-
Critical Hdwy	4.16	-	-	4.16	-	-	7.56	6.56	6.96	7.56	6.56	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-	6.56	5.56	-	6.56	5.56	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.56	5.56	-	6.56	5.56	-
Follow-up Hdwy	2.23	-	-	2.23	-	-	3.53	4.03	3.33	3.53	4.03	3.33
Pot Cap-1 Maneuver	893	-	-	838	-	-	166	130	613	177	128	647
Stage 1	-	-	-	-	-	-	366	414	-	399	441	-
Stage 2	-	-	-	-	-	-	640	441	-	620	408	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	893	-	-	838	-	-	163	130	613	147	128	647
Mov Cap-2 Maneuver	-	-	-	-	-	-	163	130	-	147	128	-
Stage 1	-	-	-	-	-	-	366	414	-	399	441	-
Stage 2	-	-	-	-	-	-	628	441	-	513	408	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	12.1	10.7
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	613	893	-	-	838	-	-	647
HCM Lane V/C Ratio	0.172	-	-	-	-	-	-	0.018
HCM Control Delay (s)	12.1	0	-	-	0	-	-	10.7
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.6	0	-	-	0	-	-	0.1

Mitigated 2035 Plus Approved Projects Plus Project PM Peak Hour - Signal Alternative 5: Frankwood Ave & Dinuba Ave

Intersection	
Intersection Delay, s/veh	10.1
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	2	2	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	255	699	620	663
Demand Flow Rate, veh/h	263	720	639	683
Vehicles Circulating, veh/h	1157	423	574	752
Vehicles Exiting, veh/h	278	790	846	391
Follow-Up Headway, s	2.900	2.900	2.900	2.900
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	10.0	9.2	9.2	11.8
Approach LOS	B	A	A	B

Lane	Left	Right	Left	Right	Left	Right	Left	Right
Designated Moves	LT	TR	LT	TR	LT	TR	LT	TR
Assumed Moves	LT	TR	L	TR	LT	TR	LT	TR
RT Channelized								
Lane Util	0.471	0.529	0.661	0.339	0.469	0.531	0.470	0.530
Critical Headway, s	3.800	4.113	3.800	4.113	3.800	4.113	3.800	4.113
Entry Flow, veh/h	124	139	476	244	300	339	321	362
Cap Entry Lane, veh/h	583	527	942	908	853	812	760	712
Entry HV Adj Factor	0.968	0.974	0.971	0.971	0.971	0.969	0.971	0.971
Flow Entry, veh/h	120	135	462	237	291	329	312	351
Cap Entry, veh/h	565	514	914	882	829	787	738	691
V/C Ratio	0.213	0.264	0.505	0.269	0.352	0.418	0.422	0.509
Control Delay, s/veh	9.2	10.8	10.4	6.9	8.4	9.9	10.5	13.0
LOS	A	B	B	A	A	A	B	B
95th %tile Queue, veh	1	1	3	1	2	2	2	3

Mitigated 2035 Plus Approved Projects Plus Project PM Peak Hour - Signal Alternative 6: Frankwood Ave & I Street

Intersection	
Int Delay, s/veh	4.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	384	349	0	31	588
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	417	379	0	34	639

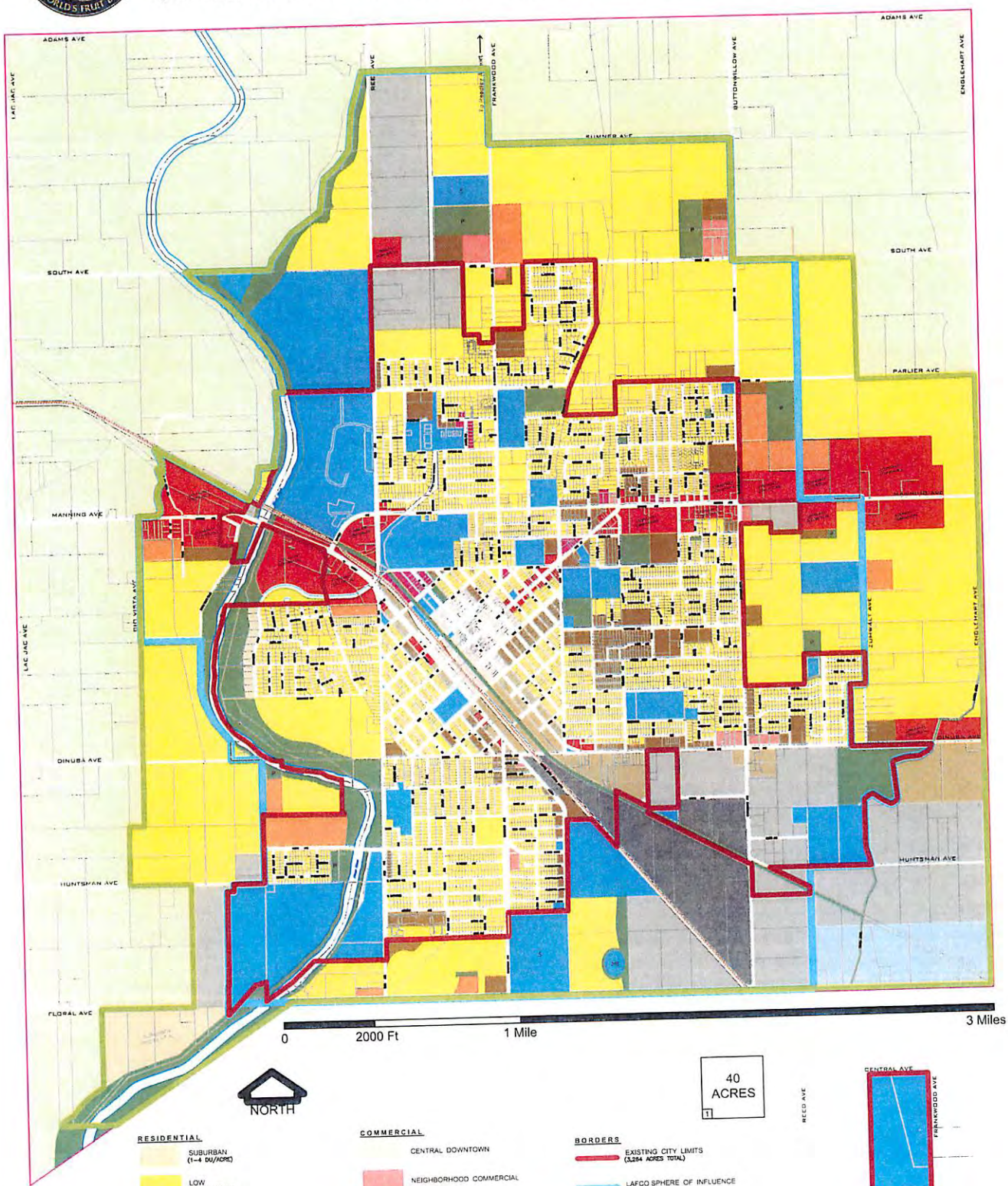
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1086	190	0	0	379	0
Stage 1	379	-	-	-	-	-
Stage 2	707	-	-	-	-	-
Critical Hdwy	6.645	6.945	-	-	4.16	-
Critical Hdwy Stg 1	5.845	-	-	-	-	-
Critical Hdwy Stg 2	5.445	-	-	-	-	-
Follow-up Hdwy	3.5285	3.3285	-	-	2.23	-
Pot Cap-1 Maneuver	223	817	-	-	1169	-
Stage 1	660	-	-	-	-	-
Stage 2	485	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	217	817	-	-	1169	-
Mov Cap-2 Maneuver	217	-	-	-	-	-
Stage 1	660	-	-	-	-	-
Stage 2	471	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.9	0	0.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	817	1169	-
HCM Lane V/C Ratio	-	-	0.511	0.029	-
HCM Control Delay (s)	-	-	13.9	8.2	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	3	0.1	-

CITY OF REEDLEY
GENERAL PLAN LAND USE MAP

(AS ADOPTED BY CITY COUNCIL RESOLUTION NO. 2014-018, DATED FEBRUARY 25, 2014)



RESIDENTIAL
- SUBURBAN (1–4 DU/ACRE)
- LOW (4–8 DU/ACRE)
- MEDIUM (8–13 DU/ACRE)
- HIGH (15–29 DU/ACRE)

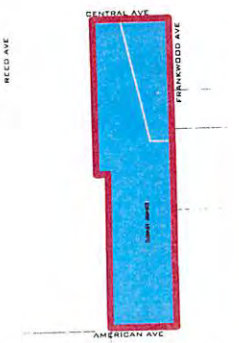
OTHER
- OPEN SPACE
- PUBLIC / INSTITUTIONAL FACILITY
- REMAINDER OF STUDY AREA
- COMMUNITY BUFFER

COMMERCIAL
- CENTRAL DOWNTOWN
- NEIGHBORHOOD COMMERCIAL
- COMMUNITY COMMERCIAL
- OFFICE
- SERVICE COMMERCIAL

INDUSTRIAL
- LIGHT INDUSTRIAL
- HEAVY INDUSTRIAL

BORDERS
- EXISTING CITY LIMITS (3,284 ACRES TOTAL)
- LAFCO SPHERE OF INFLUENCE (5,053 ACRES TOTAL)
- APPROVED SPHERE OF INFLUENCE (7,087 ACRES TOTAL)
- GEN PLAN STUDY AREA (10,620 ACRES TOTAL)

MISC
- P — PROPOSED FACILITY / PARK
- S — PROPOSED SCHOOL
- PB — PROPOSED PONDING BASIN



Reedley Airport: Approximately 15,400 Ft. (2.9 Miles) North from the intersection of Frankwood and South Avenue's.

