ADDENDUM TO THE
UNION CROSSING PROJECT EIR

SCH # 2008092083

AUGUST 2019

Prepared for:

City of Manteca – City Hall
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Manteca, CA 95337
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D e N o v o P l a n n i n g G r o u p

A Land Use Planning, Design, and Environmental Firm

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EIR ADDENDUM

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1.0 INTRODUCTION

This Addendum was prepared in accordance with the California Environmental Quality Act (CEQA) and the CEQA Guidelines. This document has been prepared to serve as an Addendum to the previously certified EIR (State Clearinghouse [SCH] # 2008092083) for the Union Crossing Project (Original Project). The City of Manteca is the lead agency for the environmental review of the proposed project modifications (Modified Project).

This Addendum addresses the proposed modifications in relation to the previous environmental review prepared for the Union Crossing Project. CEQA Guidelines Section 15164 defines an Addendum as:

> *The lead agency or responsible agency shall prepare an addendum to a previously certified EIR if some changes or additions are necessary but none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred.*
>
> *….A brief explanation of the decision not to prepare a subsequent EIR pursuant to Section 15162 should be included in an addendum to an EIR, the lead agency's findings on the project, or elsewhere in the record.*

Information and technical analyses from the Union Crossing Project EIR are utilized throughout this Addendum. Relevant passages from this document (consisting of the Union Crossing Project EIR) are cited and available for review at:

City of Manteca – City Hall
1001 West Center Street
Manteca, CA 95337

https://www.ci.manteca.ca.us/CommunityDevelopment/Planning%20Division/Pages/Planning-Division-Documents.aspx?RootFolder=%2FCommunityDevelopment%2FPlanning%20Division%2FPlanning%20Division%20Documents%2FEnvironmental&FolderCTID=0x012000C1D839DE3D407540A4D0E9B464C9237D&View=%7BC6EEA1A9%2D842B%2D49CD%2D94D1%2DE0D08910FEFD%7D

1.1 BACKGROUND AND PURPOSE OF THE EIR ADDENDUM

The Union Crossing Project EIR (SCH # 2008092083) was certified on October 20, 2009 by the Manteca City Council. The Union Crossing Project (Original Project) included the annexation of a 65-acre site into the City of Manteca. The project site is located immediately south of State Route (SR) 120, approximately 2 miles west of SR 99, and 4 miles east of Interstate 5. The site is generally bounded by an SR 120 eastbound exit ramp to the north; Woodward Avenue to the south; South Union Road to the east; and agricultural land and a residential homesite to the west.

The Original Project consisted of 8 components: 1) Certification of an EIR as adequate environmental documentation for the original project; 2) General Plan Amendment (GPA-08-01) to change the land use designation from LDR (Low Density Residential) to GC (General Commercial) for an approximately 6.32 acre parcel located at the northwest corner of the intersection of South Union Road and Woodward Avenue (APN 226-160-17); 3) Prezone (PRZ-05-04) of 6 parcels, APNs 226-160-04, 05, and 17 to C-G (General Commercial) and APNs 226-160-14, 15, 16 to R-1 (Single-Family Residential); 4) Annexation (ANX-05-05) of 6 parcels totaling approximately 64.23 acres; 5) Site Plan

Review (SPC-08-11), 6) Planned Unit Development (PCD-08-02); 7) Tentative Parcel Map (SDN-08-03), 8) and Master Sign Program (MSP-08-06) for the development of approximately 53.35 acres (APNs 226-160-04, 05, 17) into a commercial shopping center. The center is to be accessed from both South Union Road and Atherton Drive. The Original Project included various commercial/retail shops and restaurants that would total approximately 455,000 square feet (SF) for the entire project area.

Approvals required for the Union Crossing Project (Original Project) include, but were not limited to, the following:

1. General Plan Amendment redesignating the 3.6-acre parcel (Phase 3 of the project) on the northwest corner of Union Road and Woodward Avenue from Low Density Residential (LDR) to General Commercial (GC);
2. Prezoning of the retail commercial site to GC;
3. Development agreement between the City and the developer;
4. Site Development Plan;
5. Tentative Subdivision Map;
6. Ministerial grading, foundation, and building permits;
7. Master sign program;
8. Prezone and annexation of the three residential parcels and the adjacent portion of Woodward Avenue where no development is proposed; and
9. Other agency permits to implement the proposed project, as may be required.

The project also required approval of annexation of the project site to the City of Manteca from the San Joaquin County Local Agency Formation Commission. Other agencies that may have required permission or approvals included the San Joaquin Valley Air Pollution Control District, South San Joaquin Irrigation District, U.S. Army Corps of Engineers, Central Valley Regional Water Quality Control Board, U.S. Fish and Wildlife Service, and California Department of Fish and Game.

In conjunction with certification of the original Union Crossing Project EIR, the Manteca City Council approved the Union Crossing Project.

The CEQA analysis approach to this project is to prepare an Addendum to the Union Crossing Project EIR, which will focus on proposed changes to the project site and operational characteristics of the project compared to the analysis of the project site in the Original Project EIR.

Since certification of the EIR, the City of Manteca has received an application to modify the original project. The modifications are focused within the Phase 1 and Phase 2 sites (the central and northern phases), while Phase 3 would remain unchanged from the Original Project. The modifications include confirmation of various commercial and retail tenants, as well as changes to the non-residential SF and residential dwelling unit (du) count. The development footprint for the Modified Project would be identical to the Original Project. The Modified Project would include the following maximum buildout (by phase):

1. Phase 1: 240,000 SF of hotel/retail/traditional retail uses (including a large-scale retail tenant, Living Spaces);
2. Phase 2: 10,700 SF of retail/restaurant uses (including a Circle K, a quick-service restaurant (QSR), and a bank) and 281 multi-family DU; and
3. Phase 3: 46,200 SF of retail/restaurant uses.

Table 1 compares the Original Project development assumptions to the Modified Project development assumptions. As shown, the Modified Project would result in an increase of 281 DU and a decrease of 153,100 SF of non-residential uses.

TABLE 1: ORIGINAL VS. MODIFIED PROJECT DEVELOPMENT COMPARISON

Original vs. Modified	*Non-Residential SF*	*Dwelling Units*
	Phase 1	
Original	225,800 SF (Retail)	0 DU
Modified	240,000 SF, including: 120,000 SF (Large-Scale Retail – Living Spaces) + 120,000 SF (Hotel/Retail/ Traditional Retail)	0 DU
Difference	*+ 14,200 SF*	*0 DU*
	Phase 2	
Original	178,000 SF (Retail/Restaurant)	0 DU
Modified	10,700 SF, including: 4,500 SF (Pad 1 - Circle K) + 3,200 SF (Pad 2 - QSR) + 3,000 SF (Pad 3 - Bank)	281 DU
Difference	*- 167,300 SF*	*+ 281 DU*
	Phase 3	
Original	46,200 SF (Retail/Restaurant	0 DU
Modified	46,200 SF (Retail/Restaurant)	0 DU
Difference	*0 SF*	*0 DU*
	Total	
Original	450,000 SF	0 DU
Modified	296,900 SF	281 DU
Difference	*- 153,100 SF*	*+ 281 DU*

NOTES: DU = DWELLING UNITS; QSR = QUICK-SERVICE RESTAURANT.

Based on a detailed review and analysis of the project application materials, there is no evidence that there would be any new significant environmental effects, a substantial increase in the severity of previously identified environmental effects, or new information of substantial importance that would require major changes to the Union Crossing Project EIR pursuant to CEQA Guidelines Section 15162(a). Therefore, a Subsequent EIR is not warranted for this project.

The proposed project (Modified Project) would only require minor changes to the Union Crossing Project EIR to address the incremental change in impacts between development of the residential component of the site with the previously proposed Union Crossing Project uses. No new significant impacts or an increase in the severity of environmental impacts have been identified.

In determining whether an Addendum is the appropriate document to analyze the proposed modifications to the project and its approval, CEQA Guidelines Section 15164 (Addendum to an EIR or Negative Declaration) states:

a) The lead agency or a responsible agency shall prepare an addendum to a previously certified EIR if some changes or additions are necessary but none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred.

b) An addendum to an adopted negative declaration may be prepared if only minor technical changes or additions are necessary or none of the conditions described in Section 15162 calling for the preparation of a subsequent EIR or negative declaration have occurred.

c) An addendum need not be circulated for public review but can be included in or attached to the final EIR or adopted negative declaration.

d) The decision-making body shall consider the addendum with the final EIR or adopted negative declaration prior to making a decision on the project.

e) A brief explanation of the decision not to prepare a subsequent EIR pursuant to Section 15162 should be included in an addendum to an EIR, the lead agency's required findings on the project, or elsewhere in the record. The explanation must be supported by substantial evidence.

1.2 BASIS FOR DECISION TO PREPARE AN ADDENDUM

When an environmental impact report has been certified for a project, Public Resources Code Section 21166 and CEQA Guidelines Sections 15162 and 15164 set forth the criteria for determining whether a subsequent EIR, subsequent negative declaration, addendum, or no further documentation be prepared in support of further agency action on the project. Under these Guidelines, a subsequent EIR or negative declaration shall be prepared if any of the following criteria are met:

(a) When an EIR has been certified or negative declaration adopted for a project, no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in the light of the whole record, one or more of the following:

(1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;

(2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or

(3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the negative declaration was adopted, shows any of the following:

(A) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;

(B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;

(C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or

(D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

(b) If changes to a project or its circumstances occur or new information becomes available after adoption of a negative declaration, the lead agency shall prepare a subsequent EIR if required under subdivision (a). Otherwise the lead agency shall determine whether to prepare a subsequent negative declaration, and addendum, or no further documentation.

As demonstrated in the environmental analysis provided in Section 3.0 (Environmental Analysis), the proposed changes do not meet the criteria for preparing a subsequent EIR or negative declaration. An addendum is appropriate here because, as explained in Section 3.0, none of the conditions calling for preparation of a subsequent EIR or negative declaration have occurred.

2.0 PROJECT DESCRIPTION

This section provides a detailed description of the proposed project. The reader is referred to Section 3.0 (Environmental Analysis) for the analysis of environmental effects of the proposed modifications in relation to the analysis contained in the previously certified Union Crossing Project EIR (SCH # 2008092083).

2.1 PROJECT LOCATION AND SITE CHARACTERISTICS

The project site consists of approximately 48.7 acres of land located at the northwest corner of the Union Road and Woodward Avenue intersection in the City of Manteca (Assessor's Parcel Numbers [APNs]: 226-160-04, -05, and -17). The project site is located along the State Route (SR) 120 corridor in south-central Manteca. Existing uses on the project site include row crops, dirt roadways, and an orchard.

The project's regional location is shown on Figure 1. The project site and site vicinity area shown on Figure 2.

2.2 SURROUNDING LAND USES

The project site is bound by an SR 120 off-ramp to the north, Union Road to the east, Woodward Avenue to the south, and undeveloped agricultural land and rural residential uses to the west. Surrounding land uses include SR 120 and single-family residential uses to the north, commercial, retail, and residential uses to the east, existing rural residential and future single-family residential uses to the south, and undeveloped agricultural land and existing and future single-family residential uses to the west.

2.3 PROJECT CHARACTERISTICS AND DESCRIPTION

The Modified Project would include development of up to 296,900 SF of non-residential uses and 281 DU on the 48.7-acre site. The notable changes by phase for the Modified Project include:

- Decrease of 153,100 SF of non-residential uses; and
- Increase of 281 multi-family DU in Phase 2.

The total number of residential units in the Union Crossing Project with this proposed revision would come to 281 total units. The total amount of non-residential uses in the Union Crossing Project with this proposed revision would come to 296,900 SF. The original Union Crossing Project EIR analyzed impacts for the project based on an upper limit of 450,000 SF of non-residential uses.

The proposed Planned Development (PD) designations and phase boundaries are shown on Figure 3.

RESIDENTIAL

The multi-family residential portion of the Modified Project would be located in Phase 2. This area is intended for an apartment or condominium-style community with resident amenities, common area parking lots, concentrated driveway entries, and open space. The location has been selected to create a buffer and transition between the high-intensity commercial designation to the north and the less intense (quieter) single family residential zoning to the south and west. The multi-family area is approximately 12.6 acres with a maximum of 281 residential units. An approximately 3.65-acre

storm water basin would also be provided in Phase 2 in order to provide dual use storm water treatment and a neighborhood park facility.

With 281 units on 12.6 acres, the residential portion of the Modified Project would result in a density of 22.3 units per acre. This density corresponds to the Commercial Mixed Use (CMU) Manteca General Plan land use, which allows 15.1 to 25 units per acre. The Modified Project would include a request for a General Plan Amendment and rezone for the 12.6-acre residential portion of the site. The General Plan land use would change from GC to CMU, and the zoning would change from General Commercial (CG) to Mixed Use Commercial (CMU)

NON-RESIDENTIAL

The non-residential portions of the Modified Project would be located in Phases 1, 2, and 3. Phase 1 would include a large-scale retail tenant (120,000 SF), Living Spaces, a hotel or traditional retail tenant, and additional traditional retail uses. The hotel, retail, and/or traditional retail uses would not exceed 120,000 SF. Phase 2 would include 10,700 SF of corner commercial uses, including a QSR, Circle K, and bank. Phase 3 would include 46,200 SF of mixed uses.

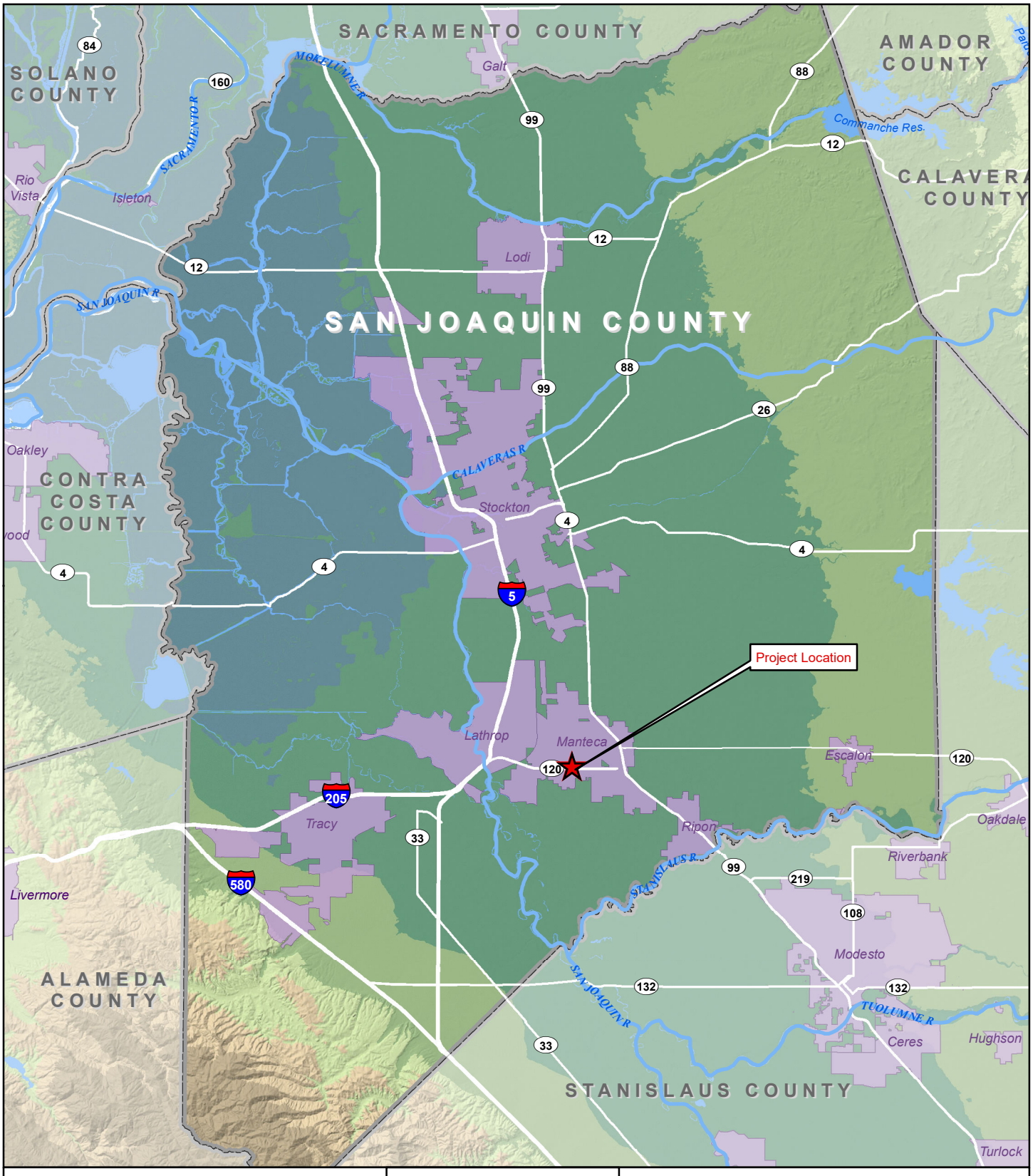
ENTITLEMENTS REQUESTED

The following entitlements are requested in order to implement the Modified Project:

- Approval of the Planned Development Amendment.;
- Approval of the General Plan Amendment redesignating 12.6-acres (within Phase 2 of the project) along Union Road from GC to CMU;
- Approval of the rezone for 12.6 acres (within Phase 2 of the project) along Union Road from CG with PD overlay to CMU with PD overlay;
- Approval of the site plan review for phase 1 (Large Scale Retail);
- Issuance of the ministerial grading, foundation, and building permits;
- Other agency permits to implement the project, as may be required.

Additionally, the following entitlements may be requested in the future in order to implement the Modified Project:

- Approval of the tentative subdivision map;
- Approval of the master sign program.



Legend

- Project Location
- County Boundary
- City Area

Sources: CalAtlas; San Joaquin, Stanislaus, Sacramento, Solano, Contra Costa, and Alameda Counties. Map date: July 22, 2019.

0 2½ 5
Miles

UNION CROSSING
MANTECA, CALIFORNIA

Figure 1. Regional Location Map

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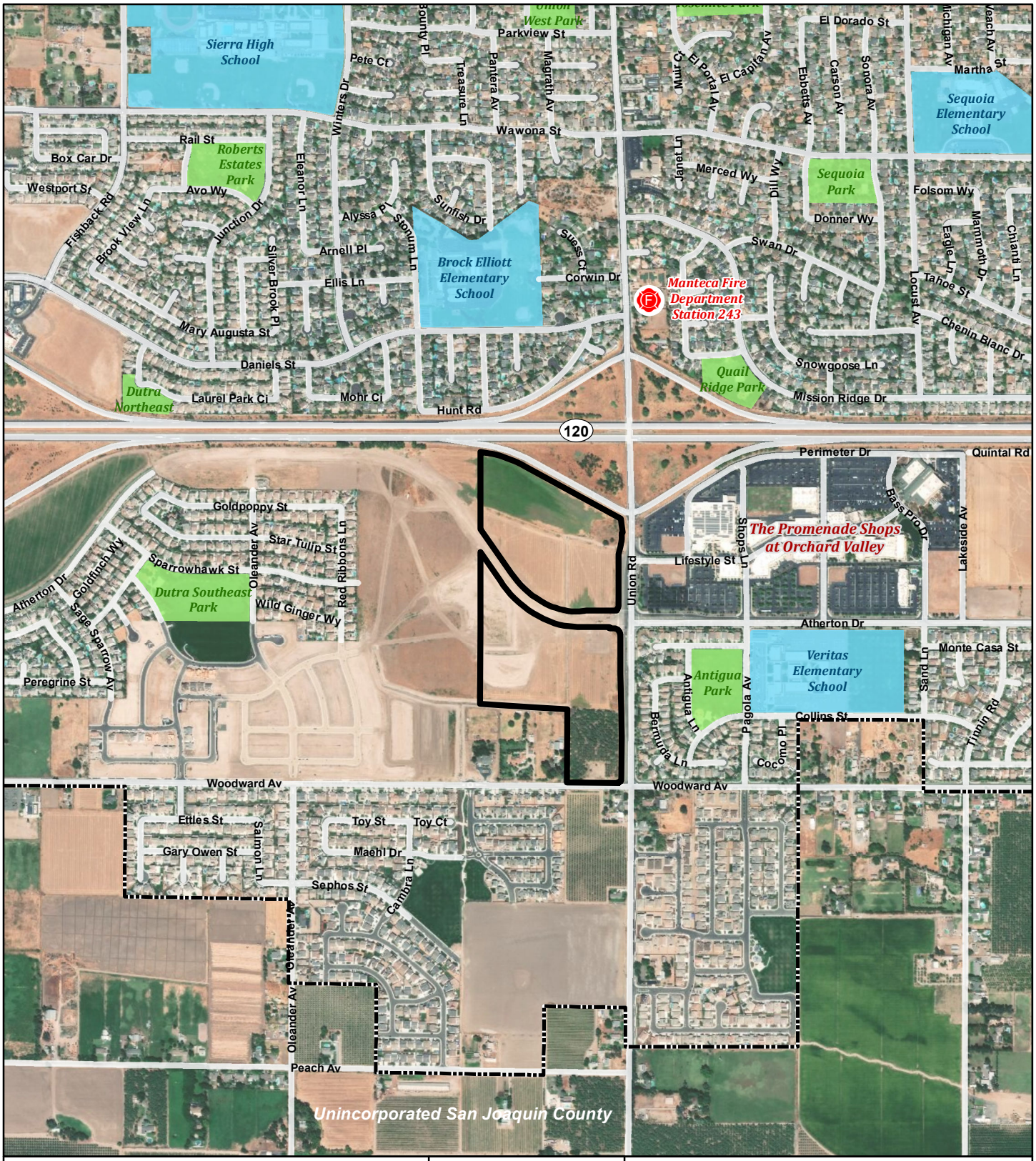

Legend

- Project Boundary
- Manteca City Limits
- School
- Park

Sources: San Joaquin County GIS; ArcGIS World Imagery Map Service; Google Maps. Map date: July 22, 2019.

N

0 500 1,000

Feet

UNION CROSSING
MANTECA, CALIFORNIA

Figure 2. Project Vicinity Map

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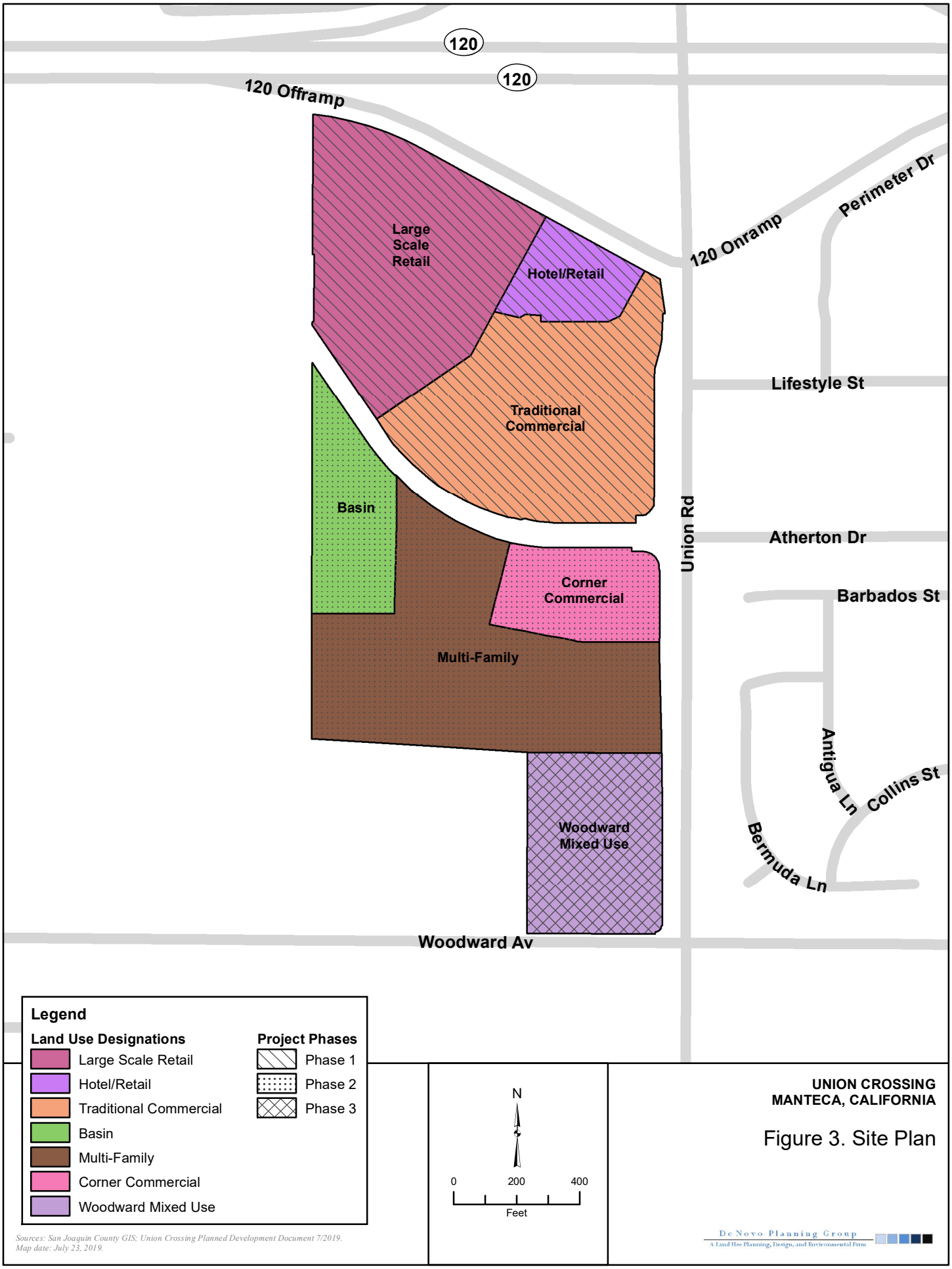

Sources: San Joaquin County GIS; Union Crossing Planned Development Document 7/2019.
Map date: July 23, 2019.

UNION CROSSING
MANTECA, CALIFORNIA

Figure 3. Site Plan

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3.0 ENVIRONMENTAL ANALYSIS

This section of the Addendum provides analysis and cites substantial evidence that support's the City's determination that the proposed modifications to the Union Crossing Project do not meet the criteria for preparing a subsequent or supplemental EIR under CEQA Guidelines Section 15162.

As addressed in the analysis below, the proposed modifications to the Union Crossing Project are not substantial changes to the originally anticipated project. The proposed modifications to the Union Crossing Project would not cause a new significant impact or substantially increase the severity of a previously identified significant impact from the Final EIR (CEQA Guidelines Section 15162[a][1]) that would require major revisions to the EIR. All impacts would be nearly equivalent to the impacts previously analyzed in the Final EIR.

The proposed changes do not cause a new significant impact or substantially increase the severity of a previously identified significant impact, and there have been no other changes in the circumstances that meet this criterion (CEQA Guidelines Section 15162[a][2]). There have been no changes in the environmental conditions on the property not contemplated and analyzed in the EIR that would result in new or substantially more severe environmental impacts.

There is no new information of substantial importance (which was not known or could not have been known at the time of the application, that identifies: a new significant impact (condition "A" under CEQA Guidelines Section 15162[a][3]); a substantial increase in the severity of a previously identified significant impact (condition "B" CEQA Guidelines Section 15162[a][3]); mitigation measures or alternatives previously found infeasible that would now be feasible and would substantially reduce one or more significant effects; or mitigation measures or alternatives which are considerably different from those analyzed in the EIR which would substantially reduce one or more significant effects on the environment (conditions "C" and "D" CEQA Guidelines Section 15162[a][3]). None of the "new information" conditions listed in the CEQA Guidelines Section 15162[a][3] are present here to trigger the need for a Subsequent or Supplemental EIR.

CEQA Guidelines Section 15164 states that "The lead agency or a responsible agency shall prepare an addendum to a previously certified EIR if some changes or additions are necessary but none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred." An addendum is appropriate here because, as explained above, none of the conditions calling for preparation of a subsequent EIR have occurred.

The following includes a detailed discussion of applicable impacts identified under the EIR in relation to the Union Crossing Project. All impacts identified under the EIR have been determined to be less than significant, less than significant with mitigation, or significant and unavoidable. The City adopted CEQA Findings of Fact relative to each impact (City Resolution No. R2009-361) at the time the EIR was certified for the Union Crossing Project. Additionally, the City adopted Statement of Overriding Considerations relative to each significant and unavoidable impact (City Resolution No. R2009-361) at the time the EIR was certified for the Union Crossing Project. Mitigation measures that were identified in the EIR for the purpose of lessening an impact to the extent feasible are embodied in a Mitigation Monitoring and Reporting Program that the City adopted at the time the EIR was certified (City Resolution No. R2009-361).

The section below identifies the environmental topics addressed in the EIR, provides a summary of impacts associated with the Original Project, as described in the EIR, and includes an analysis of the potential impacts associated with the Modified Project when compared to the Original Project.

