

CITY OF FRESNO

**NOTICE OF INTENT TO ADOPT A
NEGATIVE DECLARATION**

EA No. P19-05782 for

Development Permit Application No. P18-05782 &
Planned Development Application No. P20-01043

PROJECT SPONSOR:

Paul Halajian Architects, Inc.

PROJECT LOCATION:

4824 East Butler Avenue; located on the southeast side
of South Chestnut and East Butler Avenues.

±5.5 acres

Site Latitude: 36°43'41.52" N

Site Longitude: 119°44'5.568" W

Mount Diablo Base & Meridian, Township 14S, Range
21E

Section 7 – California

Assessor's Parcel Numbers: 473-020-37, 473-061-01, -
02, -09, & -10

Filed with:

E20201000023

FILED

JUN 26 2020

TIME

4:23pm

FRESNO COUNTY CLERK

By

Yvette Kelle *Jamison* DEPUTY

FRESNO COUNTY CLERK

2220 Tulare Street, Fresno, CA 93721

PROJECT DESCRIPTION:

Development Permit Application No. P18-03443 proposes to construct a ±26,758 square-foot cultural and arts center in accordance with the PI/cz (*Public and Institutional/conditions of zoning*) zone district for the existing Fresno Pacific University. The proposed building will serve as a special event center for educational, social and cultural events on campus. The existing vacant student housing buildings and four single-family residences will be removed to accommodate the proposed project.

Planned Development Permit Application No. P20-01043 proposes to modify the PI/cz (*Public and Institutional/conditions of zoning*) zone district development standards to allow for a reduced street-side setback, reduced landscape buffers and reduced parking requirements.

The City of Fresno has conducted an initial study of the above-described project and it has been determined to be a subsequent project that is not fully within the scope of the Master Environmental Impact Report SCH No. 2012111015 (MEIR) prepared for the Fresno General Plan. Therefore, the Planning and Development Department proposes to adopt a Negative Declaration for this project.

With the MEIR mitigations imposed, there is no substantial evidence in the record that this project may have additional significant, direct, indirect or cumulative effects on the environment that are significant and that were not identified and analyzed in the MEIR. After conducting a review of the adequacy of the MEIR pursuant to Public Resources Code, Section 21157.6(b)(1), the Planning and Development Department, as lead agency, finds that no substantial changes have occurred with respect to the circumstances under which the MEIR was certified and that no new information, which

was not known and could not have been known at the time that the MEIR was certified as complete has become available. The project is not located on a site which is included on any of the lists enumerated under Section 65962.5 of the Government Code including, but not limited to, lists of hazardous waste facilities, land designated as hazardous waste property, hazardous waste disposal sites and others, and the information in the Hazardous Waste and Substances Statement required under subdivision (f) of that Section.

Additional information on the proposed project, including the MEIR proposed environmental finding of a negative declaration and the initial study may be obtained from the Planning and Development Department, Fresno City Hall, 2600 Fresno Street, 3rd Floor Fresno, Room 3043, California 93721-3604. Please contact Jose Valenzuela at (559) 621-8070 for more information.

ANY INTERESTED PERSON may comment on the proposed environmental finding. Comments must be in writing and must state (1) the commentor's name and address; (2) the commentor's interest in, or relationship to, the project; (3) the environmental determination being commented upon; and (4) the specific reason(s) why the proposed environmental determination should or should not be made. Any comments may be submitted at any time between the publication date of this notice and close of business on **July 20, 2020**. Please direct comments to Jose Valenzuela, Planner, City of Fresno Planning and Development Department, City Hall, 2600 Fresno Street, Room 3043, Fresno, California, 93721-3604; or by email to Jose.Valenzuela@fresno.gov; or comments can be sent by facsimile to (559) 498-1026.

INITIAL STUDY PREPARED BY:

Melanie J. Halajian, AICP, Ericsson-Grant, Inc.

DATE: June 26, 2020

SUBMITTED BY:



Jose Valenzuela, Planner III
CITY OF FRESNO PLANNING AND
DEVELOPMENT DEPARTMENT

E20201000023

Initial Study/Negative Declaration

for:

Fresno Pacific University Culture and Arts Center



Prepared By:

City of Fresno

Planning & Development Department

Fresno City Hall
2600 Fresno Street, Room 3043
Fresno, CA 93721-3604
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June 2020

TABLE OF CONTENTS

	<u>PAGE</u>
<u>SECTION 1</u>	
I. INTRODUCTION	3
<u>SECTION 2</u>	
II. ENVIRONMENTAL CHECKLIST	7
PROJECT SUMMARY	12
EVALUATION OF ENVIRONMENTAL IMPACTS	29
I. AESTHETICS	30
II. AGRICULTURE AND FORESTRY RESOURCES	31
III. AIR QUALITY	32
IV. BIOLOGICAL RESOURCES	41
V. CULTURAL RESOURCES	43
VI. ENERGY	45
VII. GEOLOGY AND SOILS	49
VIII. GREENHOUSE GAS EMISSIONS	52
IX. HAZARDS AND HAZARDOUS MATERIALS	57
X. HYDROLOGY AND WATER QUALITY	5
XI. LAND USE AND PLANNING	61
XII. MINERAL RESOURCES	62
XIII. NOISE	62
XIV. POPULATION AND HOUSING	65
XV. PUBLIC SERVICES	65
XVI. RECREATION	67
XVII. TRANSPORTATION	67
XVIII. TRIBAL CULTURAL RESOURCES	74
XIX. UTILITIES AND SERVICE SYSTEMS	76
XX. WILDFIRE	80
<u>SECTION 3</u>	
III. MANDATORY FINDINGS OF SIGNIFICANCE	82
IV. PERSONS AND ORGANIZATIONS CONSULTED	83
V. REFERENCES	84

ATTACHMENTS

- A – Memorandum of Understanding between Fresno Pacific University and Butler Church**
- B – Fresno Pacific University Culture and Arts Center Emissions Memorandum**
- C – Fresno Pacific University Culture and Arts Center Traffic Impact Analysis**
- D – Fresno Pacific University Culture and Arts Center Energy Memorandum**
- E – MEIR Mitigation Measure Monitoring Checklist for EA No. P19-05782**

SECTION 1

I. INTRODUCTION

A. PURPOSE

This document is a project level Initial Study for evaluation of potential environmental impacts resulting from the proposed Fresno Pacific University Culture and Arts Center (Refer to Figures in Project Description attached to this Initial Study).

B. CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) REQUIREMENTS

As defined by Section 15063 of the State of California Environmental Quality Act (CEQA) Guidelines, an **Initial Study** is prepared primarily to provide the Lead Agency with information to use as the basis for determining whether an Environmental Impact Report (EIR), Negative Declaration, or Mitigated Negative Declaration would be appropriate for providing the necessary environmental documentation and clearance for any proposed project.

☐ According to Section 15065, an **EIR** is deemed appropriate for a particular proposal if the following conditions occur:

- The proposal has the potential to substantially degrade quality of the environment.
- The proposal has the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals.
- The proposal has possible environmental effects that are individually limited but cumulatively considerable.
- The proposal could cause direct or indirect adverse effects on human beings.

☒ According to Section 15070(a), a **Negative Declaration** is deemed appropriate if the proposal would not result in any significant effect on the environment.

☐ According to Section 15070(b), a **Mitigated Negative Declaration** is deemed appropriate if it is determined that though a proposal could result in a significant effect, mitigation measures are available to reduce these significant effects to insignificant levels.

This Initial Study is prepared in conformance with the California Environmental Quality Act of 1970, as amended (Public Resources Code, Section 21000 et. seq.); Section 15070 of the State Guidelines for Implementation of the California Environmental Quality Act of 1970, as amended (California Code of Regulations, Title 14, Chapter 3, Section 15000, et. seq.); applicable requirements of the City of Fresno; and the regulations, requirements, and procedures of any other responsible public agency or an agency with jurisdiction by law.

The City of Fresno is designated the Lead Agency, in accordance with Section 15050 of the CEQA Guidelines. The Lead Agency is the public agency which has the principal responsibility for approving the necessary environmental clearances and analyses for any project in the City of Fresno.

C. INTENDED USES OF INITIAL STUDY

This Initial Study is an informational document which is intended to inform the City of Fresno decision makers, other responsible or interested agencies, and the general public of potential environmental effects of the proposed applications. The environmental review process has been established to enable public agencies to evaluate environmental consequences and to examine and implement methods of eliminating or reducing any potentially adverse impacts. While CEQA requires that consideration be given to avoiding environmental damage, the Lead Agency and other responsible public agencies must

balance adverse environmental effects against other public objectives, including economic and social goals.

The Initial Study prepared for the project will be circulated for a period of 30 days for public and agency review and comments. At the conclusion, if comments are received, the City of Fresno Planning & Development Department will prepare a document entitled “Responses to Comments” which will be forwarded to any commenting entity and be made part of the record within 10-days of any project consideration.

D. CONTENTS OF INITIAL STUDY

This Initial Study is organized to facilitate a basic understanding of the existing setting and environmental implications of the proposed applications.

SECTION 1

I. INTRODUCTION presents an introduction to the entire report. This section discusses the environmental process, scope of environmental review, and incorporation by reference documents.

SECTION 2

II. ENVIRONMENTAL CHECKLIST FORM contains the City’s Environmental Checklist Form. The checklist form presents results of the environmental evaluation for the proposed applications and those issue areas that would have either a significant impact, potentially significant impact, or no impact.

PROJECT SUMMARY, LOCATION AND ENVIRONMENTAL SETTINGS describes the proposed project entitlements and required applications. A description of discretionary approvals and permits required for project implementation is also included. It also identifies the location of the project and a general description of the surrounding environmental settings.

ENVIRONMENTAL ANALYSIS evaluates each response provided in the environmental checklist form. Each response checked in the checklist form is discussed and supported with sufficient data and analysis, as necessary. As appropriate, each response discussion describes and identifies specific impacts anticipated with project implementation.

SECTION 3

III. MANDATORY FINDINGS presents Mandatory Findings of Significance in accordance with Section 15065 of the CEQA Guidelines.

IV. PERSONS AND ORGANIZATIONS CONSULTED identifies those persons consulted and involved in preparation of this Initial Study and Negative Declaration.

V. REFERENCES lists bibliographical materials used in preparation of this document.

VI. FINDINGS

SECTION 4

VII. RESPONSE TO COMMENTS (IF ANY)

VIII. MITIGATION MONITORING & REPORTING PROGRAM (MMRP) (IF ANY)

E. SCOPE OF ENVIRONMENTAL ANALYSIS

For evaluation of environmental impacts, each question from the CEQA Environmental Checklist Form is summarized and responses are provided according to the analysis undertaken as part of the Initial Study. Impacts and effects will be evaluated and quantified, when appropriate. To each question, there are four possible responses, including:

-
1. **No Impact:** A “No Impact” response is adequately supported if the impact simply does not apply to the proposed applications.
 2. **Less Than Significant Impact:** The proposed applications will have the potential to impact the environment. These impacts, however, will be less than significant; no additional analysis is required.
 3. **Less Than Significant with Mitigation Incorporated:** This applies where incorporation of mitigation measures has reduced an effect from “Potentially Significant Impact” to a “Less Than Significant Impact”.
 4. **Potentially Significant Impact:** The proposed applications could have impacts that are considered significant. Additional analyses and possibly an EIR could be required to identify mitigation measures that could reduce these impacts to less than significant levels.

F. PROJECT LEVEL ENVIRONMENTAL ANALYSIS

This Initial Study will be conducted under a project level analysis. Regarding mitigation measures, it is not the intent of this document to “overlap” or restate conditions of approval that are commonly established for future known projects or the proposed applications. Additionally, those other standard requirements and regulations that any development must comply with, that are outside the City’s jurisdiction, are also not considered mitigation measures and therefore, will not be identified in this document.

G. TIERED DOCUMENTS AND INCORPORATION BY REFERENCE

Information, findings, and conclusions contained in this document are based on incorporation by reference of tiered documentation, which are discussed in the following section.

1. Tiered Documents

As permitted in Section 15152(a) of the CEQA Guidelines, information and discussions from other documents can be included into this document. Tiering is defined as follows:

“Tiering refers to using the analysis of general matters contained in a broader EIR (such as the one prepared for a general plan or policy statement) with later EIRs and negative declarations on narrower projects; incorporating by reference the general discussions from the broader EIR; and concentrating the later EIR or negative declaration solely on the issues specific to the later project.”

Tiering also allows this document to comply with Section 15152(b) of the CEQA Guidelines, which discourages redundant analyses, as follows:

“Agencies are encouraged to tier the environmental analyses which they prepare for separate but related projects including the general plans, zoning changes, and development projects. This approach can eliminate repetitive discussion of the same issues and focus the later EIR or negative declaration on the actual issues ripe for decision at each level of environmental review. Tiering is appropriate when the sequence of analysis is from an EIR prepared for a general plan, policy or program to an EIR or negative declaration for another plan, policy, or program of lesser scope, or to a site-specific EIR or negative declaration.”

Further, Section 15152(d) of the CEQA Guidelines states:

“Where an EIR has been prepared and certified for a program, plan, policy, or ordinance consistent with the requirements of this section, any lead agency for a later project pursuant to or consistent with the program, plan, policy, or ordinance should limit the EIR or negative declaration on the later project to effects which:

-
- (1) Were not examined as significant effects on the environment in the prior EIR; or
 - (2) Are susceptible to substantial reduction or avoidance by the choice of specific revisions in the project, by the imposition of conditions, or other means."

2. Incorporation by Reference

Incorporation by reference is a procedure for reducing the size of EIRs/MND and is most appropriate for including long, descriptive, or technical materials that provide general background information, but do not contribute directly to the specific analysis of the project itself. This procedure is particularly useful when an EIR or Negative Declaration relies on a broadly-drafted EIR for its evaluation of cumulative impacts of related projects (*Las Virgenes Homeowners Federation v. County of Los Angeles* [1986, 177 Ca.3d 300]). If an EIR or Negative Declaration relies on information from a supporting study that is available to the public, the EIR or Negative Declaration cannot be deemed unsupported by evidence or analysis (*San Francisco Ecology Center v. City and County of San Francisco* [1975, 48 Ca.3d 584, 595]). This document incorporates by reference appropriate information from the "Master Environmental Impact Report General Plan and Development Code Update City of Fresno, Fresno County, California (December 5, 2014), and amendment (December 17, 2014), prepared by First Carbon Solutions.

When an EIR or Negative Declaration incorporates a document by reference, the incorporation must comply with Section 15150 of the CEQA Guidelines as follows:

- The incorporated document must be available to the public or be a matter of public record (CEQA Guidelines Section 15150[a]). The Master Environmental Impact Report for the City of Fresno General Plan and Development Code Update is available as it will be used to "tier" certain potential impacts and corresponding mitigation, along with this document, at the City of Fresno Planning and Development Department, 2600 Fresno Street, Room 3043, Fresno, California, 93721 (559) 621-8009.
- The Maser EIR is available for inspection by the public at the City of Fresno Planning and Development Department, 2600 Fresno Street, Room 3043, Fresno, California, 93721 (559) 621-8009.
- These documents must summarize the portion of the document being incorporated by reference or briefly describe information that cannot be summarized. Furthermore, these documents must describe the relationship between the incorporated information and the analysis in the tiered documents (CEQA Guidelines Section 15150[c]). As discussed above, the tiered EIRs address the entire project site and provide background and inventory information and data which apply to the project site. Incorporated information and/or data will be cited in the appropriate sections.
- These documents must include the State identification number of the incorporated documents (CEQA Guidelines Section 15150[d]). The State Clearinghouse Number for the Master Environmental Impact Report General Plan and Development Code Update is SCH # 2012111015.

The material to be incorporated in this document will include general background information (CEQA Guidelines Section 15150[f]). This has been previously discussed in this document.

SECTION 2

II. ENVIRONMENTAL CHECKLIST

1. **Project Title:** Fresno Pacific University Culture and Arts Center
2. **Lead Agency:** City of Fresno Planning and Development Department
3. **Contact Person and Phone Number:** Jose Valenzuela, Planner III - (559) 621-8070
4. **Address:** 2600 Fresno Street, Third Floor, Room 3043, Fresno, CA 93721
5. **E-mail:** Jose.Valenzuela@fresno.gov
6. **Project Location:** The proposed Project will occupy approximately 2 acres on five existing parcels totaling 5.5 acres located at the southeast corner of South Chestnut Avenue and East Butler Avenue (Figure 1).
7. **Project Sponsor's Name and Address:**
Fresno Pacific University
c/o Mr. Robert Lippert
1717 South Chestnut Avenue
Fresno, CA 93702
Phone: 559-453-2189
8. **General Plan Designation:** PC – Public Commercial
9. **Zoning:** PI – Public and Institutional Use
10. **Description of Project:** Fresno Pacific University, (FPU), is requesting a Special Development Permit to construct a 26,758 square foot Culture and Arts Center (proposed Project) which will serve as a special event center for educational, social and cultural events on its main Fresno campus. The project site is comprised of five parcels owned by FPU: 4824 East Butler Avenue (Assessor's Parcel Number [APN] 473-020-37); 4838 East Butler Avenue (APN 473-061-01); 4846 East Butler Avenue (APN 473-061-02); 4845 East Townsend Avenue (APN 473-061-09); and 4837 East Townsend Avenue (APN 473-061-10) (Figure 2). These parcels are developed with vacant student housing buildings and four single-family residences that will be removed to accommodate the proposed project. The project site is adjacent to (west of) the Butler Church.

The proposed Culture and Arts Center will provide a venue for students to plan, perform and manage events. Community sponsored events will also occur at the site providing a peaceful and attractive venue for cultural and social events in a campus like setting. The facility will be approximately 30-feet tall and includes landscaping, lighting, parking and other required improvements (Figure 6A, 6B, 6C and 7).

A variety of locations within the FPU campus will provide parking for the proposed Culture and Arts Center. In addition, the Butler Church that has had a long-standing supportive relationship with FPU and will provide 70 parking stalls as described in the existing Memorandum of Understanding (MOU) between FPU and the Butler Church (Attachment A). The Butler Church parking area will not be available to FPU on Sundays from 8:00 a.m. to 12:30 p.m. when church services occur.

Event hours at the Culture and Arts Center will be Monday thru Wednesday, 8:00 a.m. to 9:00 p.m.; Thursday thru Saturday, 8:00 a.m. to 10:00 p.m.; and Sunday 4:00 p.m. to 10:00 p.m.

The Culture and Arts Center will be used during the week for internal campus educational activities. Two distinct components are proposed for the event center. The first is the main auditorium which will seat approximately 400 people and accommodate a wide range of events. The second component of the center is the "Black Box" which provides an open seating and flexible use arrangement for 99

people. The two rooms will not be simultaneously occupied until additional parking can be secured for the occupancy needs of both components (i.e. to accommodate parking for 499 people).

FPU will utilize its existing staff and students to administer the Culture and Arts Center, including the maintenance of lighting and sound equipment. Specialty tasks will be handled by private firms contracted for those services.

11. **Surrounding Land Uses and Setting:** The Project is located within the FPU campus at 1717 North Chestnut (Figure 2). East Butler Avenue borders the Project on the north and East Townsend Avenue and single-family residences border the Project on the south. Four homes are situated to the east of the project site. Three of the four homes are owned by the University; (2) are being used as dormitories, and one is being used by the Campus Security Department. The remaining home is privately owned and occupied.
12. **Other public agencies whose approval is required** (e.g., permits, financing approval, or participation agreement.): San Joaquin Valley Air Pollution Control District (SJVAPCD), City of Fresno Planning Commission (PC), Fresno Metropolitan Flood Control District (FMFCD), Fresno County Environmental Health, Department of Public Works; Department of Public Utilities; Regional Water Quality Control Board.
13. **Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1?**

The State requires lead agencies to consider the potential effects of proposed projects and consult with California Native American tribes during the local planning process for the purpose of protecting Traditional Tribal Cultural Resources through the California Environmental Quality Act (CEQA) Guidelines. Pursuant to PRC Section 21080.3.1, the lead agency shall begin consultation with the California Native American tribe that is traditionally and culturally affiliated with the geographical area of the proposed project.

Consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review necessary to identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See PRC Section 21083.3.2.) Information may also be available from the California Native American Heritage Commission's (NAHC's) Sacred Lands File per Public Resources Section (PRC) Section 5097.96 and the California Historical Resources Information System (CHRIS) administered by the California Office of Historic Preservation. Note: PRC Section 21082.3(c) contains provisions specific to confidentiality.

Pursuant to Assembly Bill 52 (AB 52), the Table Mountain Rancheria Tribe and the Dumna Wo Wah were invited to consult under AB 52.

If so, has consultation begun? Yes. The City of Fresno mailed notices regarding the project to both tribes on March 27, 2020 which included the required 30-day time period for tribes to request consultation. The notices were delivered on March 30, 2020 and the city received the signed certified card back on April 2, 2020.

On March 4, 2020, Governor Gavin Newsom signed Executive Order (EO) N-54-20 proclaiming a State of Emergency to exist in the State of California as a result of the threat of COVID-19. The EO postponed requests for consultation and was effective April 22, 2020. The suspension ended on June 21, 2020. As reflected above, the request for consultation letter was sent out on March 27, 2020 prior to the date the EO took effect. In accordance with the EO, the Tribes had four days to respond after June 21, 2020, due to the 26 days that had already passed. With the postponement directed by the EO, the response period closed June 25, 2020.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

- | | | |
|--|---|---|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture/Forestry Resources | <input type="checkbox"/> Air Quality |
| <input type="checkbox"/> Biological Resources | <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Energy |
| <input type="checkbox"/> Geology/Soils | <input type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Hazards and Hazardous Materials |
| <input type="checkbox"/> Hydrology/Water Quality | <input type="checkbox"/> Land Use/Planning | <input type="checkbox"/> Mineral Resources |
| <input type="checkbox"/> Noise | <input type="checkbox"/> Population/Housing | <input type="checkbox"/> Public Services |
| <input type="checkbox"/> Recreation | <input type="checkbox"/> Transportation | <input type="checkbox"/> Tribal Cultural Resources |
| <input type="checkbox"/> Utilities/Service Systems | <input type="checkbox"/> Wildfire | <input type="checkbox"/> Mandatory Findings of Significance |

DETERMINATION

(To be completed by the Lead Agency) on the basis of this initial evaluation:

- ☒ Found that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- ☐ Found that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- ☐ Found that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- ☐ Found that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- ☐ Found that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Jose Valenzuela, Planner

Date

EVALUATION OF ADDITIONAL ENVIRONMENTAL IMPACTS NOT ASSESSED IN THE MASTER ENVIRONMENTAL IMPACT REPORT (MEIR):

1. For purposes of this Initial Study, the following answers have the corresponding meanings:
 - a. "No Impact" means the subsequent project will not cause any additional significant effect related to the threshold under consideration which was not previously examined in the MEIR.
 - b. "Less Than Significant Impact" means there is an impact related to the threshold under consideration that was not previously examined in the MEIR, but that impact is less than significant.
 - c. "Less Than Significant with Mitigation Incorporation" means there is a potentially significant impact related to the threshold under consideration that was not previously examined in the MEIR, however, with the mitigation incorporated into the project, the impact is less than significant.
 - d. "Potentially Significant Impact" means there is an additional potentially significant effect related to the threshold under consideration that was not previously examined in the MEIR.
2. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project specific screening analysis).
3. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
4. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
5. "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Attachment E, "MEIR Mitigation Measure Monitoring Checklist for EA No. P18-03724" may be cross-referenced).
6. Earlier analyses may be used where, pursuant to the tiering, program EIR or MEIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
 - a. Earlier Analysis Used. Identify and state where they are available for review.
 - b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in the MEIR or another earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - c. Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

-
7. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances).

Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

8. Supporting Information Sources: A source list should be attached, and other sources used, or individuals contacted should be cited in the discussion.
9. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
10. The explanation of each issue should identify:
 - a. The significance criteria or threshold, if any, used to evaluate each question; and
 - b. The mitigation measure identified, if any, to reduce the impact to less than significance.

PROJECT SUMMARY

- A. Project Location:** The proposed Project is located on five parcels totaling 5.5 acres at the southeast corner of South Chestnut Avenue and East Butler Avenue (Figure 1 and Figure 2): 4824 East Butler Avenue (Assessor's Parcel Number [APN] 473-020-37); 4838 East Butler Avenue (APN 473-061-01); 4846 East Butler Avenue (APN 473-061-02); 4845 East Townsend Avenue (APN 473-061-09); and 4837 East Townsend Avenue (APN 473-061-10) (Figure 3).

Project Summary: Fresno Pacific University, (FPU), is requesting a Special Development Permit to construct a two-story (30-foot high) 26,758 square foot Culture and Arts Center (proposed Project) which will serve as a special event center for educational, social and cultural events on its main Fresno campus (Figure 3). The proposed Culture and Arts Center will provide a venue for students to plan, perform and manage such events. Community sponsored events will also occur at the site providing a peaceful and attractive venue for cultural and social events in a campus like setting.

Two distinct components are proposed for the Culture and Arts Center. The first is the Main Auditorium which will seat approximately 400 people and accommodate a wide range of events. The second component of the center is the "Black Box" which provides an open seating and flexible use arrangement for 99 people. The two rooms will not be simultaneously occupied until additional parking can be secured for the occupancy needs.

The Project also includes 15,500 square feet of open space, lighting (bollard lights, pole lights, parking lot lights), and 23,774 square feet of landscaping.

Project Site

The project site is comprised of five parcels owned by FPU (Figure 4 and Figure 5). These parcels are developed with vacant student housing and single-family residences. To accommodate construction of the Project, the five student housing structures will be relocated off campus and the four single-family residences will be demolished. The project site is adjacent to (west of) the Butler Church, between East Butler Avenue on the north and East Townsend Avenue on the south.

Parking

Seventy (70) parking spaces including 66 standard stalls and 3 handicapped accessible stalls will be provided on-site to the north, west and east of the Cultural and Arts Center (see Figure 3 and Figure 4). The Project also proposed 4 future electric vehicle stalls per California Building Code 11B-208.2.4; 6 clean air/van pool/electric vehicle stall per Cal Green 5.106.5.3.3; and 70 Overflow Parking spaces at Butler Church including 66 standard stalls per Cal Green 5.106.5.2.1 and four handicapped accessible stalls. The overall total of both on-site parking and parking at Butler Church is 140 stalls. This exceeds the required number of 123 stalls by 17.

The Butler Church has had a supportive long-standing relationship with FPU and will provide 70 parking stalls as described in the existing MOU between FPU and the Butler Church. The Butler Church parking area will not be available on Sundays from 8:00 a.m. to 12:30 p.m. when church services occur. In addition, a variety of locations within the FPU campus will also provide parking for the proposed Culture and Arts Center. Additional on-site parking will become available should the streets (East Townsend Avenue, East Garden Avenue and Heaton Avenue) receive approval from the City to be vacated. The City of Fresno will condition the Project requiring that a covenant between the City, FPU and Butler Church be recorded for shared parking and access.

Hours of Operation

Event hours at the Culture and Arts Center will be Monday thru Wednesday, 8:00 a.m. to 9:00 p.m.; Thursday thru Saturday, 8:00 a.m. to 10:00 p.m.; and Sunday 4:00 p.m. to 10:00 p.m.

Staffing

FPU will utilize its existing staff and students to administer the Culture and Arts Center, including the maintenance of lighting and sound equipment. Specialty tasks will be handled by private firms contracted for those services.

Street Vacation

FPU is concurrently processing a request to vacate three segments of public streets South Townsend Avenue, South Garden Avenue and East Heaton Avenue. These streets provide vehicular and pedestrian access to South Winery Avenue to the east. The limits of the proposed vacation are shown in Figure 8A and Figure 8B. The proposed Planned Development permit provides details as to how the streets will be physically vacated and maintained through a unified plan of development for the area of the proposed Culture and Arts Center.

The purpose of the street vacation is to enhance FPU campus security by facilitating control of access on a public street and allowing greater flexibility for the development of the proposed Culture and Arts Center including additional parking. The location of the existing streets, curbs, gutters, sidewalks, and streetlights will not change as a result of the street vacation. However, the maintenance responsibility of these facilities may be transferred from the City of Fresno to FPU. Therefore, there is no physical change to the environment as a result of the proposed street vacation.

Adopted policies and procedures and ministerial permits of the city will assure that the existing water, sewer, storm drainage, natural gas, electricity, and telephone services located within the public streets to be vacated will be appropriately protected. Adopted City of Fresno policies and procedures will require FPU to grant permanent maintenance easements for the utilities as a condition of the street vacation.

Mandatory street vacation standards will require that FPU construct a standard city drive approach at East Townsend Avenue and East Heaton Avenue west of South Winery Avenue to clearly identify the termination of the public streets. The drive approaches will be constructed within the existing right-of-way.

Traffic circulation will not be significantly modified in that the three public streets to be vacated will be used for internal vehicular and pedestrian circulation by FPU. Mandatory development standards will also assure adequate vehicular ingress and egress can be maintained to accommodate emergency vehicles and refuse collection vehicles.

Should the proposed street vacation be approved, it will comply with applicable City standards that ensure public health and safety are maintained.

Utilities

Figure 4 illustrates the locations and capacities of existing utilities in the vicinity of the site, and tentative extensions to the site.

The storm drain system will be connected to the Fresno Metropolitan Flood Control District (FMFCD) on East Butler Avenue. A temporary detention basin will be constructed on site to control storm water flows within the FMFCD system in accordance with FMFCD direction.

Gas & Electricity

Pacific Gas & Electric has gas and electrical infrastructure in place within existing roadway right-of-way (East Butler Avenue, East Townsend Avenue) surrounding the Culture and Arts Center.

Telecommunications

AT&T has a 4-inch cable on the north side of the East Butler Avenue right-of-way. Comcast provides cable television and internet through facilities located in the existing right-of-way. Four 1-1/4-inch fiber optic cables are also within the north side of the right-of-way on East Butler Avenue.

Water

The City of Fresno Water Division has 6-inch water main infrastructure in place within existing right of way (East Garden Avenue, East Townsend Avenue, East Heaton Avenue). This infrastructure supplies water to multiple single-family home lots. The main also supplies four public fire hydrants and three fire sprinkler services. With the street vacation these water facilities may become private. FPU would be financially responsible for the abandonment of the existing 6-inch water mains, public fire hydrants and meters located in East Townsend Avenue, South Garden Avenue and East Heaton Avenue. If the 6-inch water service infrastructure continues to be used, it may require the installation of 6-inch master meters at the two points of connection in South Winery Avenue and the installation of reduced pressure backflow devices after each meter as commercial buildings are being served. This would severely affect fire flow for fire hydrants and not provide adequate pressure to meet the original designs of the three fire sprinkler systems due to the 10-11 pounds per square inch (psi) pressure drop in a reduced pressure backflow device.

To maintain adequate fire protection during demolition, FPU should either install a new dedicated fire service water main for the fire hydrants and fire sprinkler systems or negotiate with the Water Division on accepting the reduced pressure devices on the existing "commercial" domestic services (or if not currently present, install same) in lieu of installing master Reduced Pressure (RP) devices on each connection in South Winery Avenue. Additional backflow protection could be provided with installation of a 6-inch testable double check assembly (non-reduced pressure, Wilkins 350A or equivalent) after each master meter which have a significantly lower pressure drop than RP devices and will have minimal impact on fire hydrant flow and fire sprinkler demand.

Wastewater

A 24-inch sewer main is located north of the site within the right-of-way of East Butler Avenue. The existing 10-inch sewer line extending south from the main through the middle of the site (along the current property line) will be relocated to accommodate the proposed project. Sewer manholes are distributed throughout the site. Four-inch sewer lines also extend south from East Butler Avenue connecting to the residences to be demolished. These lines will be removed up to the public right-of-way then capped.

A city Public Utility Easement (PUE) for sewer infrastructure extends through the site. Because a sewer line is currently located within the footprint of the proposed Culture and Arts Center, the line and associated PUE will need to be moved. The line is proposed to be moved to the east and would border the west side of the temporary detention basin in accordance with City standards.

Storm Drainage

To capture on-site run-off, the Project includes a temporary detention basin in the southwest corner of the site engineered to meet storage demand per City and Fresno Metropolitan Flood Control District (FMFCD) Requirements. The basin would be 70 feet wide and 150 feet long and be 3 feet deep. Approximately 8,370 cubic feet of earth would be removed to construct the detention basin.

The FMFCD has existing storm drainage facilities within the area of the proposed vacation (Figure 8B). The FMFCD requires that FPU retain a public utility easement or provide the FMFCD with a fifteen-foot (15') wide exclusive storm drainage easement centered on the pipeline to be dedicated to the FMFCD (Figure 9).

No encroachments into the easement will be allowed including, but not limited to, buildings, roof overhangs, swimming pools and trees. The FMFCD requires that the adopted FMFCD Master Plan drainage patterns remain as designed for the proposed vacation area. Any proposed revisions to existing FMFCD facilities must be reviewed and approved by the FMFCD and the City prior to implementation.

Permits and Approvals

To develop the project as proposed, FPU is requesting a Development Permit (Figure 3) and a Planned Development Plan to allow construction of a 26,758 sq. ft. Culture and Arts Center. Development Permit Applications are required for all new structures, with the exception of single-family residences. The Planned Development Plan (Figure 4 and 5) depicts the proposed land uses and the total floor area or land area devoted to each; the proposed density or intensity of development; the location pedestrian ways, and bike ways; and the location of proposed lot lines, structures, buildings, parking, yards, pathways, open spaces, and other public or private facilities.

A Planned Development Permit (Figure 3) establishes minimum thresholds for Planned Developments. Specifically, a Planned Development Permit is used to 1) Establish a procedure for development on large areas of land and infill sites to allow for projects that desire greater flexibility than currently provided for in the Development Code; 2) Promote variety and avoid monotony in developments by allowing greater freedom in selecting the means to provide access, light, open space, and amenities; and 3) Facilitate assembling properties that might otherwise be developed in unrelated increments to the detriment of surrounding neighborhoods.

The Planned Development Permit (Figure 5) includes deviations from the Development Code, General Plan, applicable operative plan, or adopted policy being proposed. The Project intends to apply the Planned Development standards of the City of Fresno Development Code Article 59 to allow the modification of certain property development standards as follows:

Code Section or Plan Policy #	Description of Standard or Requirement	Requested Modification	Describe how proposed modification is demonstratively superior and will achieve superior community design, environmental preservation, and/or substantial public benefit.
15-1403	20-foot setback from East Townsend Avenue.	Omit setback requirement.	East Townsend Avenue is currently in the process of street vacation and will become part of the campus. The building needs this area to maximize the building site for parking and open lawn area in front of the existing seminary.
15-2008B	Block wall between the commercial and residential property.	Omit block wall requirement.	Residential property is zoned for PI and will eventually become part of the overall campus. Installation of a block wall will ultimately be removed in the future.
15-2305-C-1	15-foot landscape buffer between the commercial and residential property.	Omit landscape buffer.	Residential property is zoned for PI and will eventually become part of the overall campus. The 15-foot buffer will be used to help achieve the parking count requirements.
15-2413	Shared parking with adjacent lot.	Allow FPU to utilize the parking from Butler Church as overflow parking.	Per 15-2413, FPU wants to utilize parking spaces at Butler Church for overflow parking. FPU has a parking Memorandum of Understanding with the church.
15-2409	Parking count based on use.	Non-concurrent occupancy of the Auditorium and Black Box until sufficient parking is available.	Per the operational statement, FPU will not be using the Black Box and the Auditorium concurrently based on lack of available parking. Concurrent use may not occur unless FPU is able to add additional parking.

The Project also requires approval of a Lot Line Adjustment to accommodate the proposed improvements. The Lot Line adjustment would move the existing property line to the west, 2.5 feet left of the existing 2-inch water meter. A Voluntary Lot Merge to join APNs 473-020-37, 473-061-01, 473-061-02, 473-061-10 and 473-061-09 into a single parcel to accommodate the proposed Culture and Arts Center per state and local ordinance requirement was recorded on March 4, 2020.

Easements

There is a 30-foot wide easement along the western portion of the site approximately 18 feet east of the relocated western property line to allow for the relocation of the proposed underground sewer line.

Another 30-foot easement is along the eastern property line to accommodate overhead infrastructure. This easement extends approximately 150 feet south.

PG&E is requesting a permanent easement for its existing electrical facilities.

The City of Fresno Engineering Public Utilities Department requires that the existing 8-inch and 6-inch water mains have a public utility easement reserved in the entire public street right-of-way proposed to be vacated.

The FMFCD is requiring a public utility easement or a fifteen-foot wide exclusive storm drainage easement centered on the pipeline.

Development Schedule

FPU has purchased all but one (a total of 21) of the existing residential housing off East Townsend Avenue, South Garden Avenue, and East Heaton Avenue between South Winery Avenue and South Chestnut Avenue. These homes are currently used for student housing and campus buildings. Included with the purchase of the existing residences, FPU has also begun the process of vacating these streets. In the future, the homes will be removed, and the vacated streets will become part of FPU's Master Plan.

Below is the anticipated schedule of construction for the above project.

- Demolition of existing single-family homes: May to August 2020.
- Construction of the Culture and Arts Center is estimated to begin in October 2020 and take approximately 21 months with completion anticipated in July 2022.
- The Street Vacation process started in November 2019. Anticipated time of completion is unknown.

- B. Environmental Setting:** The proposed Project is within the boundaries of the FPU campus in the southeast portion of the City of Fresno. The campus is an urban setting with existing buildings, landscape, parking lots, sidewalks, and utilities.
- D. Analysis:** The Project is the construction of a 26,758 square foot Culture and Arts Center on the campus of FPU with a temporary detention basin. The Project includes the demolition/relocation of 10 existing structures (four single-family homes, five student housing buildings and one garage), merging five lots, and vacating three City streets (East Townsend Avenue, East Garden Avenue, South Heaton Avenue).
- E. General Plan Consistency:** The Project is consistent with the land use designation of Public Facility, College and the site zoning of Public and Institutional Use.

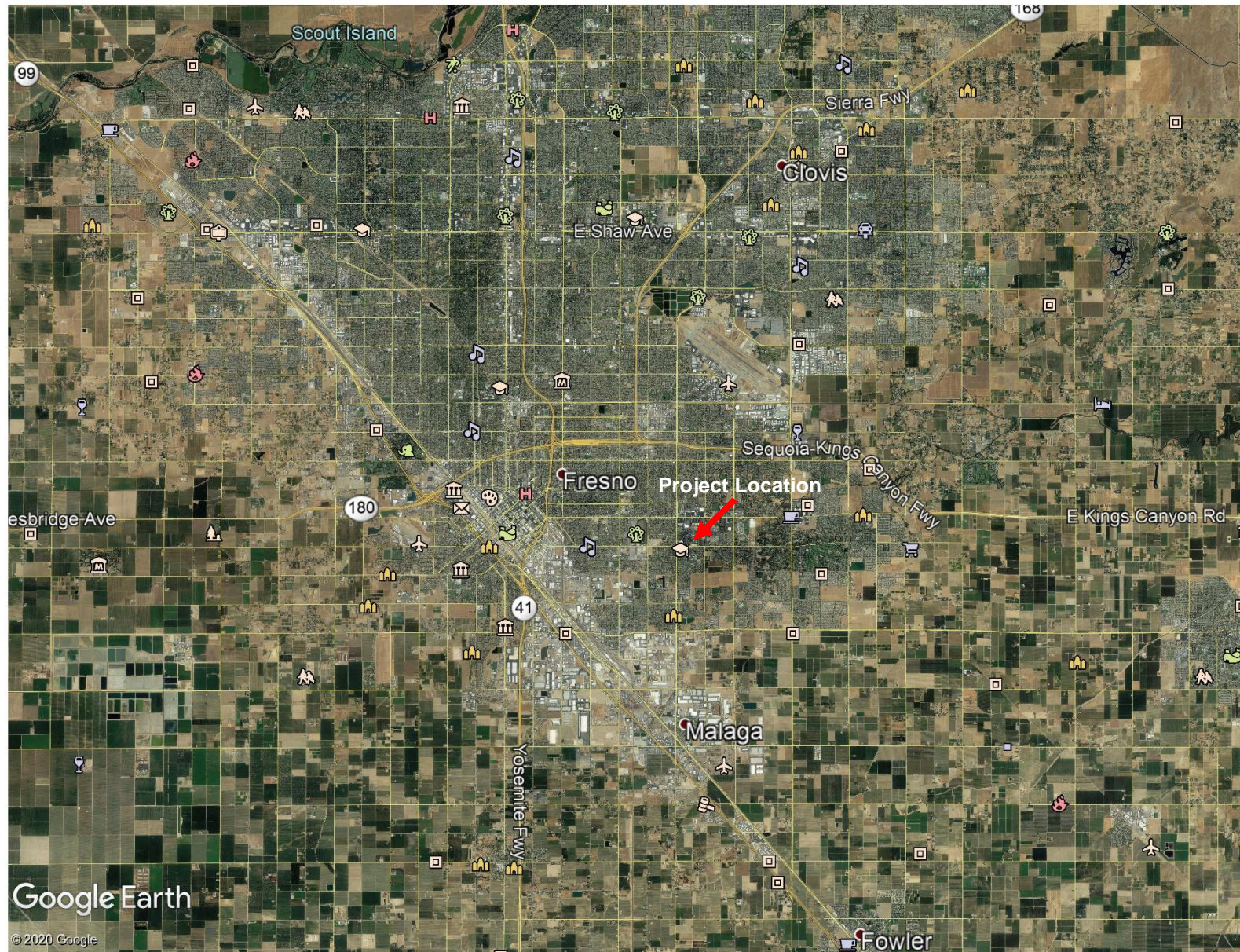
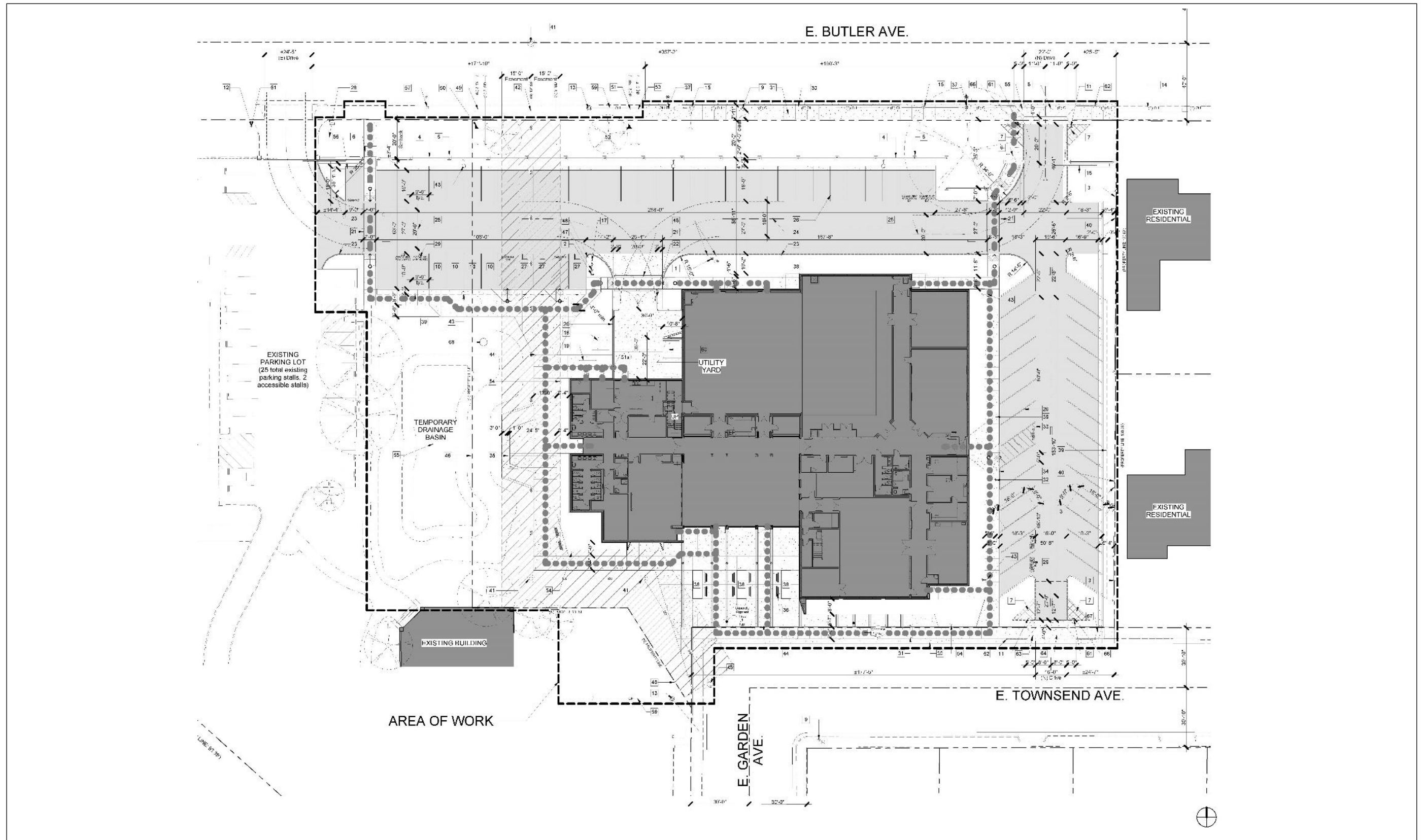