Last Updated: 2-28-14 KP

Mitigation Monitoring And Reporting Program

For

Final Environmental Impact Report (State Clearinghouse No. 2010031106)

&

Reedley General Plan 2030 Update

February 18, 2014

City of Reedley
Community Development Department
1733 Ninth Street, City Hall
Reedley, California 93654
(559) 637-4200

MITIGATION MONITORING AND REPORTING PROGRAM

The following Mitigation Monitoring and Reporting Program (MMRP) for the Reedley General Plan 2030 Update (GPU) project has been prepared pursuant to CEQA Guidelines, Section 15097 and Public Resources Code, Section 21081.6. This MMRP lists applicable mitigation measures from the Final Environmental Impact Report for the project. The appropriate timing of implementation and responsible party are identified to ensure proper enforcement of the mitigation measures from the EIR to reduce project impacts to less than significant levels.

Because the Environmental Impact Report (EIR) is programmatic in nature (CEQA Guidelines, Section 15168), the goals and policies contained in the proposed GPU serve as the primary means of avoiding or reducing impacts identified for each environmental topic evaluated. Once the proposed GPU is adopted by the City, all future development projects must be substantially consistent with the proposed GPU and its policies. Consequently, the City's implementation of the GPU policies would serve as a mitigation tool for avoiding or reducing project-specific and cumulative environmental effects of resulting from buildout of the City pursuant to the GPU. Implementation of many of the proposed policies would serve to avoid or significantly reduce and lessen the environmental effects of new development. See Draft Program EIR, Table S-1, Significant Impacts and Mitigation Measure Summary (Pg. S-3) and Recirculated Draft Program EIR, Table S-1, Significant Impacts and Mitigation Measure Summary (Page S-5).

This programmatic level EIR references GPU policy implementation as the primary tool by which potential environmental impacts of buildout of the SOI will be avoided or reduced. The GPU policies were applies to a level of less than significant level and are not explicitly identified as mitigation measures within this MMRP.

Where proposed GPU goals and policies may not serve to reduce a significant impact to a less than significant level, mitigation measures are proposed for that purpose. Where the GPU policies may not serve to adequately mitigate significant impacts to a less than significant level, mitigation measures are identified. The City may rely on General Plan policies to mitigate environmental impacts under CEQA (See Napa Citizens for Honest Gov't v. Napa County Board of Supervisors (2001) 91 Cal.App 4th). Therefore, these mitigation measures were designed as an enforceable commitment and not merely adopted to be disregarded. The Mitigation Measures themselves are designed to fill "gaps" that may exist between the level of impact avoidance or reduction provided by implementation of GPU goals and policies, and the level of impact avoidance or reduction needed to mitigate significant impacts to a less than significant level. In this case, both GPU policies and additional mitigation measures were included in the reporting program.

The following MMRP identifies the entity responsible for verifying that the mitigation measures for the project are performed. The City of Reedley, as lead agency, will also be responsible for providing a date that each mitigation measure is verified as completed. The MMRP provides a comment/verification date column for the responsible entity to provide notes and remarks and provide a date the measure was completed. The timing of implementing the mitigation measures in the MMRP is identified in each measure.

The performance of the mitigation measures is the responsibility of the project applicant. The project applicant is responsible to provide evidence to the City of Reedley that the mitigation measures are performed and completed. The City of Reedley, as lead agency, will be responsible for ensuring that implementation of all mitigation measures occurs in accordance with this program.

Impact	Mitigation Measure	Timing of Implementation	Responsible Agency/Department	Comment/Verification Date
2.2 Agricultural Resources				
Impact AG-1: Conversion of approximately 2,983 acres of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use.	Land Use Policies:			
	LU 2.5.1: In areas outside the city limits, the City shall encourage Fresno County to: a) Maintain an exclusive agricultural zone district. b) Maintain a minimum permitted lot size for agricultural land which ensures that the land can be used for commercial agricultural purposes.	LU 2.5.1: Ongoing	City of Reedley, County of Fresno & Local Area Formation Commission	
	LU 2.5.2: New development will only be approved in sequential fashion contiguous to existing development to ensure orderly extension of municipal services and unnecessary conversion of agricultural lands. Development standards shall incorporate measures to preserve and protect agricultural land as set forth in Policies LU 2.5.1 through LU 2.5.18 and COSP 4.3.1 through 4.3.4.	LU 2.5.2: Ongoing	City of Reedley, County of Fresno & Local Area Formation Commission	
	LU 2.5.3: The City shall oppose formation of new land conservation contracts on land adjacent to the City's boundaries. The City shall also work with owners of land within the SOI who wish to file for non-renewal of Williamson Act contracts in advance of urban development.	LU 2.5.3: Ongoing	City of Reedley	
	LU 2.5.4: Within one year of the adoption of the GPU, the City shall adopt a right-to-farm ordinance which will require purchasers of residential, industrial and/or commercial properties within close proximity to existing agricultural uses to acknowledge that their land borders, or is in close proximity to, agricultural land and will endure the potential impacts of that interface. The goal of this proposed ordinance is to promote and protect existing agriculture operations, allowing farmers/ ranchers to conduct operations when urban land	LU 2.5.4: Within one year of the adoption of the GPU.	City of Reedley, County of Fresno & Local Area Formation Commission	

	uses extend into natural resource areas or are side-by-side, and, address the subject of frequent nuisance complaints. This Ordinance shall be implemented through a right-to-farm covenant to be recorded against the dominant and subordinate properties.		
	LU 2.5.5: The City shall discourage the development of peninsulas of urban development into agricultural lands.	LU 2.5.5: Ongoing	City of Reedley
	LU 2.5.6: In cooperation with Fresno County, Fresno Local Agency Formation Commission (LAFCO), community and agricultural industry stakeholders, the City shall adopt and maintain a SOI consistent with the goals and policies of this GPU. The sphere of influence shall serve the mutual interest of the County and City by preserving agricultural uses from incompatible or unplanned urban uses.	LU 2.5.6: Ongoing	City of Reedley, County of Fresno & Local Area Formation Commission
	LU 2.5.7: Require contiguous development within the SOI unless it can be demonstrated that the development of contiguous property is infeasible. An analysis of the fiscal impacts on public utilities including water, surface transportation, and service shall be required as part of the application to annex new territory into the City.	LU 2.5.7: Ongoing	City of Reedley, County of Fresno & Local Area Formation Commission
	LU 2.5.8: The City shall not support annexing land for residential development until at least eighty (80%) percent of the existing residentially designated land inside the city limits is developed.	LU 2.5.8: Ongoing	City of Reedley, County of Fresno & Local Area Formation Commission
	LU 2.5.9: Work with Fresno County and Fresno LAFCO to maintain agricultural designations in areas outside the Reedley SOI.	LU 2.5.9: Ongoing	City of Reedley, County of Fresno & Local Area Formation Commission

	LU 2.5.10: Continue to maintain a Memorandum of Understanding (MOU) with Fresno County which clearly sets forth the following: a) The County shall not approve any discretionary development permit for new urban development within the City's SOI unless that development has first been referred to the City. b) That the development is orderly. c) County shall require development standards of the City of Reedley, when development is within the existing SOI. d) The City application for the annexation of any new territory be consistent with the Cortese-Knox Act. e) City initiated annexation shall have development eminent, with at least fifty (50) percent of the proposed area having an approved site plan and/or tentative map.	LU 2.5.10: Ongoing	City of Reedley, County of Fresno
	LU 2.5.11: The Plan should foster the establishment of a concentrated urban development pattern, with land outside the planned urban area being designated exclusively for Agriculture.	LU 2.5.11: Ongoing	City of Reedley
	LU 2.5.12: New urban development should occur in an orderly manner with initial development occurring on the available undeveloped properties within the City's limits which would be considered in-fill, by-passed parcels or in parcels in close proximity to the urban core, places of employment and established neighborhoods.	LU 2.5.12: Ongoing	City of Reedley