LAND USE

Impact 4.1-1: Potential for Division of an Existing Community. (Less than Significant).

Mitigation Adopted by the City: None

Discussion
These impacts were identified and discussed in Section 4.1, Land Use (page 4.1-8 of the Draft EIR).

The proposed modifications to the Original Project are not substantial changes to the originally anticipated project relating to Land Use.

The Modified Project would not result in changes to development patterns and does not designate any new sites for development or result in any substantial changes to the construction methods, location, or footprint of development that would change the potential for development to increase the significance of impacts related to Land Use.

The Modified Project would result in development of a decrease in the total non-residential SF by 153,100 SF and the addition of 281 multi-family DUs. Although the Modified Project would slightly increase residential development in the City (while decreasing non-residential development from the Original Project), the Modified Project will be required to comply with applicable land use policies and the requirements of the City General Plan and Zoning Code to avoid or mitigate environmental effects. Furthermore, the Modified Project would not physically divide an established community, nor would it conflict with the City's current General Plan Land Use regulations.

The project applicant is now seeking approval of a PD, and additional revisions to the project. The Modified Project would not result in land use impacts to adjacent uses, as described in greater detail throughout this Addendum. The Modified Project supports the underlying goals of the City's General Plan to provide adequate land for development of commercial uses and a range of housing densities to meet the needs of all income groups.

Additionally, there are no new impacts beyond what was addressed in the Final EIR, and there are no changed circumstances or new information that meets the standard for requiring further environmental review under CEQA Guidelines Section 15162.

VISUAL RESOURCES

Impact 4.2-1: Impacts on Scenic Vistas. (Less than Significant)

Mitigation Adopted by the City: None

Impact 4.2-2: Damage to Scenic Resources Within a State Scenic Highway. (Less than Significant)

Mitigation Adopted by the City: None

Impact 4.2-3: Degradation of Visual Character. (Significant and Unavoidable)

Mitigation Adopted by the City: Mitigation Measure 4.2-3. Residual impact is significant and unavoidable.

Mitigation Measure 4.2-3: Degradation of Visual Character.

Because the project would comply with the City's design and lighting standards, no other feasible mitigation is available to reduce the project's visual impacts to a less-than-significant level.

Impact 4.2-4: Impacts from Lighting. (Less than Significant with Mitigation)

Mitigation Adopted by the City: Mitigation Measure 4.2-4. Residual impact is less than significant.

Mitigation Measure 4.2-4: Visual Resources – Impacts from Lighting.

The project applicant shall meet or exceed all lighting recommendations (e.g., fixture types, location, and orientation; pole heights; fixture optics; tree removal), as shown in Drawing LSK-1 of the lighting study (Appendix B), into the project design.

Discussion

These impacts were identified and discussed in Section 4.2, Visual Resources (pages 4.2-10 through 4.2-14 of the Draft EIR).

The Modified Project includes development of the project site with residential, commercial, and retail uses. Under the Modified Project, the building heights of the proposed buildings would be 35 to 45 feet, with the potential for the multi-family residential lane use to be up to 60 feet. As required by the PD, if the residential land uses exceed 45 feet in height, additional plant screening would be required. Additionally, a residential building that would exceed 45 feet in height would be subject to increased setback and open space requirements. If the future residential use would exceed 45 feet in height, the additional landscaping, setbacks, and open space requirements would lessen the visual impact of the building. The proposed modifications to the project are not substantial changes to the originally anticipated project relating to Aesthetics. The Modified Project does not designate any new sites for development that were not contemplated and analyzed for development in the EIR, and would not result in any changes to the location of development.

The Modified Project would not result in any new potential aesthetic impacts and would not increase the significance of any aesthetic impacts. Mitigation Measures identified in Section 4.2, Visual Resources, for the Original Project would be sufficient in addressing the requirements for the Modified Project. Additionally, the Modified Project is subject to the City of Manteca' design requirements, which would ensure that the exterior facades of the proposed structures, landscaping, streetscape improvements, and exterior lighting improvements are compatible with the surrounding land uses. Therefore, the Modified Project does not change or increase the severity of the impacts beyond what was addressed in the Final EIR. There are no changed circumstances or new information that meets the standard for requiring further environmental review under CEQA Guidelines Section 15162.

AIR QUALITY

Impact 4.3-1: Air Quality — Generation of Short-Term, Temporary Construction-Related Emissions of ROG, NOX, and PM10. (Less than Significant with Mitigation)

Mitigation Adopted by the City: Mitigation Measure 4.3-1. Residual impact is less than significant.

Mitigation Measure 4.3-1: *The applicant's contractors shall implement the following standard dust control measures from Table 6-2 of the GAMAQI during construction of the proposed project, as required by SJVAPCD Regulation VIII:*

- *All disturbed areas, including storage piles, which are not being actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water, chemical stabilizer/suppressant, or vegetative ground cover.*
- *All onsite unpaved construction roads and offsite unpaved construction access roads shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant.*
- *All land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and demolition activities shall be effectively controlled of fugitive dust emissions utilizing application of water or by presoaking.*
- *When materials are transported offsite, all material shall be covered, effectively wetted to limit visible dust emissions, or at least 6 inches of freeboard space from the top of the container shall be maintained.*
- *All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at least once every 24 hours when operations are occurring. (The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions. Use of blower devices is expressly forbidden.)*
- *Following the addition of materials to, or the removal of materials from, the surfaces of outdoor storage piles, piles shall be effectively stabilized of fugitive dust emissions utilizing sufficient water or chemical stabilizer/suppressant.*
- *Project contractors shall prevent carryout and trackout.*

In addition to the measures identified above, the following enhanced and additional control measures from Table 6-3 of the GAMAQI shall be implemented by the applicant's contractors:

- *Onsite vehicle speeds on unpaved roads shall be limited to 15 mph.*
- *Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from adjacent project areas with a slope greater than 1 percent.*
- *Wheel washers shall be installed for all exiting trucks and equipment, or wheels shall be washed to remove accumulated dirt prior to leaving the site.*
- *The contractor shall install wind breaks at windward side(s) of the construction area.*
- *Excavation and grading activities shall be suspended when winds exceed 20 mph.*
- *The overall area subject to excavation and grading at any one time shall be limited to the fullest extent possible.*

The City, after consultation with the applicant, shall require all feasible additional measures to control construction emissions to be implemented by the applicant's contractors. Such measures may include, but are not limited to the following items from Table 6-4 of the GAMAQI and other sources:

- *Onsite equipment shall be maintained and properly tuned in accordance with manufacturers' specifications.*
- *When not in use, onsite equipment shall not be left idling.*
- *Construction scheduling shall limit the hours of operation of heavy-duty equipment and/or the amount of equipment in use at any one time.*

Construction of the proposed project shall comply with SJVAPCD's ISR (Rule 9510), as required by law. The applicant shall submit and have approved an Air Impact Assessment (AIA) application to SJVAPCD no later than applying for the first building permit with the

City of Manteca. The AIA application shall be submitted on a form provided by the SJVAPCD and contain, but not be limited to, the applicant's name and address, detailed project description, on-site emission reduction checklist, monitoring and reporting schedule, and an AIA. The AIA shall quantify construction NOX and PM10 emissions associated with the project. This assessment shall include: an estimate of construction emissions prior to the implementation of mitigation measures; a list of the mitigation measures to be applied to the project; an estimate of emissions for each applicable pollutant for the project, or each phase thereof, following the implementation of mitigation; and a calculation of the applicable offsite fee, if required by Rule 9510. The general mitigation requirements in the assessment, as contained in the ISR rule, shall include the following:

- *Exhaust emissions for construction equipment greater than 50 horsepower used or associated with the development project shall be reduced by 20% of the total NOX and by 45% of the total PM10 emissions from the statewide average as estimated by ARB.*
- *Methods employed by the applicant to reduce construction emissions to the degree noted above include using less polluting construction equipment, including the use of add-on controls, cleaner fuels, or newer lower emitting equipment. The emissions reduction targets listed above shall be met through any combination of onsite emission reduction measures or offset fees, including those required and other mitigation measures listed above.*

The requirements listed above can be met through any combination of on-site emission reduction measures or offset fees, including those required and other mitigation measures listed above; however, any on-site emission reductions must be both quantifiable and verifiable to be credited towards the requirements of the ISR Rule.

Impact 4.3-2: Air Quality — Generation of Long-Term Operational Emissions of Criteria Air Pollutants and Precursors. (Significant and Unavoidable)

Mitigation Adopted by the City: Mitigation Measure 4.3-2. Residual impact is significant and unavoidable.

Mitigation Measure 4.3-2: *The following mitigation measures would reduce emissions of criteria air pollutants and precursors associated with the day-to-day operational activities of the proposed project. It should be noted that all of the mitigation measures that would reduce criteria air pollutant emissions would also help reduce GHG emissions. In addition, Mitigation Measure 5-1 would reduce indirect criteria air pollutants and precursors; however, it should be noted that these reductions could occur outside of the SJVAB.*

- *Provide secure, covered bicycle parking for employees consistent with the requirements of the City of Manteca Municipal Code. This may consist of a separate secure, covered bicycle parking area at each employment venue or one ore more large bicycle parking areas to be used by workers employed at multiple stores. This measure is consistent with CAPCOA's mitigation measure MM T-1 (CAOPCOA 2008).*
- *Maximize bicycle parking for shoppers throughout the site consistent with the requirements of the City of Manteca Municipal Code. Where feasible, at least one bike rack shall be located within 100 feet of each store entrance.*
- *Incorporate into the project design preferential parking spaces and charging stations for Neighborhood Electric Vehicles (NEV). The applicant shall also provide preferential parking for Hybrid Electric Vehicles (HEV) and Natural Gas Vehicles (NGV). Preferential parking spaces for NEVs, HEVs, and NGVs shall not affect any handicap parking requirements. After five (5) full years of operation, the Applicant and the City can reconsider these requirements based on both their effectiveness*

and future unforeseen changes to the fleet of vehicles operated by shoppers in the City of Manteca.

- *Transit route maps and schedules, as well as contact information for the San Joaquin County Council of Governments Commute Connection program, shall be posted at each worksite by employers. The Applicant shall include this requirement in the commercial lease agreements for every tenant on the project site.*
- *Provide a transit stop along Atherton Drive and/or within the project site (i.e., Phase 1) and work with Manteca Transit and the City of Manteca to extend a bus route to one or both of these locations. At the time of writing this EIR Manteca Transit is in the process of extending one of its bus routes to pass by the project along South Union Road (Ferriera, pers. Com., 2008). The applicant shall work with Manteca Transit and City of Manteca to add another transit stop along Atherton Road or within the project site (i.e., Phase 1) that would provide a safe, convenient transit stop for project employees and customers. The transit stop shall include a covered waiting area, benches, route information, and lighting. Providing public transit access to the project site is consistent with the City of Manteca's General Plan Policies AQ-P-1 (cooperate with agencies to reduce air pollution), AQ-P-2 (facilitate public transit), AQ-P-4 (efficient traffic flow), and AQ-P-5 (alternative transportation). Providing a sheltered transit stop is also consistent with CAPCOA's mitigation measure MM T-7. Furthermore, this measure is consistent with Measure 25 of SJVAPCD's list of ISR On-Site Emission Reduction Mitigation Measure for alternative transit (SJVAPCD 2007).*
- *Post signs at all loading docks and truck loading areas which indicate that diesel-powered delivery trucks must be shut off when not in use for longer than 5 minutes on the premises in order to reduce idling emissions. This measure is consistent with the ATCM to Limit Diesel-Fueled Commercial Motor Vehicle Idling approved by OAL in January 2005.*
- *All busses on the project site that receive deliveries by trucks with operating transport refrigeration units (TRUs) shall provide electrification connections for powering those TRUs while during loading and unloading activities.*
- *To the extent feasible, stores shall schedule delivery trucks during daytime off-peak traffic hours to reduce congestion and vehicle idling on the site. The applicant shall express this preference in writing at the time of establishing commercial lease agreements with project tenants.*
- *In order to ensure a pedestrian-friendly environment the applicant shall incorporate into the project design a network of clearly marked pedestrian pathways that provide connection among the various on-site retail and from these uses to the transit stop located on or adjacent to the site. Provide shade trees and/or shade structures (e.g., using solar panels) that shade at least 75% of on-site pedestrian pathways. This measure is consistent with Measure 1 of SJVAPCD's list of ISR On-Site Emissions Reduction Mitigation Measure for alternative transit (SJVAPCD 2007).*
- *Incorporate into the design pedestrian access points on the east, west, and south sides of the site to allow for pedestrian connectivity to the site. No pedestrian access point would be required to the north of Phase 1 Northern Retail Site due to the presence of SR 120. This measure is consistent with Measure 8 of SJVAPCD's list of ISR On-Site Emissions Reduction Mitigation Measure for alternative transit 8 and CAPCOA's mitigation measure MM T-5 (CAPCOA 2008).*
- *Plant native, drought resistant, and low maintenance plant species for landscaping pursuant to CAPCOA's mitigation measure MM D-17 (CAPCOA 2008).*

Operation of the proposed project shall comply with SJVAPCD's ISR (Rule 9510), as required by law. The applicant shall submit an AIA application to the SJVAPCD no later than applying for a final discretionary approval with City of Manteca. The AIA application shall be

submitted on a form provided by the SJVAPCD and contain, but not be limited to, the applicant's name address, detailed project description, on-site emission reduction checklist, monitoring and reporting schedule, and an AIA. The AIA shall quantify operational NOX and PM10 emissions associated with the project. This shall include the estimated operational baseline emissions (i.e., before mitigation), and the mitigated emissions for each applicable pollutant for the project, or each phase thereof, and shall quantify the off-site fee, if applicable. General mitigation requirements, as contained in the ISR rule, include the following:

1. *Applicants shall reduce 33.3% of the project's operational baseline NOX emissions over a period of ten years as quantified in the approved AIA.*
2. *Applicants shall reduce 50% of the project's operational PM10 emissions over a period of ten years as quantified in the approved AIA.*

The requirements listed above can be met through any combination of on-site emission reduction measures or offset fees, including those required and additional measures listed below for criteria air pollutants and precursors and Mitigation Measure 5-1 for GHG emissions. However, any on-site reductions of criteria air pollutants and precursors must be both quantifiable and verifiable to be credited toward the requirements of the ISR Rule.

Impact 4.3-3: Air Quality — Contribution to Local Traffic Congestion and Mobile-Source CO Concentrations. (Less than Significant)

Mitigation Adopted by the City: None

Impact 4.3-4: Air Quality — Exposure of Sensitive Receptors to Emissions of Toxic Air Contaminants. (Less than Significant)

Mitigation Adopted by the City: None

Impact 4.3-5: Air Quality — Create objectionable odors affecting a substantial number or people. (Less than Significant)

Mitigation Adopted by the City: None

Discussion

These impacts were identified and discussed in Section 4.3, Air Quality (pages 4.3-28 through 4.3-40 of the Draft EIR).

Operational Emissions

URBEMIS2007 (v.9.24) was used in the Union Crossing Project Draft EIR to estimate operational emissions of the Original Project. Detailed URBEMIS2007 (v.9.24) emissions calculations are presented in Appendix C of the Union Crossing Project Draft EIR. The San Joaquin Valley Air Pollution Control District (SJVAPCD) has established an operational emissions threshold of significance for ozone precursors of 10 tons per year for reactive organic gases (ROG) and nitric oxide (NO_X), and 15 pounds per day for respirable particulate matter (PM_{10}).

Table 2 shows the operational emissions of the Modified Project. It is noted that emissions calculated using URBEMIS are now outdated and air districts recommend all projects now evaluate emissions with the California Emissions Estimator Model (CalEEMod, version 2016.3.2) if they use software for their analysis. Therefore, the emissions for the Modified Project were calculated using

the most recent version of CalEEMod (version 2016.3.2). The emissions calculations are presented in Appendix A of this Addendum.

TABLE 2: OPERATIONAL EMISSIONS OF CRITERIA POLLUTANTS AND PRECURSORS – TOTAL ANNUAL EMISSIONS (MODIFIED PROJECT)

Source	*ROG*	*NOX*	*PM10*	*PM2.5*
Area	2.6381	0.1293	0.0200	0.0200
Energy	0.0328	0.2904	0.0227	0.0227
Mobile	6.2236	11.8018	7.6810	2.1153
Total Annual Operational Emissions	***8.8946***	***12.2214***	***7.7238***	***2.1580***
SJVAPCD Significance Threshold (tons/year)	10	10	15	None

SOURCE: DE NOVO PLANNING GROUP, 2019.

According to operational emissions for the Original Project included in the Union Crossing Project Draft EIR, the Original Project would generate up to 18.3 tons per year of ROG, 25.3 tons per year of NOX, and 13.4 tons per year of PM10. As shown in Table 2, the Modified Project would generate up to 8.9 tons per year of ROG, 12.2 tons per year of NOX, and 7.7 tons per year of PM10. Therefore, the operational emissions of ROG, NOx, and PM_{10} resulting from the Modified Project would be below the emissions resulting from operation of the Original Project. Implementation of Mitigation Measure 4.3-2 included in the Union Crossing Project EIR would still be required for the Modified Project.

As noted in the Noise and Transportation and Circulation sections further below, the proposed land use changes will generate fewer vehicle trips than the project analyzed as part of the Union Crossing Project Draft EIR for the Original Project. Because the Modified Project would result in a decrease in total vehicle trips than what was studied for the Original Project in the Union Crossing Project Draft EIR, the resulting mobile source emissions would also slightly decrease. The emissions shown in Table 2 are consistent with this assumption.

Construction Emissions

The Modified Project does not designate any new sites for development and would not result in any substantial changes to the construction methods or location of development. The Modified Project would not result in any changes to potential development that would change potential impacts associated with construction emissions. Therefore, the construction emissions would not increase over the Original Project.

SJVAPCD Rule VIII requires implementation of various fugitive PM10 measures. These measures are included as Mitigation Measure 4.3-1 of the Union Crossing Project Draft EIR. Implementation of the dust mitigation would reduce the Modified Project's PM_{10} emissions, similar to the Original Project.

Carbon Monoxide Hotspots

As noted in the Noise and Transportation and Circulation sections further below, the proposed land use changes will generate fewer trips than the project analyzed as part of the Union Crossing Project Draft EIR. Because the Modified Project would result in a decrease in total vehicle trips than what was studied for the Original Project in the Union Crossing Project Draft EIR, the resulting traffic delay increases would also slightly decrease. Therefore, changes in carbon monoxide levels resulting from the Modified Project would not result in violations of the ambient air quality standards.

Toxic Air Contaminants

A Toxic Air Contaminant (TAC) is defined as an air pollutant that may cause or contribute to an increase in mortality or in serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air. However, their high toxicity or health risk may pose a threat to public health even at very low concentrations. In general, for those TACs that may cause cancer, there is no concentration that does not present some risk. This contrasts with the criteria pollutants for which acceptable levels of exposure can be determined and for which the state and federal governments have set ambient air quality standards.

Controlling air toxic emissions became a national priority with the passage of the Clean Air Act Amendments (CAAA) of 1990, whereby Congress mandated that the U.S. Environmental Protection Agency (EPA) regulate 188 air toxics, also known as hazardous air pollutants. The EPA has assessed this expansive list in their latest rule on the Control of Hazardous Air Pollutants from Mobile Sources (Federal Register, Vol. 72, No. 37, page 8430, February 26, 2007) and identified a group of 93 compounds emitted from mobile sources. In addition, EPA identified seven compounds with significant contributions from mobile sources that are among the national and regional-scale cancer risk drivers from their 1999 National Air Toxics Assessment. These are acrolein, benzene, 1,3-butidiene, diesel particulate matter plus diesel exhaust organic gases (diesel PM), formaldehyde, naphthalene, and polycyclic organic matter.

The 2007 EPA rule requires controls that will dramatically decrease Mobile Source Air Toxics (MSAT) emissions through cleaner fuels and cleaner engines. According to an FHWA analysis using EPA's MOBILE6.2 model, even if vehicle activity (VMT) increases by 145 percent, a combined reduction of 72 percent in the total annual emission rate for the priority MSAT is projected from 1999 to 2050. California maintains stricter standards for clean fuels and emissions compared to the national standards, therefore it is expected that MSAT trends in California will decrease consistent with or more than the U.S. EPA's national projections.

CARB published the *Air Quality and Land Use Handbook: A Community Health Perspective* (2007) to provide information to local planners and decision-makers about land use compatibility issues associated with emissions from industrial, commercial and mobile sources of air pollution. The CARB Handbook indicates that mobile sources continue to be the largest overall contributors to the State's air pollution problems, representing the greatest air pollution health risk to most Californians. The most serious pollutants on a statewide basis include diesel exhaust particulate matter (diesel PM), benzene, and 1,3-butadiene, all of which are emitted by motor vehicles. These mobile source air toxics are largely associated with freeways and high traffic roads. Non-mobile source air toxics are largely associated with industrial and commercial uses. Table 3 provides the CARB minimum separation recommendations on siting sensitive land uses. The Modified Project does not include any of the source categories identified in the CARB minimum separation standards.

There are sensitive receptors proposed as part of the Modified Project, including the multi-family residential area. The Original Project did not propose any residential uses. The project site is located within 500 feet of a freeway, SR 120. However, the residential uses would be located approximately 1,400 feet or further from the SR 120 travel lanes, and approximately 1,000 feet or further from the SR 120 off-ramp. These distances are well beyond the distance included in Table 3 for freeways.

State law restricts the siting of new schools within 500 feet of a freeway, urban roadways with 100,000 vehicles/day, or rural roadways with 50,000 vehicles with some exceptions. However, no

such requirements apply to the siting of residences, day care centers, playgrounds, or medical facilities. The available data show that exposure to vehicle-related pollutants is greatly reduced at approximately 300 feet. Specifically, a southern California study (Zhu, 2002) showed measured concentrations of vehicle-related pollutants, including ultra-fine particles, decreased dramatically within approximately 300 feet of the 710 and 405 freeways.[1] This study is cited by CARB as a reference for their minimum separation recommendations, summarized above. According to this study, total particulate matter in the size range of 6 to 25 nanometers (nm) decreases by about 80% when the distance from the freeways is about 100 meters (or approximately 328 feet). Concentrations of CO and black carbon[2] exhibited similar trends as the distance to freeways increased. Overall, total particulate matter, CO, and black carbon decayed exponentially as distance from the freeways increased.

TABLE 3: CARB MINIMUM SEPARATION RECOMMENDATIONS ON SITING SENSITIVE LAND USES

Source Category	*Advisory Recommendations*
Freeways and High-Traffic Roads	• Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day.
Distribution Centers	• Avoid siting new sensitive land uses within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units (TRUs) per day, or where TRU unit operations exceed 300 hours per week). • Take into account the configuration of existing distribution centers and avoid locating residences and other new sensitive land uses near entry and exit points.
Rail Yards	• Avoid siting new sensitive land uses within 1,000 feet of a major service and maintenance rail yard. • Within one mile of a rail yard, consider possible siting limitations and mitigation approaches.
Ports	• Avoid siting of new sensitive land uses immediately downwind of ports in the most heavily impacted zones. Consult local air districts or the CARB on the status of pending analyses of health risks.
Refineries	• Avoid siting new sensitive land uses immediately downwind of petroleum refineries. Consult with local air districts and other local agencies to determine an appropriate separation.
Chrome Platers	• Avoid siting new sensitive land uses within 1,000 feet of a chrome plater.
Dry Cleaners Using Perchloro-ethylene	• Avoid siting new sensitive land uses within 300 feet of any dry cleaning operation. For operations with two or more machines, provide 500 feet. For operations with 3 or more machines, consult with the local air district. • Do not site new sensitive land uses in the same building with perc dry cleaning operations.
Gasoline Dispensing Facilities	• Avoid siting new sensitive land uses within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater). A 50 foot separation is recommended for typical gas dispensing facilities.

SOURCE: AIR QUALITY AND LAND USE HANDBOOK: A COMMUNITY HEALTH PERSPECTIVE (CARB 2005).

Overall, the Modified Project would not cite any residential uses within 500 feet of SR 120.

Objectionable Odors

Implementation of the Modified Project would not directly create or generate objectionable odors to a significant degree. Decomposition of biological materials, such as food waste and other trash, could create objectionable odors if not properly contained and handled. The Modified Project would provide waste receptacles throughout the project site and would utilize outdoor trash

[1] Zhu, Y., Hinds, W., Kim, S., Shen, S., Sioutas, C. Study of ultrafine particles near a major highway with heavy-duty diesel traffic. Atmospheric Environment 36 (2002) 4323-4335.

[2] Black carbon is the sooty black material emitted from gas and diesel engines and other sources that burn fossil fuel. Black carbon comprises a significant portion of particulate matter. Source: https://www.epa.gov/air-research/black-carbon-research.

dumpsters with lids, which would be picked up regularly during normal solid waste collection operating hours within the area. The dumpster lids are intended to contain odors emanating from the dumpsters. The dumpsters would be stored in screened areas for further protection from potential objectionable odors. The garbage collected on-site and stored in the outdoor dumpsters would not be on-site long enough to cause substantial odors. Thus, the outdoor, enclosed, and covered trash dumpsters that would be picked up regularly would provide proper containment and handling of the trash generated on-site.

Cumulative Air Quality Impacts

As shown above, the Modified Project would not result in any new or increased air quality impacts compared to the Original Project. Emissions (ROG, NOx, and PM_{10}) resulting from the Modified Project would be below the emissions resulting from the Original Project. The Modified Project is located within the City of Manteca Sphere of Influence and is designated for development under the adopted City of Manteca General Plan. As such, the Modified Project does not conflict with the land use assumptions used to prepare the applicable air quality attainment plan (AQAP) and State Implementation Plan (SIP). The same mitigation measures included in the Union Crossing Project Draft EIR (including Mitigation Measures 4.3-1 and 4.3-2) would be applicable to the Modified Project. The Modified Project would not have any cumulative air quality impacts beyond what was addressed in the EIR.

Conclusion

The Modified Project would not increase the severity of the impacts beyond what was addressed in the Final EIR. Mitigation Measures identified in Section 4.3, Air Quality, for the Original Project would be sufficient in addressing the requirements for the Modified Project. There are no new impacts beyond what was addressed in the Final EIR. Lastly, there are no changed circumstances or new information that meets the standard for requiring further environmental review under CEQA Guidelines Section 15162.

NOISE

Impact 4.4-1: Short-Term Project-Generated Construction-Related Noise Levels. (Significant and Unavoidable)

Mitigation Adopted by the City: Mitigation Measure 4.4-1. Residual impact is significant and unavoidable.

Mitigation Measure 4.4-1: *The applicant shall implement the following measures during construction activities:*

- *Construction equipment shall be properly maintained per manufacturers' specifications and fitted with the best available noise suppression devices (e.g., mufflers, silencers, wraps). All impact tools shall be shrouded or shielded, and all intake and exhaust ports on power equipment shall be muffled or shielded.*
- *Construction operations and related activities associated with the proposed project shall comply with the operational hours outlined in the Manteca Municipal Code noise standards: construction operations shall be limited to between the hours of seven a.m. and seven p.m.*
- *Construction equipment shall not idle for extended periods of time near noise-sensitive receptors.*
- *Fixed/stationary equipment (e.g., generators, compressors, rock crushers, cement mixers) shall be located as far as possible from noise-sensitive receptors. Shroud or*

shield all impact tools, and muffle or shield all intake and exhaust ports on powered construction equipment.

Impact 4.4-2: Long-Term Project-Generated Operation-Related Noise Levels from Traffic at Existing Noise-Sensitive Receptors. (Less than Significant)

Mitigation Adopted by the City: None

Impact 4.4-3: Long-Term Project-Generated Operation-Related Noise Levels from Stationary Sources at Existing Noise-Sensitive Receptors. (Significant and Unavoidable)

Mitigation Adopted by the City: Mitigation Measure 4.4-3. Residual impact is significant and unavoidable.

Mitigation Measure 4.4-3: *The following mitigation measures shall mitigate noise sources associated with the project at the nearest noise-sensitive property line:*

- *Phase II and Phase III mechanical equipment (e.g., air conditioning and ventilation systems, pump stations, etc.) for large box store uses that are located adjacent to noise-sensitive receptor property lines shall be located in mechanical equipment rooms; or*
- *The project applicant shall include rooftop parapet noise barriers for each box store of Phase II (S-S1, S-M2, S-A1, SM-3) and Phase III (S-M4, S-S4, S-P4) located adjacent to noise-sensitive land uses. The rooftop shall be four to six feet tall and be required to break line of sight from the source to the residential receptor. Specifically, parapets shall be included at facades adjacent to noise-sensitive uses. Parapets shall be located along the southern and western rooflines of buildings in Phase II and Phase III; and*
- *Phase II and Phase III loading dock areas shall be shielded by a solid noise barrier. The barrier shall be eight to ten feet tall (as determined based on final grading elevations) and would be required to break line of sight from the source (e.g., heavy truck exhaust stacks and refrigeration units) to the nearest off site noise-sensitive receptor. The solid noise barrier shall be located along the southern and western project boundaries for Phase II loading docks, and along the western boundary for Phase III loading docks.*
- *The above mitigation measures shall be confirmed by a qualified acoustical consultant once complete detail of HVAC project components are made available.*

Impact 4.4-4: Groundborne Noise and Vibration Levels Caused by Construction Activities at Sensitive Receptors. (Less than Significant).