Figure 1
Project Location Map

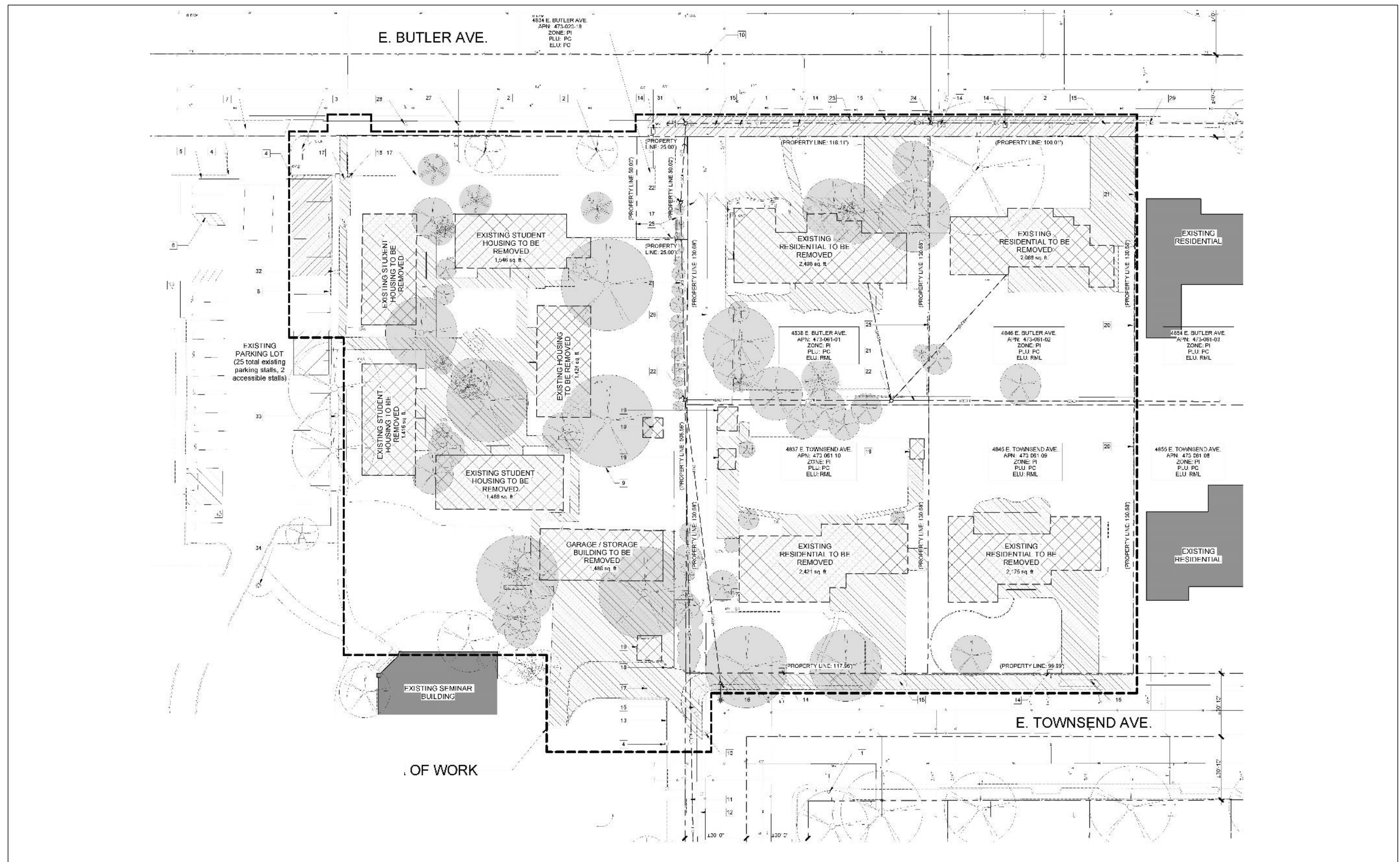


Figure 2
Aerial Map of Site and Surrounding Area



Source: Paul Halajian Architects 2020.

Figure 3
Planned Development Permit Site Plan



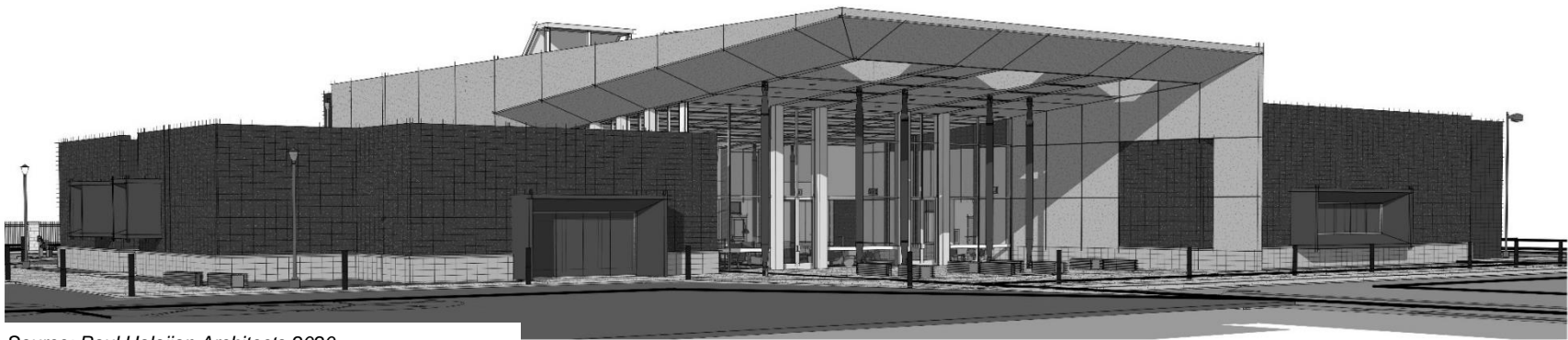
Source: Paul Halajian Architects 2020.

Figure 4
Proposed Development Plan Site Plan with Existing Uses



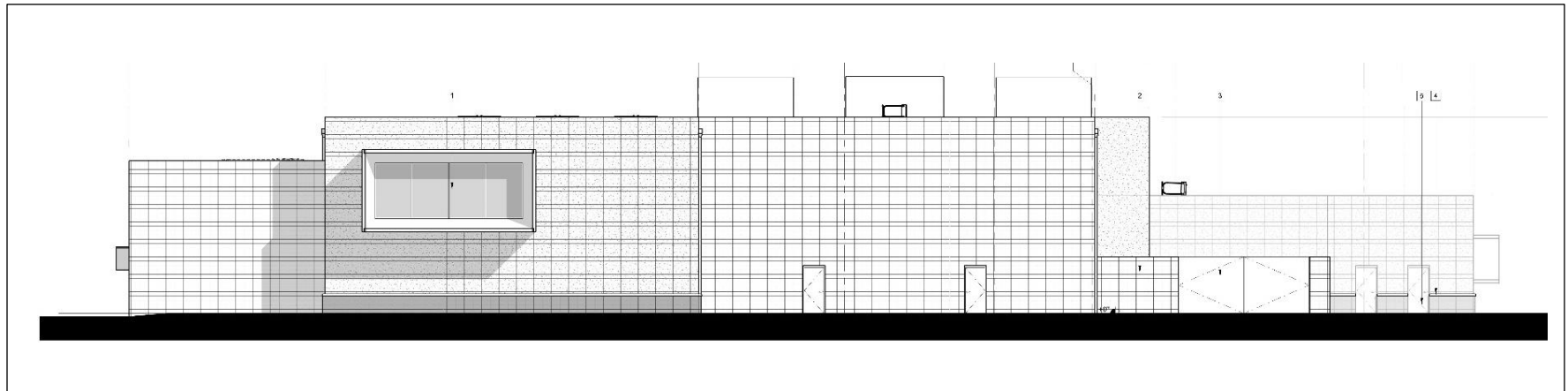
Source: Paul Halajian Architects 2020

Figure 5
Planned Development Map

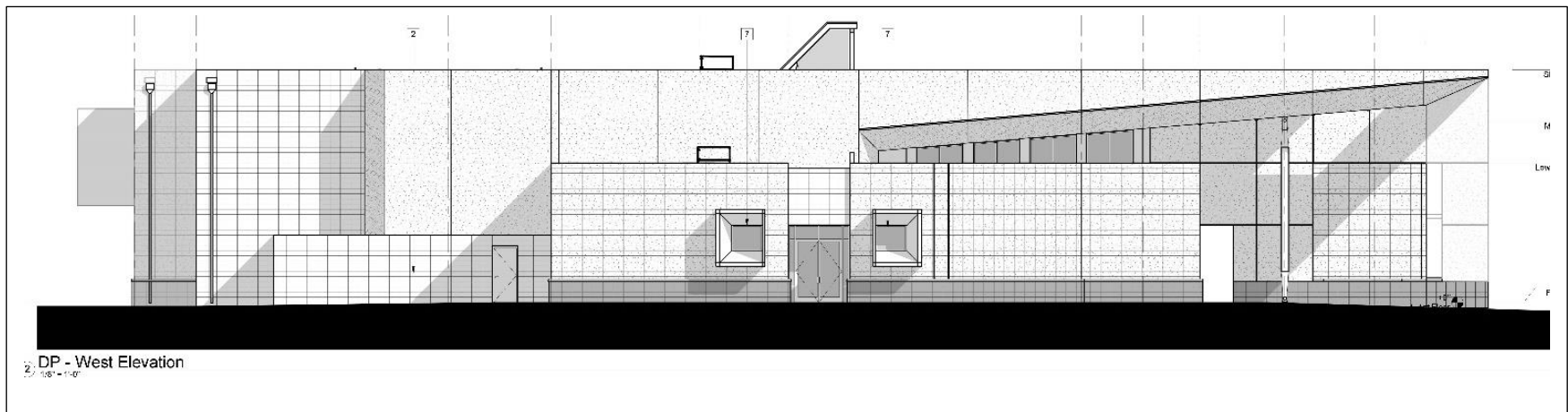


Source: Paul Halajian Architects 2020.

Figure 6A
South (Front) Elevation of Culture and Arts Center



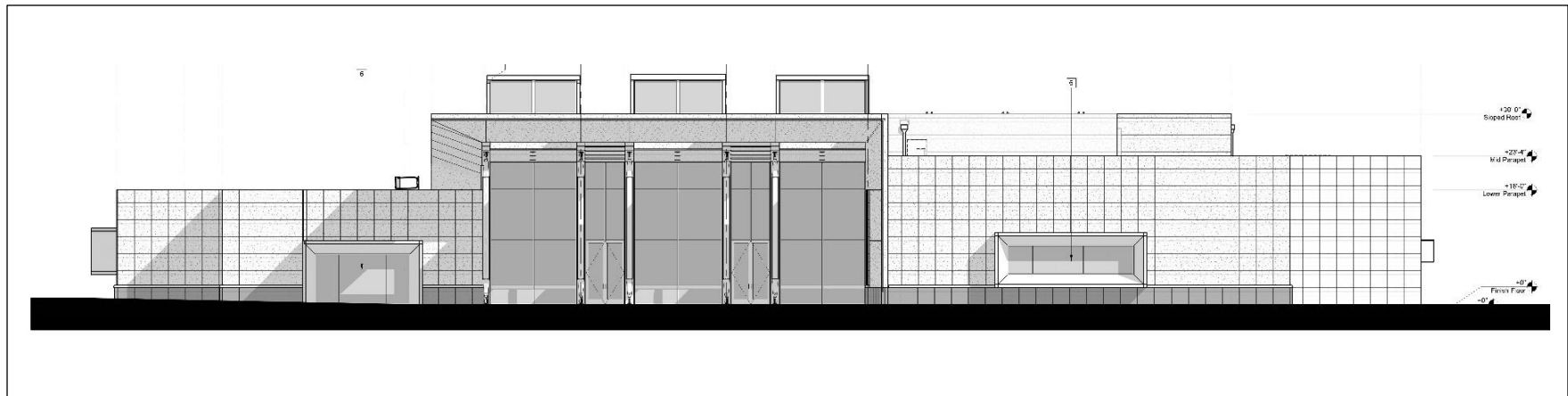
North Elevation



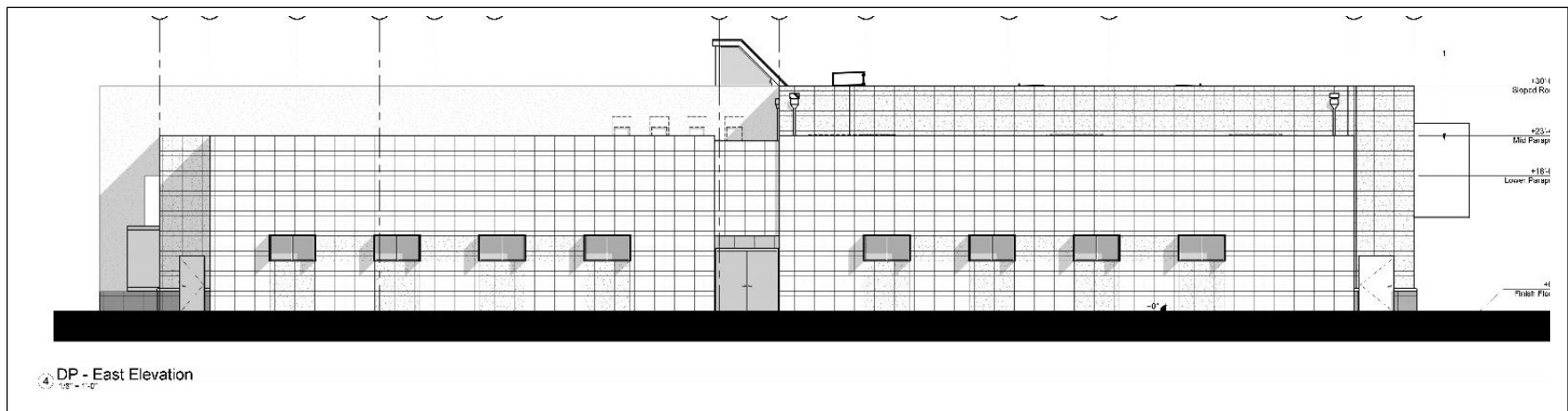
West Elevation

Source: Paul Halajian Architects 2020.

Figure 6B
North and West Elevation



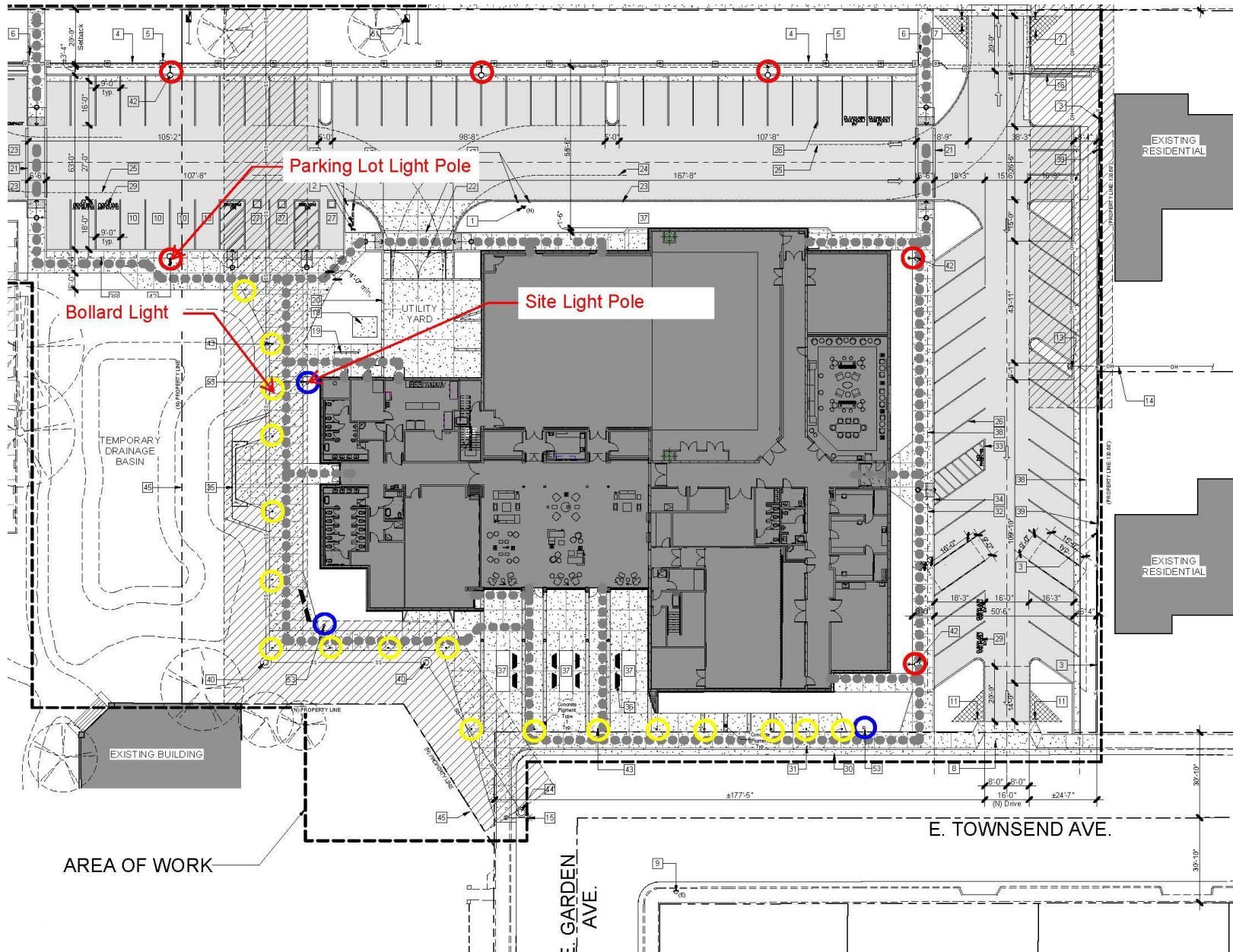
South Elevation



East Elevation

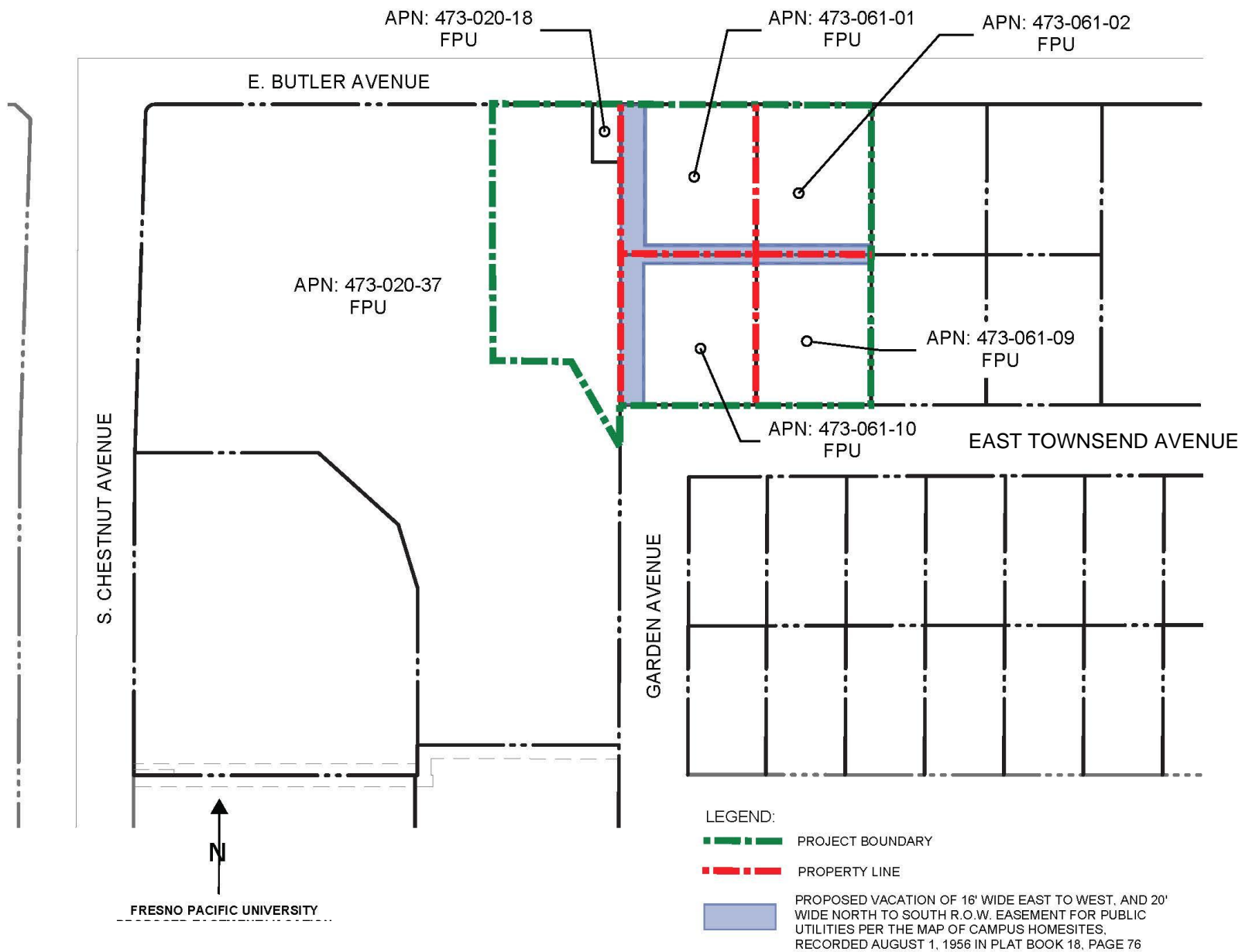
Source: Paul Halajian Architects 2020.