LU 2.5.13: The City should promote and provide urban services to development within the City as a means of controlling and directing growth.	LU 2.5.13: Ongoing	City of Reedley
LU 2.5.14: Initial development shall incorporate the necessary infrastructure to accommodate future development for the surrounding area consistent with the goals and objectives of the GPU. Reimbursement agreements or other mechanisms may be provided to the developer as a means to share the equitable burden of costs.	LU 2.5.14: Ongoing	City of Reedley
LU 2.5.15: Provide transitional design between land use types and high quality urban uses.	LU 2.5.15: Ongoing	City of Reedley
LU 2.5.16: The City shall encourage in-fill projects that incorporate pedestrian-oriented design.	LU 2.5.16: Ongoing	City of Reedley
LU 2.5.17: The City shall propose plan areas and zone districts that can accommodate mixed use planning that will provide a combination of residential, commercial services and employment opportunities all within close proximity.	LU 2.5.17: Ongoing	City of Reedley
LU 2.5.18: From the adoption date of this GPU, the City shall annex a maximum of five hundred (500) acres from within the existing SOI (@1,797-acres). Only when a Farmland Preservation Program is adopted for implementation shall the City propose additional lands for orderly annexation. The Farmland Preservation Program is discussed in great detail in Section 4.3 Agriculture.	LU 2.5.18: From the adoption date of this GPU, the City shall annex a maximum of five hundred (500) acres from within the existing SOI (@1,797-acres).	City of Reedley, County of Fresno & Local Area Formation Commission
<u>Agriculture Policies</u>:		
COSP4.3.1: Support the efforts of the County of Fresno and agricultural and community stakeholders to preserve and protect farmlands outside the centralized core of the City.	COSP4.3.1: Ongoing	City of Reedley

	COSP4.3.2: Maintain a 20-acre minimum parcel size for agriculturally designated parcels to encourage viable agricultural operations and to prevent parcelization into rural residential or ranchette developments.	COSP4.3.2: Ongoing	City of Reedley, County of Fresno
	COSP4.3.3: The City shall prepare and adopt a Farmland Preservation Plan (FPP). This plan shall include a set of policies, standards and measures to avoid the unnecessary conversion of agricultural lands. For each policy, standard or measure, the plan shall include a discussion of the following: (1) How the policy would minimize a potential detrimental effect caused by urban development; (2) Whether and how the policy would assist in avoiding the premature conversion of Prime Farmland, Unique Farmland or Farmland of Statewide Importance; (3) How the policy, standard or measure would be integrated into the entitlement process; and, (4) How the policy, standard or measure would be enforced through the regulatory environment. The FPP shall include the following policies: a) The City shall protect agriculturally designated areas, and direct urban growth away from productive agricultural lands into urbanized or underdeveloped portions of the City. b) The City shall collaborate with the Fresno County Local Area Formation Commission (LAFCo), Fresno County and land owners to encourage minimum parcel sizes of 20 acres or more for land designated for agriculture and/or evidence of commercial agricultural use prior to entering into new Williamson Act contracts.	COSP4.3.3: See LU2.5.18. The City shall prepare and deliver to the City Council an annual report FPP, describing progress made toward the preparation, adoption and implementation of the final FPP.	City of Reedley, County of Fresno & Local Area Formation Commission

c) The City shall not protest the renewal of Williamson Act Contracts with regard to land located within the City's SOI, but not adjacent or in close proximity to the City's current boundary, where the land's minimum parcel size is at least 20 acres and the land owner has provided evidence satisfactory to the City that the land is currently being used for commercial agricultural operations.

d) The City shall support the efforts of public, private, and non-profit organizations to preserve Prime Farmland, Unique Farmland or Farmland of Statewide Importance located in Fresno County through the dedication of conservation easements and the preservation of range land held as environmental mitigation.

e) The City shall encourage the installation of solar and wind energy production facilities in agricultural areas so long as they do not result in a tax burden to Fresno County, do not result in permanent water transfers from productive agricultural land, do not hinder agricultural operations on adjacent land, or do not require cancellation of Williamson Act contracts. In addition, these facilities should include dedications of agricultural land and habitat mitigation, measures to control erosion, and assurances for financing decommissioning activities.

f) The City shall actively collaborate with landowners, cities, state and federal agencies, colleges, universities, stakeholders, and community-based organizations to continue to expand agricultural preservation in the surrounding Fresno County area.

g) The City shall discourage public agencies from locating facilities, especially schools, in existing agricultural areas.

	h) The City shall encourage the voluntary merger of antiquated subdivision lots that conflict with adjacent agricultural uses. The FPP shall include the following implementation measures: a) A provision designating the Community Development Department as the department responsible for the preparation and implementation of the FPP, once adopted and directing the Department to prepare annual reports to the City Council describing progress made toward the preparation, adoption and implementation of the final FPP. b) The creation of a community outreach program to encourage current agricultural land owners' continued participation in programs that preserve farmland, including the Williamson Act, conservation easements, and USDA-funded conservation practices. c) Amend the Reedley Municipal Code within 12 months of adoption of the GPU to provide at least for the following: 1) Amend the zoning ordinance to require a minimum 100-foot buffer between new residential development and existing agricultural operations, and to establish design/maintenance guidelines for developers and property owners. The 100-foot buffer will create an appropriate transitional space between urban and agricultural land uses so as to facilitate continued agricultural operations. 2) Amend Chapter 10-6A, the Residential Estate (RE) District section, which is intended to provide living areas that combine both the urban and rural setting, to add provisions to prevent premature	c) Amend the Reedley Municipal Code within 12 months of adoption of the GPU.	City of Reedley

	conversion of agricultural land, which could cause incompatible land uses and potential conflicts. 3) Amend the subdivision ordinance to facilitate the voluntary merger of antiquated subdivision lots that conflict with adjacent agricultural uses. 4) Amend the zoning ordinance to include provisions requiring that environmental review expressly analyze the potential for a proposed entitlement or permit to create incompatibilities with agricultural uses through traffic generation, groundwater contamination, storm-water drainage disposal and/or the deterioration of air quality. d) The City shall manage extension of public utilities and infrastructure to avoid extending them into agricultural areas before those areas are committed to conversion of urban uses.		
	COSP 4.3.4: In conjunction with the preparation, adoption and implementation of the Farmland Preservation Plan described in Policy COSP 4.3.3, the City shall develop and consider the adoption of a program that shall require new development within the SOI to fund farmland preservation efforts. The goal of this program is to preserve designated Prime Farmland, Unique Farmland, and Farmland of Statewide Importance (together "Farmland") that otherwise runs the risk of being converted to urbanized development. This program shall act as a mitigation program in response to the necessary agricultural land conversion that occurs as a result of the City's expansion into its SOI. The City shall not support the annexation of lands in excess of a total of 500 acres within the City's existing SOI until this program, or a program that accomplishes the same goals, has been adopted and other actions and approvals necessary to the implementation of the program have been completed. Among other	COSP 4.3.4: See LU2.5.18 The City shall not support the annexation of lands in excess of a total of 500 acres within the City's existing SOI until this program, or a program that accomplishes the same goals, has been adopted and other actions and approvals necessary to the implementation of the program have been completed.	City of Reedley, County of Fresno & Local Area Formation Commission

provisions, the program shall include the following evaluation and performance requirements:

a) Program Goal: As Prime Farmland, Unique Farmland, and Farmland of Statewide Importance within the City's SOI is converted to urban uses, secure the permanent preservation of other Prime Farmland, Unique Farmland, and Farmland of Statewide Importance within Fresno County on a 1 for 1 basis.

b) Evaluation Process: To accomplish the program goal, as part of the entitlement application process Farmland proposed for conversion will be evaluated using the Land Evaluation and Site Assessment (LESA) model issued by the California Department of Conservation. The LESA model provides an analytical approach for rating the relative quality of land resources based upon specific factors, such as soils, site acreage, water availability, and surrounding land uses. The LESA model worksheets are provided in Appendix A, Evaluation and Site Assessment (LESA) Model, California Department of Conservation.

c) Fee Program: The City shall develop and adopt a fee program consistent with the requirements of the Mitigation Fee Act that will require applicants seeking to annex Farmland within the City's SOI to pay a fee to the City of Reedley equivalent to the cost of preserving Important Farmland on a 1 to 1 basis with land converted to urban uses. The City shall use the fees to fund an irrevocable instrument (e.g. an easement) to permanently preserve farmlands via a Trust for Farmland Funds Disbursements.