Mitigation Adopted by the City: None

Discussion

These impacts were identified and discussed in Section 4.4, Noise (pages 4.4-15 through 4.4-24 of the Draft EIR).

The Modified Project would result in development of a decrease in the total non-residential SF by 153,100 SF and the addition of 281 multi-family DUs. As discussed further below, the Modified Project is expected to generate 6,062 fewer daily trips than the Original Project studied in the Draft EIR. Additionally, the Modified Project will generate 79 more external a.m. peak hour trips, and 364 fewer external p.m. peak hour trips.

The proposed land use changes will generate fewer trips than the project analyzed as part of the Union Crossing Project Draft EIR. When compared to the Original Project, the Modified Project will generate 6,062 fewer net daily trips, 79 more net a.m. peak hour trips, and 364 fewer net p.m. peak hour trips.

Because the Modified Project would result in a decrease in total vehicle trips than what was studied for the Original Project in the Union Crossing Project Draft EIR, the resulting noise and vibration impacts would also decrease. The same mitigation measure included in the Union Crossing Project Draft EIR (including Mitigation Measures 4.4-1 and 4.4-3) would be applicable to the Modified Project. Mitigation Measures identified in Section 4.4, Noise, for the Original Project would be sufficient in addressing the requirements for the Modified Project

There are no new impacts beyond what was addressed in the Final EIR. Lastly, there are no changed circumstances or new information that meets the standard for requiring further environmental review under CEQA Guidelines Section 15162.

BIOLOGICAL RESOURCES

Impact 4.5-1: Impacts on Special-Status Plants. (Less than Significant with Mitigation)

Mitigation Adopted by the City: Mitigation Measure 4.5-1. Residual impact is less than significant.

Mitigation Measure 4.5-1: *The project applicants shall request coverage under the SJMSCP and fees shall be paid in the amount SJCOG determines during the application and review process for the project. SJCOG may also determine, based on an independent review by a qualified biologist, that the following mitigation shall be implemented to reduce impacts on special-status plants:*

a. Before project construction, surveys for the special-status plants listed in Table 4.5-1 shall be conducted by a qualified botanist at the appropriate time of year when the target species would be in flower or otherwise clearly identifiable. Surveys shall be conducted in accordance with specific methodologies described in Section 5.2.2.5 of the SJMSCP. If special-status plants are found, the following measures shall be implemented:

- *Sanford's arrowhead and slough thistle: The SJMSCP requires complete avoidance of these species; therefore, potential impacts on these species could not be covered through participation in the plan. If these species are present in the project area and cannot be avoided, a mitigation plan shall be developed, with review and input from the regulatory agencies (e.g., DFG). The mitigation plan shall identify mitigation measures for any populations affected by the project, such as creation of off-site populations through seed collection or transplanting, preserving and enhancing existing populations, or restoring or creating suitable habitat in sufficient quantities to compensate for the impact. All mitigation measures that the City determines through this consultation to be necessary shall be implemented by the project proponent. These measures shall be designed to ensure that the project does not result in a net reduction in the population size or range of Sanford's arrowhead and slough thistle.*
- *Rose mallow and Delta tule pea: These species are considered widely distributed species by the SJMSCP, and dedication of conservation easements is the preferred option for mitigation. If these species are found in the project area, the possibility*

of establishing a conservation easement shall be evaluated. If dedication of a conservation easement is not a feasible option, payment of SJMSCP development fees may be used to mitigate impacts on these species. Use of conservation easements or development fees for establishment of habitat preserves, or a combination of the two mechanisms, shall be sufficient to avoid an overall net reduction in the population size or range of rose-mallow and Delta tule pea.

- *Wright's trichocoronis: This species is considered narrowly distributed by the SJMSCP, and dedication of conservation easements is the preferred option for mitigation. If this species is found in the project area, the possibility of establishing a conservation easement shall be evaluated. If dedication of a conservation easement is not an option, the SJMSCP requires consultation with the permitting agency representatives on the Technical Advisory Committee to determine the appropriate mitigation measures. These may include seed collection or other measures and would be determined on a population basis, taking into account the species type, relative health, and abundance. After the appropriate mitigation has been determined, it shall be implemented by the project applicants.*

Impact 4.5-2: Impacts on Special-Status Wildlife. (Less than Significant with Mitigation).

Mitigation Adopted by the City: Mitigation Measure 4.5-2. Residual impact is less than significant.

Mitigation Measure 4.5-2: *The project applicants shall request coverage under the SJMSCP and fees shall be paid in the amount determined by SJCOG during the application and review process for the project. SJCOG may also determine, based on independent review by a qualified biologist, that the following mitigation shall be implemented to reduce impacts on Swainson's hawk, white-tailed kite, and northern harrier:*

Swainson's Hawk

a. If the project applicants elect to remove nest trees, then nest trees shall be removed between September 1 and February 15, when the nests are unoccupied.

b. If the project applicants elect to retain a tree with an active nest or a nest becomes established in a suitable nest tree during the construction period, a setback shall be established that excludes all construction activities within a distance of two times the dripline diameter of the tree, measured from the nest. This setback shall be maintained during the nesting season for the period encompassing nest building and continuing until fledglings leave the nest. Setbacks shall be marked by brightly colored temporary fencing or other obvious markers.

White-Tailed Kite

Preconstruction surveys shall investigate all potential nesting trees on and adjacent to the project site (e.g., especially tree tops 15–59 feet above the ground in oak, willow, eucalyptus, cottonwood, or other deciduous trees), during the nesting season (February 15 to September 15), whenever white-tailed kite is noted on-site or within the vicinity of the project site during the nesting season. A setback of 500 feet from nesting areas shall be established and maintained during the nesting season for the period encompassing nest building and continuing until fledglings leave nests.

Northern Harrier

A setback of 500 feet from nesting areas shall be established and maintained during the nesting season for the period encompassing nest building and continuing until fledglings leave nests. This setback shall apply whenever construction or other ground-disturbing activities must begin during the nesting season in the presence of nests that are known to be occupied. Setbacks shall be marked by brightly colored temporary fencing.

Impact 4.5-3: Impacts on Common Nesting Raptors. (Less than Significant with Mitigation)

Mitigation Adopted by the City: Mitigation Measure 4.5-3. Residual impact is less than significant.

Mitigation Measure 4.5-3: *Common raptors are not covered by the SJMSCP. Therefore, the following mitigation measures shall be implemented to reduce impacts on these species:*

a. *If project activity would begin during the raptor nesting season (February 15 to September 15), preconstruction surveys shall be conducted in areas of suitable nesting habitat within 500 feet of project activity. Surveys shall be conducted within 14 days before project activity begins. If no active nests are found, no further mitigation shall be required.*

b. *If an active nest is found, an appropriate buffer that minimizes the potential for disturbance of the nest shall be determined by a qualified biologist. No project activities shall begin within the buffer area until the biologist confirms that the nest is no longer active or the birds are not dependent on it. The size of the buffer may vary, depending on the nest location, nest stage, construction activity, and monitoring results.*

Impact 4.5-4: Impacts on Protected and Heritage Trees. (Less than Significant with Mitigation).

Mitigation Adopted by the City: Mitigation Measure 4.5-4. Residual impact is less than significant.

Mitigation Measure 4.5-4:

1. *Before project implementation, a tree survey shall be conducted by an arborist certified by the International Society of Arboriculture to enumerate and evaluate all trees on the site that meet the standards in the City Municipal Code.*

2. *All trees that meet the following criteria shall be avoided and protected during all construction activity:*

    - *native oak trees with a trunk at least 6 inches in diameter at a height of 4.5 feet above the ground and*
    - *heritage trees (all trees with a trunk diameter of 30 inches at a height of 2 feet above the ground).*

3. *Trees that are subject to protection but must be removed as a result of project implementation shall be replaced with in-kind species in accordance with tree planting specifications established by the City tree ordinance. Native oak trees shall be replaced at a ratio of 3 to 1 and heritage trees shall be replaced at a ratio of 5 to 1.*

4. *Replacement tree plantings shall be monitored for 3 years in accordance with monitoring protocols set forth in the City tree ordinance.*

5. *If monitoring indicates that replacement plantings are not meeting performance standards, remedial measures shall be implemented. Appropriate measures shall be determined in coordination with the City.*

Impact 4.5-5: Impacts on Sensitive Habitats. (Less than Significant with Mitigation).

Mitigation Adopted by the City: Mitigation Measure 4.5-5. Residual impact is less than significant.

Mitigation Measure 4.5-5:

1. *Before project implementation, a delineation of waters of the United States, including wetlands that would be affected by the project, shall be made by qualified biologists through the formal Section 404 wetland delineation process. The delineation shall be submitted to and verified by USACE.*

2. *If, based on the verified delineation, it is determined that fill of waters of the United States would result from project implementation, authorization for such fill shall be secured from USACE through the Section 404 permitting process.*

3. *The project applicants shall also consult with DFG to determine whether a Section 1600 Streambed Alteration Agreement may be required for alteration of irrigation drainage ditch and impacts on freshwater marsh habitat.*

4. *The acreage of waters of the United States and freshwater marsh habitat that would be removed shall be replaced or restored/enhanced on a "no net loss" basis in accordance with USACE and DFG regulations and Development Title 9-1505. A mitigation plan to compensate for unavoidable loss of wetlands shall be developed and implemented. Compensation shall ensure through creation and/or enhancement of appropriate wetland habitats that there is no net loss of overall functions and values of the wetland habitat types adversely affected by the proposed project. The amount of wetland habitat to be included in the mitigation site shall be based on the value of the proposed compensation action and the nature of the effects, but a minimum of a 1:1 ratio of adversely affected habitat to mitigation habitat shall be provided. Compensation may be provided at a ratio of 1:1 of created habitat to filled habitat, while a higher mitigation ratio may be appropriate for mitigation through enhancement and a lower mitigation ratio may be appropriate for indirect effects to habitat preserved on-site. The mitigation plan shall, at a minimum, identify the location of the mitigation site, specify habitat types and associated acreages to be created or enhanced, establish specific success criteria, describe short- and long-term maintenance and management of the mitigation site and wetland habitats preserved onsite, and specify remedial measures to be undertaken if mitigation success criteria are not met. Long-term protection of the mitigation site and on-site preserved wetlands shall be ensured through fee title acquisition, conservation easement, or other suitable mechanisms. Long-term management of mitigation lands shall be ensured by establishing a management endowment or other suitable funding source. The mitigation plan shall be reviewed and approved by the applicable resource agencies and applicable permits, including a Section 404 permit from the USACE and Section 401 Clean Water Certification from the RWQCB shall be obtained before implementation of the project.*

Impact 4.5-6: Impacts on Wildlife Movement. (Less than Significant)

Mitigation Adopted by the City: None

Impact 4.5-7: Consistency with Federal, State, and Local Plans, Policies, and Ordinances. (Less than Significant)

Mitigation Adopted by the City: None

Impact 4.5-8: Consistency with Adopted Habitat Conservation Plan, Natural Community Conservation Plan, or Other Approved Conservation Plan. (Less than Significant).

Mitigation Adopted by the City: None

Discussion
These impacts were identified and discussed in Section 4.5, Biological Resources (pages 4.5-12 through 4.5-17 of the Draft EIR).

The proposed modifications to the Original Project are not substantial changes to the originally anticipated project relating to biological resources. The Modified Project does not designate any new sites for development and would not result in any changes to the location of development. Due to the site-specific nature of biological resources, the Modified Project would not result in new impacts or cause increases in the severity of previously identified impacts to biological resources when compared to the Original Project. The Modified Project would not result in changes to development that would have an adverse effect on special-status species, resulting in impacts to sensitive habitats, including foraging areas, or wildlife movement corridors, and would not interfere to a greater extent with local policies, ordinances, or plans adopted relating to biological resources. Mitigation Measures identified in Section 4.5, Biological Resources, for the Original Project would be sufficient in addressing the requirements for the Modified Project.

There are no new impacts beyond what was addressed in the Final EIR. Lastly, there are no changed circumstances or new information that meets the standard for requiring further environmental review under CEQA Guidelines Section 15162.

HAZARDS AND HAZARDOUS MATERIALS

Impact 4.6-1: Create a Safety Hazard to Construction Workers. (Less than Significant with Mitigation).

Mitigation Adopted by the City: Mitigation Measure 4.6-1. Residual impact is less than significant.

Mitigation Measure 4.6-1: *Prior to construction activities, the project applicant shall prepare a Phase II ESA for the southernmost portion of the subject property (Phase 3 area; refer to Exhibit 3-3 of Chapter 3, "Project Description"). The applicant shall implement all recommended actions identified in the Phase I ESA's and Phase II ESA's. In addition, the project applicant shall prepare a Safety Hazard Plan.*

This plan will outline measures that will be employed to protect construction workers from exposure to hazardous materials during remediation, demolition, and construction activities. The project applicant will consult with the contractor to determine the measures to be employed at the site, which could include posting notices, limiting access to the site, monitoring the air quality, watering, and installation of wind fences. Contractors will be required to comply with OSHA and Cal/OSHA health and safety standards. In the event that

contaminated soil is encountered in the Phase 3 portion of the subject property, the contractor will prepare a site plan that identifies necessary remediation activities appropriate for proposed land uses, including excavation and removal of on-site contaminated soils, and redistribution of clean fill material within the subject property. The plan will include measures that ensure the safe transport, use, and disposal of contaminated soil and building debris removed from the project site, in coordination with and to the satisfaction of the appropriate regulatory agency (e.g., Regional Water Quality Control Board, California Department of Toxics and Substance Control, etc.), The contractor will be required to comply with the plan and applicable local, state, and federal laws. The plan will outline measures for specific handling and reporting procedures for hazardous materials, and disposal of hazardous materials removed from the site at an appropriate off-site disposal facility.

Impact 4.6-2: Create a Significant Hazard to the Public or Environment. (Less than Significant).

Mitigation Adopted by the City: None

Impact 4.6-3: Potential Wildfire Hazard. (Less than Significant).

Mitigation Adopted by the City: None

Impact 4.6-4: Emit or Handle Hazardous Materials or Waste near a School. (Less than Significant).

Discussion
These impacts were identified and discussed in Section 4.6, Hazards and Hazardous Materials (pages 4.6-7 through 4.6-9 of the Draft EIR).

The proposed modifications to the Original Project are not substantial changes to the originally anticipated project relating to hazards and hazardous materials. The Modified Project would not result in changes to development patterns and does not designate any new sites for development or result in any substantial changes to the construction methods or location of development that would change the potential for the development to be exposed to increased risk from hazards and hazardous materials. Therefore, the Modified Project would not result in changes to development patterns or potential development that would create significant hazards associated with hazardous materials, wildland fires, airplane-related impacts, or conflicts with emergency response plans. The Modified Project would not result in any new potential impacts to Hazards and Hazardous Materials and would not increase the significance of any impacts to Hazards and Hazardous Materials. Mitigation Measures identified in Section 4.6, Hazards and Hazardous Materials, for the Original Project would be sufficient in addressing the requirements for the Modified Project.

There are no new impacts beyond what was addressed in the Final EIR, and there are no changed circumstances or new information that meets the standard for requiring further environmental review under CEQA Guidelines Section 15162.

GEOLOGY, SOILS, SEISMICITY, AND PALEONTOLOGICAL RESOURCES

Impact 4.7-1: Risks to People and Structures Caused by Strong Seismic Ground Shaking. (Less than Significant with Mitigation).

Mitigation Adopted by the City: Mitigation Measure 4.7-1. Residual impact is less than significant.

Mitigation Measure 4.7-1:

a. Before the start of construction activities and before issuance of a grading permit, a final geotechnical subsurface investigation report shall be prepared by the project applicant(s) for the proposed development and shall be submitted to the City Public Works Department. The final geotechnical engineering report shall be prepared according to the standards in the current version of the CBC adopted at the time, and shall address and make recommendations on the following that shall be implemented by the project applicant(s) for all project phases:

- *seismic design;*
- *site preparation;*
- *appropriate sources and types of fill;*
- *potential need for soil amendments;*
- *road, pavement, and parking areas;*
- *structural foundations, including retaining wall design;*
- *grading practices;*
- *erosion/winterization;*
- *shallow surface water table;*
- *expansive soils/lateral spreading/subsidence;*
- *soil corrosivity;*
- *unstable soils; and*
- *liquefaction.*

In addition to the recommendations for the conditions listed above, the geotechnical investigation shall include further subsurface testing of soil and groundwater conditions (as determined necessary by the geotechnical engineer) and shall determine appropriate foundation designs that are consistent with the CBC. All recommendations contained in the final geotechnical engineering report shall be implemented by the project applicant(s). Special recommendations contained in the geotechnical engineering report shall be noted on the grading plans and implemented as appropriate before construction begins. Design and construction of all new development in all phases of the project shall be in accordance with the CBC. It is the responsibility of the project applicant(s) to provide for engineering inspection and certification that earthwork has been performed in conformity with recommendations contained in the geotechnical report.

b. Before issuance of a grading permit, the approved project design plans and specifications, including grading and foundation plans, shall be reviewed by a soils engineer approved by the City. This review shall be completed to assess whether the recommendations in the geotechnical report (Kleinfelder 2007) are sufficient for construction of the buildings described in the final project design plans. If these measures are deemed insufficient, the geotechnical engineer shall prepare a supplemental site-specific geotechnical report with appropriate recommendations sufficient to ensure the safety of project structures and site occupants.

c. The on-site soils will likely be saturated by rainfall in the winter and early spring months. If the construction schedule requires continued work during the wet months, the City shall require the applicant to consult with a qualified civil engineer and implement any additional recommendations provided, as conditions warrant.

Impact 4.7-2: Risks to People and Structures Caused by Seismic-Related Ground Failure. (Less than Significant with Mitigation).

Mitigation Adopted by the City: Mitigation Measure 4.7-2. Residual impact is less than significant.

Mitigation Measure 4.7-2: *The applicant shall implement Mitigation Measure 4.7-1, described above, to reduce the risks to people and structures of seismic-related ground failure at the project site.*

Impact 4.7-3: Construction-Related Erosion Hazards. (Less than Significant with Mitigation).

Mitigation Adopted by the City: Mitigation Measure 4.7-3. Residual impact is less than significant.

Mitigation Measure 4.7-3:

a. *A grading and erosion control plan shall be prepared by a California-registered civil engineer and submitted to the Manteca Department of Public Works prior to issuance of any grading permits. The plan shall be consistent with the CBC grading requirements and shall include the site-specific grading proposed for the new development. The project applicant shall ensure that the construction contractor is responsible for securing a source of transportation and deposition of excavated materials.*

b. *BMPs for erosion and siltation prevention, as further described in Chapter 4.9, "Hydrology and Water Quality," of this document, shall be implemented at the project site. The project applicant shall consult with the Central Valley Regional Water Quality Control Board to acquire the appropriate regulatory approvals that may be necessary to obtain Section 401 water quality certification, SWRCB statewide NPDES stormwater permit for general construction activity, and any other necessary site-specific waste discharge requirements or waivers. As required under the NPDES stormwater permit for general construction activity, the project applicant shall prepare and submit the appropriate notice of intent (NOI) and prepare the SWPPP and any other necessary engineering plans and specifications for pollution prevention and control. The SWPPP and other appropriate plans shall identify and specify the use of erosion and sediment control BMPs, means of waste disposal, implementation of approved local plans, nonstormwater management controls, permanent postconstruction BMPs, and inspection and maintenance responsibilities. The SWPPP shall also specify the pollutants that are likely to be used during construction that could be present in stormwater drainage and non-stormwater discharges. A sampling and monitoring program shall be included in the SWPPP that meets the requirements of SWRCB Order 99-08-DWQ to ensure that the BMPs are effective.*

   Construction techniques shall be identified that would reduce the potential for runoff, and the plan shall identify the erosion and sedimentation control measures to be implemented. Erosion and sediment control measures could include the use of detention basins, berms, swales, wattles, and silt fencing; and covering or watering of stockpiled soils to reduce wind erosion. Stabilization of construction entrances to minimize trackout (control dust) is commonly achieved by installing filter fabric and crushed rock to a depth of approximately 1 foot. The SWPPP shall also specify spill prevention and contingency measures, identify the types of materials used for equipment operation, and identify measures to prevent or clean up spills of hazardous materials used for equipment operation and hazardous waste. Emergency procedures for responding to spills shall also be identified. BMPs identified in the SWPPP shall be used in all

subsequent site development activities. The SWPPP shall identify personnel training requirements and procedures that would be used to ensure that workers are aware of permit requirements and proper installation and performance inspection methods for BMPs specified in the SWPPP. The SWPPP shall also identify the appropriate personnel responsible for supervisory duties related to implementation of the SWPPP. All construction contractors shall retain a copy of the approved SWPPP on the construction site.

Impact 4.7-4: Risks to People and Structures Resulting from Unstable Soil Conditions. (Less than Significant).

Mitigation Adopted by the City: None

Impact 4.7-5: Risk of Structural Damage Caused by Corrosive Soils. (Less than Significant with Mitigation).

Mitigation Adopted by the City: Mitigation Measure 4.7-5. Residual impact is less than significant.

Mitigation Measure 4.7-5: *The project applicant shall implement Mitigation Measure 4.7-1, described above, to reduce the risks to people and structures from soil corrosivity at the project site.*

Discussion

These impacts were identified and discussed in Section 4.7, Geology, Soils, Seismicity, and Paleontological Resources (pages 4.7-12 through 4.7-15 of the Draft EIR).

The proposed modifications to the Original Project are not substantial changes to the originally anticipated project relating to geology, soil, seismicity, and paleontological resources. Due to the site-specific nature of impacts to geology, soils, seismicity, and paleontological resources, the Modified Project would not result in new impacts or cause increases in the severity of previously identified impacts to geology, soils, and minerals when compared to the Original Project. The Modified Project would not result in changes to development patterns and does not designate any new sites for development or result in any substantial changes to the construction methods or location of development that would change the potential for development to be exposed to geologic and soil hazards. Therefore, the Modified Project would also not result in increased impacts associated with soil erosion or septic/alternative wastewater issues. Mitigation Measures identified in Section 4.7, Geology, Soils, Seismicity, and Paleontological Resources, for the Original Project would be sufficient in addressing the requirements for the Modified Project.

There are no new impacts beyond what was addressed in the Final EIR. Lastly, there are no changed circumstances or new information that meets the standard for requiring further environmental review under CEQA Guidelines Section 15162.

AGRICULTURAL RESOURCES

Impact 4.8-1: Direct Conversion of 48.5 Acres of Important Farmland to Nonagricultural Urban Use. (Significant and Unavoidable)

Mitigation Adopted by the City: Mitigation Measure 4.8-1. Residual impact is significant and Unavoidable.

Mitigation Measure 4.8-1: *The project applicant shall pay the required City of Manteca agricultural mitigation fee to help offset the conversion of Important Farmland. Consistent with Chapter 13.42 of the Manteca Municipal Code, an agricultural mitigation fee shall be assessed for every acre of Important Farmland that would be developed as part of the proposed project and shall be provided to the City. Under the City's program, the fees collected would be used to acquire farmland conservation easements and/or farmland deed restrictions. Consistent with goals of the City's Right-to-Farm ordinance, this mitigation measure would help reduce the occurrence of conflicts between nonagricultural and agricultural land uses caused by development pressures, by preserving agricultural lands located within the project vicinity.*

Implementation of this mitigation measure would substantially lessen significant impacts associated with the conversion of 48.5 acres of Important Farmland on the project site, by funding conservation easements that would provide assistance to the public and private sectors in protecting other farmland from the pressures of development. The agricultural mitigation fee would be used to specifically purchase farmland easements and/or farmland deed restrictions to partially offset project impacts; nonetheless, 65 acres would still be lost. In addition, no net new farmland would be made available nor would productivity of existing farmland be improved as a result of this mitigation measure. Therefore, full compensation for total losses of Important Farmland would not be achieved. No other feasible mitigation is available. Impact 4.8-1 ("Direct Conversion of 48.5 Acres of Important Farmland to Nonagricultural Urban Use") would remain significant and unavoidable after mitigation.

Impact 4.8-2: Conflict with Surrounding Agricultural Operations. (Significant and Unavoidable)

Mitigation Adopted by the City: Mitigation Measure 4.8-2. Residual impact is significant and unavoidable.

Mitigation Measure 4.8-2: *The project applicant shall prepare an agricultural conflict management plan that identifies specific measures that would be implemented to minimize, to the maximum degree possible, potential conflicts with adjacent agricultural operations. At a minimum, the plan shall identify (1) the properties adjacent to the project site that would be in active agricultural production at the time the first occupancy permit is issued, (2) the type of farming operations that would occur at these properties, and (3) the specific measures that would be implemented to minimize potential conflicts. These measures could include, but are not limited to, the posting of signs at regular intervals determined by the City to deter trespassing, posting of "No Parking" signs along the frontage of adjacent agricultural properties, installation of fencing on the project site, and posting of signs warning drivers of the potential for farm vehicle traffic. The project applicant shall coordinate with the City and adjacent landowners regarding the placement of signs. All identified measures shall be in place prior to issuance of the first occupancy permit.*

Discussion

These impacts were identified and discussed in Section 4.8, Agricultural Resources (pages 4.8-5 through 4.8-7 of the Draft EIR).

The proposed modifications to the Original Project are not substantial changes to the originally anticipated project relating to agricultural and forest resources. Resources of this type are site specific, and the Modified Project does not designate any new sites for development, and would not result in any changes to the location or footprint of development contemplated in the EIR.

Mitigation Measures identified in Section 4.8, Agricultural Resources, for the Original Project would be sufficient in addressing the requirements for the Modified Project.

The Modified Project would not result in any new potential impacts to agricultural and forest resources beyond those addressed in the EIR, and would not increase the severity of any impacts related to agricultural and forest resources. Therefore, the proposed project does not increase the severity of the impacts beyond what was addressed in the Final EIR. There are no new impacts beyond what was addressed in the Final EIR. Lastly, there are no changed circumstances or new information that meets the standard for requiring further environmental review under CEQA Guidelines Section 15162.

HYDROLOGY AND WATER QUALITY

Impact 4.9-1: Temporary Construction-Related Water Quality Effects. (Less than Significant with Mitigation).

Mitigation Adopted by the City: Mitigation Measure 4.9-1. Residual impact is less than significant.

Mitigation Measure 4.9-1: Temporary Construction-Related Water Quality Effects.

The project applicant shall implement Mitigation Measure 4.7-3, "Construction-Related Erosion Hazards."

Impact 4.9-2: Long-Term Water Quality Effects of Urban Runoff. (Less than Significant with Mitigation).

Mitigation Adopted by the City: Mitigation Measure 4.9-2. Residual impact is less than significant.

Mitigation Measure 4.9-2: Long-Term Water Quality Effects of Urban Runoff.

The project applicant shall implement permanent water quality features (BMPs) designed in conformance with standards of the Central Valley RWQCB, the City of Manteca, and SSJID. The applicant shall submit designs for these features to the City prior to issuance of a grading permit. The project applicant shall implement BMPs such as, but not limited to, the following:

a. To address peak stormwater discharge rates, the project applicant shall confirm (in coordination with the City, SSJID, and Central Valley RWQCB) that the proposed 20.04 acre-foot on-site stormwater detention basin is properly sized to accommodate the proposed project.

b. The project shall be designed to minimize, to the maximum extent practicable, the introduction of pollutants of concern that may result in significant impacts, generated from site runoff of directly connected impervious areas, to the storm water conveyance system as approved by the City. Pollutants of concern consist of any pollutants that exhibit one or more of the following characteristics: current loadings or historic deposits of the pollutant are adversely affecting the beneficial uses of a receiving water, elevated levels of the pollutant are found in sediments of a receiving water and/or have the potential to bioaccumulate in organisms therein, or the detectable inputs of the pollutant are at concentrations or loads considered potentially toxic to humans and/or flora and fauna.

c. Project plans shall include BMPs consistent with local codes, ordinances, or other regulatory mechanism to:

- *decrease the potential of slopes and/or channels (e.g., slope of the on-site detention basin and any drainage swales) from eroding and affecting stormwater runoff;*
- *convey runoff safety from the tops of slopes and stabilize disturbed slopes;*
- *use natural drainage systems to the maximum extent practicable;*
- *stabilize permanent channel crossings;*
- *vegetate slopes with native or drought tolerant vegetation, as appropriate; and*
- *install energy dissipaters, such as riprap, at the outlets of new storm drains, culverts, conduits, or channels that enter unlined channels in accordance with applicable specifications to minimize erosion, with the approval of all agencies with jurisdiction (e.g., USACE and DFG).*

d. The project applicant shall provide storm drain system stenciling and signage, where appropriate. Storm drain stencils are highly visible source controls that are typically placed directly adjacent to storm drain inlets. The stencil contains a brief statement that prohibits the dumping of improper materials into the stormwater conveyance system. Graphical icons, either illustrating anti-dumping symbols or images of receiving water fauna (such as fish), are effective supplements to the anti-dumping message. All storm drain inlets and catch basins within the project area shall be stenciled with prohibitive language (e.g., NO DUMPING – DRAINS TO RIVER) and/or graphical icons to discourage illegal dumping.

e. Where proposed project plans include outdoor areas for storage of materials that may contribute pollutants to the stormwater conveyance system, the following structural or treatment BMPs shall be implemented:

- *materials with the potential to contaminate storm water shall be: (1) placed in an enclosure such as, but not limited to, a cabinet, shed, or similar structure that prevents contact with runoff or spillage to the stormwater conveyance system; or (2) protected by secondary containment structures such as berms, dikes, or curbs;*
- *the storage area shall be paved and sufficiently impervious to contain leaks and spills; and*
- *the storage area shall have a roof or awning to minimize collection of storm water within the secondary containment area.*

f. To minimize the off-site transport of pollutants from parking areas, the applicant shall implement stormwater BMPs, such as bioretention areas in landscaping or any swale areas (to the maximum extent feasible), to infiltrate or treat runoff.