Figure 6C
South and East Elevation



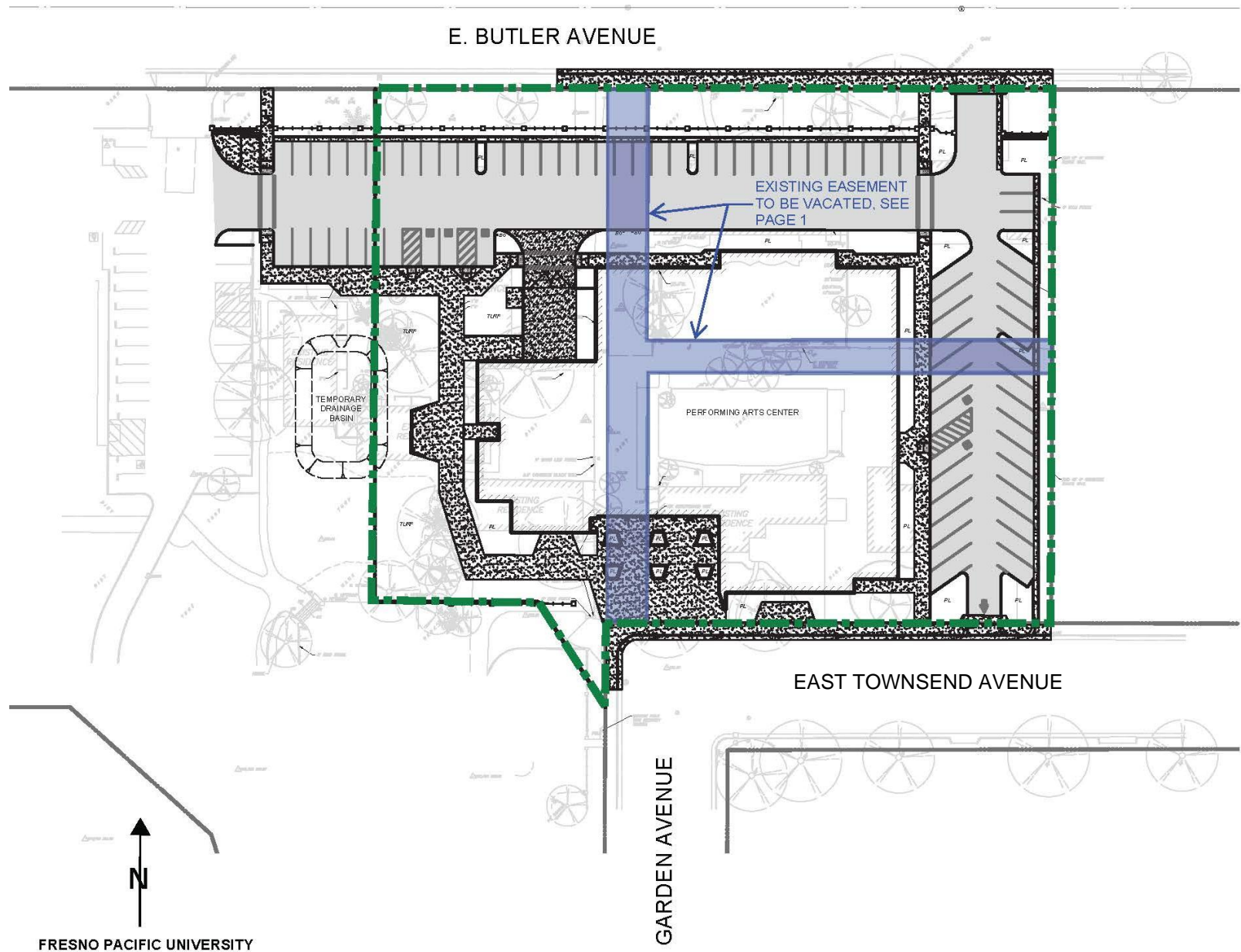
Source: Paul Halajian Architects 2020.

Figure 7
Lighting Plan



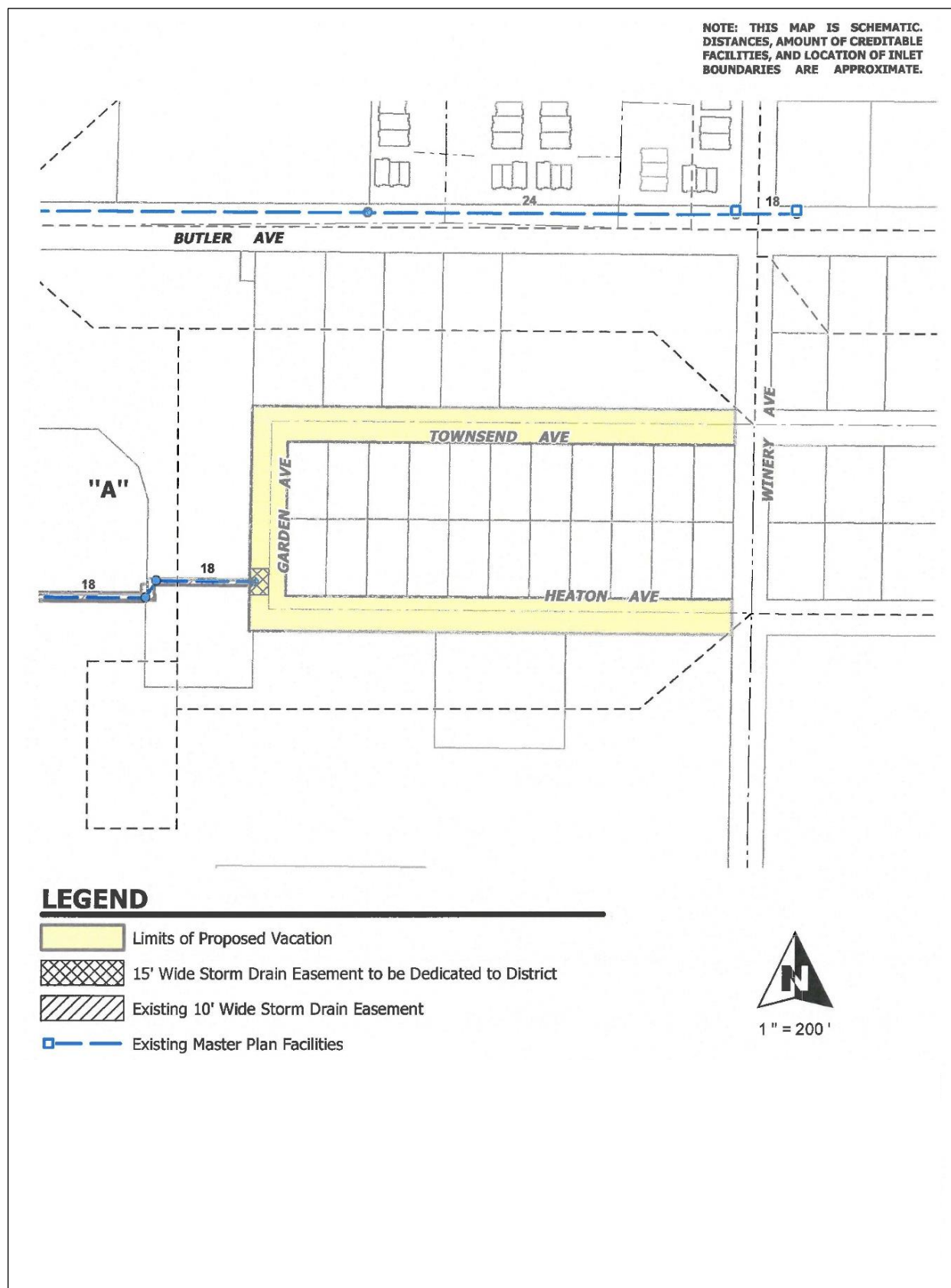
Source: Bair Church & Flynn 2019.

Figure 8A
Easement Vacation Plan



Source: Paul Halajian Architects 2020.

Figure 8B
Easement Vacation Plan



Source: FMFCD 2019.

Figure 9
FMFCD Proposed Vacation – Drainage Area “A”

EVALUATION OF ENVIRONMENTAL IMPACTS:

- 1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- 2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- 3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
- 4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).
- 5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
 - a) Earlier Analysis Used. Identify and state where they are available for review.
 - b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
- 6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
- 7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
- 8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
- 9) The explanation of each issue should identify:
 - a) the significance criteria or threshold, if any, used to evaluate each question; and
 - b) the mitigation measure identified, if any, to reduce the impact to less than significance.

	Potentially Significant Impact (PSI)	Potentially Significant Unless Mitigation Incorporated (PSUMI)	Less Than Significant Impact (LTSI)	No Impact (NI)
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I. AESTHETICS Would the project:

- a) Have a substantial adverse effect on a scenic vista or scenic highway? ☐ ☐ ☐ ☒

No Impact. The proposed Project is located within an urban area on the south side of East Butler Avenue, a 4-lane east-west collector. The area is characterized by single-family homes over 50 years old without unique or particularly interesting design, the Butler Church, Mennonite Brethren Biblical Seminary on the south side of East Butler Avenue and apartments and a strip-retail center on the north side of East Butler Avenue. Overhead utilities and large trees also dominate views along East Butler Avenue. The proposed Culture and Arts Center, as a two-story, 30-foot structure would be visible to both east and west-bound travelers along East Butler Avenue but will be screened with appropriate landscaping materials. Chestnut Avenue, to the west, aligns through an urbanized area and is not designated as a scenic highway or a scenic route. The Project is compatible in scale and design within the context of the overall FPU campus and will be an attractive addition to the grounds. Therefore, the Project would have no impact on a scenic vista or a scenic highway.

- b) Substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway? ☐ ☐ ☐ ☒

No Impact. The proposed Project is within the boundaries of the FPU campus which has been developed with buildings, pavement, and landscaping. As previously noted, the site is in an urban area and not within a state scenic highway. The residential structures are over 50 years old and will be removed but are not eligible for the historic registry. Therefore, no impact would occur regarding damaging scenic resources within a state scenic highway.

- c) In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality? ☐ ☐ ☐ ☒

No Impact. As previously noted, the Project is in an urban area within the campus of FPU. The Project would improve the aesthetic of the area for public viewers by introducing a state-of-the-art Culture and Arts Center along East Butler Avenue. The Project includes landscaping (in accordance with state and local water conservation guidelines) and lighting consistent with City standards. Signage will be installed per City standards and located on the property as indicated on the Lighting Plan (Figure 7). An electronic marquee sign will be installed along the south-facing façade (i.e. towards East Townsend Avenue) of the building that will present information regarding upcoming events. The Project is consistent with the existing PI – Public and Institutional Use zone, therefore no impact would occur.

- d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? ☐ ☐ ☒ ☐

Potentially Significant Impact (PSI)	Potentially Significant Unless Mitigation Incorporated (PSUMI)	Less Than Significant Impact (LTSI)	No Impact (NI)
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Less than Significant Impact. The Project has a lighting plan (Figure 7) with three types of fixtures: 18, 48-inch bollard lights to illuminate walkways; three, 25-foot overhead light poles to illuminate the western side and southeast corner of the site; and six, 12-foot tall pedestrian light poles on a 6-inch concrete base. The overhead lights are directed downward to avoid light spillage consistent with MEIR Mitigation Measure AES-1 (Lighting systems for street and parking areas shall include shields to direct light to the roadway surfaces and parking areas. Vertical shields on the light fixtures shall also be used to direct light away from adjacent light sensitive land uses such as residences [Attachment E]).

An electronic marquee sign will be installed along the south facing façade of the building (towards East Townsend Avenue) that will display information regarding upcoming events. The marquee is consistent with allowable lighting standards and would not adversely affect day or nighttime views in the area. The site will be landscaped which will reduce light spread onto adjacent areas. In addition, all site lighting will be designed in accordance with the standards of the City of Fresno Department of Public Works and hood/directed so as not to annoy nearby properties. Compliance with City lighting standards will ensure that the Project would not create a new source of substantial light or glare which would affect day or nighttime views in the area. Therefore, light and glare impacts of the Culture and Arts Center are considered less than significant, and the Project would not result in any aesthetic impacts beyond those analyzed in MEIR SCH No. 2012111015.

II. AGRICULTURE AND FORESTRY RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

- a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? ☐ ☐ ☐ ☒

No Impact. The proposed Project is located within the boundaries of the FPU campus. The campus and surrounding areas are identified as Urban and Built-Up Land on the Fresno County Important Farmland 2016 map (Rural Land Mapping Edition, Sheet 2 of 2) (DOC 2018). The nearest piece of Prime Farmland is located approximately one-half mile to the southeast. The Project would not convert any farmland pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency to a non-agricultural use. No impact would occur.

- b) Conflict with existing zoning for agricultural use, or a Williamson Act Contract? ☐ ☐ ☐ ☒

No Impact. As noted under item “a” above, the Project is located within the boundaries of the FPU campus. The Project site is zoned PI – Public and Institutional Use and no Williamson Act Contracts are in place on any of the Project site parcels or adjacent areas. The site is currently developed with student housing and single-family homes that will be relocated or demolished to accommodate construction of the proposed Culture and Arts Center. Therefore, the proposed Project would not conflict with zoning for agricultural use or a Williamson Act Contract. No impact would occur.

- c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?
- | | | | |
|--------------------------|--------------------------|--------------------------|-------------------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--------------------------|--------------------------|--------------------------|-------------------------------------|

No Impact. The City of Fresno Zoning Map does not have any lands zoned forest or timberland. Thus, no impact would occur regarding conflicts with existing zoning for forest lands, timberlands, or timberland zoned Timberland Production (City of Fresno 2020).

- d) Result in the loss of forest land or conversion of forest land to non-forest use?
- | | | | |
|--------------------------|--------------------------|--------------------------|-------------------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--------------------------|--------------------------|--------------------------|-------------------------------------|

No Impact. No forest lands are within the City of Fresno. The proposed Project would not result in the loss of forest land or conversion of forest land to non-forest use. Therefore, no impact is identified for this issue area.

- e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?
- | | | | |
|--------------------------|--------------------------|--------------------------|-------------------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--------------------------|--------------------------|--------------------------|-------------------------------------|

No Impact. Refer to items “b)”, “c)” and “d)” above. The proposed Project would not result in any agriculture and forestry resource environmental impacts beyond those analyzed in MEIR SCH No. 2012111015.

III. AIR QUALITY

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to the following determinations. Would the Project:

- a) Conflict with or obstruct implementation of the applicable air quality plan?
- | | | | |
|--------------------------|--------------------------|-------------------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|--------------------------|--------------------------|-------------------------------------|--------------------------|

Less than Significant Impact. As part of its enforcement responsibilities, the U.S. Environmental Protection Agency requires each state with nonattainment areas to prepare and submit a State Implementation Plan (SIP) that demonstrates the means to attain the federal standards. The SIP must integrate federal, state, and local plan components and regulations to identify specific measures to reduce pollution in areas that do not meet federal and/or state air quality standards (nonattainment areas), using a combination of performance standards and market-based programs. Similarly, under State law, the California Clean Air Act (CAA) requires an air quality attainment plan to be prepared for areas designated as nonattainment with regard to the federal and state ambient air quality

Potentially Significant Impact (PSI)	Potentially Significant Unless Mitigation Incorporated (PSUMI)	Less Than Significant Impact (LTSI)	No Impact (NI)
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standards. Air quality attainment plans outline emissions limits and control measures to achieve and maintain these standards by the earliest practical date. The Project site lies within the boundaries of the San Joaquin Valley Air Basin (SJVAB) and is in nonattainment for exceeding state and federal criteria pollutant levels. The SJVAB is under the jurisdiction of the SJVAPCD. Pursuant to the federal CAA, the SJVAPCD is required, to reduce emissions of criteria pollutants for which the SJVAB is in nonattainment.

In order to reduce of criteria pollutants for which the SJVAB is in nonattainment, the SJVAPCD prepared the 2004 Extreme Ozone Attainment Demonstration Plan and 2013 Plan for the Revoked 1-Hour Ozone Standard, 2007 Ozone Plan, 2009 Reasonably Available Control Technology Demonstration for Ozone State Implementation Plan, 2016 Plan for the 2008 8-Hour Ozone Standard and 2016 Moderate Area Plan for the 2012 PM_{2.5} Standard. These plans collectively address the air basin's nonattainment status with the national and state ozone standards as well as particulate matter by establishing a program of rules and regulations directed at reducing air pollutant emissions and achieving state (California) and national air quality standards. Pollutant control strategies are based on the latest scientific and technical information and planning assumptions, updated emission inventory methodologies for various source categories, and the latest population growth projections and associated vehicle miles traveled projections for the region. SJVAPCD's latest population growth forecasts were defined in consultation with local governments and with reference to local general plans. A project conforms with the SJVAPCD air quality plans if it complies with all applicable district rules and regulations, does not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new air quality violations, and is consistent with the growth forecasts in the applicable plans.

The proposed Project would not increase the number of residents in the area and would not increase the number of students attending FPU. The Project is proposing the development of a 26,758 SF Culture and Arts Center for students, faculty and residents of the surrounding area and thus would not conflict with the growth forecasts in the applicable plans.

Construction Generated Emissions

Construction-generated emissions associated with the proposed Project were calculated using the CARB-approved CalEEMod computer program, which is designed to model emissions for land use development projects, based on typical construction requirements. (Refer to Attachment B of this document more information regarding the construction assumptions, including construction equipment and duration, used in this analysis).

The SJVAPCD's (2015) Guidance for Assessing and Mitigation Air Quality Impacts identifies significance thresholds for ROG, CO, and NO_x, SO₂, PM₁₀, and PM_{2.5}. Table AIR-1 summarizes the predicted maximum daily construction-generated emissions for the proposed Project compared with SJVAPCD thresholds.

As shown in Table AIR-1, Project construction would not generate emissions that would exceed SJVAPCD significance thresholds and therefore would not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new air quality violations. As shown in Table 1, construction-generated emissions would not exceed SJVAPCD significance thresholds.

In addition to the SJVAPCD criteria air pollutant thresholds, SJVAPCD Rule 9510, Indirect Source Review, aims to fulfill the District's emission reduction commitments in the PM₁₀ and Ozone Attainment Plans. This rule applies to various construction projects, including projects proposing

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9,000 square feet of educational space. Thus, Rule 9510 applies to the proposed Culture and Arts Center. This rule also applies to any transportation or transit project where construction exhaust emissions equal or exceed two tons of NO_x or two tons of PM₁₀. The project developers are required to reduce concentrations of NO_x by 20 percent and PM₁₀ by 45 percent during construction activities.

Table AIR-1
Construction-Related Emissions

Construction Year	Maximum Pollutants (tons per year)					
	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Construction in the Year 2020	0.2	2.0	1.3	0.0	0.5	0.3
Construction in the Year 2021	1.0	4.2	4.2	0.0	0.3	0.2
Construction in the Year 2022	0.3	2.1	2.5	0.0	0.1	0.1
<i>SJVAPCD Potentially Significant Impact Threshold</i>	10	10	100	27	15	15
Exceed SCAQMD Regional Threshold?	No	No	No	No	No	No

Source: ECORP 2020a.

SJVAPCD Rule 9510 requires that an Air Impact Assessment (AIA) be prepared detailing the specific construction requirements (i.e., equipment required, hours of use, etc.) and operational characteristics associated with the proposed Project. In accordance with this rule, emissions of NO_x from construction equipment greater than 50 horsepower used or associated with the development project must be reduced by 20 percent from baseline (unmitigated) emissions and PM₁₀ emissions by 45 percent. The Project must also demonstrate compliance with Rule 9510, including payment of all applicable fees prior to issuance of the first building permit. Examples of measures required to reduce emissions attributable to the proposed Project in compliance with Rule 9510 include, but are not limited to, the following:

- During all construction activities, all diesel-fueled construction equipment including, but not limited to, rubber-tired dozers, graders, scrapers, excavators, asphalt paving equipment, cranes, and tractors shall be California Air Resources Board (CARB) Tier 4 Certified as set forth in Section 2423 of Title 13 of the California Code of Regulations, and Part 89 of Title 40 of the Code of Federal Regulations.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturers' specifications. Equipment maintenance records shall be kept on-site and made available upon request by the SJVAPCD or the City of Fresno.
- The Project applicant shall comply with all applicable SJVAPCD rules and regulations. Copies of any applicable air quality permits and/or monitoring plans shall be provided to the City.

Table AIR-2 summarizes construction-related emissions after applying the Rule 9510 measures.

Table AIR-2
Construction Related NO_x & PM₁₀ Emissions - Baseline and Mitigated (tons per year)

Construction	NO _x Baseline	NO _x Mitigated	Percent Reduction
Total Construction	8.3	1.0	156%
<i>SJVAPCD Rule 9510 NOx Reduction Target</i>			20%
Construction	PM ₁₀ Baseline	PM ₁₀ Mitigated	Percent Reduction
Total Construction	0.9	0.2	127%
<i>SJVAPCD Rule 9510 PM10 Reduction Target</i>			45%

Source: CalEEMod version 2013.2.2. See Attachment B for emission outputs in ECORP 2020a.

Operational Emission Impacts

Implementation of the Project would result in long-term operational emissions of criteria air pollutants such as PM₁₀, PM_{2.5}, CO, and SO₂ as well as ozone precursors such as ROG and NO_x. Project-generated increases in emissions would be predominantly associated with motor vehicle use. Operational air pollutant emissions were based on the Project site plans and the estimated traffic trip generation rates from JLB Traffic Engineering, Inc. (2020).

Table AIR-3 summarizes long-term operational emissions attributable to the Project compared to the regional operational significance thresholds promulgated by the SJVAPCD.

Table AIR-3
Operational-Related Emissions (Regional Significance Analysis)

Construction Year	Maximum Pollutants (tons per year)					
	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Annual (Maximum Tons per Year)						
Area Source	0.1	0.0	0.0	0.0	0.0	0.0
Energy Use	0.0	0.0	0.0	0.0	0.0	0.0
Mobile Source	0.1	1.0	0.8	0.0	0.2	0.1
Total	0.2	1.0	0.8	0.0	0.2	0.1
<i>SJVAPCD Significance Threshold</i>	<i>10</i>	<i>10</i>	<i>15</i>	<i>15</i>	<i>100</i>	<i>27</i>
Exceed SJVAPCD Threshold?	No	No	No	No	No	No

Source: CalEEMod version 2016.3.2. Refer to Appendix A of Attachment B for Model Data Outputs in ECORP 2020a.

Notes: Emissions projections account for 296 vehicle trips per day according to the traffic trip generation rates from JLB Traffic Engineering, Inc. (2020).

As shown in Table AIR-3 Project operations would not generate emissions that would exceed SJVAPCD significance thresholds and therefore would not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new air quality violations. Nevertheless, the proposed Project is still subject to Rule 9510 and would be required to consult with the SJVAPCD regarding the specific applicability of Rule 9510 in relation to Project operations.

SJVAPCD Rule 9510 requires that a detailed AIA be prepared detailing the operational characteristics associated with the proposed Project. In accordance with this rule, operational emissions of NO_x shall be reduced by a minimum of 33.3 percent. (Emissions reductions are in comparison to the Project's operational baseline emissions presented in Table AIR-3.) The Project would demonstrate compliance with Rule 9510, including payment of all applicable fees, before issuance of the first building permit. For these reasons, the Project would not conflict with or obstruct implementation of any applicable air quality plan during either construction or operation.

- b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

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Less than Significant Impact. By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size, by itself, to result in nonattainment of ambient air quality standards.