d) Alternative to Payment of Fee: As an alternative to the payment of the fee described in subsection (c), applicant shall provide documentation

	satisfactory to the City that demonstrates that applicant has entered into a binding agreement with one or more property owners or a third-party organization acceptable to the City of Reedley (e.g. the Sequoia Riverlands Trust) to permanently preserve farmland equivalent in acreage to the Farmland proposed for annexation into the City. The agreement shall identify an irrevocable instrument that will be recorded against the preserved property. e) This program will also involve the City maintaining a current list of organizations and owners of Farmland that can facilitate the acquisition of conservation easements so as not to unduly delay the annexation of the land into the City and completion of the proposed development.		
Impact AG-2: Conflict with Existing Zoning or Williamson Act contracts existing on land within the proposed expanded SOI.	<u>Land Use Policies</u>: LU 2.5.1: In areas outside the city limits, the City shall encourage Fresno County to: a) Maintain an exclusive agricultural zone district. b) Maintain a minimum permitted lot size for agricultural land which ensures that the land can be used for commercial agricultural purposes.	LU 2.5.1: Ongoing	City of Reedley, County of Fresno & Local Area Formation Commission
	LU 2.5.2: New development will only be approved in sequential fashion contiguous to existing development to ensure orderly extension of municipal services and unnecessary conversion of agricultural lands. Development standards shall incorporate measures to preserve and protect agricultural land as set forth in Policies LU 2.5.1 through LU 2.5.18 and COSP 4.3.1 through 4.3.4.	LU 2.5.2: Ongoing	City of Reedley, County of Fresno & Local Area Formation Commission
	LU 2.5.4: Within one year of the adoption of the GPU, the City shall adopt a right-to-farm ordinance which will require purchasers of residential, industrial and/or commercial properties within close proximity to existing agricultural uses to	LU 2.5.4: Within one year of the adoption of the GPU.	City of Reedley

	acknowledge that their land borders, or is in close proximity to, agricultural land and will endure the potential impacts of that interface. The goal of this proposed ordinance is to promote and protect existing agriculture operations, allowing farmers/ ranchers to conduct operations when urban land uses extend into natural resource areas or are side-by-side, and, address the subject of frequent nuisance complaints. This Ordinance shall be implemented through a right-to-farm covenant to be recorded against the dominant and subordinate properties.		
	LU 2.5.7: Require contiguous development within the SOI unless it can be demonstrated that the development of contiguous property is infeasible. An analysis of the fiscal impacts on public utilities including water, surface transportation, and service shall be required as part of the application to annex new territory into the City.	LU 2.5.7: Ongoing	City of Reedley, County of Fresno & Local Area Formation Commission
	LU 2.5.8: The City shall not support annexing land for residential development until at least eighty (80%) percent of the existing residentially designated land inside the city limits is developed.	LU 2.5.8: Ongoing	City of Reedley
	LU 2.5.9: Work with Fresno County and Fresno LAFCO to maintain agricultural designations in areas outside the Reedley SOI.	LU 2.5.9: Ongoing	City of Reedley, County of Fresno & Local Area Formation Commission
	LU 2.5.11: The Plan should foster the establishment of a concentrated urban development pattern, with land outside the planned urban area being designated exclusively for Agriculture.	LU 2.5.11: Ongoing	City of Reedley
	LU 2.5.12: New urban development should occur in an orderly manner with initial development occurring on the available undeveloped properties within the City's limits which would be considered	LU 2.5.12: Ongoing	City of Reedley

	in-fill, by-passed parcels or in parcels in close proximity to the urban core, places of employment and established neighborhoods. Agriculture Policies: COSP 4.3.2: Maintain a 20-acre minimum parcel size for agriculturally designated parcels to encourage viable agricultural operations and to prevent parcelization into rural residential or ranchette developments.	COSP 4.3.2: Ongoing	City of Reedley
2.3 Air Quality			
Impact AQ-1: Conflict with air quality management plans for the San Joaquin Valley Air Basin.	The proposed GPU contains a multitude of goals and policies that would directly and indirectly reduce of avoid air emissions. Many goals and policies are modeled on those recommended by the SJVAPCD for reducing air emissions from new development. The goals and policies are found through the Land Use; Circulation; and Conservation, Open Space, Parks and Recreation Elements of the GPU.	Prior to issuance of building permits, during construction and operational activities.	City of Reedley
Impact AQ-2: Cumulatively considerable increase in criteria pollutants (ozone and PM10) for which the air basin is in non-attainment.	See AQ-1	See above	City of Reedley
2.4 Biological Resources			
BIO-1: Substantial adverse effects on special-status species.	COSP4.13C: As feasible, preserve native vegetation and protected wildlife, habitat areas, and vegetation, through avoidance, impact mitigation, and habitat enhancement. COSP4.13.4: As part of the environmental review of new development projects:	COSP4.13C: Ongoing COSP4.13.4: Ongoing as development is	City of Reedley City of Reedley

	(a) Biological studies shall be prepared to assess habitat value when determined appropriate by the Community Development Department. (b) Mitigation shall be applied to assure that degradation of habitat or impacts to sensitive species is reduced or eliminated. (c) Input will be sought from agencies and individuals with expertise in biological resources, including the California Department of Fish and Game, California Water Quality Control Board, U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, and U.S. Environmental Protection Agency. COSP4.13.16: Require preservation of contiguous areas in excess of the 100-year flood plain as merited by special circumstances. Special circumstances may include sensitive wildlife or vegetation, wetland habitat, oak woodland areas, slope or topographical considerations, and recreation opportunities.	proposed. COSP4.13.16 Ongoing as development is proposed.	City of Reedley
BIO-1: Substantial adverse effects on special-status species.	BIO-1: Where review of a proposed project or activity identifies potential impacts on special-status plant species [including but not limited to brittlescale (*Atriplex depressa*), California satintail (*Imperata brevifolia*), Earlimart orache (*Atriplex erecticaulis*), lesser saltscale (*Atriplex minuscula*), recurved larkspur (*Delphinium recurvatum*), San Joaquin adobe sunburst (*Pseudobahia peirsonii*), and/or spiny-sepaled button-celery (*Eryngium spinosepalum*)] due to the presence of suitable habitat, then the City shall require that the special-status species with potential to occur on a project site be evaluated. Focused surveys conducted in accordance with current CDFG and CNPS rare plant survey protocols may be required if suitable habitat is present and would be impacted. If special-status plants occur on a site and could be	Prior to approval of an entitlement application, with oversight during the pre-construction phase of any project.	City of Reedley

	significantly impacted by a proposed project, then appropriate avoidance or mitigation shall be provided in coordination with federal or state regulatory agencies as needed to reduce the impact to a less than significant level.			
BIO-1: Substantial adverse effects on special-status species.	BIO-2: Where review of a proposed project or activity identifies potential impacts on special-status animal species due to the presence of suitable habitat, then the City shall require that the special-status species with potential to occur on a project site be evaluated. Such species include but are not limited to: invertebrates [Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), vernal pool fairy shrimp (*Branchinecta lynchi*), and vernal pool tadpole shrimp (*Lepidurus packardi*)], reptiles and amphibians [California tiger salamander (*Ambystoma californiense*), western pond turtle (*Emys marmorata*), and western spadefoot (*Spea hammondii*)], birds [burrowing owl (*Athene cunicularia*), Swainson's hawk (*Buteo swainsoni*), and western yellow-billed cuckoo (*Coccyzus americanus occidentalis*)], and mammals [pallid bat (*Antrozous pallidus*), San Joaquin kit fox (*Vulpes macrotis mutica*), and western mastiff bat (*Eumops perotis californicus*)]. Focused surveys conducted in accordance with current CDFG and USFWS survey protocols may be required if suitable habitat is present and would be impacted. If special-status animals occur on a site and could be significantly impacted by a proposed project, then appropriate avoidance or mitigation shall be provided in coordination with federal or state regulatory agencies as needed to reduce the impact to a less than significant level.	Prior to approval of an entitlement application, with oversight during the pre-construction phase of any project.	City of Reedley	
BIO-1: Substantial adverse effects on special-status species.	BIO-3. If construction activities are planned to occur with 250 feet of mature trees or shrubs during the nesting bird season (February 1 to August 31), a qualified biologist shall conduct a pre-construction survey for nesting birds to ensure that no nests would be disturbed during project construction. This	Prior to approval of an entitlement application, with oversight during the pre-construction phase of any	City of Reedley	

	survey shall be conducted no more than seven days prior to the initiation of disturbance activities during the early part of the breeding season (February through April) and no more than 30 days prior to the initiation of these activities during the late part of the breeding season (May through August). If no active nests are present within 250 feet of construction, then activities can proceed as scheduled. However, if an active nest is detected during the survey within 250 feet of construction, then the establishment of a protective construction-free buffer zone from each active nest (typically 250 feet for raptors and 50-100 feet for other species) would be required until the juvenile bird(s) have fledged, unless the biologist determines that construction activity would not impact the active nest(s). The buffer zone shall be clearly delineated or fenced to prevent disturbance to nesting birds.	project.	
2.5 Climate Change/Greenhouse Gases			
GHG-1: Generate GHGs that may have a significant impact on the environment or conflict with an applicable plan, policy or regulation adopted to reduce GHG emissions.	COSP4.11.2: The City will establish a Climate Action Plan[2] which will include measures to reduce GHG emissions from municipal, business and community activities by at least 15% by 2020 compared to "business as usual" (including any reductions required by ARB under AB 32) by July 2015.	COSP4.11.2: July 2015	City of Reedley
GHG-1: Generate GHGs that may have a significant impact on the environment or conflict with an applicable plan, policy or regulation adopted to reduce GHG emissions.	GHG-1. Until such time as the City adopts a Climate Action Plan, the City shall review and require all future development projects to be consistent with the GHG emissions impact analysis and mitigation framework developed by the SJVAPCD as part of its Climate Change Action Plan. Future projects which are not exempt from review under the Climate Change Action Plan framework shall demonstrate that GHG emissions reduction measures have been included in the project design to reduce total emissions by 29	The City shall within two years after the adoption of the GPU, adopt a Climate Action Plan.	City of Reedley