Implementation of nonstructural BMPs, through various public education and outreach programs maintained by the City under the municipal NPDES stormwater permit, would also serve to limit the types, amounts, and likely discharges of urban runoff into stormwater.

Impact 4.9-3: Potential On-site and Off-site Flooding Risk from Increased Stormwater Runoff. (Less than Significant with Mitigation).

Mitigation Adopted by the City: Mitigation Measure 4.9-3. Residual impact is less than significant.

Mitigation Measure 4.9-3: Potential On-Site and Off-Site Flooding Risk from Increased Stormwater Runoff.

The project site is located in the South Drain subshed, and will discharge stormwater to the FCOC via SSJID Drain 8. Although the project involves construction of adequately sized on-site infrastructure to meet storm drain demands, the City has identified off-site infrastructure that is needed to accommodate build-out of the area south of SR 120, in accordance with the 2006 SDMP.

As part of the project, the project applicant shall construct a stilling well at the junction of Drain 8 and Drain 8A, with associated improvements to the City's "Supervisory Control and Data Acquisition" (SCADA) system to allow for enhanced monitoring of Drain 8 water levels as part of the project. This will accommodate near-term discharge of project stormwater.

To ensure adequate long-term drainage capacity for the project's stormwater flows certain culvert crossing along the FCOC are required to be improved as identified in the 2006 SDMP. The project applicant shall pay its fair share costs for construction of these necessary South Drain subshed stormwater improvements; FCOC culvert crossing at Louise Avenue, Union Pacific Railroad, Roth Road, and the Drain 8 "Farm Road". The project applicant shall coordinate with the City of Manteca to determine the project's fair share costs of these identified improvements.

Impact 4.9-4: Impacts on Groundwater. (Less than Significant).

Mitigation Adopted by the City: None

Impact 4.9-5: Reduction in Groundwater Recharge. (Less than Significant).

Mitigation Adopted by the City: None

Impact 4.9-6: Potential for Exposure to the 200-Year Flood (Pursuant to SB 5). (Less than Significant).

Mitigation Adopted by the City: None

Discussion

These impacts were identified and discussed in Section 4.9, Hydrology and Water Quality (pages 4.9-12 through 4.9-20 of the Draft EIR).

The proposed modifications to the Original Project are not substantial changes to the originally anticipated project relating to hydrology and water quality. The Modified Project would not result in changes to development patterns and does not designate any new sites for development or result in any substantial changes to the construction methods or location of development that would change the potential for development to increase the significance of impacts, or risks related to hydrology and water quality. The project site is not located within the 100-year or 200-year floodplain, and as such, the Modified Project would not place housing within the 100-year or 200-year floodplain.

The Modified Project would not substantially deplete groundwater supplies as the City has sufficient water supplies, including, groundwater sources, to serve the project and the City's other existing and projected future water demands. Mitigation Measures identified in Section 4.9,

Hydrology and Water Quality, for the Original Project would be sufficient in addressing the requirements for the Modified Project.

The proposed changes do not increase the severity of the impacts beyond what was addressed in the Final EIR. Further, there are no new impacts beyond what was addressed in the Final EIR, and there are no changed circumstances or new information that meets the standard for requiring further environmental review under CEQA Guidelines Section 15162.

PUBLIC SERVICES AND UTILITIES

Impact 4.10-1: Increased Demand for Water Supply, Treatment, Storage, and Distribution. (Less than Significant).

Mitigation Adopted by the City: None

Impact 4.10-2: Environmental Impacts Associated with the SSJID SCSWSP. (Less than Significant).

Mitigation Adopted by the City: None

Impact 4.10-3: Increased Demand for Wastewater Treatment and Conveyance Facilities. (Less than Significant)

Mitigation Adopted by the City: None

Impact 4.10-4: Increased Generation of Solid Waste. (Less than Significant)

Mitigation Adopted by the City: None

Impact 4.10-5: Increased Demand for Electricity and Natural Gas and Required Extension of Electrical and Natural Gas Infrastructure. (Less than Significant)

Mitigation Adopted by the City: None

Impact 4.10-6: Increased Demand for Fire Protection Facilities and Services. (Less than Significant)

Mitigation Adopted by the City: None

Impact 4.10-7: Increased Demand for Fire Flow. (Less than Significant)

Mitigation Adopted by the City: None

Impact 4.10-8: Increased Demand for Police Protection Facilities and Services. (Less than Significant).

Mitigation Adopted by the City: None

Impact 4.10-9: Impacts on Existing Utility Corridors. (Less than Significant With Mitigation).

Mitigation Adopted by the City: Mitigation Measure 4.10-9. Residual impact is less than significant.

Mitigation Measure 4.10-9: *PG&E owns and operates natural gas and electric facilities that are located within and adjacent to the proposed project area. To promote the safe and reliable maintenance and operation of utility facilities, the California Public Utilities Commission (CPUC) has mandated specific clearance requirements between utility facilities and surrounding objects or construction activities. To ensure compliance with these standards, the applicant will coordinate with PG&E early in the development of project plans. Any proposed development plans will provide for unrestricted utility access and prevent easement encroachments that might impair the safe and reliable maintenance and operation of PG&E's facilities.*

The project applicant shall be responsible for the costs associated with any relocation of existing PG&E facilities to accommodate the development of the proposed project. Because facilities relocations require long lead times and are not always feasible, the applicant is encouraged to consult with PG&E as early in the planning stages as possible. Relocations of PG&E's electric transmission and substation facilities (50,000 volts and above) could also require formal approval from the CPUC. If required, this approval process could take up to 2 years to complete.

Discussion
These impacts were identified and discussed in Section 4.10, Public Services and Utilities (pages 4.10-9 through 4.10-17 of the Draft EIR).

Public Services and Recreation
The proposed modifications to the Original Project are not substantial changes to the originally anticipated project relating to public services and recreation. The Modified Project does not designate any new sites for development and would not result in any changes to the location of development.

The Modified Project would result in an increase of 281 DU and a decrease of 153,100 SF of non-residential uses. Based on 3.31 persons per household,[3] the Modified Project has the potential to add up to 930 residents to the City which were not previously accounted for as part of the Union Crossing Project Draft EIR. The Modified Project is currently in an area designated General Commercial by the Manteca General Plan.

While the Modified Project may increase future residential development in the City, there is no evidence that this will result in a substantial increase in public service needs related to police, fire, parks, or other public facilities. Furthermore, the project would be subject to the public facilities impact fees to offset its impacts on police, fire, parks, or other public facilities and services.

Implementation of the Modified Project would not adversely impact existing fire and emergency services within the City, and would not require the construction of new fire protection facilities.

[3] Source: California Department of Finance, Demographics Research Unit. Report E-5: Population and Housing Estimates for Cities, Counties, and the State, January 1, 2011-2019, with 2010 Benchmark. Released May 1, 2019.

In order to provide adequate fire protection and suppression services to the project site, the City of Manteca Fire Department must have access to adequate onsite hydrants with adequate fire-flow pressure available to meet the needs of fire suppression units. The final site plans and development specifications developed for the Modified Project will indicate the location and design specifications of the fire hydrants that will be required within the project site.

It is not anticipated that implementation of the Modified Project would result in significant new demand for police services. Project implementation would not require the construction of new police facilities to serve the project site, nor would it result in impacts to the existing response times and existing police protection service levels beyond that which was discussed in the Union Crossing Project Draft EIR.

Implementation of the Modified Project would result in population growth within the City of Manteca, which would increase enrollment at schools within the Manteca Unified School District. Under the provisions of SB 50, a project's impacts on school facilities are fully mitigated via the payment of the requisite new school construction fees established pursuant to Government Code Section 65995. Payment of the applicable impact fees by the project applicant, and ongoing revenues that would come from taxes, would ensure that project impacts to school services are less than significant.

The Modified Project would not result in any new potential impacts to public services and recreation, and would not increase the significance of any impacts to public services and recreation.

Wastewater Generation

The City of Manteca owns and operates a wastewater collection, treatment, and disposal system, and provides sanitary sewerage service to the City of Manteca and a portion of the City of Lathrop. On April 17, 2015, the Regional Water Quality Control Board (RWQCB) adopted Waste Discharge Requirements Order No. R5-2015-0026 NPDES NO. CA0081558, prescribing waste discharge requirements for the City of Manteca Wastewater Quality Control Facility (WQCF) and allowing expansion of the plant up to 17.5million gallons per day (mgd).

The City's Wastewater Quality Control Facility Master Plan Update includes projected wastewater generation factors for various land uses. Based on these calculations it was determined that the City will have flows totaling 19.5 mgd as of the General Plan horizon of 2023 with a buildout capacity of 23.0 mgd. The study includes a reduction of industrial and general commercial wastewater generation factors to reflect historical water use data from local businesses.

The notable changes by phase for the Modified Project include:

- Decrease of 153,100 SF of non-residential uses; and
- Increase of 281 multi-family DU in Phase 2.

The multi-family area is approximately 12.6 acres with a maximum of 281 residential units (which results in a density of 22.3 DU per acre). According to the City's 2012 Wastewater Collection System Master Plan Update, new High Density Residential uses (15.1 to 25.0 DU per acre) are estimated to generated 2,337 gallons per acre per day. Using this rate, 12.6 acres of high density residential uses would generate approximately 29,446.2 gallons per day (gpd) of wastewater. The decrease of 153,100 SF of non-residential uses would result in a decreased wastewater treatment demand compared to the Original Project, while the increase of residential uses would increase wastewater

treatment demand. Overall, the wastewater treatment demand from the Modified Project would be comparable to the Original Project.

The City's available capacity would ensure that there would not be a determination by the wastewater treatment and/or collection provider that there is inadequate capacity to serve the proposed project's projected demand in addition to the provider's existing commitments. Additionally, any planned expansion to the WQCF with a subsequent allocation of capacity to the proposed project would ensure that there would not be a determination by the wastewater treatment and/or collection provider that there is inadequate capacity to serve the proposed project's projected demand in addition to the provider's existing commitments.

Due to the smaller volume of traffic expected on the site as compared with the Original Project, impacts to utilities, including wastewater generation, are expected to be fewer than in the Original Project. No improvements or expansions to the existing WQCF are required, and the addition of project-generated wastewater would not result in any RWQCB violations related to effluent treatment or discharge. Implementation of the Modified Project would have a less than significant impact and no mitigation is required.

Water Supply

A Water Supply Assessment evaluating the ability of the City's existing water distribution system to meet required minimum pressures and flows for the Original Project was prepared in 2006. The analysis for the Original Project concludes that the City's existing potable water supplies are sufficient to meet the City's existing and projected future potable water demands, including those future potable water demands associated with the Modified Project, under all hydrologic conditions (normal years and dry years). Due to the smaller volume of traffic expected on the site as compared with the Original Project, impacts to utilities, including water supply, are expected to be fewer than in the Original Project.

The addition of the project's water demand would not exceed the City's available water supply. The City's water treatment and conveyance infrastructure is adequate to serve existing demand, in addition to the demand created by the Modified Project. This is a less than significant impact and no mitigation is required.

Solid Waste

The City of Manteca Solid Waste Division (SWD) provides solid waste hauling service for the City of Manteca and would serve the proposed project. Solid waste from Manteca is primarily landfilled at the Forward Sanitary Landfill, located northeast of Manteca. Other landfills used include Foothill Sanitary and North County.

The permitted maximum disposal at the Forward Landfill is 8,668 tons per day. The total permitted capacity of the landfill is 51.04 million cubic yards, which is expected to accommodate an operational life until January 1, 2020. The remaining capacity is 23,700,000 cubic yards. Solid waste generated by the proposed project was estimated based on CalRecycle generation rate estimates by use.

The residential uses are estimated to generate roughly 10 pounds per day per household. It is estimated that the proposed 281 residential units would generate 2,810 pounds (1.4 tons) of solid waste per day.

The Forward Landfill is projected to close in the year 2020. At that time the City can utilize the Foothill Landfill as a location for solid waste disposal. The City's solid waste per capita generation has decreased since 2007 due to the waste diversion efforts of the City. The permitted maximum disposal at the Forward Landfill is 8,668 tons per day. Currently, the average daily disposal is 620 tons per day. The total permitted capacity of the landfill is 51.04 million cubic yards. The addition of solid waste associated with the proposed project to the Forward Landfill would not exceed the landfill's remaining capacity. The City will need to secure a new location of disposal of all solid waste generated in the City when the Forward landfill is ultimately closed. There are several options that the City will have to consider for solid waste disposal at that time which is estimated to be 2020. The multi-family development would be subject to the City's monthly rate or charge for the city's waste collection system as outlined in the City's Municipal Code.

Conclusion
The Modified Project would not result in any new potential impacts to public services, utilities, and recreation, and would not increase the significance of any impacts to public services, utilities, and recreation. There are no new impacts beyond what was addressed in the Final EIR. Lastly, there are no changed circumstances or new information that meets the standard for requiring further environmental review under CEQA Guidelines Section 15162.

TRANSPORTATION AND CIRCULATION

Impact 4.11-1: Increases in Project-Related Traffic Volumes on Local Roadway Segments. (Less than Significant).

Mitigation Adopted by the City: None

Impact 4.11-2: Increases in Peak Hour Traffic Volumes on Regional Roadways Resulting in Unacceptable Levels of Service. (Significant and Unavoidable).

Mitigation Adopted by the City: Mitigation Measures 4.11-2a and 4.11-2b. Residual impact is significant and unavoidable.

Mitigation Measure 4.11-2a: Union Road/Daniels Street Intersection.

The applicant shall install a traffic signal, a northbound left-turn lane, a northbound through lane, and a southbound through lane. As shown in Table 4.11-22, the installation of a traffic signal, a northbound left-turn lane, a northbound through lane, and a southbound through lane would improve traffic operations to LOS A during both the a.m. and p.m. peak hour. However, due to close spacing with interim signals at the Union Road/eastbound SR 120 ramps, the signalization of this intersection is not feasible unless the interchange is reconstructed. The City and Caltrans are planning for and intend to reconstruct the Union Road/SR 120 interchange including signalizing the Union Road/Daniels Street intersection and reconstructing the interchange to improve the signal spacing between the westbound ramps intersection and Daniels Street. This would reduce the project's impact at this intersection to a less-than-significant level. Therefore, prior to issuance of a building permit, the applicant shall pay their fair share towards the reconstruction of the Union Road/SR 120 interchange (which includes intersection widening and signalization of the Union Road/Daniels Street intersection).

Construction of this improvement would occur off the project site. Impacts associated with construction of this improvement would generally consist of construction-related air, noise, biological habitat, and traffic impacts. Specific environmental impacts related to

construction of this improvement would require preparation of a separate environmental document (e.g., IS/ MND) to analyze specific environmental impacts related to this improvement outside the project site. Therefore, additional significant environmental impacts not already identified or evaluated in this DEIR could occur. However, at this time it is too speculative to determine these impacts without a proposed design and alignment for the improvement.

***Mitigation Measure 4.11-2b: Union Road/Eastbound SR 120 Ramps Intersection**.*

The applicant shall install a northbound right-turn lane. As shown in Table 4.11-22, the added northbound right-turn lane would improve traffic operations to LOS B and D during the a.m. and p.m. peak hour, respectively. Adequate right-of-way is available within the existing alignment to accommodate this improvement.

Impact 4.11-3: Project and Cumulative Bicycle Circulation Impacts. (Less than Significant).

Mitigation Adopted by the City: None

Impact 4.11-4: Project and Cumulative Pedestrian Circulation Impacts. (Less than Significant with Mitigation).

Mitigation Adopted by the City: Mitigation Measure 4.11-4. Residual impact is less than significant.

***Mitigation Measure 4.11-4:** Prior to approval of final maps, the applicant shall identify in project plans all required sidewalks along the project frontage per City standards.*

Impact 4.11-5: Project and Cumulative Bus Transit Services. (Significant and Unavoidable).

Mitigation Adopted by the City: Mitigation Measure 4.11-5. Residual impact is significant and unavoidable.

***Mitigation Measure 4.11-4:** Prior to approval of final maps, the project applicant shall coordinate with the City and modify project designs ton provide appropriate bus transit facilities at the project site. These facilities shall be designed to meet Americans with Disabilities Act design standards and provide adequate width, vehicle and pedestrian circulation, turning radius of streets, driveways, and parking lots. These facilities could include, but are not limited to, one or more sheltered transit stops along the project frontage on either Atherton Drive or within the project site.*

Impact 4.11-6: Increases in Peak Hour Traffic Volumes on Local Roadway Segments Resulting in Unacceptable Levels of Service under Cumulative Plus Project Conditions (2035). (Significant and Unavoidable).

Mitigation Adopted by the City: Mitigation Measure 4.11-6a through 4.11-6l. Residual impact is significant and unavoidable.

Mitigation Measure 4.11-6a: Atherton Drive between Union Road and Main Street.

- *Prior to issuance of any building permits, the applicant shall pay their fair share cost for widening of Atherton Drive to four lanes between Union Road and Main Street. Construction of this improvement would occur off the project site. Impacts associated with construction of this improvement would generally consist of*

construction-related air, noise, biological habitat, and traffic impacts. Specific environmental impacts related to construction of this improvement were fully analyzed in a previous environmental document (Atherton Road Extension and Union Road Widening Project, Initial Study/Proposed Mitigated Negative Declaration; November 27, 2006; SCH No. 2006112136). Therefore, additional significant environmental impacts not already identified or evaluated in this DEIR would not occur.

- *By widening this roadway segment to four lanes, roadway operations would improve to LOS C (see Table 4.11-23). In addition, this mitigation measure would be consistent with the updated PFIP project list.*

Mitigation Measure 4.11-6b: Airport Way between Yosemite Avenue and Daniels Street.

- *Prior to issuance of any building permits, the applicant shall pay their fair share cost for widening of Airport Way to six lanes between Yosemite Avenue and Daniels Street. Construction of this improvement would occur off the project site. Impacts associated with construction of this improvement would generally consist of construction-related air, noise, biological habitat, and traffic impacts. Specific environmental impacts related to construction of this improvement would require preparation of a separate environmental document (e.g., IS, EIR) to analyze specific environmental impacts related to this improvement outside the project site. Therefore, additional significant environmental impacts not already identified or evaluated in this DEIR could occur. However, at this time it is too speculative to determine these impacts without a proposed alignment for the improvement.*
- *By widening this roadway segment to six lanes, roadway operations would improve to LOS C (see Table 4.11-23). In addition, this mitigation measure would be consistent with the updated PFIP project list.*

Mitigation Measure 4.11-6c: Airport Way between Daniels Street and SR 120.

- *Prior to issuance of any building permits, the applicant shall pay their fair share cost for widening of Airport Way to six lanes between Daniels Street and SR 120. Construction of this improvement would occur off the project site. Impacts associated with construction of this improvement would generally consist of construction-related air, noise, biological habitat, and traffic impacts. Specific environmental impacts related to construction of this improvement would require preparation of a separate environmental document (e.g., IS, EIR) to analyze specific environmental impacts related to this improvement outside the project site. Therefore, additional significant environmental impacts not already identified or evaluated in this DEIR could occur. However, at this time it is too speculative to determine these impacts without a proposed alignment for the improvement.*
- *By widening this roadway segment to six lanes, roadway operations would improve to LOS C (see Table 4.11-23). In addition, this mitigation measure would be consistent with the updated PFIP project list.*

Mitigation Measure 4.11-6d: Airport Way between Atherton Drive and Woodward Avenue.

- *Prior to issuance of any building permits, the applicant shall pay their fair share cost for widening of Airport Way to six lanes between Atherton Drive and Woodward Avenue. Construction of this improvement would occur off the project site. Impacts associated with construction of this improvement would generally consist of construction-related air, noise, biological habitat, and traffic impacts.*

Specific environmental impacts related to construction of this improvement would require preparation of a separate environmental document (e.g., IS, EIR) to analyze specific environmental impacts related to this improvement outside the project site. Therefore, additional significant environmental impacts not already identified or evaluated in this DEIR could occur. However, at this time it is too speculative to determine these impacts without a proposed alignment for the improvement.

- *By widening this roadway segment to six lanes, roadway operations would improve to LOS C conditions (see Table 4.11-23). In addition, this mitigation measure would be consistent with the updated PFIP project list.*

Mitigation Measure 4.11-6e: Airport Way between Woodward Avenue and McKinley Avenue.

- *Prior to issuance of any building permits, the applicant shall pay their fair share cost for widening of Airport Way to six lanes between Woodward Avenue and McKinley Avenue. Construction of this improvement would occur off the project site. Impacts associated with construction of this improvement would generally consist of construction-related air, noise, biological habitat, and traffic impacts. Specific environmental impacts related to construction of this improvement would require preparation of a separate environmental document (e.g., IS, EIR) to analyze specific environmental impacts related to this improvement outside the project site. Therefore, additional significant environmental impacts not already identified or evaluated in this DEIR could occur. However, at this time it is too speculative to determine these impacts without a proposed alignment for the improvement.*
- *By widening this roadway segment to six lanes roadway operations would improve to LOS C conditions (see Table 4.11-23). In addition, this mitigation measure would be consistent with the updated PFIP project list.*

Mitigation Measure 4.11-6f: Union Road between Daniels Street and SR 120.

- *Prior to issuance of any building permits, the applicant shall pay their fair share cost for widening of Union Road to four lanes between Daniels Street and SR 120. Construction of this improvement would occur off the project site. Impacts associated with construction of this improvement would generally consist of construction-related air, noise, biological habitat, and traffic impacts. Specific environmental impacts related to construction of this improvement would require preparation of a separate environmental document (e.g., IS, EIR) to analyze specific environmental impacts related to this improvement outside the project site. Therefore, additional significant environmental impacts not already identified or evaluated in this DEIR could occur. However, at this time it is too speculative to determine these impacts without a proposed alignment for the improvement.*
- *By widening this roadway segment to four lanes roadway operations would improve to LOS D conditions (see Table 4.11-23). In addition, this mitigation measure would be consistent with the updated PFIP project list.*

Mitigation Measure 4.11-6g: Union Road between SR 120 and Atherton Drive.

- *Prior to issuance of any building permits, the applicant shall pay their fair share cost for widening of Union Road to six lanes between SR 120 and Atherton Drive. Construction of this improvement would primarily occur off the project site. Impacts associated with construction of this improvement would generally consist of construction-related air, noise, biological habitat, and traffic impacts. Specific environmental impacts related to construction of this improvement were fully analyzed in a previous environmental document (Atherton Road Extension and*

Union Road Widening Project, Initial Study/Proposed Mitigated Negative Declaration; November 27, 2006; SCH No. 2006112136). Therefore, additional significant environmental impacts not already identified or evaluated in this DEIR would not occur.

- *By widening this roadway segment to six lanes roadway operations would improve to LOS D conditions (see Table 4.11-23). In addition, this mitigation measure would be consistent with the updated PFIP project list.*

Mitigation Measure 4.11-6h: Union Road between Woodward Avenue and Peach Avenue.

- *Prior to issuance of any building permits, the applicant shall pay their fair share cost for widening of Union Road to four lanes between Woodward Avenue and Peach Avenue. Construction of this improvement would occur off the project site. Impacts associated with construction of this improvement would generally consist of construction-related air, noise, biological habitat, and traffic impacts. Specific environmental impacts related to construction of this improvement would require preparation of a separate environmental document (e.g., IS, EIR) to analyze specific environmental impacts related to this improvement outside the project site. Therefore, additional significant environmental impacts not already identified or evaluated in this DEIR could occur. However, at this time it is too speculative to determine these impacts without a proposed alignment for the improvement.*
- *By widening this roadway segment to four lanes roadway operations would improve to LOS C conditions (see Table 4.11-23). In addition, this mitigation measure would be consistent with the updated PFIP project list.*

Mitigation Measure 4.11-6i: Woodward Avenue between McKinley Avenue and Airport Way.

- *Prior to issuance of any building permits, the applicant shall pay their fair share cost for widening of Woodward Avenue to four lanes between McKinley Avenue and Airport Way. Construction of this improvement would occur off the project site. Impacts associated with construction of this improvement would generally consist of construction-related air, noise, biological habitat, and traffic impacts. Specific environmental impacts related to construction of this improvement would require preparation of a separate environmental document (e.g., IS, EIR) to analyze specific environmental impacts related to this improvement outside the project site. Therefore, additional significant environmental impacts not already identified or evaluated in this DEIR could occur. However, at this time it is too speculative to determine these impacts without a proposed alignment for the improvement.*
- *By widening this roadway segment to four lanes roadway operations would improve to LOS C conditions (see Table 4.11-23). In addition, this mitigation measure would be consistent with the updated PFIP project list.*

Mitigation Measure 4.11-6j: Woodward Avenue between Airport Way and Oleander Road.

- *Prior to issuance of any building permits, the applicant shall pay their fair share cost for widening of Woodward Avenue to four lanes between Airport Way and Oleander Road. Construction of this improvement would occur off the project site. Impacts associated with construction of this improvement would generally consist of construction-related air, noise, biological habitat, and traffic impacts. Specific environmental impacts related to construction of this improvement would require preparation of a separate environmental document (e.g., IS, EIR) to analyze specific*

environmental impacts related to this improvement outside the project site. Therefore, additional significant environmental impacts not already identified or evaluated in this DEIR could occur. However, at this time it is too speculative to determine these impacts without a proposed alignment for the improvement.

- *By widening this roadway segment to four lanes roadway operations would improve to LOS C conditions (see Table 4.11-23). In addition, this mitigation measure would be consistent with the updated PFIP project list.*

Mitigation Measure 4.11-6k: Woodward Avenue between Oleander Road and Union Road.

- *Prior to issuance of any building permits, the applicant shall pay their fair share cost for widening of Woodward Avenue to four lanes between Oleander Road and Union Road. Construction of this improvement would occur off the project site. Impacts associated with construction of this improvement would generally consist of construction-related air, noise, biological habitat, and traffic impacts. Specific environmental impacts related to construction of this improvement would require preparation of a separate environmental document (e.g., IS, EIR) to analyze specific environmental impacts related to this improvement outside the project site. Therefore, additional significant environmental impacts not already identified or evaluated in this DEIR could occur. However, at this time it is too speculative to determine these impacts without a proposed alignment for the improvement.*
- *By widening this roadway segment to four lanes roadway operations would improve to LOS C conditions (see Table 4.11-23). In addition, this mitigation measure would be consistent with the updated PFIP project list.*

Mitigation Measure 4.11-6l: Woodward Avenue between Tinnin Road and Main Street.

- *Prior to issuance of any building permits, the applicant shall pay their fair share cost for widening of Woodward Avenue to four lanes between Tinnin Road and Main Street. Construction of this improvement would occur off the project site. Impacts associated with construction of this improvement would generally consist of construction-related air, noise, biological habitat, and traffic impacts. Specific environmental impacts related to construction of this improvement would require preparation of a separate environmental document (e.g., IS, EIR) to analyze specific environmental impacts related to this improvement outside the project site. Therefore, additional significant environmental impacts not already identified or evaluated in this DEIR could occur. However, at this time it is too speculative to determine these impacts without a proposed alignment for the improvement.*
- *By widening this roadway segment to four lanes roadway operations would improve to LOS C conditions (see Table 4.11-23). In addition, this mitigation measure would be consistent with the updated PFIP project list.*

Impact 4.11-7: Increases in Peak Hour Traffic Volumes on Regional Roadways Resulting in Unacceptable Levels of Service under Cumulative Plus Project Conditions (2035). (Significant and Unavoidable).

Mitigation Adopted by the City: Mitigation Measures 4.11-7a through 4.11-7p. Residual impact is significant and unavoidable.

Mitigation Measure 4.11-7a: Airport Way/Yosemite Avenue.