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Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's individual emissions exceed its identified significance thresholds, the project would be cumulatively considerable. Projects that do not exceed significance thresholds would not be considered cumulative considerable.

A portion of the proposed Project's air quality impacts are attributable to construction activities while the majority of the long-term air quality impacts are due to the operation of motor vehicles traveling to and from the site. For purposes of impact assessment, air quality impacts have been separated into construction impacts and operational impacts.

Construction Emission Impacts

Construction-generated emissions are temporary and short-term but have the potential to represent a significant air quality impact. Three basic sources of short-term emissions will be generated through construction of the proposed Project: operation of the construction vehicles (i.e., excavators, trenchers, dump trucks); the creation of fugitive dust during clearing and grading; and the use of asphalt or other oil-based substances during paving activities.

Construction activities such as excavation and grading operations, construction vehicle traffic, and wind blowing over exposed soils generate exhaust emissions and fugitive PM emissions that affect local air quality at various times during construction. Effects would be variable depending on the weather, soil conditions, the amount of activity taking place, and the nature of dust control efforts. The dry climate of the area during the summer months creates a high potential for dust generation. Construction activities would be subject to SJVAPCD Regulation VIII Fugitive Dust Control, which specifies the following measures to control fugitive dust:

- Apply water to unpaved surfaces and areas.
- Use nontoxic chemical or organic dust suppressants on unpaved roads and traffic areas.
- Limit or reduce vehicle speed on unpaved roads and traffic areas to a maximum 15 miles per hour.
- Maintain areas in a stabilized condition by restricting vehicle access.
- Install wind barriers.
- During high winds, cease outdoor activities that disturb the soil.
- Keep bulk materials sufficiently wet when handling.
- Store and handle materials in a three-sided structure.
- When storing bulk materials, apply water to the surface or cover the storage pile with a tarp.
- Do not overload haul trucks. Overloaded trucks are likely to spill bulk materials.
- Cover haul trucks with a tarp or other suitable cover. Or, wet the top of the load enough to limit visible dust emissions.
- Clean the interior of cargo compartments on emptied haul trucks prior to leaving a site.
- Prevent track-out by installing a track-out control device.
- Clean up track-out at least once a day. If along a busy road or highway, clean up track-out immediately.
- Monitor dust-generating activities and implement appropriate measures for maximum dust control.

Construction-generated emissions are short-term and of temporary duration, occurring only during construction. However, construction-generated emissions would be considered a significant air quality impact if the volume of pollutants generated exceeds the SJVAPCD's thresholds of significance. As shown in Table AIR-1 Construction-Related Emissions, under Item a) above, construction-generated emissions would not exceed SJVAPCD significance thresholds. As

Potentially Significant Impact (PSI)	Potentially Significant Unless Mitigation Incorporated (PSUMI)	Less Than Significant Impact (LTSI)	No Impact (NI)
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demonstrated in Table AIR-2, compliance with Rule 9510 has the potential to reduce total NO_x emissions by 156 percent and total PM₁₀ emissions by 127 percent, which is beyond the reduction needed to achieve the SJVAPCD Rule 9510 target. Therefore, criteria pollutant emissions generated during Project construction would not result in a violation of air quality standards.

Operational Emission Impacts

As discussed under item a) above, implementation of the Project would result in long-term operational emissions of criteria air pollutants such as PM₁₀, PM_{2.5}, CO, and SO₂ as well as ozone precursors such as ROG and NO_x predominantly generated by motor vehicle use. Table AIR-3 Operational-Related Emissions (Regional Significance Analysis), under item a) above, summarizes the long-term operational emissions attributed to the Project compared to the regional operational significance thresholds promulgated by the SJVAPCD. As shown in Table AIR-3, operations-generated emissions would not exceed SJVAPCD significance thresholds. Nevertheless, the proposed Project is still subject to Rule 9510 and would be required to consult with the SJVAPCD regarding the specific applicability of Rule 9510 in relation to Project operations. In accordance with Rule 9510, the Project applicant would be required to prepare a detailed Air Quality Impact Assessment (AIA) for submittal to the SJVAPCD demonstrating the reduction from the Project's baseline of NO_x emissions by 33.3 percent. As operations-generated emissions would not exceed SJVAPCD significance thresholds and compliance with Rule 9510 is mandatory, criteria pollutant emissions generated during Project operations would not result in a violation of air quality standards. Impacts to an applicable air quality standard are considered less than significant.

- c) Expose sensitive receptors to substantial pollutant concentrations? ☐ ☐ ☒ ☐

Less than Significant Impact. Sensitive receptors are defined as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. The California Air Resources Board (CARB) has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis. The sensitive receptors surrounding the Project site are residents to the north and west, the Butler Church to the east, and FPU and residents to the south.

Construction Generated Air Contaminants

Construction-related activities would result in temporary, short-term proposed Project-generated emissions of diesel particulate matter (DPM), ROG, NO_x, CO, and PM₁₀ from the exhaust of off-road, heavy-duty diesel equipment for site preparation (e.g., clearing, grading); soil hauling truck traffic; paving; and other miscellaneous activities. However, as shown in Table AIR-1 Construction-Related Emissions under item a) above, the Project would not exceed the SJVAPCD emission thresholds. The portion of the SJVAB that encompasses the Project area is designated as a nonattainment area for state standards of O₃, PM₁₀ and PM_{2.5} while also being designated as a nonattainment area for federal standards of O₃ and PM_{2.5} (CARB 2018a in ECORP 2020a). Thus, existing these levels in the SJVAB are at unhealthy levels during certain periods.

Potentially Significant Impact (PSI)	Potentially Significant Unless Mitigation Incorporated (PSUMI)	Less Than Significant Impact (LTSI)	No Impact (NI)
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Ozone

The health effects associated with O₃ are generally associated with reduced lung function. Because the Project would not involve construction activities that would result in O₃ precursor emissions (ROG or NO_x) in excess of the SJVAPCD thresholds, the Project is not anticipated to substantially contribute to regional O₃ concentrations and the associated health impacts.

Carbon Monoxide

CO tends to be a localized impact associated with congested intersections. In terms of adverse health effects, CO competes with oxygen, often replacing it in the blood, reducing the blood's ability to transport oxygen to vital organs. The results of excess CO exposure can include dizziness, fatigue, and impairment of central nervous system functions. The Project would not involve construction activities that would result in CO emissions in excess of the SJVAPCD thresholds. Thus, the Project's CO emissions would not contribute to the health effects associated with this pollutant.

Particulate Matter

Particulate matter (PM₁₀ and PM_{2.5}) contains microscopic solids or liquid droplets that are so small that they can get deep into the lungs and cause serious health problems. Particulate matter exposure has been linked to a variety of problems, including premature death in people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms such as irritation of the airways, coughing, or difficulty breathing. For construction activity, DPM is the primary toxic air contaminant (TAC) of concern. Particulate exhaust emissions from diesel-fueled engines (i.e., DPM) were identified as a TAC by the CARB in 1998. The potential cancer risk from the inhalation of DPM, as discussed below, outweighs the potential for all other health impacts (i.e., non-cancer chronic risk, short-term acute risk) and health impacts from other TACs.

Based on the emission modeling conducted, the maximum onsite construction-related daily emissions of exhaust PM_{2.5}, considered a surrogate for DPM, would be 0.08 pounds/day during 2020, 2021 and 2022 construction activities (see Appendix A of Attachment B). (PM_{2.5} exhaust is considered a surrogate for DPM because more than 90 percent of DPM is less than 1 microgram in diameter and therefore is a subset of particulate matter under 2.5 microns in diameter (i.e., PM_{2.5}). Most PM_{2.5} derives from combustion, such as use of gasoline and diesel fuels by motor vehicles.) As with O₃ and NO_x, the Project would not generate emissions of PM₁₀ or PM_{2.5} that would exceed the SJVAPCD's thresholds. Additionally, the Project would be required to comply with SJVAPCD Regulation VIII Fugitive Dust Control described above, which limits the amount of fugitive dust generated during construction. Accordingly, the Project's PM₁₀ and PM_{2.5} emissions are not expected to cause any increase in related regional health effects for these pollutants.

In summary, the Project would not result in a potentially significant contribution to regional concentrations of nonattainment pollutants and would not result in a significant contribution to the adverse health impacts associated with those pollutants.

Project Operations

Operation of the proposed Project would not result in the development of any substantial sources of air toxics. There are no stationary sources associated with the operations of the Project; nor would the Project attract mobile sources that spend long periods queuing and idling at the site. Thus, by its

Potentially Significant Impact (PSI)	Potentially Significant Unless Mitigation Incorporated (PSUMI)	Less Than Significant Impact (LTSI)	No Impact (NI)
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very nature, the Culture and Arts Center would not be a source of TAC concentrations during operations.

Naturally Occurring Asbestos

Another potential air quality issue associated with construction-related activities is the airborne entrainment of asbestos due to the disturbance of naturally occurring asbestos-containing soils. The proposed Project is not located within an area designated by the State of California as likely to contain naturally occurring asbestos (Department of Conservation [DOC] 2000 in ECORP 2020a). As a result, construction-related activities would not be anticipated to result in increased exposure of sensitive land uses to asbestos.

Valley Fever

Coccidioidomycosis (CM), often referred to as San Joaquin Valley Fever or Valley Fever, is one of the most studied and oldest known fungal infections. Valley Fever most commonly affects people who live in hot dry areas with alkaline soil and varies with the season. This disease, which affects both humans and animals, is caused by inhalation of arthroconidia (spores) of the fungus *Coccidioides immitis* (CI). CI spores are found in the top few inches of soil and the existence of the fungus in most soil areas is temporary. Valley fever (*Coccidioidomycosis*) is found in California and is endemic to Fresno County. When soil containing this fungus is disturbed by activities such as digging or grading, by vehicles raising dust, or by the wind, the fungal spores become airborne. When people breathe the spores into their lungs, they may get valley fever. ground-disturbing activities can be partially mitigated through the control of Project-generated dust. As previously noted under items a) and b) above, Project-generated dust would be controlled by adhering to SJVAPCD dust-reducing measures (Regulation VIII Fugitive Dust Control), which includes the preparation of a SJVAPCD-approved dust control plan describing all fugitive dust control measures that are to be implemented before, during, and after any dust-generating activity. With minimal site grading and conformance with SJVAPCD Regulation VIII, dust from the construction of the Project would not add significantly to the existing exposure level of people to this fungus, including construction workers.

Carbon Monoxide Hot Spots

It has long been recognized that CO exceedances are caused by vehicular emissions, primarily when idling at intersections. Concentrations of CO are a direct function of the number of vehicles, length of delay, and traffic flow conditions. Under certain meteorological conditions, CO concentrations close to congested intersections that experience high levels of traffic and elevated background concentrations may reach unhealthy levels, affecting nearby sensitive receptors. Given the high traffic volume potential, areas of high CO concentrations, or "hot spots," are typically associated with intersections that are projected to operate at unacceptable levels of service during the peak commute hours. However, transport of this criteria pollutant is extremely limited, and CO disperses rapidly with distance from the source under normal meteorological conditions. Furthermore, vehicle emissions standards have become increasingly more stringent in the last 20 years. Currently, the CO standard in California is a maximum of 3.4 grams per mile for passenger cars (requirements for certain vehicles are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology on industrial facilities, CO concentrations in the Project vicinity have steadily declined.

Accordingly, with the steadily decreasing CO emissions from vehicles, even very busy intersections do not result in exceedances of the CO standard. The analysis prepared for CO attainment in the South Coast Air Quality Management District's (SCAQMD's) 1992 *Federal Attainment Plan for*

Carbon Monoxide in Los Angeles County can be used to demonstrate the potential for CO exceedances. The SCAQMD CO hot spot analysis was conducted for four busy intersections in Los Angeles County during the peak morning and afternoon time periods. The intersections evaluated included Long Beach Boulevard and Imperial Highway (Lynwood), Wilshire Boulevard and Veteran Avenue (Westwood), Sunset Boulevard and Highland Avenue (Hollywood), and La Cienega Boulevard and Century Boulevard (Inglewood). The busiest intersection evaluated was at Wilshire Boulevard and Veteran Avenue, which has a traffic volume of approximately 100,000 vehicles per day. The Los Angeles County Metropolitan Transportation Authority evaluated the level of service (LOS) in the vicinity of the Wilshire Boulevard/Veteran Avenue intersection and found it to be LOS E at peak morning traffic and LOS F at peak afternoon traffic (LOS E and F are the two least efficient traffic LOS ratings). Even with the inefficient LOS and volume of traffic, the CO analysis concluded that there was no violation of CO standards (SCAQMD 1992).

According to the Traffic Impact Assessment prepared for the Project (JLB Traffic Engineering, Inc. 2020) (Attachment D), the Project is anticipated to generate approximately 296 daily trips on average. Because the proposed Project would not generate traffic volumes at any intersection of more than 100,000 vehicles per day, there is no likelihood of the Project traffic exceeding CO values.

- d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people? ☐ ☐ ☒ ☐

Less than Significant Impact. Odors are typically regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory, and respiratory effects, nausea, vomiting, and headache).

With respect to odors, the human nose is the sole sensing device. The ability to detect odors varies considerably among the population and overall is quite subjective. Quality and intensity are two properties present in any odor. Some individuals can smell minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor; in fact, an odor that is offensive to one person (e.g., from a fast-food restaurant) may be perfectly acceptable to another. It is also important to note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

Project Construction

During construction, the proposed Project presents the potential for generation of objectionable odors in the form of diesel exhaust in the immediate vicinity of the site. However, these emissions are short term in nature and will rapidly dissipate and be diluted by the atmosphere downwind of the emission sources. Additionally, odors would be localized and generally confined to the construction area.

Project Operations

Land uses commonly considered to be potential sources of obnoxious odorous emissions include agriculture (farming and livestock), wastewater treatment plants, food processing plants, chemical plants, composting facilities, refineries, landfills, dairies, and fiberglass molding. The proposed Project does not include any uses identified as being associated with odors.

Overall, the Project would not generate any long-term odors that would adversely impact a substantial number of people. This impact is considered less than significant.

IV. BIOLOGICAL RESOURCES Would the project:

- a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

☐ ☐ ☒ ☐

Less than Significant Impact. The proposed Project is in an urban setting within the boundaries of the FPU campus. The urbanized area has been developed and disturbed for over 50 years and does not have any natural habitat that would serve to attract candidate, sensitive or special status species. Therefore, the proposed Project would have no impact on any species identified as a candidate, sensitive or special status species. The project does however require removal of trees and vegetation to accommodate construction of the Culture and Arts Center. If tree removal occurs during nesting season, there is potential to harm nesting birds and a pre-construction survey would be required as specified in MEIR Mitigation Measure USS-15 (Attachment E).

MEIR Mitigation Measure USS-15: Prior to ground disturbing activities during nesting season (March through July) for a project that supports bird nesting habitat, a pre-construction survey of trees shall be conducted. If nests are found during the survey, a qualified biologist shall assess the nesting activity on the project site. If active nests are located, no construction activities shall be allowed within 250 feet of the nest until the young have fledged. If construction activities are planned during the non-breeding period (August through February), a nest survey is not necessary.

Timing of Implementation: Prior to ground disturbing activities during nesting season (March through July) for a project that supports bird nesting habitat.

Enforcement: Compliance Verified by CDFW and USFWS.

With MEIR mitigation measure USS-15 incorporated, the project will not result in any biological resource impacts beyond those analyzed in MEIR SCH No. 2012111015. This impact is considered less than significant.

- b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

☐ ☐ ☐ ☒

No Impact. The proposed Project site is in an urban setting within the boundaries of the FPU campus. The area has been developed and disturbed for over 60 years and does not have any riparian habitat or other sensitive natural community. Therefore, the proposed Project would have no impact on any riparian habitat or other sensitive natural community.

- c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

☐ ☐ ☐ ☒

No Impact. As discussed under items a) and b) above, the proposed Project site is in an urban setting within the boundaries of the FPU campus. The area has been developed and disturbed for over 60 years and does not have any wetlands present, and no impact would occur to a federally protected wetland.

- d) Interfere substantially with the movement of any resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?
- | | | | |
|--------------------------|--------------------------|--------------------------|-------------------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
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No Impact. Wildlife corridors are linear features that connect large patches of natural open space and provide avenues for the migration of animals. The Project site is in the City of Fresno within the boundaries of the FPU campus. The site is bordered by urban uses with no natural open space. As such, the Project site does not serve as an important wildlife corridor or habitat linkage for larger mammals and species that are limited to native habitats. Therefore, no impact regarding interfering with the movement of wildlife would occur.

- e) Conflict with any local policies or ordinance protecting biological resource, such as a tree preservation policy or ordinance?
- | | | | |
|--------------------------|--------------------------|-------------------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|--------------------------|--------------------------|-------------------------------------|--------------------------|

Less than Significant Impact. As discussed under item a) above, the proposed Project site is completely disturbed. The site includes mature trees and landscaping. A total of 51 trees will have to be removed to accommodate construction of the Culture and Arts Center. All trees are located on the Project site and no trees on City property (i.e. along East Butler Avenue) would be affected. Tree Preservation is addressed in Fresno Municipal Code Section 13-305. This section states that it is the city's policy to utilize whatever techniques, methods, and procedures are required to preserve, whenever feasible, all trees in the city including, but not limited to, trees which are affecting surface improvements or underground facilities or which are diseased, or located where construction is being considered or will occur." This section also states that the Director may issue a permit to property owners to remove or maintain a street tree if certain requirements are met. FMC 15-2308 is the Citywide Development Code provision for Trees and process for Tree Removal. None of the 51 trees proposed for removal are Heritage Trees. The proposed Project is subject to FMC and will comply with the requirements. A less than significant impact will occur with regard to conflicting with a tree preservation policy or ordinance.

- f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?
- | | | | |
|--------------------------|--------------------------|--------------------------|-------------------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--------------------------|--------------------------|--------------------------|-------------------------------------|

No Impact. The City of Fresno is not within an adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional, or state habitat conservation plan. No impact would occur.

V. CULTURAL RESOURCES Would the project:

- a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5? ☐ ☐ ☐ ☒

No Impact. The proposed Project is in an urban setting within the boundaries of the FPU campus. The area has been developed and disturbed for over 60 years. Existing development on the site includes student housing (five duplexes), one garage and four single-family homes. The original construction dates for the four single-family homes according to the Fresno County Assessor are as follows: 4383 East Butler Avenue (APN 473-061-01), 1962; 4846 East Butler Avenue (APN 473-061-02), 1957; 4845 East Townsend Avenue (APN 473-061-09), 1956; and 4837 East Townsend (APN 473-061-10), 1957.

Because the construction dates for these homes are greater than 50 years of age, they each meet the threshold for consideration of historic designation. Each of the homes is an example of the tract homes built in the late 1950's and early 1960's, thousands of which exist throughout Fresno. Upon initial review, none of these homes appear to be eligible for National, California, or Local Register listing as they possess no outstanding features, unique design or architectural distinctives.

The Willey Giffen Home at 4824 East Butler Avenue, to the south of the Project site, was constructed in 1926 and given a Historic Property Number (HP #081). The home was previously evaluated and determined eligible for listing in the Local Register of Historic Resources in 1979 by the City's Historic Preservation Commission. The home appears to retain historic integrity and eligibility for the Local Register of Historic Resources. The Project would not require demolition of this potential historic resource or otherwise diminish the integrity of the Willey Giffen Home. Therefore, no impact to a historical resource would occur in association with the proposed Project.

- b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5? ☐ ☐ ☐ ☒

No Impact. The Project site and surrounding areas have been extensively disturbed by construction of the existing student housing and single-family residences. The deepest excavations would be associated with construction of the temporary detention basin in the southwest portion of the site. The basin would be 24-inches in depth and require removing 8,370 cubic feet of earth and installation of a line connecting the basin to a 24-inch storm drain main in East Butler Avenue. The line would be 36-inches below the bottom of the basin (5-feet below ground surface). Any subsurface archaeology, if present, would have likely been disturbed and would no longer remain intact. However, if previously unknown resources are encountered during construction, MEIR Mitigation Measure CUL-1 shall be implemented (Attachment E):

MEIR Mitigation Measure CUL-1: If previously unknown resources are encountered before or during grading activities, construction shall stop in the immediate vicinity of the find and a qualified historical resources specialist shall be consulted to determine whether the resource requires further study. The qualified historical resources specialist shall make recommendations to the City on the measures that shall be implemented to protect the discovered resources, including but not limited to excavation of the finds and evaluation of the finds in accordance with Section 15064.5 of the CEQA Guidelines and the City's Historic Preservation Ordinance.

If the resources are determined to be unique historical resources as defined under Section 15064.5 of the CEQA Guidelines, measures shall be identified by the monitor and recommended to the Lead Agency. Appropriate measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds. No further grading shall occur in the area of the discovery until the Lead Agency approves the measures to protect these. Any historical artifacts recovered as a result of mitigation shall be provided to a City-approved institution or person capable of providing long-term preservation to allow future scientific study.

Timing of Implementation: Prior to commencement of, and during, construction activities.

Enforcement: Planning and Development Department

With MEIR mitigation measure CUL-1 incorporated, the project will not result in any cultural resource impacts beyond those analyzed in MEIR SCH No. 2012111015.

Therefore, no impact is identified regarding an archeological resource.

- c) Disturb any human remains, including those interred outside of dedicated cemeteries? ☐ ☐ ☐ ☒

No Impact. As described in item a) above, it is not likely that human remains would be found on the Project site based on prior disturbance of the site to develop the existing student housing and single-family homes. In the unlikely event that human remains are discovered, MEIR mitigation measure CUL-4 would be implemented (Attachment E):

MEIR Mitigation Measure CUL-4: In the event human remains are unearthed during excavation and grading activities of any future development project, all activity shall cease immediately. Pursuant to Health and Safety Code (HSC) Section 7050.5, no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to Public Resources Code (PRC) Section 5097.98(a). If the remains are determined to be of Native American descent, the coroner shall within 24 hours notify the Native American Heritage Commission (NAHC). The NAHC shall then contact the most likely descendent of the deceased Native American, who shall then serve as the consultant on how to proceed with the remains.

Pursuant to PRC Section 5097.98(b), upon the discovery of Native American remains, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located is not damaged or disturbed by further development activity until the landowner has discussed and conferred with the most likely descendants regarding their recommendations, if applicable, taking into account the possibility of multiple human remains. The landowner shall discuss and confer with the descendants all reasonable options regarding the descendants' preferences for treatment.

Timing of Implementation: Prior to commencement of, and during, construction activities.

Enforcement: Planning and Development Department.

With MEIR mitigation measure CUL-4 incorporated, the project will not result in any cultural resource impacts beyond those analyzed in MEIR SCH No. 2012111015. No impact would occur.