	percent or the SJVAPCD emissions reduction threshold in effect at the time environmental review is being conducted for individual projects.		
	2.9 Hydrology and Water Quality		
HYD-2: Substantially deplete groundwater supplies or interfere with groundwater recharge.	Water Service Policies: CIR 3.10.1: The City shall adopt the 2010 Urban Water Management Plan in accordance with California Water Code, Division 6, by January 2014; a) The Plan shall be prepared in accordance with Article 1, Sections 10620-10621. b) The contents of this Plan shall be consistent with Article 2. Contents of Plans, Sections 10630-10634. c) The implementation of the Plan shall be in accordance with Article 3. Adoption and Implementation of Plans, Sections 10640-10645. d) After the adoption of the 2010 Urban Water Management Plan, the City shall prepare and adopt the 2015 Urban Water Management Plan, pursuant to the California Water Code, Division 6. e) Should the Plan expire at any time, pursuant to State Law, the City shall not support the approval of unincorporated territory, General Plan, zone change and/or tentative tract map entitlement applications.	CIR 3.10.1: Completed	City of Reedley
	CIR 3.10.2: The City shall identify capital facilities necessary to maintain service in the City of Reedley as the City expands.	CIR 3.10.2: Annual review by the City Council.	City of Reedley
	CIR 3.10.3: The City Council shall annually review and adopt updates of development impact fees,	CIR 3.10.3: Annual review by City	City of Reedley

	water connection charges, and volume-based monthly service charges to ensure that adequate funds are collected to operate and maintain existing facilities and to construct new facilities for delivery, monitoring, and storage.	council.	
	CIR 3.10.4: The City shall actively support efforts to expand surface water supply and storage that benefits the City. These efforts should include, but not be limited to, coordination with Irrigation Districts for water banking, and WWTP effluent recycling and percolation.	CIR 3.10.4: Ongoing	City of Reedley
	CIR 3.10.5: The City shall require that necessary water supply infrastructure is available prior to constructing new development, and approve development entitlements only when there is assurance of a dependable and adequate water supply that will serve the development.	CIR 3.10.5: At time of entitlement approval and prior to issuance of a building permit.	City of Reedley
	CIR 3.10.6: Any development project which meets the definition of a "water-demand project", pursuant to the CEQA Guidelines, Section 15155, shall be required to prepare a "water assessment" in accordance with Water Code Sections10910 & 10915. The City Council shall formally consider approval of the assessment within the time period required by applicable law and prior to the approval of any development entitlements for the development project.	CIR 3.10.6: Pursuant to proposed project compliance with CEQA Guidelines.	City of Reedley
	CIR 3.10.7: The City shall cooperate with surrounding water management authorities and irrigation districts to develop a comprehensive water management and recharge program which addresses the long-term stabilization of the Kings Basin and the transfer of excess WWTP effluent recycled water for use by the districts for recharge or use by their constituents.	CIR 3.10.7: Ongoing	City of Reedley

	CIR 3.10.8: Through the entitlement process described in the RMC, the City shall require as a condition of approval that new development will be required to install water meters which meet the City's standards.	CIR 3.10.8: Prior to issuance of a building permit.	City of Reedley	
	CIR 3.10.9: The City shall encourage and cooperate with the private sector, as appropriate, to incorporate alternative methods of water reuse into new development, such as reclaimed water from irrigation, landscaping and purple pipe systems.	CIR 3.10.9: Ongoing	City of Reedley	
	CIR 3.10.10A: The City Council shall initiate the preparation and then consider adoption of a performance based Water Conservation Program ("WCP") that addresses water consumption to help ensure an adequate water supply to accommodate the projected growth and development patterns proposed within this GPU. The policies and implementation measures contained in the WCP shall set performance standards for sustainable management of Reedley's water production. The WCP, or a similar program that accomplishes the goals set forth below, shall be adopted and in effect prior to the implementation deadlines set forth in any of the policies set forth below. For each policy, standard and implementation measure identified below for inclusion in the WCP there shall be a discussion of the following: (1) How the policy, standard or implementation measure shall reduce per capita potable water consumption; (2) Whether and how the policy, standard or implementation measure would be integrated into the development entitlement process; and (3) how the policy, standard or implementation measure would be enforced through the regulatory environment.	CIR 3.10.10A: The WCP, or a similar program that accomplishes the goals set forth below, shall be adopted and in effect prior to the implementation deadlines set forth in any of the policies set forth below.	City of Reedley	

	The policies listed below have been assigned a date of anticipated implementation or completion. Those dates were determined by operational necessity and compliance, complexity of task and staffing capacity. GOAL: To reduce per capita potable water consumption by an additional twenty (20) percent by the year 2020. COMPLIANCE MONITORING AND REPORTING: After the adoption of the WCP, the Community Development Department shall provide an annual report to the City Council progress made toward overall implementation of the WCP. The WCP shall include the following policies and implementation measures:		
	a) The WCP shall include a public education component that addresses various topics related to groundwater production, consumption, recharge and recycling. The public education activities listed below will occur annually at various times throughout the year:	a) Ongoing	City of Reedley
	1) The annual water quality report, prepared by the Public Works Department, which includes statistics related to annual water consumption, discharge and containment, shall be presented to the City Council for its consideration of approval. After Council approval, the report shall be submitted to the State Department of Water Resources.	1) Annual review by the City Council.	City of Reedley
	2) The Public Works Department shall prepare an annual report that identifies, at a minimum, the amount of water used to irrigate the open space and the projected amount of groundwater recharge that has occurred. The City shall use industry standards to establish a formula to calculate the	2) Annual review by City Council.	City of Reedley

	balancing of production to groundwater recharge.		
	3) All water quality reports prepared by the Public Works Department that are required by the Regional Water Quality Board shall be presented to the City Council for its consideration of approval.	3) Annual review by City Council.	City of Reedley
	4) The City shall develop publications and other forms of communication to City water customers to inform them regarding the City's efforts to reduce water consumption and ways the customers can assist with achieving the City's goals.	4) Ongoing	City of Reedley
	b) By March 2014, City Council shall consider the adoption of a water utility plan to implement a city-wide public water system through the year 2030. The implementation of this plan will assist the City in identifying locations for future delivery and recharge infrastructure. The Plan will serve as a basis for the development of impact fees necessary for implementation of the plan.	b) March 2014	City of Reedley
	c) Within one (1) year of the adoption of the GPU, the City Council shall complete a thorough review of the City's development impact fee program and shall consider the adoption of a comprehensive update of the various fees included in the program.	c) Within one (1) year of the adoption of the GPU	City of Reedley
	1) This review shall include, but not be limited to, Storm Drainage, Water Distribution, Groundwater Recharge, Water Supply/Holding and Waste Water Collection and Treatment.		
	2) Within each topic area, the review shall include the analysis of existing conditions, proposed new development, need necessitated by future development and proportional cost attributed to land use development.		

	d) Within one (1) year of the adoption of the GPU, the City Council shall consider the amendment of RMC, Section 8-1-12 and other relevant provisions of the RMC related to Water Conservation, to include additional water conservation provisions and implementation measures to assist in implementing the provisions of Senate Bill No. 407 and State Building Code provisions related to water conserving plumbing fixtures and fittings, so as to meet or exceed a twenty (20) percent reduction in water consumption. Specific requirements added to the RMC would include, at a minimum, the following: 1) Shower head fixtures and fittings shall be designed and installed so that they will not exceed a water supply flow rate of 1.75 gallons per minute. 2) Faucets at kitchens, lavatories, wet bars, laundry sinks, or other similar use fixtures shall be Water Sense labeled and installed so that they will not exceed a water supply flow rate of 1.5 gallons per minute. 3) Toilet fixtures and fittings shall have an average consumption that does not exceed 1.1 gallons of water per flush. 4) New residential dwellings that are equipped with clothes washers shall install washers that are ENERGY STAR qualified. 5) The water pressure in a single family home shall not exceed 60 pounds per square inch (psi), with no detectable water leaks. Multifamily and midrise projects are exempt from the water pressure testing criterion but shall meet the requirements as stated in 1) through 4) above (Source: U.S. Green Building Council).	d) Within one (1) year of the adoption of the GPU.	City of Reedley