Prior to issuance of any building permits, the applicant shall pay their fair-share of the following intersection improvements, which have been identified in the PFIP projects list:

- *Construct three northbound and southbound through lanes*
- *Construct three eastbound and westbound through lanes*
- *Construct dual left-turn lanes on all approaches*
- *Construct right-turn lanes on all approaches*

Construction of these improvements would occur off the project site. Impacts associated with construction of these improvements would generally consist of construction-related air, noise, biological habitat, and traffic impacts. Specific environmental impacts related to construction of this improvement would require preparation of a separate environmental document (e.g., IS, EIR) to analyze specific environmental impacts related to these improvements outside the project site. Therefore, additional significant environmental impacts not already identified or evaluated in this DEIR could occur. However, at this time it is too speculative to determine these impacts without a proposed design for the improvement.

With implementation of these improvements, the intersection would operate at an acceptable LOS during the a.m. and p.m. peak hours, as shown in Table 4.11-24.

Mitigation Measure 4.11-7b: Airport Way/Wawona Street.

Prior to issuance of any building permits, the applicant shall pay their fair-share of intersection improvements. The impact at this location could be reduced to a less than significant level by constructing the following intersection improvements identified in the PFIP projects list:

- *Signalize the intersection*
- *Construct three northbound and southbound through lanes*
- *Construct a southbound left-turn lane, a northbound right-turn lane, and a westbound right-turn lane*

Construction of these improvements would occur off the project site. Impacts associated with construction of these improvements would generally consist of construction-related air, noise, biological habitat, and traffic impacts. Specific environmental impacts related to construction of this improvement would require preparation of a separate environmental document (e.g., IS, EIR) to analyze specific environmental impacts related to these improvements outside the project site. Therefore, additional significant environmental impacts not already identified or evaluated in this DEIR could occur. However, at this time it is too speculative to determine these impacts without a proposed design and alignment for the improvement.

With implementation of these improvements, the intersection would operate at an acceptable LOS during the a.m. and p.m. peak hours, as shown in Table 4.11-24.

Mitigation Measure 4.11-7c: Airport Way/SR 120 Westbound.

Prior to issuance of any building permits, the applicant shall pay their fair-share to reconstruct the SR 120/Airport Way interchange. The City of Manteca and Caltrans are currently preparing a Project Study Report (PSR) for future interchange improvements at Airport Way/SR 120. As part of the improvements, the Airport Way overpass and ramp

terminal intersections would be designed to provide acceptable LOS D or better operations under cumulative conditions. The future design of the interchange is not yet finalized, but based on the PSR for the Union Road/SR 120 interchange (which is substantially similar to what is proposed for this interchange), and the PFIP project list, the Airport Way/SR 120 interchange would likely have a partial cloverleaf design. The overpass would include three through lanes in each direction. The design for the ramp terminal intersections would include dual left-turn lanes and dedicated right-turn lanes.

Reconstruction of the interchange would occur off the project site. Impacts associated with reconstruction of the interchange would generally consist of construction-related air, noise, biological habitat, and traffic impacts. Specific environmental impacts related to reconstruction of the interchange would require preparation of a separate environmental document (e.g., IS, EIR) to analyze specific environmental impacts related to this improvement outside the project site. Therefore, additional significant environmental impacts not already identified or evaluated in this DEIR could occur. However, at this time it is too speculative to determine these impacts without a proposed design alignment for the improvement. Further, the City and Caltrans are working together to prepare the necessary environmental documents for this improvement.

With reconstruction of the interchange, the Airport Way / SR 120 westbound ramp intersection would operate at an acceptable LOS during the a.m. and p.m. peak hours, as shown in Table 4.11-24.

Mitigation Measure 4.11-7d: Airport Way/SR 120 eastbound.

The applicant shall implement Mitigation Measure 4.11-7c. With reconstruction of the interchange, the Airport Way / /SR 120 eastbound ramp intersection would operate at an acceptable LOS during the a.m. and p.m. peak hours, as shown in Table 4.11-24.

Mitigation Measure 4.11-7e: Airport Way/Atherton Drive.

Prior to issuance of any building permits, the applicant shall pay their fair-share of the following intersection improvements, which are identified in the PFIP projects list:

- *Signalize the intersection*
- *Construct three northbound and southbound through lanes*
- *Construct two eastbound and westbound through lanes*
- *Construct dual left-turn lanes on the eastbound and westbound approaches*

Construction of these improvements would occur off the project site. Impacts associated with construction of these improvements would generally consist of construction-related air, noise, biological habitat, and traffic impacts. Specific environmental impacts related to construction of this improvement would require preparation of a separate environmental document (e.g., IS, EIR) to analyze specific environmental impacts related to these improvements outside the project site. Therefore, additional significant environmental impacts not already identified or evaluated in this DEIR could occur. However, at this time it is too speculative to determine these impacts without a proposed design alignment for the improvements.

With implementation of these improvements, the intersection would operate at an acceptable LOS during the a.m. and p.m. peak hours, as shown in Table 4.11-24.

Mitigation Measure 4.11-7f: Airport Way/Woodward Avenue.

Prior to issuance of any building permits, the applicant shall pay their fair-share of the following intersection improvements, which are identified in the PFIP projects list:

- *Signalize the intersection*
- *Construct two left-turn lanes, three through lanes, and one right-turn lane on the northbound and southbound approaches*
- *Construct two left-turn lanes, two through lanes, and one right-turn lane on the eastbound and westbound approaches.*

Construction of these improvements would occur off the project site. Impacts associated with construction of these improvements would generally consist of construction-related air, noise, biological habitat, and traffic impacts. Specific environmental impacts related to construction of this improvement would require preparation of a separate environmental document (e.g., IS, EIR) to analyze specific environmental impacts related to these improvements outside the project site. Therefore, additional significant environmental impacts not already identified or evaluated in this DEIR could occur. However, at this time it is too speculative to determine these impacts without a proposed design and alignment for the improvements.

With implementation of these improvements, the intersection would operate at an acceptable LOS during the a.m. and p.m. peak hours, as shown in Table 4.11-24.

Mitigation Measure 4.11-7g: Union Road/Yosemite Avenue.

Prior to issuance of any building permits, the applicant shall pay their fair-share of the following intersection improvements, which are identified in the PFIP projects list:

- *Construct dual left-turn lanes at the northbound approach*
- *Construct two eastbound through lanes*
- *Construct right-turn lanes on the westbound, southbound, and northbound approaches.*

Construction of these improvements would occur off the project site. Impacts associated with construction of these improvements would generally consist of construction-related air, noise, biological habitat, and traffic impacts. Specific environmental impacts related to construction of this improvement would require preparation of a separate environmental document (e.g., IS, EIR) to analyze specific environmental impacts related to these improvements outside the project site. Therefore, additional significant environmental impacts not already identified or evaluated in this DEIR could occur. However, at this time it is too speculative to determine these impacts without a proposed design and alignment for the improvements.

With implementation of these improvements, the intersection would operate at an acceptable LOS during the a.m. and p.m. peak hours, as shown in Table 4.11-24.

Mitigation Measure 4.11-7h: Union Road/Wawona Street.

Prior to issuance of any building permits, the applicant shall pay their fair-share of the following intersection improvements, which are identified in the PFIP projects list:

- *Construct two southbound through lanes*
- *Construct a right-turn lane on the northbound approach.*

Construction of these improvements would occur off the project site. Impacts associated with construction of these improvements would generally consist of construction-related air, noise, biological habitat, and traffic impacts. Specific environmental impacts related to construction of this improvement would require preparation of a separate environmental document (e.g., IS, EIR) to analyze specific environmental impacts related to these improvements outside the project site. Therefore, additional significant environmental impacts not already identified or evaluated in this DEIR could occur. However, at this time it is too speculative to determine these impacts without a proposed design and alignment for the improvements.

With implementation of these improvements, the intersection would operate at an acceptable LOS during the a.m. and p.m. peak hours, as shown in Table 4.11-24.

Mitigation Measure 4.11-7i: Union Road/Daniels Street.

Prior to issuance of any grading building permits, the applicant shall pay their fair-share of the following intersection improvements, which are identified in the PFIP projects list:

- *Signalize the intersection*
- *Construct two southbound through lanes*
- *Construct two northbound through lanes*
- *Construct a left-turn lane on the northbound approach.*

Construction of these improvements would occur off the project site. Impacts associated with construction of these improvements would generally consist of construction-related air, noise, biological habitat, and traffic impacts. Specific environmental impacts related to construction of this improvement would require preparation of a separate environmental document (e.g., IS, EIR) to analyze specific environmental impacts related to these improvements outside the project site. Therefore, additional significant environmental impacts not already identified or evaluated in this DEIR could occur. However, at this time it is too speculative to determine these impacts without a proposed design and alignment for the improvements.

With implementation of these improvements, the intersection would operate at an acceptable LOS during the a.m. and p.m. peak hours, as shown in Table 4.11-24.

Mitigation Measure 4.11-7j: Union Road/SR 120 westbound.

The applicant shall pay their fair-share to reconstruct the SR 120/Union Road interchange. The City of Manteca and Caltrans are currently preparing a Project Report/Environmental Document for future interchange improvements at Union Road/SR 120. As part of the improvements, the Union Road overpass and ramp terminal intersections would be designed to provide acceptable LOS D or better operations under cumulative conditions. The future design of the interchange is not yet finalized; but based on the PSR for the interchange and the PFIP project list it would likely have a partial cloverleaf design. The overpass would include two through lanes in each direction. The design for the ramp terminal intersections would include dual left-turn lanes and dedicated right-turn lanes.

Reconstruction of this interchange would occur off the project site. Impacts associated with reconstruction of this interchange would generally consist of construction-related air, noise, biological habitat, and traffic impacts. Specific environmental impacts related to reconstruction of this interchange would require preparation of a separate environmental document (e.g., IS, EIR) to analyze specific environmental impacts related to this improvement outside the project site. Therefore, additional significant environmental

impacts not already identified or evaluated in this DEIR could occur. However, at this time it is too speculative to determine these impacts without a proposed alignment for the improvement.

With reconstruction of this interchange, the intersection would operate at an acceptable LOS during the a.m. and p.m. peak hours, as shown in Table 4.11-24.

Mitigation Measure 4.11-7k: Union Road/SR 120 eastbound.

The applicant shall implement Mitigation Measure 4.11-7j. With reconstruction of the Union Road / SR 120 interchange, the Union Road / SR 120 eastbound ramp intersection would operate at an acceptable LOS during the a.m. and p.m. peak hours, as shown in Table 4.11-24.

Mitigation Measure 4.11-7l: Union Road/Woodward Avenue.

Prior to issuance of any building permits, the applicant shall pay their fair-share of the following intersection improvements, which are identified in the PFIP projects list:

- *Signalize the intersection*
- *Construct two left-turn lanes, two through lanes, and one right-turn lane on each approach.*

Construction of these improvements would occur off the project site. Impacts associated with construction of these improvements would generally consist of construction-related air, noise, biological habitat, and traffic impacts. Specific environmental impacts related to construction of this improvement would require preparation of a separate environmental document (e.g., IS, EIR) to analyze specific environmental impacts related to these improvements outside the project site. Therefore, additional significant environmental impacts not already identified or evaluated in this DEIR could occur. However, at this time it is too speculative to determine these impacts without a proposed design and alignment for the improvements.

With implementation of these improvements, the intersection would operate at an acceptable LOS during the a.m. and p.m. peak hours, as shown in Table 4.11-24

Mitigation Measure 4.11-7m: Main Street/SR 120 westbound.

The applicant shall implement Mitigation Measure 4.11-7j.

With reconstruction of the Union Road / SR 120 interchange, the Union Road / SR 120 westbound ramp intersection would operate at an acceptable LOS during the a.m. and p.m. peak hours, as shown in Table 4.11-24.

Mitigation Measure 4.11-7n: Main Street/SR 120 eastbound.

The applicant shall implement Mitigation Measure 4.11-7j.

With reconstruction of the Union Road / SR 120 interchange, the Main Street / SR 120 eastbound ramp intersection would operate at an acceptable LOS during the a.m. and p.m. peak hours, as shown in Table 4.11-24.

Mitigation Measure 4.11-7o: Main Street/Woodward Avenue.

Prior to issuance of any building permits, the applicant shall pay their fair-share of the following intersection improvements, which are identified in the PFIP projects list:

- *Signalize the intersection*
- *Construct two through lanes at each approach*
- *Construct dual lefts on the northbound, southbound, and westbound approaches.*

Construction of these improvements would occur off the project site. Impacts associated with construction of these improvements would generally consist of construction-related air, noise, biological habitat, and traffic impacts. Specific environmental impacts related to construction of this improvement would require preparation of a separate environmental document (e.g., IS, EIR) to analyze specific environmental impacts related to these improvements outside the project site. Therefore, additional significant environmental impacts not already identified or evaluated in this DEIR could occur. However, at this time it is too speculative to determine these impacts without a proposed design and alignment for the improvements.

With implementation of these improvements, the intersection would operate at an acceptable LOS during the a.m. and p.m. peak hours, as shown in Table 4.11-24.

Mitigation Measure 4.11-7p: Union Road/Project Access Driveway (Study intersection #21).

The applicant shall prohibit left turn outs at the Union Road/Project Access Driveway (Study Intersection #21).

This intersection operates acceptably with left turns out in the existing plus project scenario; however, at a time between the existing plus project scenario and the cumulative plus project scenario intersection operations become unacceptable. Therefore, the applicant shall either 1) alter the site plan to show no left turns out or 2) construct the intersection to allow left turns out and pay the City of Manteca to monitor the intersection annually to determine when operations fall below acceptable levels and the turning movement shall be prohibited. The effects of prohibiting left turns out at this intersection were examined on the Union Road/Atherton Drive and Atherton Drive/Project Access 26 intersections to ensure that operations remained acceptable. When left turns are prohibited, the applicant shall construct a pork-chop island or a raised center median to ensure that vehicles are physically prohibited from making this movement.

Impact 4.11-8: Increases in Traffic Volumes on Freeway Mainlines Resulting in Unacceptable Levels of Service under Cumulative Plus Project Conditions (2035). (Significant and Unavoidable).

Mitigation Adopted by the City: Mitigation Measure 4.11-8. Residual impact is significant and unavoidable.

Mitigation Measure 4.11-8: Fair-Share of Atherton Drive Extension and Pay Regional Transportation Impact Fee.

Prior to issuance of any building permits, the applicant shall pay their fair-share to extend Atherton Drive westerly from the project site to connect to the existing terminus of Atherton Drive near Sparrowhawk Street. This alignment extension has been evaluated as part of the City's General Plan and EIR. No additional significant impacts not previously identified in

this EIR would occur with this improvement. This connection would offer another route for project trips to Airport Way without using the state highway system. Although this improvement would reduce congestion on SR 120, it is unlikely that the densities on SR 120 would be reduced to acceptable levels.

In addition, prior to issuance of any building permits, the project applicant shall pay their fair- share of the SJCOG regional transportation impact fee to support current and future freeway widening projects in the area. With payment of this fee, the project's cumulative impacts would be reduced to a less-than-significant level. Caltrans currently does not have any plans for further widening of SR 99 or SR 120 and a funding mechanism for improvements at the identified segments has not been established by Caltrans. The City of Manteca acknowledges its lead agency responsibilities to address potential significant impacts to traffic including on the state highway system that may result from City approved projects. The City is committed to work in good faith with Caltrans and our other regional partners to provide feasible mitigation measures to address these impacts. While a funding mechanism has not been established and improvements have not been identified, the project applicant and the City shall coordinate with Caltrans to identify the specific fair share costs and the funding mechanism that would be used to construct these improvements along the State highway system.

Impact 4.11-9: Increases in Traffic Volumes on Freeway Ramps Resulting in Unacceptable Levels of Service under Cumulative Plus Project Conditions (2035). (Less than Significant with Mitigation).

Mitigation Adopted by the City: Mitigation Measure 4.11-9. Residual impact is less than significant.

Mitigation Measure 4.11-9: Airport Way/SR 120 Ramp Junctions and Union Road/SR 120 Ramp Junctions.

The applicant shall implement Mitigation Measures 4.11-7c, 4.11-7d, 4.11-7j, and 4.11-7k. Implementation of improvements at the Airport Way/SR 120 and Union Road/SR 120 interchanges would improve ramp terminal intersection operations by adding additional turn lanes. In addition, auxiliary lanes would be constructed on SR 120 when the Airport Way and Union Road interchanges are reconstructed.

Impact 4.11-10: Impacts on Emergency Vehicle Access. (Less than Significant).

Mitigation Adopted by the City: None

Impact 4.11-11: Increased Roadway Congestion from Construction Traffic. (Less than Significant with Mitigation).

Mitigation Adopted by the City: Mitigation Measure 4.11-11. Residual impact is less than significant.

Mitigation Measure 4.11-11: Prepare and Implement a Construction Traffic Management Plan.

Prior to the issuance of building permits, the project applicant shall prepare a Construction Management Plan and submit the plan to the City of Manteca Public Works Department for review and approval. The Construction Management Plan shall identify the timing of construction and the timing of elements that would result in the full or partial blockage of

local roadways. The plan shall specify the measures that would be implemented to minimize traffic-related impacts, including construction parking during construction, which shall be limited to on-site areas or facilities designated for parking uses (e.g., parking lots). These measures could include, but are not limited to the following: use of signage notifying travelers that they are entering a construction zone; and use of cones, flaggers, and guide-vehicles to direct traffic through the construction zone. In addition, the plan shall include, at a minimum, the following conditions:

- *Local roadways shall be jointly monitored by the City and project applicant every six months to determine whether project-related construction traffic is degrading roadway conditions. Roadways with potential to be damaged by construction traffic and included in the monitoring effort shall be agreed to by the City and the project applicant.*
- *All degradation of pavement conditions because of project-related construction traffic shall be fully repaired by the project applicant to the satisfaction of the City of Manteca, based on maintaining at least preconstruction conditions.*
- *Procedures shall be provided for any road closures and movement of large construction vehicles such as cranes and dump trucks.*
- *Plans shall be provided for lane closures, including times (e.g., limit closures to between 9:00 a.m. and 4:00 p.m.).*
- *A copy of the plan shall be submitted to local emergency response agencies and these agencies shall be notified at least 14 days before the commencement of construction that would partially or fully obstruct local roadways.*

Impact 4.11-12: Conformity with City Parking Requirements. (Less than Significant).

Mitigation Adopted by the City: None

Discussion

These impacts were identified and discussed in Section 4.11, Transportation and Circulation (pages 4.11-57 through 4.11-88 of the Draft EIR).

The proposed land use changes would generate fewer trips than the Original Project analyzed as part of the Union Crossing Project Draft EIR. Therefore, additional traffic-related impacts beyond those identified in the Union Crossing Project EIR would not be expected to occur as a result of the Modified Project.

An updated traffic analysis was prepared for the Modified Project (Fehr & Peers, 2019). See Appendix B of this Addendum. According to the updated traffic analysis, the Modified Project is projected to generate 10,854 daily trips, 450 a.m. peak hour trips, and 994 p.m. peak hour trips. Additionally, the Modified Project will generate 6,062 fewer daily trips, 79 more external a.m. peak hour trips, and 364 fewer external p.m. peak hour trips.

The updated traffic analysis analyzed potential impacts at the following six study intersections and five study segments:

1. Union Road / Atherton Drive;
2. Union Road / Woodward Avenue;
3. Main Street / Atherton Drive;
4. Main Street / Woodward Avenue;
5. Airport Way / Atherton Drive; and
6. Airport Way / Woodward Avenue.

1. Union Road between SR 120 and Atherton Drive;
2. Union Road between Atherton Drive and Woodward Avenue;
3. Atherton Drive between Union Road and Main Street;
4. Woodward Avenue between Union Road and Main Street; and
5. Woodward Avenue between Union Road and Main Street.

According to the analysis, all six existing study intersections, with two signalized and unsignalized study intersections would continue to operate at acceptable Level of Service (LOS) C or better under Existing Plus Project AM and PM peak hour conditions. In addition, the eight project study intersections, with one signalized and seven unsignalized would also operate at acceptable LOS C or better under Existing Plus Project AM and PM peak hour conditions. Further, under Cumulative Plus Project Conditions, the addition of vehicle traffic generated by the proposed Union Crossing Project would result in minor changes in average vehicle delay. During the morning peak hour, all six signalized study intersections would continue to operate at acceptable LOS C or better under Cumulative Plus Project AM peak hour conditions. In addition, the eight project study intersections, with one signalized and seven unsignalized would also continue to operate at acceptable LOS C or better under Cumulative Plus Project AM peak hour conditions.

During the evening peak hour, all six signalized study intersections would continue to operate at acceptable LOS D or better under Cumulative Plus Project AM peak hour conditions. In addition, the eight project study intersections, with one signalized and seven unsignalized would also continue to operate at acceptable LOS C or better under Cumulative Plus Project AM peak hour conditions. The updated traffic analysis concluded that all impacts related to transportation, including study intersections, study segments, alternative transportation, and site access/circulation would be less than significant. See Appendix B for detailed discussions of the methodology and results.

Mitigation Measures identified in Section 4.11, Transportation and Circulation, for the Original Project would be sufficient in addressing the requirements for the Modified Project. These modifications would not increase the severity of the impacts beyond what was addressed in the Final EIR. There are no new impacts beyond what was addressed in the Final EIR. Lastly, there are no changed circumstances or new information that meets the standard for requiring further environmental review under CEQA Guidelines Section 15162.

CULTURAL RESOURCES

Impact 4.12-1: Known Archaeological Resources. (Less than Significant).

Mitigation Adopted by the City: None

Impact 4.12-2: Known Historic Resources. (Less than Significant).

Mitigation Adopted by the City: None

Impact 4.12-3: Undiscovered/Unrecorded Archaeological Sites. (Less than Significant with Mitigation).

Mitigation Adopted by the City: Mitigation Measure 4.12-3. Residual impact is less than significant.

Mitigation Measure 4.12-3: Undiscovered/Unrecorded Archaeological Sites.

At the onset of construction, all construction personnel shall be alerted to the possibility of buried cultural resources and shall be educated as to identification of archaeological artifacts. If artifacts or unusual amounts of stone, bone, or shell or significant quantities of historic-era artifacts are uncovered during construction activities, work within 50 feet of the specific construction site at which the suspected resources have been uncovered shall be suspended, and the project applicant shall be immediately contacted. At that time, the project applicant shall retain a professional archaeologist, who shall conduct a field investigation of the specific site and recommend measures deemed necessary for the protection or recovery of any cultural resources concluded by the archaeologist to represent significant or potentially significant resources as defined by CEQA. These measures could include, but are not limited to, capping, data recovery, or excavation. The project applicant shall implement the measures deemed necessary by the archaeologist before the resumption of construction activities within the area of the find.

Impact 4.12-4: Undiscovered/Unrecorded Human Remains. (Less than Significant with Mitigation).

Mitigation Adopted by the City: Mitigation Measure 4.12-4. Residual impact is less than significant.

Mitigation Measure 4.12-4: Undiscovered/Unrecorded Human Remains.

If human remains are found on the project site, the California Health and Safety Code (HSC) requires that excavation be halted in the immediate area and the county coroner be notified to determine the nature of the remains. The coroner is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or state lands (HSC. 7050.5[b]). If the coroner determines that the remains are those of a Native American, he or she must contact the NAHC by phone within 24 hours of making that determination (HSC 7050.5[c]).

The responsibilities of the NAHC for acting on notification of a discovery of Native American human remains are identified in the California PRC, Section 5097.9. The NAHC is responsible for immediately notifying the person it believes is the most likely descendant (MLD) of the Native American whose remains were found. With permission of the legal landowner(s), the MLD may visit the site and make recommendations regarding the treatment and disposition of the human remains and any associated grave goods. The MLD should do this within 24 hours of NAHC notification (PRC 5097.98[a]). If an agreement for treatment of the remains cannot be resolved satisfactorily, any of the parties may request mediation by the NAHC (PRC 5097.94[k]). Should mediation fail, the landowner or the landowner's representative must re-inter the remains and associated items with appropriate dignity on the property in a location not subject to further subsurface disturbance (PRC 5097.98[b]).

Discussion

These impacts were identified and discussed in Section 4.12, Cultural Resources (pages 4.12-7 through 4.12-9 of the Draft EIR).

The proposed modifications to the Original Project are not substantial changes to the originally anticipated project relating to cultural resources. Due to the site-specific nature of cultural resources, the Modified Project would not result in new impacts or cause increases in the severity of previously identified impacts to cultural resources when compared to the Original Project. The Modified Project does not designate any new sites for development and would not result in any

substantial changes to the construction methods or location of development. The Modified Project would not result in any changes to potential development that would change potential impacts associated with the disturbance of historical, archaeological, paleontological, or geologic resources. The Modified Project would also not result in any changes that would change the potential to disturb human remains. The Modified Project would not result in any new potential impacts to cultural resources and would not increase the significance of any potential impacts to Cultural Resources. Mitigation Measures identified in Section 4.12, Cultural Resources, for the Original Project would be sufficient in addressing the requirements for the Modified Project.

There are no new impacts beyond what was addressed in the Final EIR. Lastly, there are no changed circumstances or new information that meets the standard for requiring further environmental review under CEQA Guidelines Section 15162.

POPULATION, EMPLOYMENT, AND HOUSING

Impact 4.13-1: Population Growth and Housing Demand During Construction. (Less than Significant)

Mitigation Adopted by the City: None

Impact 4.13-2: Increased Employment Opportunities and Housing Demand. (Less than Significant)

Mitigation Adopted by the City: None

Impact 4.13-3: Housing Displacement. (Less than Significant)

Mitigation Adopted by the City: None

Discussion

These impacts were identified and discussed in Section 4.12, Population, Employment, and Housing (pages 4.13-6 through 4.13-8 of the Draft EIR).

As noted in the Union Crossing Project Draft EIR, because San Joaquin County and the City of Manteca are "housing rich", the number of housing units available should be sufficient to accommodate the employees generated by the Modified Project. Additionally, because the Original Project was anticipated to generate little or no demand for new housing and would likely bring the regional jobs-housing index closer to a balanced condition, impacts associated with increased employment opportunities and housing demand would be less than significant. Further, as noted in the Union Crossing Project Draft EIR, the Original Project would not be expected to generate the need for substantial additional housing in the City during construction. Lastly, of the four rural residences within the Original Project site, one would be removed during project development. The three residential parcels located in the south and southwestern portion of the Original Project site would not be developed.

The Modified Project would result in development of a decrease in the total non-residential SF by 153,100 SF and the addition of 281 multi-family DUs. According to the 2018 US Census population

estimates, the population in Manteca is 81,592 people. Based on 3.31 persons per household,[4] the Modified Project has the potential to add up to 930 residents to the City which were not previously accounted for as part of the Union Crossing Project Draft EIR. This is an estimated 1.1 percent growth in Manteca. An estimated 1.1 percent growth in Manteca is not considered substantial growth in Manteca or the region and it is consistent with the assumed growth in the General Plan. The 930 people may come from Manteca or surrounding communities. The Modified Project would not include upsizing of offsite infrastructure or roadways. The installation of new infrastructure would be limited to the internal project site. The sizing of the infrastructure would be specific to the number of units and non-residential square feet proposed within the project site. Implementation of the Modified Project would not induce substantial population growth in an area, either directly or indirectly.

Additionally, there are no new impacts beyond what was addressed in the Final EIR, and there are no changed circumstances or new information that meets the standard for requiring further environmental review under CEQA Guidelines Section 15162.

CUMULATIVE

5.3.1: **Land Use**. (Less than Cumulatively Considerable).

Mitigation Adopted by the City: None

5.3.2: **Visual**. (Less than Cumulatively Considerable).

Mitigation Adopted by the City: None

5.3.3: **Air Quality**. (Less than Cumulatively Considerable).

Mitigation Adopted by the City: None

5.3.4 **Greenhouse Gas Emissions**. Impact 5-1: Substantial Contribution of Greenhouse Gas Emissions. (Cumulatively Considerable and Significant and Unavoidable).

Mitigation Adopted by the City: Mitigation Measure 5-1. Residual impact is than significant and unavoidable.