VI. ENERGY

- a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Less than Significant Impact. The Energy discussion in this section is based on the Energy Memorandum prepared by ECORP Environmental Consulting, Inc. (ECORP 2020b). Energy consumption is analyzed due to the potential direct and indirect environmental impacts associated with the Project. Such impacts include the depletion of nonrenewable resources (oil, natural gas, coal, etc.) during both the construction and long-term operational phases.

Energy Types and Sources

California relies on a regional power system comprised of a diverse mix of natural gas, renewable, hydroelectric, and nuclear generation resources. Natural gas provides California with a majority of its electricity followed by renewables, large hydroelectric and nuclear (CEC 2018 in ECORP 2020b). The Pacific Gas and Electric Company (PG&E) provides electricity and natural gas to the City of Fresno. It generates or buys electricity from hydroelectric, nuclear, renewable, natural gas, and coal facilities. PG&E provides natural gas and electricity to most of the northern two-thirds of California, from Bakersfield and Barstow to near the Oregon, Nevada, and Arizona State Line. It provides 5.2 million people with electricity and natural gas across 70,000 square miles. In 2017, PG&E announced that 80 percent of the company's delivered electricity comes from Greenhouse Gas (GHG)-free sources, including renewables, nuclear, and hydropower.

Energy Consumption

Electricity use is measured in kilowatt-hours (kWh), and natural gas use is measured in therms. Vehicle fuel use is typically measured in gallons (e.g. of gasoline or diesel fuel), although energy use for electric vehicles is measured in kWh.

The electricity consumption associated with all non-residential uses in Fresno County from 2014 to 2018 is shown in Table ENG-1. As indicated, the demand has remained constant since 2014.

Table ENG-1
Non-Residential Electricity Consumption in Fresno County 2014-2018

Year	Electricity Consumption (kilowatt hours)
2018	4,907,627,753
2017	4,641,655,361
2016	4,962,678,732
2015	5,012,233,259
2014	4,981,363,605

Source: ECDMS 2019 in ECORP 2020b.

Table ENG-2 summarizes the natural gas consumption associated with all non-residential uses in Fresno County from 2014 to 2018. As shown, the demand has increased since 2014.

Table ENG-2
Non-Residential Natural Gas Consumption in Fresno County 2014-2018

Year	Natural Gas Consumption (therms)
2018	245,996, The overall total of both on-site
2017	238,870,384
2016	187,421,155
2015	202,520,120
2014	200,372,785

Source: ECDMS 2019 in ECORP 2020b.

Table ENG-3 summarizes automotive fuel consumption in Fresno County from 2015 to 2019. As shown, fuel consumption has increased slightly between 2015 and 2019.

Table ENG-3
Automotive Fuel Consumption in Fresno County 2015-2019

Year	Total Fuel Consumption (gallons)
2019	543,845,188
2018	550,087,720
2017	555,088,621
2016	561,997,488
2015	540,947,408

Source: CARB 2017 in ECORP 2020b.

Methodology

Levels of construction and operation-related energy consumption estimated to be consumed by the Project include the number of kilowatt hours (kWh) of electricity, therms of natural gas and gallons of gasoline. Modeling was based on Project-specific information such as the estimated traffic trip generation rates from JLB Traffic Engineering, Inc. (2020) and Project site plans. Energy consumption estimates were calculated using the California Emissions Estimator Model (CalEEMod), version 2016.3.2. CalEEMod is a statewide land use computer model designed to quantify resources associated with both construction and operations from a variety of land use projects.

The impact analysis focuses on the four sources of energy that are relevant to the proposed Project: electricity, natural gas, the equipment-fuel necessary for Project construction, and the automotive fuel necessary for Project operations. Addressing energy impacts requires an agency to decide as to what constitutes a significant impact. There are no established thresholds of significance, statewide or locally, for what constitutes a wasteful, inefficient, and unnecessary consumption of energy for a proposed land use project. For this analysis, the amount of electricity and natural gas estimated to be consumed by the Project is quantified and compared to that consumed by all land uses in Fresno County. Similarly, the amount of fuel necessary for Project construction and operations is calculated and compared to that consumed in Fresno County.

The analysis of electricity gas usage is based on CalEEMod modeling conducted by ECORP Consulting (see May 2020 Emissions Memorandum) (Attachment C), which quantifies energy use for Project operations. The amount of operational automotive fuel use was estimated using the CARB's EMFAC2017 computer program, which provides projections for typical daily fuel usage in

Fresno County. The amount of total construction-related fuel use was estimated using ratios provided in the Climate Registry's General Reporting Protocol for the Voluntary Reporting Program, Version 2.1. Table ENG-4 summarizes energy consumption associated with the proposed Project.

Operations of the proposed Culture and Arts Center would include electricity and natural gas usage associated with lighting, space and water heating, and landscape maintenance activities. As shown in Table ENG-4, the annual electricity consumption due to operations would be 236,006 kilowatt-hours resulting in an approximate 0.004 percent increase in the typical annual electricity consumption attributable to all non-residential uses in Fresno County. However, this is potentially a conservative estimate.

Table ENG-4
Proposed Project Energy and Fuel Consumption

Energy Type	Annual Energy Consumption	Percentage Increase Countywide
Electricity Consumption ¹	236,006 kWh	0.004 percent
Natural Gas ¹	5,584 therms	0.002 percent
Automotive Fuel Consumption		
Project Construction 2020 ²	22,365 gallons	0.004 percent
Project Construction 2021 ²	63,054 gallons	0.011 percent
Project Construction 2022 ²	36,158 gallons	0.006 percent
Project Operations ³	42,633 gallons	0.007 percent

Source: ¹CalEEMod; ²Climate Registry 2016; ³EMFAC2017 (CARB 2017) in ECORP 2020b.

Notes: The Project increases in electricity and natural gas consumption are compared with all of the non-residential buildings in Fresno County in 2018, the latest data available. The Project increases in automotive fuel consumption are compared with the countywide fuel consumption in 2019, the most recent full year of data.

In September 2018, Governor Jerry Brown Signed Executive Order (EO) B-55-18 establishing a new statewide goal "to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter." Carbon neutrality refers to achieving a net zero CO₂ emissions. This can be achieved by reducing or eliminating carbon emissions, balancing carbon emissions with carbon removal, or a combination of the two. This goal is in addition to existing statewide targets for GHG emission reduction. EO B-55-18 requires CARB to "work with relevant state agencies to ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal." Furthermore, the Project increases in natural gas usage, 0.002 percent, across all non-residential uses in the County would also be negligible. For these reasons, the Project would not result in the inefficient, wasteful, or unnecessary consumption of building energy.

Fuel necessary for Project construction would be required for the operation and maintenance of construction equipment and the transportation of materials to the Project site. The fuel expenditure necessary to construct the Culture and Arts Center building and supporting infrastructure would be temporary, lasting only as long as Project construction. As further indicated in Table ENG-4, the Project's gasoline fuel consumption during the one-time construction period is estimated to be 22,365 gallons of fuel during 2020 construction; 63,054 gallons of fuel during 2021 construction; and 36,158 gallons of fuel during 2022 construction. This would increase the annual countywide gasoline fuel use in Fresno County by 0.004 percent; 0.011 percent and 0.006 percent, respectively.

As such, Project construction would have a nominal effect on local and regional energy supplies. No unusual Project characteristics would necessitate the use of construction equipment that would be less energy efficient than at comparable construction sites in the region or the state. Construction contractors would purchase their own gasoline and diesel fuel from local suppliers and would judiciously use fuel supplies to minimize costs due to waste and subsequently maximize profits. Additionally, construction equipment fleet turnover and increasingly stringent state and federal regulations on engine efficiency combined with state regulations limiting engine idling times and requiring recycling of construction debris, would further reduce the amount of transportation fuel demand during Project construction. For these reasons, it is expected that construction fuel consumption associated with the Project would not be any more inefficient, wasteful, or unnecessary than other similar development projects of this nature.

Per the Traffic Impact Analysis prepared by JLB Traffic Engineering, Inc. (2020), the Project is estimated to generate a maximum of 296 daily trips. As shown in Table ENG-4, the maximum construction trips would consume approximately 42,633 gallons of automotive fuel per year. This would increase the annual countywide automotive fuel consumption by 0.007 percent. The amount of operational fuel use was estimated using CARB's EMFAC2017 computer program, which provides projections for typical daily fuel usage in Fresno County. This analysis conservatively assumes that all of the automobile trips projected to arrive at the Project during operations would be new to Fresno County. Further, a liberal approach was taken for vehicle trip estimation to ensure potential impacts due to operational gasoline usage were adequately accounted. Fuel consumption associated with vehicle trips generated by the Project would not be considered inefficient, wasteful, or unnecessary in comparison to other similar developments in the region. This impact is considered less than significant.

- b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency. ☐ ☐ ☐ ☒

No Impact. The Project would be designed in a manner that is consistent with relevant energy conservation plans and standards designed to encourage development that results in the efficient use of energy resources. The Project will be built to the Energy Efficiency Standards for Residential and Nonresidential Buildings, as specified in Title 24, Part 6, of the California Code of Regulations (Title 24). Title 24 was established in 1978 in response to a legislative mandate to reduce California's energy consumption. Title 24 is updated approximately every three years; the 2013 standards became effective July 1, 2014. The 2016 Title 24 updates went into effect on January 1, 2017. The 2019 Energy Standards improve upon the 2016 Energy Standards for new construction of, and additions and alterations to, residential and nonresidential buildings.

The 2019 update to the Energy Standards focuses on several key areas to improve the energy efficiency of newly constructed buildings and additions and alterations to existing buildings. The 2019 Energy Standards are a major step toward meeting Zero Net Energy. Buildings permitted on or after January 1, 2020, must comply with the 2019 Standards. Compliance with Title 24 is mandatory at the time new building permits are issued by city and county governments. Additionally, in January 2010, the State of California adopted the California Green Building Standards Code (CalGreen) establishing mandatory green building standards for all buildings in California. The code was subsequently updated in 2013. The code covers five categories: planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and indoor environmental quality. Furthermore, the Project would also be consistent with the City's General Plan, specifically Objective RC-8 which strives to reduce the consumption of non-

Potentially Significant Impact (PSI)	Potentially Significant Unless Mitigation Incorporated (PSUMI)	Less Than Significant Impact (LTSI)	No Impact (NI)
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renewable energy resources by requiring and encouraging conservation measures and the use of alternative energy sources. Therefore, the proposed Project would no conflict with or obstruct a state or local plan for renewable energy or energy efficiency. No impact would occur.

The proposed Project would be designed in accordance with State-mandated building codes to meet minimum efficiency standards related to various building features, including space heating, and cooling equipment, building insulation and roofing, and lighting. Implementation of these standards significantly increases energy savings. Compliance with State mandated code requirements and conservation requirements in the Energy Code and CALGreen ensure that the Project would not result in wasteful, inefficient, or unnecessary consumption of energy resources. In conclusion, with MEIR mitigation measures incorporated, the project will not result in any energy impacts beyond those analyzed in MEIR SCH No. 2012111015.

VII. GEOLOGY AND SOILS Would the project:

- a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: ☐ ☐ ☒ ☐

- i.) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42? ☐ ☐ ☐ ☒

No Impact. According to the City of Fresno General Plan and Development Code Update Master Environmental Impact Report (MEIR) (2014), there are no major active faults or fault zones within the City's Planning Area. The MEIR also states that the Alquist-Priolo Earthquake Fault Zoning Act does not apply within the City of Fresno because no active faults cross the Planning Area (First Carbon Solutions 2014, p. 5.6-9). Thus, no impact is associated with a known earthquake fault.

- ii.) Strong Seismic ground shaking? ☐ ☐ ☒ ☐

Less than Significant Impact. The Project is subject to ground shaking in the event of an earthquake along faults in the region including the Great Valley Fault Zone or the Nunez Fault. To minimize damage, development must be designed to withstand strong ground shaking to comply with the California Building Code (CBC). The General Plan Update and City of Fresno Municipal Code also includes Objective NS-2 (Minimize risks of property damage and personal injury posed by geologic and seismic risks) and Policy NS-2-a (Seismic Protection. Ensure seismic protection is incorporated into new and existing construction, consistent with the Fresno Municipal Code) to reduce ground-shaking impacts (First Carbon Solutions, 2014 p. 5.6-19).

With the implementation of the above objective and policy, as well as adherence to Municipal Code Section 12-1022, which requires preparation of a Soils Report which will be used as a basis to design the building and related improvements consistent with state and federal standards. The proposed Project must comply with mandatory seismic safety standards proven effective in reducing seismic safety impacts to a level of insignificance. With

mandatory compliance with seismic safety standards, potential seismic ground shaking impacts would be reduced to less than significant and the proposed Project would not result in impacts from strong seismic ground shaking beyond those analyzed in MEIR SCH No. 2012111015.

- | | | | | |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|
| iii.) Seismic-related ground failure, including liquefaction? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|

Less than Significant Impact. The Project site is currently developed as evidenced by the existing structures that will be removed or demolished. Liquefaction occurs when granular soil below the water table is subjected to vibratory motions, such as those produced by earthquakes. A Geotechnical Report is not required for the Project. However, Fresno Municipal Code Section 12-1022 requires the preparation of a Soils Report identifying potential site-specific soil issues, foundation support and grading parameters. Compliance with the findings and recommendations of the Soils Report would reduce any seismic-related ground failure impacts. In addition, all development is required to adhere to the adopted Uniform Building Code (UBC) which will ensure that no seismic safety, soil erosion or other soil-related impacts are mitigated. Therefore, impacts associated with liquefaction are considered less than significant.

- | | | | | |
|------------------|--------------------------|--------------------------|--------------------------|-------------------------------------|
| iv.) Landslides? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|------------------|--------------------------|--------------------------|--------------------------|-------------------------------------|

No Impact. The Project site is flat and has been previously developed with student housing and single-family residential uses. Based on the flat topography of the site, no impact would occur regarding landslides.

- | | | | | |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|
| b) Result in substantial soil erosion or the loss of topsoil? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|

Less than Significant Impact. The proposed Project site is on two soils types: Greenfield sandy loam, 0 to 3 percent slopes (western portion) and Ramona loam (on the eastern portion). Construction of the proposed Project would result in site preparation activities including removing existing structures, trees, landscaping, grading, and trenching.

As noted in the discussion of item "aiii)" Fresno Municipal Code Section 12-1022 requires the preparation of a Soils Report identifying potential site-specific soil issues, foundation support and grading parameters. The findings of the report would be incorporated into the design as required by the Code. In addition, Fresno Municipal Code Section 12-1023, Grading and Erosion Control, requires every approved map to be conditioned on compliance with the requirements for grading and erosion control, including the prevention of sedimentation or damage to off-site property, set forth in Appendix Chapter 70 of the Uniform Building Code, 1973 Edition, Volume I, as adopted and amended by the city. Compliance with these policies and with other pertinent regulations will ensure that potential soil erosion impacts, or the potential loss of topsoil, would be less than significant.

Additionally, the Project's construction activities would be subject to a General Construction Activity Stormwater National Pollution Discharge System (NPDES) permit which would cover clearing, grading, excavating, and general disturbances to the ground (FCS 2014 p. 5.9-7). A Stormwater Pollution Prevention Plan (SWPPP) is required for the issuance of a General Construction Activity Stormwater NPDES permit and typically includes the implementation of structural and non-structural

	Potentially Significant Impact (PSI)	Potentially Significant Unless Mitigation Incorporated (PSUMI)	Less Than Significant Impact (LTSI)	No Impact (NI)
<p>Best Management Practices (BMPs) (e.g. watering to control dust, minimizing the amount of soil exposed during construction activity, installing silt fencing to prevent soil transport off site) to reduce impacts related to surface water quality. Therefore, impacts regarding substantial soil erosion or the loss of topsoil would be less than significant.</p>				
c) Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project, and potentially result in on- or off-site landslides, lateral spreading, subsidence, liquefaction, or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>No Impact. The Project site is in a developed area with flat topography. No potential for landslide is present. The Soils Report, as required by Municipal Code Section 12-1022, will identify potential site-specific soil issues. However, given that the existing development on the site does not evidence any sign of damage from shrink-swell or lateral spreading, subsidence, liquefaction or collapse, no impact is anticipated.</p>				
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>Less than Significant Impact. As previously noted in item “b)” the Project site includes two soil types: Greenfield sandy loam, 0 to 3 percent slopes and Ramona loam. Only the Ramona loam has a small percentage (5 percent) of clay content. The Project site has been previously developed and the proposed Project will be designed and engineered taking into consideration the soils present and the findings of the Soils Report as required by Fresno Municipal Code Section 12-1022. Therefore, direct, and indirect risk to life and property are considered less than significant.</p>				
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>No Impact. The proposed Project will be served with municipal wastewater and does not propose inclusion of septic tanks or an alternative wastewater disposal system. No impact would occur.</p>				
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>No Impact. The Project site is urbanized and would replace existing vacant student housing and single-family residential development with a Culture and Arts Center. The Project site and surrounding areas are flat with no distinguishing geologic features. The proposed Project would involve some excavation and trenching in association with construction of the temporary detention basin and utility installation. Excavations are anticipated to be approximately 36-inches in depth. The Project site and surrounding areas have been previously disturbed in association with construction of the existing student housing and single-family homes.</p>				
<p>The General Plan Master EIR states that “excavation and/or construction activities within the Planning Area that are associated with the General Plan and Development Code Update have the</p>				

potential to impact paleontological/geological resources during excavation and construction activities within previously undisturbed soils. Although many areas have been previously disturbed by farming activities or previous structural development, the project could include future development that will require excavations or construction within previously undisturbed soils.” (MEIR 2014, p. 5.5-8). As noted, all soils affected by development of the proposed Culture and Arts Center have been previously disturbed. Thus, the potential to disturb unknown paleontological resources is low based on the depth of excavation and degree of prior disturbance. No unique geologic features are present on the site. Thus, no impact would occur.

VIII. GREENHOUSE GAS EMISSIONS Would the project:

- a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? ☐ ☐ ☒ ☐

Greenhouse gas (GHG) emissions are released as byproducts of fossil fuel combustion, waste disposal, energy use, land use changes, and other human activities. This release of gases, such as carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and chlorofluorocarbons, creates a blanket around the earth that allows light to pass through but traps heat at the surface, preventing its escape into space. While this is a naturally occurring process known as the greenhouse effect, human activities have accelerated the generation of GHGs beyond natural levels. The overabundance of GHGs in the atmosphere has led to an unexpected warming of the earth and has the potential to severely impact the earth’s climate system.

Each GHG differs in its ability to absorb heat in the atmosphere based on the lifetime, or persistence, of the gas molecule in the atmosphere. CH₄ traps over 25 times more heat per molecule than CO₂, and N₂O absorbs 298 times more heat per molecule than CO₂. Often, estimates of GHG emissions are presented in carbon dioxide equivalents (CO₂e). Expressing GHG emissions in carbon dioxide equivalents takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO₂ were being emitted.

The local air quality agency regulating the SJVAB is the SJVAPCD, the regional air pollution control officer for the basin. To provide guidance to local lead agencies on determining significance for GHG emissions in CEQA documents, the SJVAPCD provides a tiered approach in assessing significance of project specific GHG emission increases as shown below.

Projects complying with an approved GHG emission reduction plan or GHG mitigation program which avoids or substantially reduces GHG emissions within the geographic area in which the project is located would be determined to have a less-than-significant individual and cumulative impact for GHG emissions. Such plans or programs must be specified in law or approved by the lead agency with jurisdiction over the affected resource and supported by a CEQA-compliant environmental review document adopted by the lead agency. Projects complying with an approved GHG emission reduction plan or GHG mitigation program would not be required to implement Best Performance Standards (BPS).

Projects implementing BPS would not require quantification of project-specific GHG emissions. Consistent with CEQA Guidelines, such projects would be determined to have a less-than- significant individual and cumulative impact for GHG emissions.

Potentially Significant Impact (PSI)	Potentially Significant Unless Mitigation Incorporated (PSUMI)	Less Than Significant Impact (LTSI)	No Impact (NI)
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Projects not implementing BPS would require quantification of project-specific GHG emissions and demonstration that project-specific GHG emissions would be reduced or mitigated by at least 29 percent, and compared to Business-as-Usual (BAU), including GHG emission reductions achieved since the 2002-2004 baseline period, consistent with GHG emission reduction targets established in the 2017 Scoping Plan. Projects achieving at least a 29 percent GHG emission reduction compared to BAU would be determined to have a less-than-significant individual and cumulative impact for GHGs.

In terms of approved GHG emission reduction plans, the Fresno Greenhouse Gas Reduction Plan (GHG Plan) was required as a policy in the Fresno General Plan and adopted as an appendix to the General Plan Master EIR in 2014. The GHG Plan includes GHG emission reduction targets, strategies, and implementation measures developed to help the City reach these targets. Reduction strategies address GHG emissions associated with land use and transportation, transportation facilities strategies, transportation demand strategies, energy conservation strategies for new and existing buildings, waste diversion and recycling and energy recovery, strategies for existing development, and municipal strategies. The GHG Plan focuses on emissions generated by activities under the control or influence of the City.

Additionally, the Project site is in Fresno County where the Fresno Council of Governments (Fresno COG) serves as the Metropolitan Planning Organization (MPO). As the MPO, Fresno COG is required to produce certain documents that maintain the region's eligibility for federal transportation assistance. Fresno COG adopted its Sustainable Communities Strategy in 2014 and adopted its Regional Transportation Plan and updated Sustainable Communities Strategy in 2018. The Fresno COG Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) charts a course for closely integrating land use and transportation so that the region can grow smartly and sustainably. The RTP/SCS is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals. The Fresno COG region strives toward sustainability through integrated land use and transportation planning. The Fresno COG region, which encompasses the Project site, must achieve specific federal air quality standards, and is required by state law to lower regional GHG emissions. Fresno COG has been tasked by CARB to achieve a 6 percent and a 13 percent per capita reduction by 2020 and 2035, respectively (CARB 2018b).

The BPS and the BAU portion of the SJVAPCD tiered approach are problematic based on the 2015 California Supreme Court Newhall Ranch decision which stated that an GHG-related impact determination based on the BAU approach is "not supported by a reasoned explanation based on substantial evidence."