	e) The City shall strive to implement best management practices ("BMP") developed by the California Urban Water Conservation Council and provide annual reports to the City Council and the California Urban Water Conservation Council regarding its progress in implementing the BMP. f) The City shall consider the adoption of a Water Efficient Landscaping Ordinance that is as effective as, or more effective than, the Model Water Efficient Landscape Ordinance adopted by the California Department of Water Resources. The Ordinance shall contain applicability, definitions, provisions for new construction or rehabilitated landscapes, application requirements, water efficient landscape and certification. To further reduce outdoor water consumption, encourage water efficient landscaping practices through the reduction of turf grass by at least 40% and increasing the amount of plants that are native or adapted to the region by at least 25% (Source: U.S. Green Building Council).	e) Ongoing	City of Reedley
	g) The City shall work with utility service providers such as PG&E who have rebate programs available to City's water customers to inform customers of the programs and to encourage them to utilize the programs to replace current water consuming appliances with water conserving appliances that are Energy Star rated.	g) Ongoing	City of Reedley
	h) The City shall measure irrigation water used for parks/open space through the installation of standard water meters on all large park/open space areas, which may be creditable for recharge purposes. The installation of the meters will be completed within one year after the adoption of the GPU.	h) Ongoing	City of Reedley

	i) The City shall systematically replace failing irrigation controllers at City parks, median islands and other City facilities with landscape irrigation systems with irrigation controllers equipped with, at a minimum, rain and evapotranspiration sensors, with the goal of reducing water used for landscape irrigation by twenty (20) percent to forty (40) percent, as supported by studies performed in the industry. This replacement program shall commence when the GPU is adopted.	i) Ongoing	City of Reedley
	j) The City shall work cooperatively with land owners, local and regional water agencies, and irrigation districts which rely upon the Kings Basin as a source of water to identify and implement infrastructure projects and other programs that serve to reduce the use of groundwater and/or facilitate the recharge of the aquifer.	j) Ongoing	City of Reedley
	k) The City shall continue to work with the Upper Kings Basin Integrated Regional Water Management Authority in developing a strong coalition of water agencies, cities, counties and environmental groups to address local water issues.	k) Ongoing	City of Reedley
	CIR 3.10.10B: As part of the City's formulation of its annual budget, City staff shall identify a list of capital facilities improvement projects, with proposed budgetary allocations, necessary to implement further reductions in water consumption and/or maintain service.	CIR 3.10.10B: Ongoing	City of Reedley
	<u>Waste Water Policies</u>:		
	CIR 3.10.11: By March 2014, City Council shall adopt a Waste Water Master Plan to address collection and treatment system. The implementation of this plan will assist the City in identifying general locations for future	CIR 3.10.11: By March 2014.	City of Reedley

infrastructure. The Plan will also be vital to the development of impact fees which are necessary for implementation.		
CIR 3.10.12: The master plan will include analysis of the treatment needs as well as collector system disposal measures and funding mechanisms.	CIR 3.10.13: By March 2014.	City of Reedley
CIR 3.10.13: The City shall acquire adequate land to be used for reclamation purposes.	CIR 3.10.13: By 2018.	City of Reedley
CIR 3.10.14: The City shall periodically review and update development impact fees, wastewater connection charges, and monthly service charges to ensure that adequate funds are collected to operate and maintain existing facilities and to construct new facilities.	CIR 3.10.14: City Council review on a three-year ongoing cycle.	City of Reedley
Storm Water Policies:		
CIR 3.10.18: The City shall prepare and present to the City Council for consideration of adoption of a comprehensive set of policies to ensure an adequate storm water drainage system to support the growth and development patterns proposed within this GPU. These policies shall set performance standards for sustainable management of Reedley's storm water drainage system. The policies, including those set forth below, shall be adopted such that their provisions are implemented by the deadlines set forth in the proposed policies. If the policy does not contain a specific deadline for its implementation, it shall be considered for adoption within twelve (12) months of the GPU's adoption. After the adoption of the GPU, the Community Development Department shall provide an annual report to the City Council describing progress made toward the development, adoption and overall implementation of these policies.	CIR 3.10.18: Within twelve month of the adoption.	City of Reedley

	The staff analysis supporting each policy shall include a discussion of the following: (1) How the policy would minimize potential detrimental effect caused by the percolation of storm water; (2) Whether and how the policy would assist in the City's efforts to recharge the underground aquifer; (3) How the policy would be integrated into the entitlement process; and, (4) How the policy would be enforced through the regulatory environment. The policies shall include the following:			
	a) The City shall develop and implement a public education component that addresses various topics related to collection and disposal of storm water and shall include periodic reports to the City Council and the public regarding its progress in implementing the policies. Specifically, this component shall include the following actions by the City Council:	a) Ongoing	City of Reedley	
	1) All legally required storm drainage reports prepared by the Public Works Department shall be presented to the City Council for consideration of adoption.	1) Annual review by the City Council.	City of Reedley	
	2) All legally required National Pollutant Discharge Elimination System (NPDES) program reports, prepared by the Public Works Department shall be presented to the City Council for consideration of adoption.	2) Annual review by the City Council.	City of Reedley	
	3) By March 2014, City Council shall consider the adoption of the Storm Drain Master Plan. The plan will assist the City in identifying locations for future infrastructure and ground water recharge opportunities. The Plan will also serve as basis for the development of updates to the impact fees which are necessary for implementation.	3) March 2014	City of Reedley	

	b) The City shall develop standard operating procedures for vegetation management in storm water basins to ensure the basins structure and capacity is not compromised. The formal procedure shall be adopted within eighteen months after the adoption of the GPU.	b) Ongoing	City of Reedley	
	c) The City shall develop standard operating procedures for storm water measurement and for recording water levels in the basins. These procedures shall be adopted within eighteen months after the adoption of the GPU.	c) Ongoing	City of Reedley	
	d) The City shall develop standard operating procedures for documentation of interceptor monitoring and clean-out. The formal procedures shall be adopted within eighteen months after the adoption of the GPU.	d) Ongoing	City of Reedley	
	e) The City shall develop standard operating procedures for the bottom ripping of all storm water basins to ensure continual and optimal percolation. The procedures shall be adopted within eighteen months after the adoption of the GPU.	e) Ongoing	City of Reedley	
	f) As the City collects storm drainage development impact fees, and those fees become available, the City shall install measuring devices (e.g. flow meters, visually marked measuring poles) on drain inlets to measure storm events, which will be used to quantify Reedley's efforts to increase groundwater recharge.	f) Ongoing	City of Reedley	
	g) On an on-going basis, the City shall strive to work with the irrigation districts to identify the most suitable locations for storm water basins based on soil type, elevation, and other factors.	g) Ongoing	City of Reedley	

	CIR 3.10.18B: As part of the City's formulation of its annual budget, City staff shall identify a list of capital facility improvement projects, with proposed budgetary allocations, necessary to increase the use of collected storm water for the City's groundwater recharge efforts.	CIR 3.10.18B: Annual review by City Council.	City of Reedley
	CIR 3.10.19A: The City shall prepare and present to the City Council for consideration of adoption a comprehensive set of policies to ensure an adequate city-wide program for the recharge of ground water to support the growth and development patterns proposed within this GPU. These policies shall set performance standards for sustainable management of Reedley's use of groundwater and promote efforts to increase groundwater recharge. The policies, including those set forth below, shall be adopted such that their provisions are implemented by the deadlines set forth in the proposed policies. If the policy does not contain a specific deadline for adoption or implementation, it shall be considered for adoption within twelve (12) months of the GPU's adoption. After the adoption of the GPU, the Community Development Department shall provide an annual report to the City Council describing progress made toward the development, adoption and overall implementation of these policies. The staff analysis supporting each policy shall include a discussion of the following: (1) How the policy would help to reduce consumptive use; (2) Whether and how the policy would assist in the City's efforts to recharge the underground aquifer; (3) How the policy would be integrated into the entitlement process; and, (4) How the policy would be enforced through the regulatory environment. The policies shall include the following:	CIR 3.10.19A: Within twelve (12) months of the GPU's adoption.	City of Reedley

	a) The City shall develop and implement a public education component that addresses various topics related to the consumptive use of groundwater as well as efforts to recharge the underground aquifer and shall include periodic reports to the City Council and the public regarding its progress in implementing the policies.	a) Ongoing	City of Reedley	
	b) The City shall work cooperatively with land owners, local and regional water agencies, and irrigation districts which rely upon the Kings Basin as a source of water to identify and implement infrastructure projects and other programs that serve to reduce the use of groundwater and/or facilitate the recharge of the aquifer.	b) Ongoing	City of Reedley	
	c) The City shall work cooperatively with the irrigation districts to develop and implement new strategies to expand upon current efforts directed toward groundwater recharge. These strategies may include: 1) Exploring the feasibility of joint water banking. 2) Exploring opportunities to jointly participate in studies that will be used to facilitate new or expand wastewater recycling and reclamation opportunities.	c) Ongoing	City of Reedley	
	d) Develop a methodology for early consultation (CEQA Section §21080.3) with the irrigation districts as part of the environmental review process when an entitlement application that involves annexing new land into the City is submitted. The comments received from the District will be fundamental to the development of conditions of approval applied to said projects. This process could be developed and implemented within one year after the adoption of the GPU.	d) Within one year after the adoption of the GPU.	City of Reedley	