Mitigation Measure 5-1: *The following mitigation measures would help reduce the GHG emissions associated with the day-to-day activities of the proposed project. It should be noted that some of the mitigation measures to reduce GHG emissions would also help reduce CAP emissions. Conversely, the mitigation measures listed under Mitigation Measure 4.3-2 for criteria air pollutants and ozone precursors will also reduce GHG emissions from mobile and area sources. Implementation of Mitigation Measure 5-1 would result in reductions of GHG emissions; however, at the time of writing this EIR these reductions cannot be fully quantified. While implementation of these mitigations may not reduce Impact 5-1 to a less-*

[4] Source: California Department of Finance, Demographics Research Unit. Report E-5: Population and Housing Estimates for Cities, Counties, and the State, January 1, 2011-2019, with 2010 Benchmark. Released May 1, 2019.

than-significant level, implementation of the following mitigations are still required as a condition of project approval:

- *Implement all mitigation measures listed above in Mitigation Measure 4.3-2, which will have the added benefit of reducing project-generated, operation-related GHG emissions.*
- *Design buildings to exceed 2008 Title 24 energy efficiency standards by a minimum of 20%. This mitigation measure is consistent with the City of Manteca's General Plan Policy AQ-P-10, which encourages energy efficient building designs. In addition, this measure is consistent with the Measures 14 and 15 from SJVAPCD's list of ISR On-Site Emission Reduction Mitigation Measure for commercial uses (SJVAPCD 2007).*
- *Ensure that all appliances installed in all retail and commercial buildings on the project site are ENERGY STAR qualified. This mitigation measure is consistent with the City of Manteca's General Plan Policy AQ-P-10, which encourages energy efficient building designs.*
- *Install energy efficient lighting (e.g., "Smart Lighting" [bi-level sensor LED]) in the parking lot and along on-site pedestrian walkways.*
- *All hot water for proposed businesses should be supplied from solar water heaters and/or tankless water heaters. This mitigation measure is consistent with the City of Manteca's General Plan Policy AQ-P-10, which encourages energy efficient building designs.*
- *Provide water efficient landscape irrigation design to reduce the outdoor use of potable water by a minimum of 50% beyond that of the established water budget, where the established water budget for landscape irrigation is consistent with the Department of Water Resources' Model Water Efficient Landscape Ordinance. If desired, measures to achieve a 50% reduction may include, but are not limited to the installation and use of rooftop rain collection cisterns or other water collection devices that store rainwater or storm water for landscape irrigation, or the use of gray water produced on site. This mitigation measure is consistent with City of Manteca's General Plan Water Conservation Goal RC-2 to recycle water for irrigation and non-potable uses. The Applicant shall provide a plan for achieving this performance standard when submitting its building plans to the City. The City shall review whether the plan to meet this water conservation performance standard is consistent with the methods outlined in the Department of Water Resources' Model Water Efficient Landscape Ordinance.*
- *Minimize the use of water, including the use of pressure washers, for regular maintenance of parking lot, walkway, and store front areas. Pressure washing of buildings and surfaces shall not be performed more than once each year. The applicant shall include this requirement in the commercial lease agreement for every tenant on the project site.*

5.3.5: **Noise**. (Less than Cumulatively Considerable).

Mitigation Adopted by the City: None

5.3.6: **Biological Resources**. (Less than Cumulatively Considerable).

Mitigation Adopted by the City: None

5.3.7: **Hazards and Hazardous Materials**. (Less than Cumulatively Considerable).

Mitigation Adopted by the City: None

5.3.8: **Geology, Soils, Seismicity, and Paleontological Resources**. (Less than Cumulatively Considerable).

Mitigation Adopted by the City: None

5.3.9: **Agricultural Resources**. (Less than Cumulatively Considerable).

Mitigation Adopted by the City: None

5.3.10: **Hydrology and Water Quality**. (Less than Cumulatively Considerable).

Mitigation Adopted by the City: None

5.3.11: **Public Services and Utilities**. (Less than Cumulatively Considerable).

Mitigation Adopted by the City: None

5.3.12: **Transportation and Circulation**. (Less than Cumulatively Considerable).

Mitigation Adopted by the City: None

5.3.13: **Cultural Resources**. (Less than Cumulatively Considerable).

Mitigation Adopted by the City: None

5.3.14: **Population and Housing**. (Less than Cumulatively Considerable).

Mitigation Adopted by the City: None

Discussion
These impacts were identified and discussed throughout Chapter 5.0, Cumulative Impacts, of the Union Crossing Project Draft EIR. Although the Modified Project would increase residential development (while also decreasing non-residential development) in the City compared to the Original Project, there is no evidence that this would substantially increase overall population growth in the City. The Modified Project would result in slight reductions in trip generation which, in turn, would reduce mobile air quality and greenhouse gas (GHG) emissions, as well as transportation noise. Therefore, the Modified Project's contribution to these topics would be less than cumulatively considerable.

Many of the environmental topics analyzed in the Union Crossing Project EIR are site specific (i.e., Agricultural Resources, Biological Resources, Cultural Resources, Geology, Soils, Seismicity, and Paleontological Resources, Hazards and Hazardous Materials, etc.), and the Modified Project does not designate any new sites for development, and would not result in any changes to the location of development contemplated in the EIR. Therefore, the Modified Project's contribution to these site-specific topics would be less than cumulatively considerable.

Impacts associated with GHGs and climate change are discussed in detail below.

Greenhouse Gases and Climate Change
Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and

agricultural sectors. Therefore, the cumulative global emissions of GHGs contributing to global climate change can be attributed to every nation, region, and city, and virtually every individual on Earth. A project's GHG emissions are at a micro-scale relative to global emissions, but could result in a cumulatively considerable incremental contribution to a significant cumulative macro-scale impact. Implementation of the proposed project would contribute to increases of GHG emissions that are associated with global climate change. Estimated GHG emissions attributable to future development would be primarily associated with increases of CO_2 and other GHG pollutants, such as CH_4 and N_2O, from mobile sources and utility usage.

The Modified Project's short-term construction-related and long-term operational GHG emissions for buildout of the proposed project, were estimated using CalEEMod™ (v.2016.3.2). CalEEMod is a statewide model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify GHG emissions from land use projects. The model quantifies direct GHG emissions from construction and operation (including vehicle use), as well as indirect GHG emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use. Emissions are expressed in annual metric tons of CO_2 equivalent units of measure (i.e., $MTCO_2e$), based on the global warming potential of the individual pollutants.

Short-Term Construction GHG Emissions

As noted previously, the Modified Project does not designate any new sites for development and would not result in any substantial changes to the construction methods or location of development. The Modified Project would not result in any changes to potential development that would change potential impacts associated with construction emissions. Therefore, the construction emissions would not increase over the Original Project.

Long-Term Operational GHG Emissions

The long-term operational GHG emissions estimate for buildout of the proposed project, incorporates the potential area source and vehicle emissions, and emissions associated with utility and water usage, and wastewater and solid waste generation. The modeling included the following inputs for the year 2021:

Traffic

- Project Setting: Low Density Suburban
- Increase Density: 273 du/12.6 ac = 21.67 du/ac
- Increase Destination Accessibility: Distance to Downtown/Job Center is 1.5 miles (from project site to downtown Manteca)
- Increase Transit Accessibility: Distance to Transit is 0.05 miles (Manteca Transit Routes 2 and 3 have stops at Union Rd. / Woodward Ave.)
- Improve Pedestrian Network: Project Site and Connecting Off-Site (project includes connections from the site to the adjacent shopping center)

Area

- Only Natural Gas Hearth (Per SJVAPCD Rule 4901: Wood-Burning Fireplaces and Wood-Burning Heaters, open-hearth fireplaces are not allowed in new construction projects which would result in more than two homes per acre. The proposed project includes more than two homes per acre.

Estimated GHG emissions associated with the buildout of the proposed project with and without the above mitigation incorporated are summarized in Tables 4 and 5. According to operational emissions for the Original Project included in the Union Crossing Project Draft EIR, the Original Project would generate up to 17,664 $MTCO_2e$. As shown in the tables, the annual GHG emissions associated with buildout of the proposed project would be 10,538 $MTCO_2e$ with the above referenced mitigation incorporated and 11,165 $MTCO_2e$ without mitigation. The mitigation results in a decrease of 627 $MTCO_2e$. Therefore, the Modified Project GHG emissions would be less than the Original Project.

TABLE 4: OPERATIONAL GHG EMISSIONS 2021 (UNMITIGATED METRIC TONS/YR)

Category	*Bio-CO2*	*NBio-CO2*	*Total CO2*	*CH4*	*N2O*	*CO2e*
Area	50.9383	125.1446	176.0829	0.2438	0.0023	182.8424
Energy	0.0000	1,654.4369	1,654.4369	0.0664	0.0184	1,661.5771
Mobile	0.0000	8,944.3129	8,944.3129	0.7652	0.0000	8,963.4427
Waste	87.2394	0.0000	87.2394	5.1557	0.0000	216.1320
Water	12.5340	87.1719	99.7059	1.2913	0.0312	141.2900
Total	**150.7118**	**10,811.0663**	**10,961.7781**	**7.5223**	**0.0518**	**11,165.2842**

SOURCE: CALEEMOD (V.2016.3.2).

TABLE 5: OPERATIONAL GHG EMISSIONS 2021 (MITIGATED METRIC TONS/YR)

Category	*Bio-CO2*	*NBio-CO2*	*Total CO2*	*CH4*	*N2O*	*CO2e*
Area	0.0000	125.1446	125.1446	0.00565	0.0023	125.9509
Energy	0.0000	1,654.4369	1,654.4369	0.0664	0.0184	1,661.5771
Mobile	0.0000	8,374.7073	8,374.7073	0.7260	0.0000	8,392.8571
Waste	87.2394	0.0000	87.2394	5.1557	0.0000	216.1320
Water	12.5340	87.1719	99.7059	1.2913	0.0312	141.2900
Total	**99.7734**	**10,241.4607**	**10,341.2342**	**7.2450**	**0.0518**	**10,537.8071**

SOURCE: CALEEMOD (V.2016.3.2).

Regional Transportation Plan/Sustainable Communities Strategy

SJCOG adopted the Final Draft of the RTP/SCS on June 2018. The RTP/SCS reflects a region-specific, balanced multimodal plan that only achieves the intent and promise of SB 375 and can be implemented through existing and planned programs or policies. The RTP/SCS foundation comprises recent household and job growth forecasts, market demand and economic studies, and transportation studies including SJCOG's Smart Growth Transit Oriented Development Plan, Goods Movement Study, and Regional Bike/Pedestrian/Safe Routes to School Master Plan.

Chapter 3 of the RTP/SCS contains policies and supportive strategies in order to address the transportation needs of the San Joaquin region and quantify regional needs in the 25-year planning horizon. One of the strategies in Table 3.1 of the SJCOG RTP/SCS aims to optimize public transportation to provide efficient and convenient access for users at all income levels. Another strategy aims to provide transportation improvements to facilitate non-motorized travel. Manteca Transit Routes 2 and 3 currently run adjacent to the project site on Union Road and Atherton Drive. Route 2 originates at the City's Transit Center and travels clockwise along South Main Street, Atherton Drive, Daniels Street, Fishback Road, Yosemite Avenue, West Center Street, Union Road, Northgate Drive, London Avenue, Lathrop Road, and Main Street before returning back to the

Transit Center. Route 3's alignment starts at the City's Transit Center and travels along North Main Street, Northgate Drive, Lathrop Road, London Avenue, Union Road, Cherry Lane, Center Street, Yosemite Avenue, Winters Drive, Fishback Road, Daniels Street, and Atherton Drive before returning to the Transit Center. Route 3 operates as a counter-clockwise loop complementing Route 2.

The Manteca Transit Center is located approximately 1.41 miles northeast of the project site. Manteca Transit provides a Route 2 and Route 3 bus stop at the Union Road and Atherton Drive intersection, located approximately 0.06 miles southeast of the project site. Therefore, the proposed project would be located in an area that is currently served by Manteca Transit.

As demonstrated above, the proposed project would be generally consistent with the goals and strategies of the RTP/SCS.

Manteca Climate Action Plan

The City of Manteca Climate Action Plan (2013) sets forth a feasible strategy to reduce community-generated GHG emissions, consistent with statewide GHG reduction efforts for consideration and potential adoption by the City Council.

The Climate Action Plan contains strategies by emissions sector (i.e., land use and transportation, transportation facilities and demand strategies, energy conservation, waste diversion and recycling and energy recovery, strategies for existing development, and municipal strategies). Only some of the reduction measures would apply to the proposed project. For example, Strategy MUD-1 encourages mixed-use development by ensuring that new growth areas designate mixed-use areas at optimal locations. The proposed project is a mixed-use development strategically located near SR 120. Strategy MUD-2 encourages mixed use residential developments that either allow for sufficient population to support commercial development within the project or are constructed in an area with an existing variety of commercial development within walking distance and is already supported by residential development. The project site includes apartment uses and commercial uses. The population from the apartment uses would support the proposed commercial component of the project.

Additionally, Strategy ENB-1 requires all new development to exceed Title 24 standards by at least 10 percent. The proposed project will comply with Title 24, Part 6 of the California Code of Regulations, known as the Building Energy Efficiency Standards. This includes the CALGreen requirements for new buildings to reduce water consumption by 20 percent, and install low pollutant-emitting materials. Further, Strategies POD-1 through POD-5 encourage the development of pedestrian infrastructure. The project would incorporate continuous sidewalks along Union Road and Atherton Drive. The project would provide pedestrian connections to the adjacent commercial development.

As demonstrated above, the proposed project would be generally consistent with the goals and strategies of the Manteca Climate Action Plan.

Conclusion

The short-term annual construction emissions of GHG associated with development of the Modified Project would not increase over the Original Project. Short-term construction GHG emissions are a one-time release of GHGs and are not expected to significantly contribute to global climate change over the lifetime of the Modified Project. The annual GHG emissions associated with buildout of the

proposed project would be 10,538 $MTCO_2e$ with the above referenced mitigation incorporated and 11,165 $MTCO_2e$ without mitigation. The mitigation results in a decrease of 627 $MTCO_2e$.

Additionally, the project would be generally consistent with the goals, policies, and measures of the RTP/SCS and the Manteca Climate Action Plan. The project is currently served by Manteca Transit who provides bus services close to the project site. The project would also comply with Strategies MUD-1, MUD-2, ENB-1, and POD-1 through POD-5 of the Climate Action Plan.

The same mitigation measures included in the Union Crossing Project Draft EIR (including Mitigation Measures 4.3-1, 4.3-2, and 5-1) would be applicable to the Modified Project. The Modified Project would not have any cumulative GHG impacts beyond what was addressed in the EIR.

As demonstrated throughout this EIR Addendum, the Modified Project would not result in new impacts beyond what was addressed in the Final EIR. Mitigation Measures identified for the Original Project would be sufficient in addressing the requirements for the Modified Project.

There are no new impacts beyond what was addressed in the Final EIR. Lastly, there are no changed circumstances or new information that meets the standard for requiring further environmental review under CEQA Guidelines Section 15162.

CUMULATIVE

The Modified Project was considered in the Union Crossing Project EIR, as discussed in the beginning of this document. The Union Crossing Project EIR addressed a full range of impacts, as discussed throughout this document, but did not fully address impacts associated with greenhouse gases and climate change, tribal cultural resources, or wildfires. At the time the Union Crossing Project EIR was written, the Tribal Cultural Resources section and Wildfire section of Appendix G of the CEQA Guidelines did not exist as standalone sections. Additionally, recent case law and state legislation has resulted in a need to revisit the greenhouse gases and climate change analysis. Further, Appendix F of the State CEQA Guidelines requires consideration of the potentially significant energy implications of a project. The Union Crossing Project EIR did not analyze energy impacts in accordance with Appendix F of the CEQA Guidelines. As such, the following section includes a more detailed analysis for energy, tribal cultural resources, and wildfires that would result from development of the Modified Project. The greenhouse gases and climate change analysis is discussed in detail above.

Energy

As demonstrated throughout this EIR, the proposed land use changes will generate fewer vehicle trips than the project analyzed as part of the Union Crossing Project Draft EIR for the Original Project. Because the Modified Project would result in a decrease in total vehicle trips than what was studied for the Original Project in the Union Crossing Project Draft EIR, the resulting energy usage would also slightly decrease. The emissions shown in Tables 2 and 5 are consistent with this assumption.

Additionally, the Modified Project does not designate any new sites for development and would not result in any substantial changes to the construction methods or location of development. The Modified Project would not result in any changes to potential development that would change potential impacts associated with construction. Therefore, the energy usage required for construction activities would not increase over the Original Project.

Tribal Cultural Resources

The proposed modifications to the Original Project are not substantial changes to the originally anticipated project relating to tribal cultural resources. Due to the site-specific nature of tribal cultural resources, the Modified Project would not result in new impacts or cause increases in the severity of impacts to tribal cultural resources when compared to the Original Project. The Modified Project does not designate any new sites for development and would not result in any substantial changes to the construction methods or location of development. The Modified Project would not result in any changes to potential development that would change potential impacts associated with the disturbance of tribal cultural resources. The Modified Project would not result in any new potential impacts to tribal cultural resources and would not increase the significance of any potential impacts to Tribal Cultural Resources. Mitigation Measures identified in Section 4.12, Cultural Resources, for the Original Project would be required for the Modified Project.

Wildfire

There are no State Responsibility Areas (SRAs) within the vicinity of the Manteca Planning Area. The City of Manteca is not categorized as a "Very High" Fire Hazard Severity Zone (FHSZ) by CalFire. No cities or communities within San Joaquin County are categorized as a "Very High" FHSZ by CalFire. Although this CEQA topic only applies to areas within a SRA or Very High FHSZ, out of an abundance of caution, these checklist questions are analyzed below.

The risk of wildfire is related to a variety of parameters, including fuel loading (vegetation), fire weather (winds, temperatures, humidity levels and fuel moisture contents) and topography (degree of slope). Steep slopes contribute to fire hazard by intensifying the effects of wind and making fire suppression difficult. Fuels such as grass are highly flammable because they have a high surface area to mass ratio and require less heat to reach the ignition point. The project site is located in an area that is predominately agricultural and urban, which is not considered at a significant risk of wildlife.

The project site will connect to an existing network of City streets. The proposed circulation improvements would allow for greater emergency access relative to existing conditions. The Modified Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

The Modified Project includes development of infrastructure (water, sewer, and storm drainage) required to support the proposed uses. The project site is surrounded by existing and future urban development. The Modified Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. The Modified Project would not require the installation or maintenance of infrastructure that may exacerbate fire risk.

The proposed project would require the installation of storm drainage infrastructure to ensure that storm waters properly drain from the project site and does not result in downstream flooding or major drainage changes. Storm drainage would be conveyed to an on-site storm drain basin and storm drainage metering station which will discharge to the City's storm drainage system. Runoff from the project site currently flows to the existing City storm drains located in Woodward Avenue and Union Road. Upon development of the site, stormwater would flow to the on-site retention basin and/or the existing storm drains in the adjacent roadways. Additionally, the project site is located within FEMA Zone X (Levee), indicating that the site is located in an area protected by levees from the 100-year flood hazard zone. Further, because the site is essentially flat and located in an existing urbanized and agricultural area of the City, downstream landslides would not occur.

Landslides include rockfalls, deep slope failure, and shallow slope failure. Factors such as the geological conditions, drainage, slope, vegetation, and others directly affect the potential for landslides. One of the most common causes of landslides is construction activity that is associated with road building (i.e. cut and fill). The project site is relatively flat; therefore, the potential for a landslide in the project site is essentially non-existent.

Conclusion

The Modified Project would not increase impacts related to energy, tribal cultural resources, or wildfire beyond those that would have been expected for the Original Project.

REFERENCES

California Department of Resources Recycled and Recovery. SWIS Facility Detail – Forward Landfill, Inc. 39-AA-0015 Available at: <https://www2.calrecycle.ca.gov/SWFacilities/Directory/39-AA-0015/Detail/>.

California Department of Finance, Demographics Research Unit. Report E-5: Population and Housing Estimates for Cities, Counties, and the State, January 1, 2011-2019, with 2010 Benchmark. Released May 1, 2019.

City of Manteca. City of Manteca 2012 Wastewater Collection System Master Plan Update. January 2013.

City of Manteca. Draft Environmental Impact Report for the Union Crossing Project (SCH # 2008092083). May 2009.

Fehr & Peers. Union Crossing Mixed-Use Development Project – Manteca, CA. July 2019.

San Joaquin Valley Air Pollution Control District. Guide for Assessing and Mitigation Air Quality Impacts. March 19, 2015.

Appendix A

Air Quality and Greenhouse Gas Modeling Outputs

UNION CROSSING (MODIFIED PROJECT) CALEEMOD ASSUMPTIONS

PROJECT CHARACTERISTICS TAB:

Project Location – Air District: San Joaquin Valley Air Pollution Control District
CEC Forecasting Climate Zone: 2
Land Use Setting: Urban
Start of Construction: May 1, 2020
Operational Year: 2021
Utility Company: PG&E

LAND USE TAB:

LAND USE TYPE AND SUBTYPE	UNIT AMOUNT AND METRIC	ACREAGE	SQUARE FOOTAGE	POPULATION
Retail - Regional Shopping Center (Living Spaces)	120.0 KSF	N/A	120,000	--
Retail - Regional Shopping Center (Retail / Commercial / Restaurant)	166.2 KSF	N/A	166,200	--
Residential - Apartments Mid Rise (Apartments)	281 DU	12.6	--	930

NOTES: KSF = THOUSAND SQUARE FEET; DU = DWELLING UNITS.
THE UNIT AMOUNT, METRIC, AND ACREAGES WERE PROVIDED BY THE PROJECT APPLICANT (MANTECA DEVELOPMENT GROUP, UNION CROSSING DEVELOPMENT STANDARDS AND DESIGN GUIDELINES, JUNE 2019).
THE POPULATION FOR THE APARTMENTS WAS CALCULATED USING THE MOST RECENT (2019) PERSONS PER HOUSEHOLD RATE FOR THE CITY OF MANTECA, WHICH IS 3.31 (REPORT E-5, CALIFORNIA DEPARTMENT OF FINANCE DEMOGRAPHICS RESEARCH UNIT).

CONSTRUCTION TAB – PHASING: CalEEMod Defaults

PHASE #	PHASE NAME	START DATE	END DATE	# DAYS/WEEK	# DAYS
1	Site Preparation	05/01/2020	05/14/2020	5	10
2	Grading	05/15/2020	06/25/2020	5	30
3	Building Construction	06/26/2020	08/19/2021	5	300
4	Paving	08/20/2021	09/16/2021	5	20
5	Architectural Coating	09/17/2021	10/14/2021	5	20

CONSTRUCTION TAB – OFF-ROAD EQUIPMENT: CalEEMod Defaults

CONSTRUCTION TAB – DUST FROM MATERIAL MOVEMENT: 65 acres graded. 50,000 cubic yards of material export.

CONSTRUCTION TAB – ARCHITECTURAL COATINGS: Assume interior coatings are flat coatings. Per SJVAPCD Rule 4601, flat coatings have a maximum VOC limit of 100 g/L.

OPERATIONAL TAB – MOBILE: According to the Transportation Impact Analysis prepared for the project (Fehr & Peers, July 2019), the project would generate:

- 6.3 daily trips per thousand square feet for the Retail - Regional Shopping Center (Living Spaces) land use;
- 64.01 daily trips per thousand square feet for the Retail - Regional Shopping Center (Retail / Commercial / Restaurant) land use; and
- 7.32 daily trips per unit for the Residential - Apartments Mid Rise (Apartments) land use.

While the Transportation Impact Analysis has two different trip generation rates for the two retail components, CalEEMod groups these land uses into one row in the Operational – Mobile tab. Therefore, De Novo Planning Group calculated a weighted average for the Retail - Regional Shopping Center land use using the square footages of the Living Space use and the other retail/commercial/restaurant uses. The weighted average daily trip rate for the Retail - Regional Shopping Center land use is 31.51 daily trips per thousand square feet.

The fleet mix was updated for consistency with prior model run (2009).

OPERATIONAL TAB – AREA: Assume interior coatings are flat coatings. Per SJVAPCD Rule 4601, flat coatings have a maximum VOC limit of 100 g/L.

MITIGATION TAB (NOTE – THESE REPRESENT PROJECT CHARACTERISTICS – NOT MITIGATION):
Traffic:

- Project Setting: Low Density Suburban
- Increase Density: 281 du/12.6 ac = 22.3 du/ac
- Increase Destination Accessibility: Distance to Downtown/Job Center is 1.5 miles (from project site to downtown Manteca)
- Increase Transit Accessibility: Distance to Transit is 0.05 miles (Manteca Transit Routes 2 and 3 have stops at Union Rd. / Woodward Ave.)
- Improve Pedestrian Network: Project Site and Connecting Off-Site (project includes connections from the site to the adjacent shopping center)

Area:

- Only Natural Gas Hearth (Per SJVAPCD Rule 4901: Wood-Burning Fireplaces and Wood-Burning Heaters, open-hearth fireplaces are not allowed in new construction projects which would result in more than two homes per acre. The proposed project includes more than two homes per acre.

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Mid Rise	281.00	Dwelling Unit	12.60	281,000.00	930
Regional Shopping Center	120.00	1000sqft	2.75	120,000.00	0
Regional Shopping Center	166.20	1000sqft	3.82	166,200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.7	**Precipitation Freq (Days)**	45
Climate Zone	2			**Operational Year**	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

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Project Characteristics -

Land Use - See CalEEMod Assumptions (Appendix A).

Construction Phase -

Trips and VMT -

Grading - See CalEEMod Assumptions (Appendix A). Assume whole site (65 acres graded). Assumes 50,000 cy cut (material exported).

Architectural Coating - Assume interior coatings are flat coatings. Per SJVAPCD Rule 4601, flat coatings have a maximum VOC limit of 100 g/L.

Vehicle Trips - Trip rates provided by the Traffic Report (Fehr & Peers, 2019). The trip rate for Regional Shopping Center is a weighted average. Internal trips not double-counted.

Woodstoves - No hearths.

Area Coating - Assume interior coatings are flat coatings. Per SJVAPCD Rule 4601, flat coatings have a maximum VOC limit of 100 g/L.

Mobile Land Use Mitigation -

Area Mitigation - No hearth.

Fleet Mix - Fleet Mix updated for consistency with prior model run (2009).