For this analysis, Project GHG emissions are quantified and compared to the thresholds issued by the California Air Pollution Control Officers Association (CAPCOA), which is an association of the air pollution control officers from all 35 local air quality agencies throughout California, including the SJVAPCD. CAPCOA recommends a significance threshold of 900 metric tons annually. This threshold is based on a capture rate of 90 percent of land use development projects, which in turn translates into a 90 percent capture rate of all GHG emissions. The 900 metric ton threshold, the lowest promulgated in any region in the state, is considered by CAPCOA to be low enough to capture a substantial fraction of future projects that will be constructed to accommodate future statewide population and economic growth, while setting the emission threshold high enough to exclude small projects that will in aggregate contribute a relatively small fraction of cumulative statewide GHG emissions. Additionally, the Project is compared to the City GHG Plan, which includes GHG emission

Potentially Significant Impact (PSI)	Potentially Significant Unless Mitigation Incorporated (PSUMI)	Less Than Significant Impact (LTSI)	No Impact (NI)
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reduction targets, strategies, and implementation measures developed to help the City reach its GHG reduction targets. The Project is also compared to the Fresno COG RTP/SCS which establishes an overall GHG target for the Project region consistent with statewide GHG reduction goals.

Methodology

GHG emissions-related impacts were assessed in accordance with methodologies recommended by CARB. Where quantification is required, emissions are modeled using CalEEMod. CalEEMod is a statewide land use emissions computer model designed to quantify potential criteria pollutant emissions associated with both construction and operations from a variety of land use projects. Project construction-generated emissions were primarily calculated using CalEEMod model defaults for Fresno County, though the span of construction has been adjusted to reflect the timing anticipated by FPU. Operational GHG emissions were calculated based on the Project site plans and the estimated traffic trip generation rates from JLB Traffic Engineering, Inc. (2020).

Construction-Generated Greenhouse Gas Emissions

A potent source of GHG emissions associated with the proposed Project would be combustion of fossil fuels during construction activities. The construction phase of the proposed Project is temporary but would result in GHG emissions from the use of heavy construction equipment and construction-related vehicle trips.

Construction-related activities that would generate GHGs include worker commute trips, haul trucks carrying supplies and materials to and from the Project site and off-road construction equipment (e.g., dozers, loaders, excavators). Table GHG-1 illustrates the specific construction-generated GHG emissions that would result from construction of the Project.

Table GHG-1
Construction-Related Greenhouse Gas Emissions

Emission Source	CO ₂ e (Metric Tons/ Year)
2020 Construction	227
2022 Construction	640
2023 Construction	367
<i>CAPCOA's Potentially Significant Impact</i>	900
Exceed Significance Threshold?	No

Source: CalEEMod version 2016.3.2. Refer to Appendix A of Attachment B for Model Data Outputs in ECORP 2020a.

As shown in Table GHG-2, Project construction would not result in the exceedance of 900 metric tons of CO₂e during any year of construction. Once construction is complete, the generation of these GHG emissions would cease. Therefore, construction-related GHG emissions would have a less than significant impact on the environment.

Operational-Generated Greenhouse Gas Emissions

Operation of the Project would result in GHG emissions predominantly associated with the use of motor vehicles traveling to and from the site. Table GHG-2 summarizes long-term operational GHG emissions attributable to the Project.

**Table GHG-2
Operational-Related GHG Emissions**

Emissions Source	CO _{2e} (Metric Tons/ Year)
Area Source Emissions	0
Energy Source Emissions	99
Mobile Source Emissions	373
Solid Waste Emissions	0
Water Emissions	35
Total Emissions	507
CAPCOA's Potentially Significant Impact Threshold	900
Exceed Significance Threshold?	No

Source: CalEEMod version 2016.3.2. Refer to Appendix A of Attachment B for Model Data Outputs in ECORP 2020a.

As shown in Table GHG-2, Project operations would result in the generation of approximately 507 metric tons of CO_{2e} annually and would not exceed CAPCOA's significance threshold of 900 metric tons annually. Therefore, operation-related GHG emissions would have a less than significant impact on the environment.

- b) Conflict with an applicable plan or policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? ☐ ☐ ☒ ☐

Less than Significant Impact. The analysis of GHG emissions is based on the Emissions Memorandum prepared by ECORP Consulting, Inc. (ECORP 2020a).

City of Fresno GHG Plan

The City of Fresno GHG Plan (2014) is a strategic planning document that identifies sources of GHG emissions within the City's boundaries, presents current and future emissions estimates, identifies a GHG reduction target for future years, and presents strategic programs, policies, and projects to reduce emissions from the energy, transportation, land use, water use, and waste sectors. The emissions reduction program developed by the City employs the following criteria to use CEQA tiering and streamlining provisions.

- Quantify greenhouse gas emissions, both existing and projected over a specified time period, resulting from activities within a defined geographic area;
- Establish a level, based on substantial evidence, below which the contribution to GHG emissions from activities covered by the plan would not be cumulatively considerable;
- Identify and analyze the GHG emissions resulting from specific actions or categories of actions anticipated within the geographic area;
- Specify measures or group of measures, including performance standards, that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level;
- Establish a mechanism to monitor the plan's progress toward achieving the level and to require amendment if the plan is not achieving specified levels;
- Be adopted in a public process following environmental review.

Potentially Significant Impact (PSI)	Potentially Significant Unless Mitigation Incorporated (PSUMI)	Less Than Significant Impact (LTSI)	No Impact (NI)
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According to the City of Fresno, its GHG Plan is structured to meet the streamlining criteria listed above. Compliance with the applicable GHG Plan strategies would result in less-than-significant impacts related to GHG emissions. The reduction measures contained in the GHG Plan build on inventory results and key opportunities prioritized by City staff. The CAP strategies consist of measures and actions that identify the steps the City will take to support reductions in GHG emissions. The City will achieve these reductions in GHG emissions through a mix of voluntary programs and new strategic standards. All standards presented in the GHG Plan respond to the needs of development, avoiding unnecessary regulation, streamlining new development, and achieving more efficient use of resources.

The Project is consistent with the GHG inventory and forecast in the GHG Plan. Both the existing and the projected GHG inventories in the GHG Plan were derived based on the land use designations and associated densities defined in the City's General Plan. The proposed Project is located on the FPU campus and intended to serve existing FPU students. The Project is not proposing to amend the City General Plan and is thereby consistent with all land use designations applied to the site. As such, the Project is consistent with the GHG inventory and forecast in the GHG Plan. Additionally, the Project would be required to adhere to all applicable City General Plan and GHG Plan policy provisions intended to reduce community GHG emissions. All development in the City, including the Project, is required to adhere to all City-adopted policy provisions, including those contained in the GHG Plan. The City ensures all provisions of the City General Plan and GHG Plan are incorporated into projects and their permits through development review and applications of conditions of approval as applicable.

Fresno COG RTP/SCS

The Fresno COG region, which encompasses the Project site, must achieve specific federal air quality standards, and is required by state law to lower regional GHG emissions. Specifically, the region has been tasked by CARB to achieve a 6 percent and a 13 percent per capita reduction by 2020 and 2035, respectively (CARB 2018b, ECORP 2020b). The Fresno COG RTP/SCS charts a course for closely integrating land use and transportation so that the region can grow smartly and sustainably. The RTP/SCS identifies existing and future transportation related needs, while considering all modes of travel, analyzing alternative solutions, and identifies what can be completed with anticipated available funding for the over 3,000 projects. The goals objectives and policies are organized into six broad transportation mode categories and are as followed; general transportation, highway, streets and railroads, mass transportation, aviation, active transportation, and rail. The RTP/SCS further identifies that land use strategies which focus new housing and job growth in areas served by high quality transit and other opportunity areas would be consistent with a land use development pattern that supports and complements the proposed transportation network, which emphasizes system preservation, active transportation, and transportation demand management measures. The RTP/SCS incorporates local land use projections and circulation networks from the region's municipal general plans, including the City of Fresno General Plan. The projected regional development pattern in the RTP/SCS, including location of land uses and residential densities in local general plans, when integrated with the proposed regional transportation network identified in the RTP/SCS, would reduce per capita vehicular travel-related GHG emissions and achieve the GHG reduction per capita targets for the Fresno COG region.

The proposed Project is located on the FPU campus and is intended to serve existing FPU students. The Project is not proposing to amend the City General Plan and is thereby consistent with all land use designations applied to the site. Thus, the proposed Project is consistent with the types, intensity,

and patterns of land use envisioned for the site vicinity in the General Plan. As a result, the Project would not conflict with the land use assumptions or exceed the population or job growth projections used by Fresno COG to develop the RTP/SCS. The Fresno COG regional population, housing, and employment forecasts are based on the local plans and policies; and Fresno COG has incorporated these same projections into the RTP/SCS. Therefore, the proposed Project would be considered consistent with the population, housing, and employment growth projections utilized in the preparation of the RTP/SCS. Furthermore, FPU would utilize its existing staff and students to facilitate events at the Culture and Arts Center thus reducing the number of trips needed for new employees. Additionally, the Project site is located within 0.5 miles of 10 bus stops for the Fresno Area Express, promoting the use of bus transit within the City. The Project would not conflict with Fresno COG's regional forecasts for the location of the proposed land uses. While the Project would emit GHG emissions, implementing Fresno COG's RTP/SCS would greatly reduce the regional GHG emissions from transportation, helping to achieve 2020 and 2035 emission reduction targets. Therefore, the proposed Project is consistent with the applicable plans and policies adopted for the purpose of reducing GHG emissions.

IX. HAZARDS AND HAZARDOUS MATERIALS Would the project:

- a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? ☐ ☐ ☐ ☒

No Impact. The Project is the construction of a 26,758 square foot Culture and Arts Center on the campus of FPU. Appreciable quantities of hazardous chemicals would not be stored or used on site during construction. Diesel fuel, oil and hydraulic fluid may be present in limited quantities in association with heavy equipment used and staged on-site. However, the limited quantities and duration of construction would not create a significant hazard to the public through the routine transport, use, or disposal of hazardous materials. No impact is identified regarding routine transport, use and disposal of hazardous materials.

- b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? ☐ ☐ ☒ ☐

Less than Significant Impact. The Project is the construction and operation of a 26,758 square foot Culture and Arts Center on the campus of FPU. A search of the Department of Toxic Substances (DTSC) EnviroStor database identified two sites within a 0.5-mile radius of the campus: Chevron #9-5768 at 4811 East Butler Avenue and the Senior Citizens Village at 1917 South Chestnut Avenue. Both were Leaking Underground Storage Tank (LUST) sites that had been closed (i.e. remediation was completed) (EnviroStor 2020).

Regarding on-site hazards, the student housing to be relocated (4832 East Butler, Units A – K) was surveyed for asbestos by Leon Environmental Services on August 29, 2019. Samples of the following were taken and tested for asbestos: black mastic, joint compound (from sheetrock walls and ceilings), roof mastic (from roof vents and jacks), spray acoustic material (ceilings), and sheetrock (walls). All materials sampled had varying percentages of asbestos. The United States Environmental Protection Agency (EPA) National Emission Standards for Hazardous Air Pollutants (NESHAP) (40 CFR Part 61 – November 20, 1990) requires materials containing greater than one percent asbestos be removed

prior to renovation or demolition. As a result, it is recommended that asbestos containing materials (ACM) be abated by a licensed asbestos abatement contractor prior to moving the structures

Units E&F also had spray acoustic material that should be removed by a licensed asbestos abatement contractor prior to renovation and or demolition of this structure. Units J&K had sheetrock walls that must be abated by a licensed asbestos abatement contractor prior to starting moving procedures.

Regulated asbestos containing material (RACM) requires a 10-day notification to the local Air Pollution Control District (i.e. the SJVAPCD) prior to abatement. The abatement contractor is required to comply with all Federal, State and Local regulations regarding asbestos containing materials. Therefore, potential for release of hazardous materials into the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment is considered a less than significant impact.

- c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?
- | | | | |
|--------------------------|--------------------------|-------------------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|--------------------------|--------------------------|-------------------------------------|--------------------------|

Less than Significant Impact. The Project site is within the boundaries of the FPU campus. No other school are within one-quarter mile of the Project site. Aside from temporary construction emissions which would occur for a limited duration (refer to Section III, Air Quality, above), the Project would not emit any hazardous emissions or handle hazardous or acutely hazardous materials. The Project occupies approximately 2 acres and would not generate large volumes of construction emissions such as dust and exhaust. Therefore, this impact is considered less than significant.

- d) Be located on a site, which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?
- | | | | |
|--------------------------|--------------------------|--------------------------|-------------------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--------------------------|--------------------------|--------------------------|-------------------------------------|

No Impact. A search of DTSC's EnviroStor website did not identify any hazardous materials sites within the boundaries of the Project site (EnviroStor 2020). No impact is identified for this issue area.

- e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?
- | | | | |
|--------------------------|--------------------------|--------------------------|-------------------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--------------------------|--------------------------|--------------------------|-------------------------------------|

No Impact. The proposed Project is approximately ½-mile outside the Airport Influence Area for the Fresno Yosemite International Airport. As such, the Project site is not located within an airport land use plan nor is it within two miles of a public airport or a public use airport. The proposed Project would not result in a safety hazard or excessive noise exposure. Thus, no impact is identified for these issues.

- f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?
- | | | | |
|--------------------------|--------------------------|--------------------------|-------------------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--------------------------|--------------------------|--------------------------|-------------------------------------|

No Impact. The City of Fresno maintains an Office of Emergency Services (OES) function for its jurisdictional responsibility area and coordinates with Fresno County OES regarding disaster preparedness, response, and recovery activities (Fresno County OES 2020). The proposed Project is not expected to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. The primary access to the site will be from the north off East Butler Avenue which is designated as a Collector in the Circulation Element of the City of Fresno General Plan. Access will also be available from the south off East Townsend Avenue via South Winery Avenue (which is also designated as a Collector in the Circulation Element of the City of Fresno General Plan). Thus, the proposed Project would not impair the implementation of, or physically interfere with, any adopted emergency response plan or emergency evacuation plans. No impact would occur.

- g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires? ☐ ☐ ☐ ☒

No Impact. The Project site is in an urban setting and would not be subject to wildland fire. No impact would occur.

X. HYDROLOGY AND WATER QUALITY Would the project:

- a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality? ☐ ☐ ☐ ☒

No Impact. The proposed Project includes construction of a 26,758 square foot Culture and Arts Center on the campus of FPU. In accordance with FMFCD and City standards, a temporary detention basin is proposed in the southwest portion of the site to capture and retain stormwater flows generated by the Project. The basin would also provide some water quality benefits by reducing pollutants and sediments and providing incidental groundwater recharge. The basin is subject to a Nation Pollutant Discharge Elimination System (NPDES) permit. Retained water would filter through sediments and the soil column providing natural treatment prior to the water reaching the underlying aquifer. With the inclusion of the temporary detention basin, the proposed Project would not violate any water quality standards, waste discharge requirements or otherwise substantially degrade surface or ground water quality. No impact would occur.

- b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin? ☐ ☐ ☐ ☒

No Impact. Fresno's primary source of potable water is groundwater stored in an aquifer. The Project site is currently developed with structures, pavement, and landscaped areas. While the proposed Project would result in a greater amount of impervious surface, it also includes a temporary detention basin which would slow and retain stormwater runoff flows generated by the Culture and Arts Center. As such, the Project would not decrease groundwater supplies or interfere substantially with groundwater recharge. No impact to a groundwater management basin would occur.

	Potentially Significant Impact (PSI)	Potentially Significant Unless Mitigation Incorporated (PSUMI)	Less Than Significant Impact (LTSI)	No Impact (NI)
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river through the addition of impervious surfaces in a manner which would:				
i) Result in a substantial erosion or siltation on- or off-site.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>No Impact. The Project site is developed with vacant student housing and single-family homes as well as pavement and landscaping. The site would be cleared of all structures to accommodate construction. The Project would require a Soils Report, an NPDES permit and preparation of a Stormwater Pollution Prevention Plan (SWPPP) prior to granting of a grading permit (refer to discussion under Section VII Geology and Soils, item "b"). Compliance with these ministerial requirements that have proven effective in reducing erosion and siltation impacts on or off-site to less than significant levels would also apply to the proposed Project. Therefore, substantial erosion or siltation on- or off-site would not occur. No impact is identified.</p>				
ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>Less than Significant Impact. The proposed Project would increase the impervious surfaces on the site. The Project is within the FMFCD and subject to FMFCD standards for drainage, grading and stormwater management. As described under item "a)", above, a temporary detention basin is proposed with capacity to capture and detain on-site stormwater flows generated by the Culture and Arts Center. Inclusion of the temporary basin would prevent overloading the existing storm drainage system operated by the Fresno Metropolitan Flood Control District (FMFCD) consistent with MEIR Mitigation Measure HYD-5.4 as outlined below (Attachment E):</p>				
<p>HYD-5.4 The City shall implement the following measures to reduce the impacts on the capacity of existing or planned storm drainage Master Plan pump disposal systems to less than significant.</p> <ul style="list-style-type: none"> • Consult the FMFCD Storm Drainage Master Plan to determine the extent and degree to which the capacity of the existing pump system will be exceeded. • Require new developments to install, operate, and maintain FMFCD design standard on-site detention facilities to reduce peak stormwater runoff rates to existing planned peak runoff rates. • Provide additional pump system capacity to maximum allowed by existing permitting to increase the capacity to match or exceed the peak runoff rates determined by the SDMP. 				
<p><i>Timing of Implementation: Prior to exceedance of capacity of existing pump disposal systems.</i></p>				
<p><i>Enforcement: Fresno Metropolitan Flood Control District, Planning and Development Department, Public Works.</i></p>				
<p>With inclusion of the temporary basin consistent with Mitigation Measure HYD-5.4, impacts from surface runoff resulting in on- or off-site flooding are considered less than significant.</p>				
iii) Create or contribute runoff water, which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Potentially Significant Impact (PSI)	Potentially Significant Unless Mitigation Incorporated (PSUMI)	Less Than Significant Impact (LTSI)	No Impact (NI)
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No Impact. The proposed Culture and Arts Center would contribute runoff water which would exceed the capacity of existing storm drainage infrastructure precluding connection of the Project to the system. As in interim solution until the Fresno Metropolitan Flood Control District (FMFCD) infrastructure is expanded, the Project includes a temporary detention basin in the southwest portion of the site to capture on-site stormwater flows and provide some water quality benefits by reducing pollutants and sediments. The basin includes a line that would extend north and tie into a 24-inch storm drain main within East Butler Avenue. When the next phase of development takes place on campus, FPU will need to construct an 18-inch main that would align down Heaton Avenue to the west, through a portion of the campus before extending out onto Chestnut Avenue. The 18-inch line would then extend south as a 30-inch main parallel to the existing 36-inch main until it reaches the California alignment. At this point, the line would extend west as a 48-inch line into Basin "A" (Ciesla pers. comm., 2020). The line will cost approximately \$1.2 million to be split between FMFCD and FPU. With the temporary detention basin, the proposed Project would have no impact to contributing runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.

iv) Impede or redirect flows? ☐ ☐ ☒ ☐

Less than Significant Impact. As noted in item "c" above, the proposed Project would redirect flows to the on-site temporary detention basin. The basin would capture and retain all on-site stormwater flows generated by the Project. Redirecting stormwater flows is considered a less than significant impact.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation? ☐ ☐ ☐ ☒

No Impact. The proposed Project is not located within a flood hazard, tsunami or seiche zone. Thus, no impact is identified for these issues.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan? ☐ ☐ ☐ ☒

No Impact. In accordance with FMFCD and City standards, the proposed Project would capture on-site stormwater flows in a temporary detention basin in the southwestern corner of the site. The basin would provide some water quality benefits by reducing pollutants and sediments and avoid discharge of polluted water. The Project would have no impact on a water quality control plan or a sustainable groundwater management plan as all improvements will be consistent with FMFCD and City standards.

XI. LAND USE AND PLANNING Would the project:

a) Physically divide an established community? ☐ ☐ ☐ ☒

No Impact. The proposed Project is located on the FPU campus in southeast Fresno. The Project would replace existing vacant student housing and four vacant single-family residential structures. Because the Project is planned and within the context of the existing campus, it would not physically divide an established community. The proposed Culture and Arts Center will also provide a venue for students to plan, perform and manage various events. Community sponsored events will also occur at the Culture and Arts Center providing a peaceful and attractive venue for cultural and social events in a campus-like setting. Thus, no impact is identified regarding dividing an established community.

	Potentially Significant Impact (PSI)	Potentially Significant Unless Mitigation Incorporated (PSUMI)	Less Than Significant Impact (LTSI)	No Impact (NI)
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- b) Conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

☐ ☐ ☒ ☐

Less than Significant Impact. The proposed Project is consistent with the existing Public Commercial (PC) and Public Institutional Use (PI) zoning designation. Additionally, to develop the Project as proposed, FPU is requesting a Development Permit and a Planned Development Permit. The Development Permit is required for all new structures except for single-family residences. The Planned Development Permit is required to address deviations from the Development Code, General Plan, applicable operative plan, or adopted policy.

The Project requests application of the Planned Development standards of the City of Fresno Development Code Article 59 to allow the modification of certain property development standards. These include omitting a building setback requirement; omitting a block wall requirement; omitting a landscape buffer; allowing FPU to utilize parking at the Butler Church for overflow parking; and non-concurrent occupancy of the Auditorium and Black Box of the of the Culture and Arts Center until sufficient parking is available to accommodate both venues. With granting of the Development Permit and Planned Development Permit, conflicts with an applicable policies or regulations adopted for the purpose of avoiding or mitigating an environmental effect would be considered less than significant.

XII. MINERAL RESOURCES Would the project:

- a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

☐ ☐ ☐ ☒

No Impact. Mineral extract in the City occurs within the San Joaquin River bottom. The Project is proposed in an urban area that is not identified as having mineral resources. No impact would occur.

- b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

☐ ☐ ☐ ☒

No Impact. Refer to item a), above.

XIII. NOISE Would the project result in:

- a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

☐ ☐ ☒ ☐

Less than Significant Impact. The discussion of noise is divided between short-term construction and long-term operational noise.

Short-Term Construction Noise

Construction of the proposed Project would take approximately 21 months and is estimated to start in October 2020. The first step would be demolition and site preparation. Demolition is scheduled to occur from May 2020 to August 2020. Both activities would create temporary localized increases in noise levels from operation of on-site equipment as well as from delivery trucks hauling materials.

The major activities for the proposed Project would consist of demolition of four existing single-family homes, a garage and any student housing that is not relocated; removal of trees and vegetation/clearing and grubbing. Construction activities producing noise include grading, pouring the foundation and framing the structure.

Demolition and construction noise impacts are a function of several factors including noise generated by equipment; location of the equipment relative to sensitive nearby land uses (e.g. residences, libraries); and the time of day in which the construction activity takes place.

The proposed Project would be near residential uses to the south of East Townsend Avenue as well as the Hiebert Library and Mennonite Brethren Biblical Seminary to the west. These uses are considered noise sensitive and would be exposed to construction noise while the Project is being built. Short-term construction noise generated by equipment would occur with varying intensities and durations. Noise levels from construction operations decrease at a rate of approximately 6 dBA per doubling of distance from the source. Based on the Project site plan, construction would be approximately 50 feet from residences on the south side of East Townsend Avenue; 50 feet northeast of the Hiebert Library; and 75 feet east of Mennonite Biblical Seminary.