	e) On an on-going basis, the City shall strive to work with the irrigation districts to identify the most suitable locations for storm water basins based on soil type, elevation, and other factors.	e) Ongoing	City of Reedley
	f) The City shall continue to work with the Upper Kings Basin Integrated Regional Water Management Authority in developing a strong coalition of water agencies, cities, counties and environmental groups to address local water issues.	f) Ongoing	City of Reedley
	g) The City shall continue to work with the Kings River Conservation District to identify projects that would directly and efficiently increase groundwater recharge and to identify funding sources for said project, with the goal of submitting a grant application to the District for such a project by January 15, 2015.	g) By January 15, 2015.	City of Reedley
	h) Within one (1) year of the adoption of the GPU, the City Council shall complete a thorough review of the City's development impact fee program and shall consider the adoption of a comprehensive update of the various fees included in the program. 1) This review shall include, but not be limited to, Storm Drainage, Water Distribution, Groundwater Recharge, Water Supply/Holding and Waste Water Collection and Treatment. 2) Within each topic area, the review shall include the analysis of existing conditions, proposed new development, need necessitated by future development and proportional cost attributed to land use development.	h) Within one year after the adoption of the GPU.	City of Reedley
	i) By 2020, the City shall prepare an updated Groundwater Pumping, Recharge, and Consumptive Use Analysis report using the same	i) To be completed by the end of 2020.	City of Reedley

	methodology as the 2013 report. Part of this report will include policies, recommendations, and implementation measures. The analysis and recommendations shall be presented to the City Council for its consideration.		
	j) All annual reports, prepared by the Public Works Department related to water quality, water supply and delivery, and groundwater recharge shall be presented to the City Council for its consideration of adoptions.	j) Ongoing	City of Reedley
	k) The City shall continue to strive to develop and implement best management practices, strategies, in compliance with State law, and regulatory permits/requirements related to water quality and supply and groundwater recharge and report annually to the California Urban Water Conservation Council on its progress in development and implementing said practices.	k) Annual Reporting	City of Reedley
	l) The Public Works Department shall prepare an annual report that identifies, at a minimum, the amount of water used to irrigate the open space and the projected amount of groundwater recharge that has occurred. The City shall use industry standards to establish a formula to calculate the balancing of production to groundwater recharge.	l) Ongoing	City of Reedley
	CIR 3.10.20B: As part of the City's formulation of its annual budget, City staff shall identify a capital facility improvement projects, with proposed budgetary allocations, necessary to implement the City's groundwater recharge efforts.	CIR 3.10.20B Annual review by City Council.	City of Reedley
	<u>Natural Resources Policies</u>:		
	COSP4.2.3 Protect areas of groundwater recharge from land uses and disposal methods which would degrade water sources.	COSP4.2.3: Ongoing	City of Reedley

	COSP4.2.4 Provide public sewer service to new urban development as a means of protecting groundwater resources.	COSP4.2.4: At time of entitlement approval and prior to issuance of a building permit.	City of Reedley
	COSP4.2.5: To protect human health the City groundwater resources will be monitored on a regular basis to test for bacteriological and toxic chemical components.	COSP4.2.5: Ongoing	City of Reedley
	COSP4.2.6: Promote activities which combine storm-water control and water recharge.	COSP4.2.6: Ongoing	City of Reedley
	COSP4.2.7: The City will enhance groundwater recharge supply by requiring the installation of detention/retention ponds in new growth areas.	COSP4.2.7: Ongoing	City of Reedley
	COSP4.2.10: Continue to encourage water conservation.	COSP4.2.10: Ongoing	City of Reedley
HYD-2: Substantially deplete groundwater supplies or interfere with groundwater recharge.	HYD-1. The City will update its Urban Water Master Plan or prepare a separate water supply plan to identify how the City will avoid or substantially reduce the impacts of increased demand for groundwater resources on groundwater depletion and overdraft of the Kings Basin resulting from implementation of the proposed GPU. The plan should include, but may not be limited to the following components: (a) Inventory of existing water demands, supplies, and providers, water use efficiency, recycling, transfers, and conjunctive use. (b) Analysis of future water demands based on general plan land use at buildout.	City Council has approved the 2010-2015 Urban Water Management Plan.	City of Reedley

	(c) Assessment of future opportunities for enhanced water use conservation (which could include an update of the City's water conservation ordinance), recycling of water, water transfers, conjunctive use of groundwater and surface water, additional storage or water development projects, and other potential increases in water entitlements and supply. (d) Assessment of any shortfalls in future water demands based on wet, normal, dry, and multiple dry year types and contingency plans for drought conditions. (e) Identification of alternative water sources that will be utilized as needed to supplement groundwater extraction as the City's only source of urban water supply in order to avoid or substantially reduce impacts from overdraft of the Kings Basin.			
2.10 Noise				
N-1: Noise levels from transportation sources, potentially stationary sources, and potentially railroad sources in excess of noise standards.	NE 6.1.3: Areas subject to a DNL greater than 60 dBA are identified as noise impact zones. As part of the special permit process the proposed development project will be required to have an acoustical analysis prepared by a licensed engineer. The report should also include practical and reasonable mitigation measures.	Ongoing as development is proposed.	City of Reedley	
	NE 6.1.5: Design of all proposed development should incorporate features necessary to minimize adverse noise impacts, while also minimizing effects on surrounding land uses.	Ongoing as development is proposed.	City of Reedley	
	NE 6.1.6: Land use and transportation planning should include analysis of the potentially adverse noise levels associated with various design and use alternatives.	Ongoing as development is proposed.	City of Reedley	

	NE 6.1.7: The design of proposed transportation facility should incorporate feasible measures to diminish potential increases in noise levels. NE 6.1.8: To relieve excessive noise generation associated with various modes of transportation, the City should: a) designate truck routes where appropriate (see Circulation Element). b) Limit vehicle speed where appropriate. c) Adoption of State Noise Insulation Standards (California Code of Regulations, Title 24) and Chapter 35 of the Uniform Building Code (UBC) concerning interior noise exposure for new single, multi-family housing, hotels and motels. d) Encourage appropriate authorities to stringently enforce California Motor Vehicle Code standards relating to noise emission levels and muffler systems. e) Maintain awareness of State and Federal standards or legislation relating to noise and lend support or criticism as appropriate. NE 6.1.9: The City should cooperate with Fresno County to adopt compatible noise control programs. NE 6.1.10: The City should develop noise contours for the following facilities: a) Major roads classified in the Circulation Element of the General Plan. b) Stationary facilities which emit noise levels greater than DNL of 60 dBA.	Ongoing as development is proposed. Ongoing, and as development is proposed.	City of Reedley City of Reedley	

N-1: Noise levels from transportation sources, potentially stationary sources, and potentially railroad sources in excess of noise standards.	N-1. The City will minimize to the degree practicable the impact of transportation-related noise. Transportation noise sources include roadways, railroads and aircraft operations. Transportation noise shall be minimized as follows: (a) Noise-Sensitive Land Uses: New development of noise-sensitive land uses shall not be permitted in areas exposed to existing or projected future noise levels from transportation noise sources exceeding 60 dB DNL within outdoor activity areas unless appropriate noise mitigation measures have been incorporated into the final project design. An exterior exposure of up to 65 dB DNL within outdoor activity areas may be allowed if a good-faith effort has been made to mitigate exterior noise exposure using a practical application of available noise mitigation measures and interior noise exposure due to exterior sources will not exceed 45 dB DNL. (b) New Transportation Noise Sources: Noise created by new transportation noise sources, including roadway improvement projects, shall be mitigated so as not to exceed 60 dB DNL within outdoor activity areas and 45 dB DNL within interior living spaces of existing or planned noise-sensitive land uses.	Prior to approval of an entitlement application, with mitigation as necessary to reduce impacts to a less than significant level.	City of Reedley, County of Fresno & Local Area Formation Commission Community Development Department	
N-1: Noise levels from transportation sources, potentially stationary sources, and potentially railroad sources in excess of noise standards.	N-2. The City will minimize to the degree practicable the impact of stationary noise sources. Stationary noise sources include industrial and commercial facilities, agricultural operations and vehicle movements on private property. Stationary noise shall be minimized as follows: (a) Noise-Sensitive Land Uses: The development of new noise-sensitive land uses shall not be permitted in areas where noise levels from existing stationary noises sources may exceed the noise level standards shown in Table 6.1.2-B of the proposed GPU within outdoor activity areas.	Prior to approval of an entitlement application, with mitigation as necessary to reduce impacts to a less than significant level.	City of Reedley	