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Interior	150.00	100.00
tblArchitecturalCoating	EF_Residential_Interior	150.00	100.00
tblAreaCoating	Area_EF_Nonresidential_Interior	150	100
tblAreaCoating	Area_EF_Residential_Interior	150	100
tblFleetMix	HHD	0.11	0.02
tblFleetMix	HHD	0.11	0.02
tblFleetMix	LDA	0.51	0.46
tblFleetMix	LDA	0.51	0.46
tblFleetMix	LDT1	0.03	0.12
tblFleetMix	LDT1	0.03	0.12
tblFleetMix	LDT2	0.17	0.21
tblFleetMix	LDT2	0.17	0.21
tblFleetMix	LHD1	0.02	0.02

tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD2	5.3740e-003	7.0000e-003
tblFleetMix	LHD2	5.3740e-003	7.0000e-003
tblFleetMix	MCY	5.3070e-003	0.04
tblFleetMix	MCY	5.3070e-003	0.04
tblFleetMix	MDV	0.12	0.11
tblFleetMix	MDV	0.12	0.11
tblFleetMix	MH	7.9200e-004	0.01
tblFleetMix	MH	7.9200e-004	0.01
tblFleetMix	MHD	0.02	0.01
tblFleetMix	MHD	0.02	0.01
tblFleetMix	OBUS	1.7970e-003	0.00
tblFleetMix	OBUS	1.7970e-003	0.00
tblFleetMix	SBUS	9.6900e-004	1.0000e-003
tblFleetMix	SBUS	9.6900e-004	1.0000e-003
tblFleetMix	UBUS	1.6230e-003	1.0000e-003
tblFleetMix	UBUS	1.6230e-003	1.0000e-003
tblGrading	AcresOfGrading	75.00	65.00
tblGrading	MaterialExported	0.00	50,000.00
tblLandUse	LotAcreage	7.39	12.60
tblLandUse	Population	891.00	930.00
tblVehicleTrips	WD_TR	6.65	6.30
tblVehicleTrips	WD_TR	42.70	31.51

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.3613	3.8215	2.5607	8.5200e-003	0.4685	0.1266	0.5951	0.1712	0.1183	0.2895	0.0000	777.8237	777.8237	0.0985	0.0000	780.2856
2021	3.7598	2.3468	2.3210	6.1800e-003	0.2419	0.0902	0.3321	0.0653	0.0847	0.1500	0.0000	556.8227	556.8227	0.0703	0.0000	558.5804
Maximum	**3.7598**	**3.8215**	**2.5607**	**8.5200e-003**	**0.4685**	**0.1266**	**0.5951**	**0.1712**	**0.1183**	**0.2895**	**0.0000**	**777.8237**	**777.8237**	**0.0985**	**0.0000**	**780.2856**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.3613	3.8215	2.5607	8.5200e-003	0.4685	0.1266	0.5951	0.1712	0.1183	0.2895	0.0000	777.8234	777.8234	0.0985	0.0000	780.2853
2021	3.7598	2.3468	2.3210	6.1800e-003	0.2419	0.0902	0.3321	0.0653	0.0847	0.1500	0.0000	556.8225	556.8225	0.0703	0.0000	558.5802
Maximum	**3.7598**	**3.8215**	**2.5607**	**8.5200e-003**	**0.4685**	**0.1266**	**0.5951**	**0.1712**	**0.1183**	**0.2895**	**0.0000**	**777.8234**	**777.8234**	**0.0985**	**0.0000**	**780.2853**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	5-1-2020	7-31-2020	2.3539	2.3539
2	8-1-2020	10-31-2020	1.0875	1.0875
3	11-1-2020	1-31-2021	1.0570	1.0570
4	2-1-2021	4-30-2021	0.9551	0.9551
5	5-1-2021	7-31-2021	0.9842	0.9842
6	8-1-2021	9-30-2021	2.0920	2.0920
		Highest	2.3539	2.3539

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.8949	0.1673	4.4703	8.3900e-003		0.4005	0.4005		0.4005	0.4005	50.9383	125.1446	176.0829	0.2438	2.2300e-003	182.8424
Energy	0.0328	0.2904	0.1916	1.7900e-003		0.0227	0.0227		0.0227	0.0227	0.0000	1,654.4369	1,654.4369	0.0664	0.0184	1,661.5771
Mobile	6.4193	12.3039	53.4060	0.0984	8.1525	0.0968	8.2493	2.1804	0.0907	2.2711	0.0000	8,944.3129	8,944.3129	0.7652	0.0000	8,963.4427
Waste						0.0000	0.0000		0.0000	0.0000	87.2394	0.0000	87.2394	5.1557	0.0000	216.1320
Water						0.0000	0.0000		0.0000	0.0000	12.5340	87.1719	99.7059	1.2913	0.0312	141.2900
Total	**9.3471**	**12.7615**	**58.0679**	**0.1086**	**8.1525**	**0.5200**	**8.6724**	**2.1804**	**0.5139**	**2.6942**	**150.7118**	**10,811.0663**	**10,961.7781**	**7.5223**	**0.0518**	**11,165.2842**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.6381	0.1293	2.1384	7.8000e-004		0.0200	0.0200		0.0200	0.0200	0.0000	125.1446	125.1446	5.6500e-003	2.2300e-003	125.9509
Energy	0.0328	0.2904	0.1916	1.7900e-003		0.0227	0.0227		0.0227	0.0227	0.0000	1,654.4369	1,654.4369	0.0664	0.0184	1,661.5771
Mobile	6.2236	11.8018	50.5260	0.0922	7.5900	0.0911	7.6810	2.0299	0.0853	2.1153	0.0000	8,374.7073	8,374.7073	0.7260	0.0000	8,392.8571
Waste						0.0000	0.0000		0.0000	0.0000	87.2394	0.0000	87.2394	5.1557	0.0000	216.1320
Water						0.0000	0.0000		0.0000	0.0000	12.5340	87.1719	99.7059	1.2913	0.0312	141.2900
Total	**8.8946**	**12.2214**	**52.8559**	**0.0948**	**7.5900**	**0.1338**	**7.7238**	**2.0299**	**0.1281**	**2.1580**	**99.7734**	**10,241.4607**	**10,341.2342**	**7.2450**	**0.0518**	**10,537.8071**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**4.84**	**4.23**	**8.98**	**12.77**	**6.90**	**74.27**	**10.94**	**6.90**	**75.08**	**19.90**	**33.80**	**5.27**	**5.66**	**3.69**	**0.00**	**5.62**

3.0 Construction Detail

Construction Phase

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	5/1/2020	5/14/2020	5	10	
2	Grading	Grading	5/15/2020	6/25/2020	5	30	
3	Building Construction	Building Construction	6/26/2020	8/19/2021	5	300	
4	Paving	Paving	8/20/2021	9/16/2021	5	20	
5	Architectural Coating	Architectural Coating	9/17/2021	10/14/2021	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 65

Acres of Paving: 0

Residential Indoor: 569,025; Residential Outdoor: 189,675; Non-Residential Indoor: 429,300; Non-Residential Outdoor: 143,100; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	6,250.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	294.00	77.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	59.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0204	0.2121	0.1076	1.9000e-004		0.0110	0.0110		0.0101	0.0101	0.0000	16.7153	16.7153	5.4100e-003	0.0000	16.8505
Total	**0.0204**	**0.2121**	**0.1076**	**1.9000e-004**	**0.0903**	**0.0110**	**0.1013**	**0.0497**	**0.0101**	**0.0598**	**0.0000**	**16.7153**	**16.7153**	**5.4100e-003**	**0.0000**	**16.8505**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.8000e-004	2.6000e-004	2.6200e-003	1.0000e-005	7.2000e-004	1.0000e-005	7.2000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.6461	0.6461	2.0000e-005	0.0000	0.6466
Total	**3.8000e-004**	**2.6000e-004**	**2.6200e-003**	**1.0000e-005**	**7.2000e-004**	**1.0000e-005**	**7.2000e-004**	**1.9000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**0.6461**	**0.6461**	**2.0000e-005**	**0.0000**	**0.6466**

3.2 Site Preparation - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0204	0.2121	0.1076	1.9000e-004		0.0110	0.0110		0.0101	0.0101	0.0000	16.7153	16.7153	5.4100e-003	0.0000	16.8505
Total	**0.0204**	**0.2121**	**0.1076**	**1.9000e-004**	**0.0903**	**0.0110**	**0.1013**	**0.0497**	**0.0101**	**0.0598**	**0.0000**	**16.7153**	**16.7153**	**5.4100e-003**	**0.0000**	**16.8505**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.8000e-004	2.6000e-004	2.6200e-003	1.0000e-005	7.2000e-004	1.0000e-005	7.2000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.6461	0.6461	2.0000e-005	0.0000	0.6466
Total	**3.8000e-004**	**2.6000e-004**	**2.6200e-003**	**1.0000e-005**	**7.2000e-004**	**1.0000e-005**	**7.2000e-004**	**1.9000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**0.6461**	**0.6461**	**2.0000e-005**	**0.0000**	**0.6466**

3.3 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1285	0.0000	0.1285	0.0539	0.0000	0.0539	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0668	0.7530	0.4794	9.3000e-004		0.0326	0.0326		0.0300	0.0300	0.0000	81.7264	81.7264	0.0264	0.0000	82.3872
Total	**0.0668**	**0.7530**	**0.4794**	**9.3000e-004**	**0.1285**	**0.0326**	**0.1611**	**0.0539**	**0.0300**	**0.0839**	**0.0000**	**81.7264**	**81.7264**	**0.0264**	**0.0000**	**82.3872**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0249	0.8707	0.1264	2.4900e-003	0.0535	2.9900e-003	0.0565	0.0147	2.8600e-003	0.0176	0.0000	237.4291	237.4291	0.0133	0.0000	237.7604
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2700e-003	8.6000e-004	8.7500e-003	2.0000e-005	2.4000e-003	2.0000e-005	2.4200e-003	6.4000e-004	2.0000e-005	6.5000e-004	0.0000	2.1538	2.1538	6.0000e-005	0.0000	2.1553
Total	**0.0262**	**0.8716**	**0.1352**	**2.5100e-003**	**0.0559**	**3.0100e-003**	**0.0589**	**0.0153**	**2.8800e-003**	**0.0182**	**0.0000**	**239.5829**	**239.5829**	**0.0133**	**0.0000**	**239.9158**

3.3 Grading - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1285	0.0000	0.1285	0.0539	0.0000	0.0539	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0668	0.7530	0.4794	9.3000e-004		0.0326	0.0326		0.0300	0.0300	0.0000	81.7263	81.7263	0.0264	0.0000	82.3871
Total	**0.0668**	**0.7530**	**0.4794**	**9.3000e-004**	**0.1285**	**0.0326**	**0.1611**	**0.0539**	**0.0300**	**0.0839**	**0.0000**	**81.7263**	**81.7263**	**0.0264**	**0.0000**	**82.3871**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0249	0.8707	0.1264	2.4900e-003	0.0535	2.9900e-003	0.0565	0.0147	2.8600e-003	0.0176	0.0000	237.4291	237.4291	0.0133	0.0000	237.7604
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2700e-003	8.6000e-004	8.7500e-003	2.0000e-005	2.4000e-003	2.0000e-005	2.4200e-003	6.4000e-004	2.0000e-005	6.5000e-004	0.0000	2.1538	2.1538	6.0000e-005	0.0000	2.1553
Total	**0.0262**	**0.8716**	**0.1352**	**2.5100e-003**	**0.0559**	**3.0100e-003**	**0.0589**	**0.0153**	**2.8800e-003**	**0.0182**	**0.0000**	**239.5829**	**239.5829**	**0.0133**	**0.0000**	**239.9158**

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1431	1.2951	1.1373	1.8200e-003		0.0754	0.0754		0.0709	0.0709	0.0000	156.3367	156.3367	0.0381	0.0000	157.2903
Total	**0.1431**	**1.2951**	**1.1373**	**1.8200e-003**		**0.0754**	**0.0754**		**0.0709**	**0.0709**	**0.0000**	**156.3367**	**156.3367**	**0.0381**	**0.0000**	**157.2903**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0206	0.6327	0.1200	1.4800e-003	0.0345	3.4900e-003	0.0379	9.9500e-003	3.3300e-003	0.0133	0.0000	140.3428	140.3428	0.0111	0.0000	140.6198
Worker	0.0839	0.0570	0.5787	1.5800e-003	0.1587	1.1300e-003	0.1598	0.0422	1.0400e-003	0.0432	0.0000	142.4734	142.4734	4.0800e-003	0.0000	142.5754
Total	**0.1045**	**0.6896**	**0.6987**	**3.0600e-003**	**0.1931**	**4.6200e-003**	**0.1977**	**0.0521**	**4.3700e-003**	**0.0565**	**0.0000**	**282.8162**	**282.8162**	**0.0152**	**0.0000**	**283.1952**

3.4 Building Construction - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1431	1.2951	1.1373	1.8200e-003		0.0754	0.0754		0.0709	0.0709	0.0000	156.3366	156.3366	0.0381	0.0000	157.2901
Total	**0.1431**	**1.2951**	**1.1373**	**1.8200e-003**		**0.0754**	**0.0754**		**0.0709**	**0.0709**	**0.0000**	**156.3366**	**156.3366**	**0.0381**	**0.0000**	**157.2901**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0206	0.6327	0.1200	1.4800e-003	0.0345	3.4900e-003	0.0379	9.9500e-003	3.3300e-003	0.0133	0.0000	140.3428	140.3428	0.0111	0.0000	140.6198
Worker	0.0839	0.0570	0.5787	1.5800e-003	0.1587	1.1300e-003	0.1598	0.0422	1.0400e-003	0.0432	0.0000	142.4734	142.4734	4.0800e-003	0.0000	142.5754
Total	**0.1045**	**0.6896**	**0.6987**	**3.0600e-003**	**0.1931**	**4.6200e-003**	**0.1977**	**0.0521**	**4.3700e-003**	**0.0565**	**0.0000**	**282.8162**	**282.8162**	**0.0152**	**0.0000**	**283.1952**

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1568	1.4382	1.3675	2.2200e-003		0.0791	0.0791		0.0744	0.0744	0.0000	191.1008	191.1008	0.0461	0.0000	192.2534
Total	**0.1568**	**1.4382**	**1.3675**	**2.2200e-003**		**0.0791**	**0.0791**		**0.0744**	**0.0744**	**0.0000**	**191.1008**	**191.1008**	**0.0461**	**0.0000**	**192.2534**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0205	0.7004	0.1278	1.7900e-003	0.0421	1.9700e-003	0.0441	0.0122	1.8900e-003	0.0141	0.0000	169.9364	169.9364	0.0130	0.0000	170.2608
Worker	0.0945	0.0619	0.6415	1.8600e-003	0.1939	1.3300e-003	0.1953	0.0515	1.2300e-003	0.0528	0.0000	168.0808	168.0808	4.4400e-003	0.0000	168.1918
Total	**0.1149**	**0.7623**	**0.7693**	**3.6500e-003**	**0.2360**	**3.3000e-003**	**0.2393**	**0.0637**	**3.1200e-003**	**0.0668**	**0.0000**	**338.0172**	**338.0172**	**0.0174**	**0.0000**	**338.4527**

3.4 Building Construction - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1568	1.4382	1.3675	2.2200e-003		0.0791	0.0791		0.0744	0.0744	0.0000	191.1005	191.1005	0.0461	0.0000	192.2531
Total	**0.1568**	**1.4382**	**1.3675**	**2.2200e-003**		**0.0791**	**0.0791**		**0.0744**	**0.0744**	**0.0000**	**191.1005**	**191.1005**	**0.0461**	**0.0000**	**192.2531**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0205	0.7004	0.1278	1.7900e-003	0.0421	1.9700e-003	0.0441	0.0122	1.8900e-003	0.0141	0.0000	169.9364	169.9364	0.0130	0.0000	170.2608
Worker	0.0945	0.0619	0.6415	1.8600e-003	0.1939	1.3300e-003	0.1953	0.0515	1.2300e-003	0.0528	0.0000	168.0808	168.0808	4.4400e-003	0.0000	168.1918
Total	**0.1149**	**0.7623**	**0.7693**	**3.6500e-003**	**0.2360**	**3.3000e-003**	**0.2393**	**0.0637**	**3.1200e-003**	**0.0668**	**0.0000**	**338.0172**	**338.0172**	**0.0174**	**0.0000**	**338.4527**

3.5 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0126	0.1292	0.1465	2.3000e-004		6.7800e-003	6.7800e-003		6.2400e-003	6.2400e-003	0.0000	20.0235	20.0235	6.4800e-003	0.0000	20.1854
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0126**	**0.1292**	**0.1465**	**2.3000e-004**		**6.7800e-003**	**6.7800e-003**		**6.2400e-003**	**6.2400e-003**	**0.0000**	**20.0235**	**20.0235**	**6.4800e-003**	**0.0000**	**20.1854**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.8000e-004	3.8000e-004	3.9700e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0395	1.0395	3.0000e-005	0.0000	1.0402
Total	**5.8000e-004**	**3.8000e-004**	**3.9700e-003**	**1.0000e-005**	**1.2000e-003**	**1.0000e-005**	**1.2100e-003**	**3.2000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**1.0395**	**1.0395**	**3.0000e-005**	**0.0000**	**1.0402**

3.5 Paving - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0126	0.1292	0.1465	2.3000e-004		6.7800e-003	6.7800e-003		6.2400e-003	6.2400e-003	0.0000	20.0235	20.0235	6.4800e-003	0.0000	20.1854
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0126**	**0.1292**	**0.1465**	**2.3000e-004**		**6.7800e-003**	**6.7800e-003**		**6.2400e-003**	**6.2400e-003**	**0.0000**	**20.0235**	**20.0235**	**6.4800e-003**	**0.0000**	**20.1854**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.8000e-004	3.8000e-004	3.9700e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0395	1.0395	3.0000e-005	0.0000	1.0402
Total	**5.8000e-004**	**3.8000e-004**	**3.9700e-003**	**1.0000e-005**	**1.2000e-003**	**1.0000e-005**	**1.2100e-003**	**3.2000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**1.0395**	**1.0395**	**3.0000e-005**	**0.0000**	**1.0402**

3.6 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.4704					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1900e-003	0.0153	0.0182	3.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	2.5533	2.5533	1.8000e-004	0.0000	2.5576
Total	**3.4726**	**0.0153**	**0.0182**	**3.0000e-005**		**9.4000e-004**	**9.4000e-004**		**9.4000e-004**	**9.4000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.8000e-004**	**0.0000**	**2.5576**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3000e-003	1.5100e-003	0.0156	5.0000e-005	4.7200e-003	3.0000e-005	4.7500e-003	1.2500e-003	3.0000e-005	1.2800e-003	0.0000	4.0886	4.0886	1.1000e-004	0.0000	4.0913
Total	**2.3000e-003**	**1.5100e-003**	**0.0156**	**5.0000e-005**	**4.7200e-003**	**3.0000e-005**	**4.7500e-003**	**1.2500e-003**	**3.0000e-005**	**1.2800e-003**	**0.0000**	**4.0886**	**4.0886**	**1.1000e-004**	**0.0000**	**4.0913**

3.6 Architectural Coating - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.4704					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1900e-003	0.0153	0.0182	3.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	2.5533	2.5533	1.8000e-004	0.0000	2.5576
Total	**3.4726**	**0.0153**	**0.0182**	**3.0000e-005**		**9.4000e-004**	**9.4000e-004**		**9.4000e-004**	**9.4000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.8000e-004**	**0.0000**	**2.5576**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3000e-003	1.5100e-003	0.0156	5.0000e-005	4.7200e-003	3.0000e-005	4.7500e-003	1.2500e-003	3.0000e-005	1.2800e-003	0.0000	4.0886	4.0886	1.1000e-004	0.0000	4.0913
Total	**2.3000e-003**	**1.5100e-003**	**0.0156**	**5.0000e-005**	**4.7200e-003**	**3.0000e-005**	**4.7500e-003**	**1.2500e-003**	**3.0000e-005**	**1.2800e-003**	**0.0000**	**4.0886**	**4.0886**	**1.1000e-004**	**0.0000**	**4.0913**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Improve Destination Accessibility

Increase Transit Accessibility

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	6.2236	11.8018	50.5260	0.0922	7.5900	0.0911	7.6810	2.0299	0.0853	2.1153	0.0000	8,374.7073	8,374.7073	0.7260	0.0000	8,392.8571
Unmitigated	6.4193	12.3039	53.4060	0.0984	8.1525	0.0968	8.2493	2.1804	0.0907	2.2711	0.0000	8,944.3129	8,944.3129	0.7652	0.0000	8,963.4427

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,770.30	1,795.59	1646.66	5,089,291	4,738,130
Regional Shopping Center	3,781.20	5,996.40	3028.80	6,995,987	6,513,264
Regional Shopping Center	5,236.96	8,305.01	4194.89	9,689,442	9,020,870
Total	10,788.46	16,097.00	8,870.35	21,774,719	20,272,264

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	10.80	7.30	7.50	45.60	19.00	35.40	86	11	3
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.455000	0.115000	0.211000	0.114000	0.021000	0.007000	0.011000	0.016000	0.000000	0.001000	0.038000	0.001000	0.010000
Regional Shopping Center	0.455000	0.115000	0.211000	0.114000	0.021000	0.007000	0.011000	0.016000	0.000000	0.001000	0.038000	0.001000	0.010000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,329.5711	1,329.5711	0.0601	0.0124	1,334.7807
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,329.5711	1,329.5711	0.0601	0.0124	1,334.7807
NaturalGas Mitigated	0.0328	0.2904	0.1916	1.7900e-003		0.0227	0.0227		0.0227	0.0227	0.0000	324.8659	324.8659	6.2300e-003	5.9600e-003	326.7964
NaturalGas Unmitigated	0.0328	0.2904	0.1916	1.7900e-003		0.0227	0.0227		0.0227	0.0227	0.0000	324.8659	324.8659	6.2300e-003	5.9600e-003	326.7964

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	2.73922e+006	0.0148	0.1262	0.0537	8.1000e-004		0.0102	0.0102		0.0102	0.0102	0.0000	146.1750	146.1750	2.8000e-003	2.6800e-003	147.0437
Regional Shopping Center	1.404e+006	7.5700e-003	0.0688	0.0578	4.1000e-004		5.2300e-003	5.2300e-003		5.2300e-003	5.2300e-003	0.0000	74.9228	74.9228	1.4400e-003	1.3700e-003	75.3680
Regional Shopping Center	1.94454e+006	0.0105	0.0953	0.0801	5.7000e-004		7.2400e-003	7.2400e-003		7.2400e-003	7.2400e-003	0.0000	103.7681	103.7681	1.9900e-003	1.9000e-003	104.3847
Total		**0.0328**	**0.2904**	**0.1916**	**1.7900e-003**		**0.0227**	**0.0227**		**0.0227**	**0.0227**	**0.0000**	**324.8659**	**324.8659**	**6.2300e-003**	**5.9500e-003**	**326.7964**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	2.73922e+006	0.0148	0.1262	0.0537	8.1000e-004		0.0102	0.0102		0.0102	0.0102	0.0000	146.1750	146.1750	2.8000e-003	2.6800e-003	147.0437
Regional Shopping Center	1.404e+006	7.5700e-003	0.0688	0.0578	4.1000e-004		5.2300e-003	5.2300e-003		5.2300e-003	5.2300e-003	0.0000	74.9228	74.9228	1.4400e-003	1.3700e-003	75.3680
Regional Shopping Center	1.94454e+006	0.0105	0.0953	0.0801	5.7000e-004		7.2400e-003	7.2400e-003		7.2400e-003	7.2400e-003	0.0000	103.7681	103.7681	1.9900e-003	1.9000e-003	104.3847
Total		**0.0328**	**0.2904**	**0.1916**	**1.7900e-003**		**0.0227**	**0.0227**		**0.0227**	**0.0227**	**0.0000**	**324.8659**	**324.8659**	**6.2300e-003**	**5.9500e-003**	**326.7964**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.19607e+006	347.9491	0.0157	3.2600e-003	349.3125
Regional Shopping Center	1.4148e+006	411.5815	0.0186	3.8500e-003	413.1942
Regional Shopping Center	1.9595e+006	570.0404	0.0258	5.3300e-003	572.2740
Total		**1,329.5711**	**0.0601**	**0.0124**	**1,334.7807**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.19607e+006	347.9491	0.0157	3.2600e-003	349.3125
Regional Shopping Center	1.4148e+006	411.5815	0.0186	3.8500e-003	413.1942
Regional Shopping Center	1.9595e+006	570.0404	0.0258	5.3300e-003	572.2740
Total		**1,329.5711**	**0.0601**	**0.0124**	**1,334.7807**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.6381	0.1293	2.1384	7.8000e-004		0.0200	0.0200		0.0200	0.0200	0.0000	125.1446	125.1446	5.6500e-003	2.2300e-003	125.9509
Unmitigated	2.8949	0.1673	4.4703	8.3900e-003		0.4005	0.4005		0.4005	0.4005	50.9383	125.1446	176.0829	0.2438	2.2300e-003	182.8424

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.3470					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.2152					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.2691	0.1432	2.3767	8.2800e-003		0.3889	0.3889		0.3889	0.3889	50.9383	121.7313	172.6696	0.2405	2.2300e-003	179.3461
Landscaping	0.0636	0.0242	2.0936	1.1000e-004		0.0115	0.0115		0.0115	0.0115	0.0000	3.4133	3.4133	3.3200e-003	0.0000	3.4962
Total	**2.8949**	**0.1673**	**4.4703**	**8.3900e-003**		**0.4005**	**0.4005**		**0.4005**	**0.4005**	**50.9383**	**125.1446**	**176.0829**	**0.2438**	**2.2300e-003**	**182.8423**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.3470					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.2152					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0123	0.1051	0.0447	6.7000e-004		8.5000e-003	8.5000e-003		8.5000e-003	8.5000e-003	0.0000	121.7313	121.7313	2.3300e-003	2.2300e-003	122.4547
Landscaping	0.0636	0.0242	2.0936	1.1000e-004		0.0115	0.0115		0.0115	0.0115	0.0000	3.4133	3.4133	3.3200e-003	0.0000	3.4962
Total	**2.6381**	**0.1293**	**2.1384**	**7.8000e-004**		**0.0200**	**0.0200**		**0.0200**	**0.0200**	**0.0000**	**125.1446**	**125.1446**	**5.6500e-003**	**2.2300e-003**	**125.9509**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	99.7059	1.2913	0.0312	141.2900
Unmitigated	99.7059	1.2913	0.0312	141.2900

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	18.3083 / 11.5422	46.3800	0.5984	0.0145	65.6511
Regional Shopping Center	21.1996 / 12.9933	53.3260	0.6929	0.0168	75.6389
Total		**99.7059**	**1.2913**	**0.0312**	**141.2900**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	18.3083 / 11.5422	46.3800	0.5984	0.0145	65.6511
Regional Shopping Center	21.1996 / 12.9933	53.3260	0.6929	0.0168	75.6389
Total		**99.7059**	**1.2913**	**0.0312**	**141.2900**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	87.2394	5.1557	0.0000	216.1320
Unmitigated	87.2394	5.1557	0.0000	216.1320

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	129.26	26.2386	1.5507	0.0000	65.0051
Regional Shopping Center	300.51	61.0008	3.6050	0.0000	151.1269
Total		**87.2394**	**5.1557**	**0.0000**	**216.1320**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	129.26	26.2386	1.5507	0.0000	65.0051
Regional Shopping Center	300.51	61.0008	3.6050	0.0000	151.1269
Total		**87.2394**	**5.1557**	**0.0000**	**216.1320**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Appendix B

Updated Traffic Analysis

1. INTRODUCTION

This report documents the results of the Transportation Impact Analysis conducted for the proposed Union Crossing Mixed Use Development Project in Manteca, California. This *Transportation Impact Analysis* (July 2019) was prepared by Fehr & Peers for the proposed project under contract to the City of Manteca Community Development Department and DeNovo Planning Group.

PROJECT DESCRIPTION

The Union Crossing Project would construct a mixed-use development project (commercial and residential) on the west side of Union Road between State Route 120 (to the north) and Woodward Avenue (to the south). The Union Crossing Project site is located both north and south of Atherton Drive, and consistent with the 2009 Project the following driveway access points would serve project-generated traffic:

- Full access signalized intersection at Union Road / Atherton Drive;
- Full access signalized intersection on Atherton Drive;
- Two unsignalized driveways on Atherton Drive;
- Right-turn in / right-turn out only driveway on Union Road north of Atherton Drive;
- Three unsignalized driveway on Union Road between Atherton Drive and Woodward Avenue; and
- One unsignalized driveways on Woodward Avenue.

STUDY INTERSECTIONS

The following fifteen (15) study intersections were included in the analysis:

1) Union Road / Atherton Drive ;
2) Union Road / Woodward Avenue;
3) Main Street / Atherton Drive ;
4) Main Street / Woodward Avenue;
5) Airport Way / Atherton Drive ;
6) Airport Way / Woodward Avenue;
7) Union Road / Project Driveway #1;
8) Union Road / Project Driveway #2;
9) Union Road / Project Driveway #3;
10) Union Road / Project Driveway #4;
11) Atherton Drive / Project Driveway #5;
12) Atherton Drive / Project Driveway #6;
13) Atherton Drive / Project Driveway #7; and
14) Woodward Avenue / Project Driveway #8.

TRAFFIC ANALYSIS SCENARIOS

The study intersections were evaluated for the following four scenarios:

- **Scenario 1: Existing Conditions** – Analyzes operations as they exist today.

- **Scenario 2: Existing Plus Project Conditions** – Analyzes existing operations with the addition of trips generated from the proposed Union Crossing Mixed-Use Development Project.

- **Scenario 3: Cumulative No Project Conditions** – Analyzes cumulative year (2042) volumes based on the City of Manteca / San Joaquin Council of Governments Travel Demand Forecasting (TDF) Model, assuming the project site remains in its current state

- **Scenario 4: Cumulative Plus Project Conditions** – Analyzes cumulative year volumes with the addition of trips generated from the proposed Union Crossing Mixed-Use Development Project.

2. ANALYSIS METHODOLOGY

This chapter describes the methods used to analyze the fifteen (15) study intersections described above, and to develop traffic forecasts for the study intersections.

DATA COLLECTION

Intersection turning movements and roadway segment traffic counts were collected in May 2019 when local Manteca Unified Schools were in session. We collected weekday AM (7:00 AM to 9:00 AM) and PM (4:00 PM to 6:00 PM) peak period intersection turning movements at the following six (6) existing study intersections.

1) Union Road / Atherton Drive ;
2) Union Road / Woodward Avenue;
3) Main Street / Atherton Drive ;
4) Main Street / Woodward Avenue;
5) Airport Way / Atherton Drive; and
6) Airport Way / Woodward Avenue.

We collected daily roadway segment traffic counts on the following five (5) existing segments:

1) Union Road between SR 120 and Atherton Drive;
2) Union Road between Atherton Drive and Woodward Avenue;
3) Atherton Drive between Union Road and Main Street;
4) Woodward Avenue between Union Road and Main Street and
5) Woodward Avenue between Union Road and Main Street.

TRAVEL DEMAND FORECASTS

Using the City of Manteca / SJCOG sub-area Travel Demand Forecasting (TDF) Model, Cumulative Year 2042 traffic volume forecasts were developed for the following six (6) existing study intersections.

1) Union Road / Atherton Drive ;
2) Union Road / Woodward Avenue;
3) Main Street / Atherton Drive ;
4) Main Street / Woodward Avenue;
5) Airport Way / Atherton Drive; and
6) Airport Way / Woodward Avenue.

The travel demand model incorporates the current RTP / Air Quality Model, Build-out of the current City of Manteca General Plan, and General Plans for the surrounding communities of Lathrop, Ripon, San Joaquin County, and Stockton.

The Manteca General Plan Model also includes projects identified in the City's Public Facilities Improvement Plan (PFIP) and the Regional Transportation Plan / Sustainable Communities Strategy (RTP/SCS) Project List for:

- Mainline Highway Improvements (Table 6-1 from SJCOG RTP);
- Interchange Improvements (Table 6-1 from SJCOG RTP); and
- Regional Roadway Improvements (Table 6-3 from SJCOG RTP).

The traffic forecasting adjustment procedure known as the "difference method" was used to develop Cumulative Year (2042) AM and PM Peak Hour traffic forecasts. For a given intersection, this forecasting procedure is calculated as follows for every movement at the study intersections:

Year 2042 Forecast = Existing Volume + (Year 2042 TDF Model – Base Year (2018) TDF Model)

INTERSECTION ANALYSIS

The study intersections were analyzed using procedures and methodologies contained in the *Highway Capacity Manual – 6th Edition* (Transportation Research Board, 2016). These methodologies were applied using Synchro 10 software which considers traffic volumes, lane configurations, signal timings, signal coordination, and other pertinent parameters of intersection operations.

The following describes the specific inputs, model parameters, and other aspects of the Synchro modeling, based on data collected in May 2019:

- Existing roadway geometrics and intersection lane configurations.
- The peak hour factor (PHF) observed at each intersection during each peak hour was used. The PHF, which is a measure of peaking (lower values represent more peaking) during the busiest 15-minutes of the hour, ranges from 0.79 to 0.94 depending on the intersection and the peak hour.
- The heavy vehicle percentage observed at each intersection during each peak hour was used. The heavy vehicle percentage ranges from one percent (1%) to six percent (6%) depending on the intersection and the peak hour.
- A minimum volume of five pedestrians and five bicyclists were entered at each intersection approach/crosswalk (if observed volumes were lower than five).

LEVEL OF SERVICE DEFINITION

Each study intersection was analyzed using the concept of Level of Service (LOS). LOS is a qualitative measure of traffic operating conditions whereby a letter grade, from A (the best) to F (the worst), is assigned. These grades represent the perspective of drivers and are an indication of the comfort and convenience associated with driving. In general, LOS A represents free-flow conditions with no congestion, and LOS F represents severe congestion and delay under stop-and-go conditions. For signalized intersections and all-way stop controlled intersections, LOS is based on the average delay experienced by all vehicles passing through the intersection.

For side-street stop-controlled intersections, the delay and LOS for the overall intersection is reported along with the delay for the worst-case movement. Table 1 displays the delay range associated with each LOS category for signalized and unsignalized intersections.

Table 1: Intersections Level of Service (LOS) Criteria

LOS	Description (for Signalized Intersections)	Average Delay (Seconds/Vehicle)	
		Signalized Intersections	Unsignalized Intersections
A	Operations with very low delay occurring with favorable traffic signal progression and/or short cycle lengths.	< 10.0	< 10.0
B	Operations with low delay occurring with good progression and/or short cycle lengths.	> 10.0 to 20.0	> 10.0 to 15.0
C	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	> 20.0 to 35.0	> 15.0 to 25.0
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	> 35.0 to 55.0	> 25.0 to 35.0
E	Operations with high delay values indicating poor progression, and long cycle lengths. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.	> 55.0 to 80.0	> 35.0 to 50.0
F	Operations with delays unacceptable to most drivers occurring due to over-saturation, poor progression, or very long cycle lengths.	> 80.0	> 50.0

Note: LOS = level of service; V/C ratio = volume-to-capacity ratio
LOS at signalized intersections and unsignalized all-way stop controlled intersections is based on average delay for all vehicles. LOS at unsignalized side-street stop-controlled intersections is reported for the entire intersection and for the minor street movement with the greatest delay.
Source: Transportation Research Board, 2016

STANDARDS OF SIGNIFICANCE

The City of Manteca 2023 General Plan Policy C-P-2 establishes the following level of service standard:

To the extent feasible, the City shall strive for a vehicular LOS of D or better at all streets and intersections, except in the Downtown area where right-of-way is limited, pedestrian, bicycle, and transit mobility are most important and vehicular LOS is not a consideration.

3. PROJECT IMPACTS UNDER EXISTING CONDITIONS

This chapter presents the transportation impact analysis results for Existing and Existing Plus Project Conditions. The following is a detailed description of the roadways that could be affected by the project:

- **Union Road** is a north-south arterial in the City of Manteca extending from State Route 120 (SR 120) and W. Ripon Road to the south and French Camp Road and the City of Stockton to the north. Near the project site, Union Road provides one travel lane in each direction. Between SR 120 and Atherton Drive, Union Road has an Average Daily Traffic (ADT) volume of approximately 11,000 vehicles. Between Atherton Drive and Woodward Avenue, Union Road has an Average Daily Traffic (ADT) volume of approximately 8,600 vehicles.

- **Atherton Drive** is an east-west arterial in the City of Manteca extending from west of Airport Way to E. Woodward Avenue near Moffat Boulevard and State Route 99 to the east. Near the project site, Atherton Drive provides one travel lane in each direction. Between Airport Way and Union Road, Atherton Drive has an Average Daily Traffic (ADT) volume of approximately 1,000 vehicles. Between Union Road and Main Street, Atherton Drive has an Average Daily Traffic (ADT) volume of approximately 6,000 vehicles.

- **Airport Way** is a north-south arterial in the City of Manteca extending from State Route 120 (SR 120) and W. Ripon Road to the south and French Camp Road and the City of Stockton to the north. Near the project site, Airport Way provides one travel lane in each direction. Between SR 120 and Woodward Avenue, Airport Way has an Average Daily Traffic (ADT) volume of approximately 8,600 vehicles.

- **Main Street** is a north-south arterial in the City of Manteca extending from State Route 120 (SR 120) and W. Ripon Road to the south and Lathrop Road to the north. Near the project site, Main Street provides one travel lane in each direction. Between SR 120 and Atherton Drive, Main Street has an Average Daily Traffic (ADT) volume of approximately 10,500 vehicles. Between Atherton Drive and Woodward Avenue, Main Street has an Average Daily Traffic (ADT) volume of approximately 8,000 vehicles.

- **Woodward Avenue** is an east-west minor collector extending from west of Airport Way to Moffat Boulevard. Near the project site, Woodward Avenue consists of one travel lane in each direction. Between Airport Way and Union Road, Woodward Avenue has an ADT volume of approximately 4,600 vehicles.

EXISTING LEVEL OF SERVICE

Table 2 presents the LOS results for the study intersections under Existing AM and PM Peak Hour Conditions. As shown, the intersections operate acceptably during both peak hours. Technical calculations are provided in Appendix A.

Table 2: Level of Service Analysis – Existing Conditions

Intersection	Control	AM Peak Hour		PM Peak Hour	
		Delay[1]	LOS	Delay[1]	LOS
1) Union Road / Atherton Drive	Signal	3	A	4	A
2) Union Road / Woodward Avenue	AWSC	16	C	18	C
3) Main Street / Atherton Drive	Signal	13	B	17	B
4) Main Street / Woodward Avenue	AWSC	22	C	23	C
5) Airport Way / Atherton Drive	SSSC	1 (10)	A (B)	1 (11)	A (B)
6) Airport Way / Woodward Avenue	AWSC	12	B	15	B

Notes: LOS = Level of Service, AWSC = All-Way Stop Control
[1] For all-way stop controlled intersections, average intersection delay is reported in seconds per vehicle for all approaches.
Source: Fehr & Peers, 2019

TRANSIT SERVICE

Transit service in the City of Manteca is provided by Manteca Transit. Transit Route 2 (northbound / westbound) and Transit Route 3 (southbound / eastbound) provide fixed route service near the study area. The closest transit stop for Routes 2 and 3 are located on Atherton Street, east of Union Road, which is located directly east of the Union Road / Atherton Drive intersection.

BICYCLE AND PEDESTRIAN FACILITIES

Bicycle infrastructure near the project site consists of a Class II bike lane on Pagola Avenue and Collins Street east of the project site and on Oleander Avenue west of the project site. A Class II bike lane is defined in the Manteca Bicycle Master Plan (City of Manteca, 2003) as a bike lane that provides a restricted right-of-way and is designated for the use of bicycles with a striped lane on a street or highway.

The pedestrian network in the study area includes sidewalks present along the developed frontages of Union Road and Atherton Drive. Sidewalks in the area are being constructed as development occurs; therefore, significant gaps in the pedestrian network currently exist. However, these gaps will be reduced, if not eliminated, as the area continues to build out.

PROJECT TRIP GENERATION

Table 3 presents the estimated trips generated by the proposed Union Crossing Project for weekday daily, AM and PM peak hour conditions. As shown below, the project would generate approximately 10,854 daily vehicle trips, 450 AM peak hour trips (with 216 inbound and 234 outbound), and 994 PM peak hour trips (with 504 inbound and 490 outbound). The trips generated by the proposed project are based on trip rates from the *Trip Generation Manual 10th Edition* (Institute of Transportation Engineers, 2017).

Table 3: Union Crossing Project Trip Generation Analysis

Land Use (ITE Code)	Quantity	Vehicle Trip Rate[1]							Vehicle Trips						
		Daily	AM			PM			Daily	AM			PM		
		Total	In	Out	Total	In	Out	Total	Total	In	Out	Total	In	Out	Total
Living Spaces (890)	120,000 Square Feet	6.3	0.18	0.08	0.26	0.24	0.28	0.52	756	22	9	31	29	33	62
Shopping Center (Retail / Commercial / Restaurant) (820)	166,200 Square Feet	64.01	1.64	1.39	3.03	2.88	2.99	5.87	11,324	289	247	536	510	529	1,039
Apartments (220)	281 Dwelling Units	7.32	0.11	0.35	0.46	0.35	0.21	0.56	2,057	30	100	130	99	58	157
Internal and Pass-By Reduction									-3,283	-125	-122	-247	-134	-130	-264
Net New Trips									10,854	216	234	450	504	490	994

Notes:
[1] Trip rates are based on the *Trip Generation Manual 10th Edition* (Institute of Transportation Engineers 2017).
Source: Fehr & Peers, 2019

Table 4 presents the comparison of the estimated trips generated by the proposed 2019 Union Crossing Project to the approved 2009 Union Commercial Project for weekday daily, AM and PM peak hour conditions. As shown below, the 2019 Union Crossing project would generate approximately 6,062 fewer daily vehicle trips, an additional 79 AM peak hour trips (with 10 less inbound and 89 more outbound), and 364 fewer PM peak hour trips (with 148 less inbound and 216 less outbound). It should be noted that the AM peak hour has lower traffic volumes under Existing and Cumulative No Project conditions when compared to the PM peak hour. Therefore, the total of 79 new morning peak hour trips was determined not to be an impact to trip generation and intersection operations for either Existing Plus Project or Cumulative Plus Project Conditions.

Table 4: Trip Generation Comparison (2019 versus 2009 Projects)							
Proposed Project	Vehicle Trips						
	Daily	AM			PM		
	Total	In	Out	Total	In	Out	Total
2009 Union Commercial Project	16,916	226	145	371	652	706	1,358
2009 Union Crossing Project	10,854	216	234	450	504	490	994
Net New Trips	-6,062	-10	89	79	-148	-216	-364
Source: Fehr & Peers, 2019							

TRIP DISTRIBUTION/ASSIGNMENT

Project trips were distributed throughout the study area and assigned to project driveways based on proposed permitted turning movements and existing directional travel patterns on Airport Way, Union Road, and Woodward Avenue during morning and evening commute time periods. The following Union Crossing project access driveway configurations were used in the distribution / assignment of project generated traffic.

- Union Road / Project Driveway #1 – Unsignalized
  With Southbound right-turn in / eastbound right-turn out;
- Union Road / Project Driveway #2 – Unsignalized
  With Southbound right-turn in / eastbound right-turn out;
- Union Road / Project Driveway #3 – Unsignalized
  With Southbound right-turn in / eastbound right-turn out;
- Union Road / Project Driveway #4 – Unsignalized
  With Southbound right-turn in / eastbound right-turn out;
- Atherton Drive / Project Driveway #5 – Signalized With Full Access (all Movements Allowed);
- Atherton Drive / Project Driveway #6 – Unsignalized
  With Westbound right-turn in / Southbound right-turn out; and
  Eastbound right-turn in / Northbound right-turn out
- Atherton Drive / Project Driveway #7 – Unsignalized
  With Westbound right-turn in / Southbound left-turn out
  Southbound right-turn out; and
- Woodward Avenue / Project Driveway #8 – Unsignalized
  With Westbound right-turn in / Southbound right-turn out.

Based on existing travel patterns and complimentary land uses, approximately 55 percent of project generated trips during the AM peak hour and 50 percent of project trips during the PM peak hour will travel to and from the north / west while 45 percent of project trips during the AM peak hour and 50 percent of project trips during the PM peak hour will travel to and from the south / east.

EXISTING PLUS PROJECT INTERSECTION LEVELS OF SERVICE

Table 5 displays intersection LOS and delay under existing plus project conditions. As shown, all intersections would operate acceptably with the proposed project. Technical calculations are provided in Appendix B.

All six (6) existing study intersections, with two (2) signalized and (4) unsignalized study intersections would continue to operate at acceptable LOS C or better under Existing Plus Project AM and PM peak hour conditions. In addition, the eight (8) project study intersections, with one (1) signalized and seven (7) unsignalized would also operate at acceptable LOS C or better under Existing Plus Project AM and PM peak hour conditions.

Table 5: Level of Service Analysis – Existing Plus Project Conditions									
Intersection	Control	Existing Conditions				Existing Plus Project Conditions			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay[1]	LOS	Delay[1]	LOS	Delay[1]	LOS	Delay[1]	LOS
1) Union Road / Atherton Drive	Signal	3	A	4	A	20	B	30	C
2) Union Road / Woodward Avenue	AWSC	16	C	18	C	18	C	20	C
3) Main Street / Atherton Drive	Signal	13	B	17	B	15	B	19	B
4) Main Street / Woodward Avenue	AWSC	22	C	23	C	24	C	24	C
5) Airport Way / Atherton Drive	SSSC	1 (10)	A (B)	1 (11)	A (B)	3 (19)	A (C)	4 (25)	A (C)
6) Airport Way / Woodward Avenue	AWSC	12	B	15	B	13	B	16	C
7) Union Road / Project Driveway #1	SSSC	n/a		n/a		1 (1)	A (A)	1 (1)	A (A)
8) Union Road / Project Driveway #2	SSSC	n/a		n/a		1 (9)	A (A)	1 (10)	A (A)
9) Union Road / Project Driveway #3	SSSC	n/a		n/a		1 (11)	A (B)	1 (13)	A (B)
10) Union Road / Project Driveway #4	SSSC	n/a		n/a		1 (9)	A (A)	1 (8)	A (A)
11) Atherton Drive / Project Driveway #5	Signal	n/a		n/a		21	C	22	C
12) Atherton Drive / Project Driveway #6	SSSC	n/a		n/a		2 (9)	A (A)	2 (8)	A (A)
13) Atherton Drive / Project Driveway #7	SSSC	n/a		n/a		1 (9)	A (A)	1 (8)	A (A)
14) Woodward Avenue / Project Driveway #8	SSSC	n/a		n/a		1 (9)	A (A)	1 (8)	A (A)

Notes: LOS = Level of Service, AWSC = All-Way Stop Control; SSSC = Side-Street Stop-Control
In some cases, reported intersection delay is the same; however, LOS varies. This is due to rounding and occurs when intersection delay is at the delay threshold between two different levels of service.
[1] For all-way stop controlled intersections, average intersection delay is reported in seconds per vehicle for all approaches. For side-street stop-controlled intersections, average intersection and (worst-case movement) delay in seconds per vehicle is reported.
Source: Fehr & Peers, 2019

4. CUMULATIVE CONDITIONS ANALYSIS

This chapter presents the results for Cumulative No Project and Cumulative Plus Project Conditions.

CUMULATIVE NO PROJECT INTERSECTION LEVELS OF SERVICE

The City of Manteca Public Facilities Impact Fee Program includes traffic signals at all four (4) existing study intersections that are currently stop controlled under cumulative conditions. Table 5 displays the results of the Cumulative No Project operations analysis. Therefore, traffic signals were assumed at the following study intersections under the Cumulative No Project scenario:

1) Union Road / Woodward Avenue;
2) Main Street / Woodward Avenue;
3) Airport Way / Atherton Drive; and
4) Airport Way / Woodward Avenue.

Table 5: Level of Service Analysis – Cumulative No Project Conditions

Intersection	Control[1]	Existing Conditions				Cumulative No Project Conditions			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay[2]	LOS	Delay[2]	LOS	Delay[2]	LOS	Delay[2]	LOS
1) Union Road / Atherton Drive	Signal	3	A	4	A	23	C	25	C
2) Union Road / Woodward Avenue	AWSC/Signal	16	C	18	C	29	C	22	C
3) Main Street / Atherton Drive	Signal	13	B	17	B	27	C	30	C
4) Main Street / Woodward Avenue	AWSC / Signal	22	C	23	C	21	C	24	C
5) Airport Way / Atherton Drive	SSSC / Signal	1 (10)	A (B)	1 (11)	A (B)	20	C	22	C
6) Airport Way / Woodward Avenue	AWSC/Signal	12	B	15	B	34	C	38	D

Notes:
LOS = Level of Service, AWSC = All-Way Stop Control; SSSC = Side-Street Stop Control
[1] Under existing conditions, intersection control for both study intersections is AWSC. Under cumulative conditions, intersection control for both study intersections is a traffic signal.
[2] For signalized intersections and all-way stop controlled intersections, average intersection delay is reported in seconds per vehicle for all approaches.

Source: Fehr & Peers, 2019

CUMULATIVE PLUS PROJECT INTERSECTION LEVELS OF SERVICE

Project trips were added to Cumulative No Project volumes. The same trip generation estimates and trip distribution patterns for project-generated traffic used for Existing Plus Project conditions was also applied for Cumulative Plus Project Conditions. Table 6 displays the results of the Cumulative Plus Project Conditions operations analysis. As shown, all intersections operate acceptably at LOS D or better during both peak hours.

Under Cumulative Plus Project Conditions, the addition of vehicle traffic generated by the proposed Union Crossing Project would result in minor changes in average vehicle delay. During the morning peak hour, all six (6) signalized study intersections would continue to operate at acceptable LOS C or better under Cumulative Plus Project AM peak hour conditions. In addition, the eight (8) project study intersections, with one (1) signalized and seven (7) unsignalized would also continue to operate at acceptable LOS C or better under Cumulative Plus Project AM peak hour conditions.

During the evening peak hour, all six (6) signalized study intersections would continue to operate at acceptable LOS D or better under Cumulative Plus Project AM peak hour conditions. In addition, the eight (8) project study intersections, with one (1) signalized and seven (7) unsignalized would also continue to operate at acceptable LOS C or better under Cumulative Plus Project AM peak hour conditions.

Table 6: Level of Service Analysis – Cumulative Plus Project Conditions									
Intersection	Control[1]	Cumulative No Project Conditions				Cumulative Plus Project Conditions			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay[2]	LOS	Delay[2]	LOS	Delay[2]	LOS	Delay[2]	LOS
1) Union Road / Atherton Drive	Signal	23	C	25	C	28	C	32	C
2) Union Road / Woodward Avenue	AWSC / Signal	29	C	22	C	31	C	24	C
3) Main Street / Atherton Drive	Signal	27	C	30	C	29	C	32	C
4) Main Street / Woodward Avenue	AWSC / Signal	21	C	24	C	22	C	25	C
5) Airport Way / Atherton Drive	SSSC / Signal	20	C	22	C	23	C	26	C
6) Airport Way / Woodward Avenue	AWSC / Signal	34	C	38	D	35	C	39	D
7) Union Road / Project Driveway #1	SSSC	n/a		n/a		1 (5)	A (A)	1 (9)	A (A)
8) Union Road / Project Driveway #2	SSSC	n/a		n/a		1 (12)	A (B)	1 (14)	A (B)
9) Union Road / Project Driveway #3	SSSC	n/a		n/a		1 (13)	A (B)	1 (14)	A (B)
10) Union Road / Project Driveway #4	SSSC	n/a		n/a		1 (10)	A (A)	1 (10)	A (A)
11) Atherton Drive / Project Driveway #5	Signal	n/a		n/a		26	C	28	C
12) Atherton Drive / Project Driveway #6	SSSC	n/a		n/a		2 (10)	A (A)	2 (10)	A (A)
13) Atherton Drive / Project Driveway #7	SSSC	n/a		n/a		1 (10)	A (A)	1 (10)	A (A)
14) Woodward Avenue / Project Driveway #8	SSSC	n/a		n/a		1 (9)	A (A)	1 (9)	A (A)

Notes:
LOS = Level of Service, AWSC = All-Way Stop Control; SSSC = Side-Street Stop Control
[1] Under cumulative conditions, intersection control for Intersections 2, 4, 5, and 6 is a traffic signal.
[2] For signalized intersections and all-way stop controlled intersections, average intersection delay is reported in seconds per vehicle for all approaches. For side-street stop controlled intersections, average intersection and (worst-case movement) delay in seconds per vehicle is reported.
Source: Fehr & Peers, 2019

5. TRANSPORTATION IMPACT ANALYSIS CONCLUSIONS

This chapter presents the conclusions of the transportation impact analysis for the proposed Union Crossing Project in Manteca, California. The Union Crossing Project would construct a mixed-use development project (commercial and residential) on the west side of Union Road between State Route 120 (to the north) and Woodward Avenue (to the south). The Union Crossing Project site is located both north and south of Atherton Drive, and consistent with the 2009 Project the following driveway access points would serve project-generated traffic:

RESULTS OF THE INTERSECTION LEVEL OF SERVICE ANALYSIS

All six (6) existing study intersections, with two (2) signalized and (4) unsignalized study intersections would continue to operate at acceptable LOS C or better under Existing Plus Project AM and PM peak hour conditions. In addition, the eight (8) project study intersections, with one (1) signalized and seven (7) unsignalized would also operate at acceptable LOS C or better under Existing Plus Project AM and PM peak hour conditions. Therefore, impacts would be considered *less than significant.*

The City of Manteca Public Facilities Impact Fee Program includes traffic signals at all four (4) existing study intersections that are currently stop controlled under cumulative conditions. Therefore, traffic signals were assumed at the following study intersections under the Cumulative No Project scenario:

5) Union Road / Woodward Avenue;
6) Main Street / Woodward Avenue;
7) Airport Way / Atherton Drive; and
8) Airport Way / Woodward Avenue.

Under Cumulative Plus Project Conditions, the addition of vehicle traffic generated by the proposed Union Crossing Project would result in minor changes in average vehicle delay. During the morning peak hour, all six (6) signalized study intersections would continue to operate at acceptable LOS C or better under Cumulative Plus Project AM peak hour conditions. In addition, the eight (8) project study intersections, with one (1) signalized and seven (7) unsignalized would also continue to operate at acceptable LOS C or better under Cumulative Plus Project AM peak hour conditions.

During the evening peak hour, all six (6) signalized study intersections would continue to operate at acceptable LOS D or better under Cumulative Plus Project AM peak hour conditions. In addition, the eight (8) project study intersections, with one (1) signalized and seven (7) unsignalized would also continue to operate at acceptable LOS C or better under Cumulative Plus Project AM peak hour conditions. Therefore, impacts would be considered *less than significant.*

RESULTS OF THE AIR TRAFFIC PATTERNS ANALYSIS

The proposed project does not include airport or airstrip facilities and is not located adjacent to an airport or airstrip. According to the San Joaquin Council of Governments (SJCOG) Regional Transportation Plan, the project site is a compatible land use based on its location relative to the Stockton Airport.

The proposed project does include buildings over two stories (hotel and apartments), but these proposed land uses would not result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks. Implementation of proposed Union Crossing project would have *no impact* relative to this topic.

RESULTS OF THE SITE CIRCULATION AND EMERGENCY VEHICLE ACCESS ANALYSIS

No site circulation or access issues have been identified that would cause a traffic safety problem/hazard or any unusual traffic congestion or delay at the eight Union Crossing Project driveways. The volumes on the internal roadways and drive aisles would be relatively low such that no significant conflicts would be expected with through traffic on Atherton Drive, Union Road, or Woodward Avenue. All emergency vehicles arriving to and from the proposed Union Crossing Mixed-Use Development Project would be able to enter via Atherton Drive Union Road, or Woodward Avenue. All accesses would be designed to City standards that accommodate turning requirements for fire trucks. These multiple entry/exit points provide flexibility for emergency vehicles to access or evacuate from multiple directions during an emergency.

At the proposed signalized project entrance on Atherton Drive, there are no safety, capacity, or sight distance issues identified with providing either an eastbound left-turn or westbound left-turn movement entering the project site. The new traffic signal should also be designed to provide crosswalks on all four quadrants to encourage pedestrians to walk between the mixed-use developments. In addition, at the seven (7) unsignalized proposed project entrances on Atherton Drive, Union Road, and Woodward Avenue, there were no safety, capacity, or sight distance issues identified with providing the following access:

- Union Road / Project Driveway #1 – Southbound right-turn in / eastbound right-turn out;
- Union Road / Project Driveway #2 – Southbound right-turn in / eastbound right-turn out;
- Union Road / Project Driveway #3 – Southbound right-turn in / eastbound right-turn out;
- Union Road / Project Driveway #4 – Southbound right-turn in / eastbound right-turn out;
- Atherton Drive / Project Driveway #6 – Westbound right-turn in / Southbound right-turn out; and Eastbound right-turn in / Northbound right-turn out
- Atherton Drive / Project Driveway #7 – Westbound right-turn in / Southbound left-turn out / Southbound right-turn out; and
- Woodward Avenue / Project Driveway #8 - Westbound right-turn in / Southbound right-turn out.

Therefore, impacts associated with design features and emergency access would be considered *less than significant.*

RESULTS OF THE CONSISTENCY WITH MANTECA GENERAL PLAN POLICIES ANALYSIS

The Manteca General Plan is a long-range comprehensive planning document required by state law to set policy and guide future growth, development and conservation of resources. The Plan was adopted by the City in 2003 and amended most recently in 2016. The following 2011 General Plan Circulation Element goals and policies are relevant to circulation in Manteca.

Goals:

Goal C-1. Provide for a circulation system that allows for the efficient movement of people, goods, and services within and through Manteca while minimizing public costs to build and maintain the system.

Goal C-2. Provide complete streets designed to serve a broad spectrum of travel modes, including automobiles, public transit, walking, and bicycling.

Goal C-3. Develop attractive streetscapes that include landscaping, street trees, planted berms, and landscaped medians.

Goal C-4. Support the development of a Downtown area that is highly accessible to all modes of travel, focusing primarily on pedestrians, bicyclists, and transit riders.

Goal C-5. Balance the level of service for all modes so that residents and visitors have a variety of transportation choices.

Goal C-6. Maintain a safe transportation system for all modes.

Goal C-7. Accommodate truck and freight movements by developing city-wide truck routes and encouraging the development of freight and warehousing centers near existing rail lines and spurs.

Goal C-8. Establish reasonable parking requirements (minimum and maximum rates for uses) that limit parking encroachment while minimizing the amount of land consumed by parking lots.

Goal C-9. Provide a safe, secure, and convenient bicycle route system that connects to retail, employment centers, public facilities, and parks.

Goal C-10. Provide for safe and convenient pedestrian circulation.

Goal C-11. Maintain a coordinated, efficient bus service that provides both an effective alternative to automobile use and serves members of the community that cannot drive.

Goal C-12. Support and encourage regional transit connections that link Manteca to other cities.

Policies:

Policies in the Circulation Element are organized by topic. Policies for each topic most relevant to this report are summarized below

Level of Service: Policies C-P-1 through CP-3 promote balanced levels of service (LOS) across all modes and vehicular LOS of D or better, except in downtown and certain other locations where other goals predominate.

Street System: Policies C-P-8 through C-P-11 and C-P-17 promote access and connectivity for all modes. Policy C-P-12 promotes use of roundabouts.

Transportation Safety: Policies C-P-20 through C-P-22 promote hazard reduction, maintenance of sight distances, and development of landscape separated sidewalks, respectively.

Parking: Policy C-P-23 notes that future growth in traffic volumes may require removal of on-street parking. Bikeways and Pedestrian Facilities: Policies C-P-29 through C-P-40 promote development of safe and complete bicycle and pedestrian networks across the city.

Public Transportation: Policies C-P-41 through C-P-43 promote interregional bus and rail connections. Policy C-P-44 promotes intermodal connectivity. Policy C-P-45 and C-P-46 promote ridesharing. Policy C-P-48 promotes inclusion of transit on future roadways.

Transportation Demand Management: Policies C-P-53 through C-P-56 support programs which encourage alternatives to reduce the number and length of automobile trips.

The proposed Union Crossing Mixed-Use Development Project does not conflict with any of the above listed policies from the General Plan Transportation & Circulation Element. The proposed Union Crossing Project would not generate a significant increase in traffic in the area and it would not decrease levels of service to unacceptable levels. In addition, the proposed project would not change the design of any existing pedestrian or bicycle facilities or create any new safety problems in the area. The proposed project will add a small amount of both pedestrians and bicyclists who will utilize both existing and planned facilities connecting the project site with the community at large. The internal pedestrian circulation system will be designed to the City's standard for pedestrian sidewalks.

The proposed Union Crossing Mixed-Use Development Project would not interfere with any existing bus routes and would not remove or relocate any existing bus stops. The proposed project also would not conflict with any transit plans or goals of the City of Manteca and, based on the size of the project, it would be expected to generate increased transit ridership to Manteca Transit Route 2 (westbound) and Transit Route 3 (eastbound) on Atherton Drive.

Implementation of the proposed project would have a ***less than significant*** impact relative to this topic.