	(b) New Stationary Noise Sources: Noise created by proposed stationary noise sources, or existing stationary noise sources which undergo modifications that may increase noise levels, shall be mitigated so as not to exceed the noise level standards shown in Table 6.1.2-B of the proposed GPU within outdoor activity areas of existing or planned noise-sensitive land uses.			
N-1: Noise levels from transportation sources, potentially stationary sources, and potentially railroad sources in excess of noise standards.	N-3. Maintain a citywide noise environment that achieves noise goals through development review and post-development monitoring by implementing the following actions: (a) Development Review: The City will review new public and private development proposals to determine conformance with the policies and implementing actions of the Noise Element. (b) Acoustical Analysis Required (Transportation Noise Sources): At the discretion of the Community Development Department or where the development of a project may result in noise-sensitive land uses being exposed to existing or projected future transportation noise levels exceeding 60 dB DNL (or CNEL), an acoustical analysis shall be required early in the review process so that noise mitigation may be included in the project design. For development not subject to environmental review, the requirements for an acoustical analysis shall be implemented prior to the issuance of a building permit. Areas of the city potentially exposed to noise from transportation sources in excess of 60 dB DNL (or CNEL) may be determined by reference to Table 16, Generalized Traffic Noise Exposure Reedley 2020 General Plan Update Future Conditions, for traffic noise. For railroad noise, it is assumed that areas closer than 200 feet from the track may be exposed to 60 dB DNL or above.	Prior to approval of an entitlement application, with mitigation as necessary to reduce impacts to a less than significant level.	City of Reedley	

	When required, an acoustical analysis shall include identification and quantification of noise sources that may affect the proposed use, or that may result from the proposed use, for existing and foreseeable future conditions. Noise levels shall be quantified in terms of the DNL (CNEL for aircraft noise) and shall include consideration of site-specific conditions that could affect noise exposure at the location or locations of interest. (c) Acoustical Analysis Required (Stationary Noise Sources): Where, at the discretion of the Community Development Department, the development of a project may result in noise-sensitive land uses being exposed to noise from existing or future stationary sources exceeding the daytime or nighttime standards shown in Table 6.1.2-B of the proposed GPU, an acoustical analysis shall be required. The acoustical analysis should be required early in the review process so that noise mitigation may be included in the project design. For development not subject to environmental review, the requirements for an acoustical analysis shall be implemented prior to the issuance of a building permit. When required, an acoustical analysis shall include identification and quantification of noise sources that may affect the proposed use, or that may result from the proposed use, for existing and foreseeable future conditions. Noise levels shall be quantified in terms of the noise level descriptors utilized in 6.1.2-B and shall include consideration of site-specific conditions that could affect noise exposure at the location or locations of interest.			

	(d) Compliance Monitoring: The City shall develop and employ procedures to monitor compliance with the policies of the Noise Element after completion of projects where noise mitigation measures have been required.			
2.13 Utilities				
UTIL-3: Have sufficient water supply available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed.	See HYD-1 and HYD-2.	See above.	Community Development, Engineering and Public Works Departments	

Project Specific
Mitigation Monitoring and Reporting Program

For

Kings River Village

(Vesting Tentative Tract Map No. 6096 and Conditional Use Permit Application No. 2014-05)

City of Reedley
Community Development Department
1733 Ninth Street, City Hall
Reedley, California 93654
(559) 637-4200

Contact: Kevin E. Fabino, Community Development Director

February 11, 2015

PROJECT SPECIFIC MITIGATION MONITORING AND REPORTING PROGRAM

The following project Specific Mitigation Monitoring and Reporting Program (MMRP) for Vesting Tentative Tract Map No. 6096 and Conditional Use Permit Application No. 2014-05, has been prepared pursuant to CEQA Guidelines, Section 15097 and Public Resources Code, Section 21081.6. This Project Specific MMRP lists applicable mitigation measures from the Mitigated Negative Declaration (MND) for the Kings River Village project (Environmental Assessment No. 2014-21). The appropriate timing of implementation and responsible party are identified to ensure proper enforcement of the mitigation measures from the MND to reduce project impacts to less than significant levels.

The following Project Specific MMRP identifies the entity responsible for verifying that the mitigation measures for the project are performed. The City of Reedley, as lead agency, will also be responsible for providing a date that each mitigation measure is verified as completed. The MMRP provides a comment/verification date column for the responsible entity to provide notes and remarks and provide a date the measure was completed. The timing of implementing the mitigation measures in the MMRP is identified in each measure.

The performance of the mitigation measures is the responsibility of the project applicant. The project applicant is responsible to provide evidence to the City of Reedley that the mitigation measures are performed and completed. The City of Reedley, as lead agency, will be responsible for ensuring that implementation of all mitigation measures occurs in accordance with this program.

Impact	PROJECT SPECIFIC Mitigation Measure	Timing of Implementation	Responsible Agency/Department	Comment/ Verification Date
3. Air Quality & Global Climate Change				
Air Quality	Project specific mitigation shall be compliance with the San Joaquin Valley Air Pollution Control District Rule 9510 (the Indirect Source Review Rule), as attached Exhibit A, Project Specific Mitigation Monitoring Checklist, dated January 21, 2015.	Prior to issuance of building permits, during construction and operational activities.	San Joaquin Valley Air Pollution Control District	
9. Hydrology and Water Quality				
Water Quality and Distribution	Project specific mitigation shall include the payment of Water Supply/Holding and Water Distribution Facilities, pursuant to the City's Development Impact Fee Program.	Prior to issuance of building permits, during construction and operational activities.	Community Development Department	
Wastewater Treatment	Project specific mitigation shall include the payment of Wastewater Treatment and Collection, pursuant to the City's Development Impact Fee Program.	Prior to issuance of building permits, during construction and operational activities.	Community Development Department	
Storm Drainage Management	Project specific mitigation shall include the payment of Storm Drainage Facilities, pursuant to the City's Development Impact Fee Program.	Prior to issuance of building permits, during construction and operational activities.	Community Development Department	
14. Public Services				
Fire Protection	Project specific mitigation shall include the payment of Fire Facilities, pursuant to the City's Development Impact Fee Program.	Prior to issuance of building permits, during construction and operational activities.	Community Development Department	
Law Enforcement	Project specific mitigation shall include the payment of Law Enforcement Facilities, pursuant to the City's Development Impact Fee Program.	Prior to issuance of building permits, during construction and operational activities.	Community Development Department	
Parks & Recreation	Project specific mitigation shall include the payment of Park & Recreation, and Open Space, pursuant to the City's Development Impact Fee Program.	Prior to issuance of building permits, during construction and operational activities.	Community Development Department	
16. Transportation/Traffic				
Transportation	Project specific mitigation shall include the payment of Streets & Thoroughfares, and Traffic Control Faculties, pursuant to the City's	Prior to issuance of building permits, during	Community Development Department	

	Development Impact Fee Program.	construction and operational activities.	
Traffic	Project specific mitigation shall include the Kings River Village to pay 100% of the costs of all required public improvements in taking access from Dinuba Avenue with the initial phase of the project. (This includes the three primary points of access, as depicted on Tentative Tract Map No. 6096 and Conditional Use Permit Application No. 2014-05, Site Plan.	Consistent with the first Phase of the project.	Community Development, Engineering and Public Works Departments
	Project specific mitigation for the future impacts to "off-site" improvements, the Dinuba and Buttonwillow roundabout and the future roundabout at the Dinuba and I Streets, Frankwood and I and Dinuba and Frankwood area shall pay their required proportionate share of costs for the above improvements. To determine proportionate share a detailed engineers estimate shall be prepared, by a California licensed engineer, and the proportionate share calculated based on Caltrans methodologies, as follows: $P = \frac{T}{T^{35} - T^{E}} * 100\%$ sample: $P = \frac{350}{5000-1500} *$ $100\% = 10\%$ • P = Project's Proportionate Share • T = Project peak hour trips entering the intersection • T^{35} = 2035 Plus Project peak hour trips entering the intersection • T^{E} = Existing peak hour trips entering the intersection The proportionate share for the intersections of Dinuba Avenue / Frankwood Avenue / I Street are calculated as a single location, utilizing trips entering the "3-intersection area". Additionally, the AM and PM peak hour trips are added together for the calculations to achieve the average. Table 18 shows the proportionate share calculations for the intersections with recommended improvements. **TABLE 18: PROJECT PROPORTIONATE FAIR SHARE CALCULATION (TIS, PAGE 38)** **2035**	Prior to Phase IV issuance of building permits, during construction and operational activities.	Community Development Department

Intersection	Project Trips[1]	Existing Trips[1]	Plus Project Trips[1]	Fair Share
Dinuba Avenue at Project Driveway	---	---	---	100%
Dinuba Avenue at Buttonwillow Avenue	737	2,347	4,051	43.3%
Dinuba Avenue/ Frankwood Avenue/ I Street	438	2,741	4,743	21.9%

[1] *all trips are the sum of the AM and PM peak hours*