As discussed in the General Plan MEIR, construction noise typically occurs intermittently and generates varying levels of noise depending on the activity (e.g., demolition, land clearing, grading, excavation, erection) of construction. Noise produced by certain pieces of construction equipment, such as earthmovers, material handlers, and portable generators, can reach high levels (FCS 2014, p. 5.11-24).

Table NOI-1 summarizes typical construction equipment noise levels (Note: Noise Terminology is included in Appendix D). As shown, construction equipment noise levels range from approximately 77 dBA to 90 dBA Lmax at 50 feet. Operating cycles differ based on equipment type and specific activity. Cycles typically alternate between two minutes of full power and three to four minutes at lower settings. Depending on the equipment required and duration of use, average-hourly noise levels associated with construction activity range from roughly 65 to 90 dBA Leq at 50 feet with grading and excavation generating the highest noise levels (FCS 2014, p. 5.11-24).

Table NOI-1
Typical Construction Noise Levels

Equipment	Typical Noise Level (dBA Lmax) 50 feet from Source	Equipment	Typical Noise Level (dBA Lmax) 50 feet from Source
Backhoe/Front-End Loader	80	Generator	82
Compactor	80	Truck (Dump/ Flat Bed)	84
Concrete Mixer Truck	85	Jack Hammer	85
Dozer	85	Paver	85
Grader	85	Pneumatic Tool	85
Excavator/Scraper	85	Pump	77
Air Compressor	80	Roller	85
Gradall	85	Concrete Saw	90
Crane, Mobile	85		

Source: FHWA 2006, Roadway Construction Noise Model User's Guide in GP MEIR prepared by FCS 2014, page 5.11-24 and 5.11-25.

The City of Fresno General Plan Noise Ordinance (June 11, 2016) exempts construction, repair or remodeling work accomplished pursuant to a building, electrical, plumbing, mechanical, or other construction permit issued by the city or other governmental agency, or to site preparation and grading, provided such work takes place between the hours of 7:00 a.m. and 10:00 p.m. on any day except Sunday.

Construction would occur between 7:30 a.m. to 3:30 p.m. during workdays to avoid disturbing residents, seminarians, and students. Because construction is considered exempt from the Ordinance when construction complies with the prescribed hours, short-term construction impacts associated with the exposure of persons to, or the generation of, short-term noise levels in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies would be less than significant.

Long-Term Noise Associated with Project Operation

The noise profile of the FPU is similar to that of a large master planned community with the major noise source being from automotive-related noises. With the exception of baseball and soccer which are played outside, entertainment and sports events occur on the campus with enclosed buildings. Campus Security enforces established standards of conduct for all campus activities. The Campus Security works closely with City of Fresno Police Department to assure any activity on or near the campus does not adversely affect the health or safety of the community or the University. The Culture and Arts Center would operate for limited hours Monday thru Wednesday, 8:00 a.m. to 9:00 p.m.; Thursday thru Saturday, 8:00 a.m. to 10:00 p.m.; and Sunday 4:00 p.m. to 10:00 p.m. Although the Culture and Arts Center will create additional activity in the area, the project will be required to comply with all noise policies from the Fresno General Plan and Noise Ordinance. All events will occur in doors. The proposed Project would not result in any noise environmental impacts beyond those analyzed in MEIR SCH No. 2012111015.

Therefore, exposure of persons to, or the generation of, long-term noise levels in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies would be less than significant.

- b) Generation of excessive groundborne vibration or groundborne noise levels? ☐ ☐ ☐ ☒

No Impact. Construction of the proposed Culture and Arts Center would not generate groundborne vibration or noise levels that would be considered excessive. Activities such as blasting, or pile driving would not be necessary and no other excavation methods would be used that would result in groundborne vibration. Therefore, no impact would occur regarding generation of excessive groundborne vibration or groundborne noise levels.

- c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? ☐ ☐ ☐ ☒

No Impact. The proposed Project is not located within the vicinity of a private airstrip or an airport land use plan. The Project would not expose people residing or working in the area to excessive noise levels. No impact would occur.

XIV. POPULATION AND HOUSING Would the project:

- a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and business) or indirectly (for example, through extension of roads or other infrastructure)? ☐ ☐ ☐ ☒

No Impact. The proposed Project is the construction of a Culture and Arts Center on the FPU campus. The Project does not propose the development of new housing nor does it propose construction or extension of new roads. Instead it would demolish/relocate several existing residential structures and vacate a portion of East Townsend Avenue. Therefore, the proposed Project would have no impact regarding inducing population growth.

- b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere? ☐ ☐ ☐ ☒

No Impact. As previously noted, five student housing buildings would be relocated and four single-family residences would be demolished as part of this Project. In the future, an additional four single-family homes will be demolished to accommodate future development on campus. A total of 8 house will eventually be demolished. All structures to be relocated or demolished are currently vacant. As a result, the proposed Project would not displace substantial numbers of existing housing or people requiring construction of replacement housing elsewhere. No impact would occur regarding the need for replacement housing.

XV. PUBLIC SERVICES

- a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:

- 1) Fire protection? ☐ ☐ ☒ ☐

Less than Significant Impact. The proposed Project is within the jurisdiction of the City of Fresno and would be served by the City of Fresno Fire Department. The closest Fire Station to the Project site is Station 1 located at 1264 North Jackson Avenue, approximately 3 miles away. An existing fire hydrant along East Butler Avenue would remain in place and a new fire hydrant would be placed approximately 15-feet north of the Culture and Arts Center. The Fire Department would connect to the system at a point to the northwest of the Cultural and Arts Center Utility Yard. All hydrants will be located and perform as required by the Fresno Municipal Code. In addition, the Project includes the following requirements:

- Fire hydrants and access roads shall be installed, tested, and approved and maintained serviceable prior to and during all phases of development. The 4-1/2" outlet shall face the access lane.
- All required fire hose and equipment access gates shall remain unlocked or be provided with Police/Fire bypass locks.
- Fire hose pull and equipment access is an unobstructed walkway which provides continuous access connecting vehicular access to all building openings and exterior storage areas.
- The walkway requires unobstructed 36-inch horizontal clearance around openings and continuous 7-foot vertical clearance.

- Landscaping areas shall be constructed to maintain the fire access pathways clear of obstructions. (FFD Development Policy 403.002).
- Required walking access shall be designed to prevent sharp turns and obstacles which would hinder the carrying of hoses, ground ladders and other hand-held equipment.
- Loading zone(s) shall not be in fire lanes.
- Electric gates shall be provided with battery back-up.
- Emergency vehicle access shall be designated by painting the curb red (top and side) and stenciling "FIRE LANE NO PARKING" in 3-inch white letters on the most vertical curb, at least every 50 feet.
- If no curb is present, a minimum 6-inch wide red stripe shall be painted along the edge of the roadway with "FIRE LANE" in 3-inch white letters at least every 50 feet.
- Signs (17-inches x 22-inches minimum) shall be provided at all public entrance drives to the property which state "Warning - Vehicles stopped, parked or left standing in fire lanes will be immediately removed at owner's expense - 22658(a) California Vehicle Code - Fresno Police Department 621-2300".
- All gates across fire hose and equipment access points shall be a minimum of 4-foot clear width.

With the incorporation of these features mandated by the FFD, impacts to fire protection would result in less than significant impacts.

2) Police Protection? ☐ ☐ ☒ ☐

Less than Significant Impact. The Project site is within the jurisdiction of the City of Fresno Police Department. The Department is divided into five policing districts which are broken down in the one-half mile squares. The site is within the Southeast Police District which has seven sub-areas 3A through 3G. These sub-areas are further divided into one-half square mile blocks. The Project is in Block 2862. The Police Office for this District is located at 1617 South Cedar Avenue approximately one mile west of FPU. In addition, FPU has on-campus security which has a constant presence and patrol 24-hours a day, 7-days per week. Security would be present to patrol the area during events at the Culture and Arts Center. The Project has been designed to include lighting throughout parking areas and walkways for illumination and safety. The Project provides a combination of pole mounted and bollard site lighting that achieves light levels which follow Illuminating Engineering Society (IES) standards to properly illuminate parking lots and pedestrian paths. This will create a properly lit exterior environment that will mitigate dark, hard to surveil places around the exterior of the building. Building mounted security cameras and adequate site lighting will be located at strategic points to provide video surveillance that will be monitored by Campus Police. Exterior entry points will be equipped with access control hardware that will only allow authorized personnel to gain access to the building after hours (Halajian pers. comm., 2020). Therefore, impacts to police protection are considered less than significant.

3) Schools? ☐ ☐ ☐ ☒

No Impact. The proposed Project will not impact schools because it neither includes a residential component nor would it generate the need for new housing to accommodate workforce population. The Project would place a Culture and Arts Center on the campus of FPU. As such, the proposed Project would not have an adverse physical effect on the environment resulting from construction of a new school, park, or other public facility. Therefore, no impact is identified for this issue area.

	Potentially Significant Impact (PSI)	Potentially Significant Unless Mitigation Incorporated (PSUMI)	Less Than Significant Impact (LTSI)	No Impact (NI)
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4) Parks?

☐
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☒

No Impact. Refer to item “a3” above.

5) Other Public Facilities?

☐
☐
☐
☒

No Impact. Although the proposed Project will be located on the FPU campus and used primarily as a venue for students to plan, perform and manage cultural events, the facility will also be used for community-sponsored events. The Project would not negatively impact any other public facilities. No impact would occur.

XVI. RECREATION

- a) Would the project increase the use of the existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

☐
☐
☐
☒

No Impact. The proposed Project is the construction of a Culture and Arts Center on the FPU campus. The Project would not create a demand for neighborhood or regional parks. Thus, no impact is identified for these issues.

- b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse effect on the environment?

☐
☐
☐
☒

No Impact. The proposed Project does not include recreational facilities or require the construction or expansion of recreational facilities. Thus, no impact is identified for these issues.

XVII. TRANSPORTATION Would the project:

- a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

☐
☐
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☐

Less than Significant Impact. The proposed Project is adjacent to East Butler Avenue, an existing east-west, two-lane collector divided by a two-way left-turn lane adjacent to the proposed Project site. South Winery Avenue, is an existing north-south two-lane undivided roadway to the east of the Project site. These two roadways are the primary routes to the Project.

A Traffic Impact Analysis (TIA) was prepared for the Project by JLB Traffic Engineering (JLB 2020) (Appendix E of this document) in accordance with a Scope of Work approved by the City Traffic Engineer. The TIA focused on evaluating traffic conditions at the intersection of South Winery Avenue and East Butler Avenue which potentially may be impacted by the proposed Project.

Four scenarios were analyzed in the TIA: Existing Conditions; Existing plus Project Traffic Conditions; Near-Term plus Project Traffic Conditions; and Cumulative Year 2035 plus Project Traffic Conditions. Level of Service (LOS) was used as the metric for evaluating operating conditions. A LOS of “A” indicates no congestion of any kind and a LOS of “F” indicates unacceptable congestion and delays.

The City of Fresno 2035 General Plan has established various degrees of acceptable LOS on its major streets which are dependent on four Traffic Impact Zones (TIZ) within the City. The standard LOS threshold for TIZ I is LOS F; TIZ II is LOS E; TIZ III is LOS D; and TIZ IV is LOS E. Additionally,

Potentially Significant Impact (PSI)	Potentially Significant Unless Mitigation Incorporated (PSUMI)	Less Than Significant Impact (LTSI)	No Impact (NI)
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the 2035 General Plan MEIR made findings of overriding consideration to allow a lower LOS threshold than that established by the underlying TIZ's. For those cases in which a LOS criterion for a roadway segment differs from that of the underlying TIZ, such criteria are identified in the roadway description. In this analysis, the study intersection falls within TIZ II and utilizes LOS E to evaluate the potential significance of LOS impacts pursuant to the City of Fresno 2035 General Plan.

The existing peak hour turning movement volume counts were conducted at the study intersection in October 2019 while schools in the vicinity of the proposed Project were in session. The intersection turning movement counts included pedestrian volumes. Table TRN-1 presents a summary of the Existing peak hour LOS at the study intersection.

Table TRN-1
Existing Intersection LOS Results

Intersection	Intersection Control	PM (406) Peak Hour	
		Average Delay (sec/veh)	LOS
South Winery Avenue/East Butler Avenue	Signalized	11.3	B

Source: JLB 2020, p. 11.

At present, the intersection of South Winery Avenue and East Butler Avenue operates at an acceptable LOS during the PM peak period (JLB 2020, p. 29).

It should be noted the proposed Project will remove 4 single-family residences, 5 dormitories, and 1 garage. (Note: In the future, an additional 4 single-family residences will be removed bringing the total to 8). Table TRN-2 presents the existing trip generation of the site with trip generation rates for Single-Family Detached Housing pursuant to the Trip Generation Manual published by the Institute of Transportation Engineers. At present, the existing site is estimated to generate a maximum of 76 daily trips and 8 PM peak hour trips.

Table TRN-2
Existing Trip Generation

Land Use (ITE Code)	Size	Unit	Daily		PM (4-6) Peak Hour					
			Rate	Total	Trip Rate	In	Out	In	Out	Total
						%				
Single-Family Detached Housing (210)	8	d.u.	9.44	76	0.99	63	37	5	3	8
Total Driveway Trips				76				5	3	8

Source: JLB 2020, p. 11. Note: d.u. = Dwelling Units

Table TRN-3 presents the net new trip generation estimated for the Project site. When considering the existing traffic generated by the site, the Project is estimated to generate more traffic by 220 daily trips and 124 PM peak hour trips. However, the analysis assumes no reduction in the Project's estimated maximum trip generation, so the results are considered conservative.

Table TRN-3
Difference in Trip Generation

Land Use	Daily Total	PM (4-6) Peak Hour		
		In	Out	Total
Project	296	112	20	132
Existing	76	5	3	8
Difference in Trip Generation	220	107	17	124

Source: JLB 2020, p. 15.

Potentially Significant Impact (PSI)	Potentially Significant Unless Mitigation Incorporated (PSUMI)	Less Than Significant Impact (LTSI)	No Impact (NI)
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Existing plus Project Traffic Conditions scenario assumes the existing roadway geometrics and traffic controls remain in place. At buildout, the proposed Project is estimated to generate a maximum of 296 daily trips and 132 PM peak hour trips. The total trip generation for the Near-Term Projects is 51,510 daily trips and 5,077 PM peak hour trips. Under this scenario, the intersection of South Winery Avenue and East Butler Avenue is projected to operate at an acceptable LOS during the PM peak period.

Near-Term plus Project Traffic Conditions

Near-Term Projects are approved and/or known projects that are: either under construction: built but not fully occupied; not built but have final site development review (SDR) approval; known to the lead agency or responsible agencies.

The trip generation listed in Table TRN-4 represents the anticipated number of daily trips and PM Peak Hour trips to be added to the streets and highways by Near-Term Projects between the time of the preparation of the TIA (March 2020) and five years from 2020. As shown in Table TRN-4, the total trip generation for the Near-Term Projects is 51,510 daily trips and 5,077 PM peak hour trips. (Refer to Figure 6 in Appendix D of Attachment D for an illustration of the location of the approved, near approval, or known projects and their combined trip assignment to the study intersections under the Near-Term plus Project Traffic Conditions scenario.)

Table TRN-4
Near Term Projects' Trip Generation

Approved Project Location	Approved or Known Projects	Daily Trips	PM Peak Hour
A	TT 5464 (portion of) ¹	76	8
B	TT 5498 ¹	755	79
C	TT 5638 ¹	3,351	351
D	TT 5913 ¹	1,029	108
E	TT 5953 ¹	887	93
F	TT 6095 (portion of) ¹	47	5
G	Lennar Heirloom Chateau Series ¹	1,964	206
H	Fresno Unified School District Alternative Education ²	2,459	221
I	Sanger Unified School District ²	7,597	640
J	Fresno Unified School District ²	5,243	935
K	4780 South Maple Avenue Rezone ²	1,036	145
L	Orange Industrial Park ³	6,260	873
M	North Pointe (portion of) ⁴	6,552	438
N	North and Orange Commercial Development ²	5,907	439
O	RP East Industrial ²	1,041	128
P	BDM Builders Mixed-Use Development ²	7,306	408
Total Approved and Pipeline Project Trips		51,510	5,077

Source: JLB 2020, p. 22.

Note: 1 = Trip Generation prepared by JLB Traffic Engineering, Inc. based on readily available information

2 = Trip Generation based on JLB Traffic Engineering, Inc. Traffic Impact Analysis Report

3 = Trip Generation based on Precision Civil Engineering, Inc. Traffic Impact Study Report

4 = Trip Generation based on TJKM Transportation Consultants Traffic Impact Study Report

The total trip generation for the Near-Term Projects is 51,510 daily trips and 5,077 PM peak hour trips. Under this scenario, the intersection of South Winery Avenue and East Butler Avenue is projected to operate at an acceptable LOS during the PM peak period (JLB 2020, p. 30).

Results of Near-Term plus Project Level of Service Analysis

The Near-Term plus Project Traffic Conditions scenario assumes that the existing roadway geometrics and traffic controls remain in place. (Refer to Figure 7, Near-Term plus Project turning movement volumes, intersection geometrics and traffic controls. LOS worksheets for the Near-Term plus Project Traffic Conditions scenario are provided in Appendix H of Attachment D of this document). Table TRN-5 presents a summary of the Near Term plus Project peak hour LOS at the study intersection.

Table TRN-5
Near Term plus Project Intersection LOS Results

ID	Intersection	Intersection Control	PM (4-6) Peak Hour	
			Average Delay (sec/veh)	LOS
1	South Winery Avenue/East Butler Avenue	Signalized	12.2	B

Source: JLB 2020, p. 23.

Note: LOS = Level of Service based on average delay on signalized intersections and All-Way STOP Controls
LOS for two-way and one-way STOP controlled intersections are based on the worst approach/movement of the minor street.

Under this scenario, the intersection of Winery Avenue and Butler Avenue is projected to operate at an acceptable LOS (B) during the PM peak period (LOS 2020, p. 23).

Cumulative Year 2035 plus Project Level of Service Analysis

The Cumulative Year 2035 plus Project Traffic Conditions scenario assumes the existing roadway geometrics and traffic controls remain in place. (Refer to Figure 8, Cumulative Year 2035 plus Project turning movement volumes, intersection geometrics and traffic controls; and LOS worksheets for the Cumulative Year 2035 plus Project Traffic Conditions scenario in Appendix I of Attachment D).

Table TRN-6 presents a summary of the Cumulative Year 2035 plus Project peak hour LOS at the study intersections.

Table TRN-6
Cumulative Year 2035 plus Project Intersection LOS Results

ID	Intersection	Intersection Control	PM (4-6) Peak Hour	
			Average Delay (sec/veh)	LOS
1	South Winery Avenue /East Butler Avenue	Signalized	14.0	B

Source: JLB 2020, p. 26.

Note: LOS = Level of Service based on average delay on signalized intersections and All-Way STOP Controls.
LOS for two-way STOP controlled intersections are based on the worst approach/movement of the minor street.

Under this scenario, the intersection of Winery Avenue and Butler Avenue is projected to operate at an acceptable LOS (B) during the PM peak period (JLB 2020, p. 26).

Based on the analysis above, the Project intersection would operate at an acceptable LOS under each scenario: Existing, Existing Plus Project, Near-Term Plus Project; and Cumulative Year 2035 Plus Project. Therefore, the proposed Project would have no impact on a program, plan or ordinance addressing the circulation system.

Per the project site plan, 70 on-site stalls shall be provided as part of this project. An additional 537 existing paved parking spaces are proximate to the proposed Cultural and Arts Building as part of the existing campus. An additional 70 overflow parking stalls are available at Butler Church located at 4884 East Butler Avenue per an existing parking MOU between the Butler Church and FPU. City Code requires 123 on site paved spaces. The overall total of both on-site parking and parking at Butler Church is 140 stalls. This exceeds the required number of 123 stalls by 17. The City of Fresno will condition the Project requiring that a covenant be recorded for shared parking and access. The Covenant will be between the City, FPU and Butler Church.

The proposed Project would not result in any traffic or transportation environmental impacts beyond those analyzed in MEIR SCH No. 2012111015.

- b) Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)? ☐ ☐ ☒ ☐

Less than Significant Impact. Senate Bill (SB) 743 (Steinberg 2013) was approved by then Governor Jerry Brown on September 27, 2013. SB 743 created a path to revise the definition of transportation impacts according to CEQA. The revised CEQA Guidelines requiring vehicle miles traveled (VMT) analysis became effective December 28, 2018; however, agencies have until July 1, 2020 to finalize their local guidelines on VMT analysis. Therefore, as agencies finalize their VMT analysis protocol, CEQA transportation impacts continue to be determined using the LOS of intersections and roadways, which is a measure of congestion.

The intent of SB 743 is to align CEQA transportation study methodology with and promote the statewide goals and policies of reducing VMT and greenhouse gases (GHG). Three objectives of SB 743 related to development are to reduce GHG, diversify land uses, and focus on creating a multimodal environment. It is hoped that this will spur infill development (JLB 2020, p. 17).

The Technical Advisory on Evaluating Transportation Impacts in CEQA published by the Governor's Office of Planning and Research (OPR) dated December 2018 acknowledges that lead agencies should set criteria and thresholds for VMT and transportation impacts. However, the Technical Advisory provides guidance to residential, office and retail uses, citing these as the most common land uses. Beyond these three land uses, there is no guidance provided for any other land use type. The Technical Advisory also notes that land uses may have a less than significant impact if located within low VMT areas of a region and suggests that screening maps be used for this determination (JLB 2020, p. 17).

VMT is simply the product of the number of trips and the lengths of the trips. The first step in a VMT analysis is to establish the baseline average VMT which requires that the region be defined. The Technical Advisory states that existing VMT may be measured at the regional or city level. The Technical Advisory also notes that VMT analyses should not be truncated due to "jurisdictional or other boundaries" (JLB 2020, p. 17).

Currently, Fresno Council of Governments (COG) and its member agencies, which include the City of Fresno, have begun the process to develop recommended criteria and thresholds that balance the direction from the Office of Planning and Research (OPR) and the goals of SB 743 with the vision of Fresno and economic development, access to goods and services, and overall quality of life. While these regional recommended criteria are not anticipated to be completed until mid-2020, Fresno COG was able to provide estimated VMT data for the proposed Project. Based on the Fresno COG model run, the Project is anticipated to generate an average of 6.20 VMT per trip (JLB 2020, p. 17).

Potentially Significant Impact (PSI)	Potentially Significant Unless Mitigation Incorporated (PSUMI)	Less Than Significant Impact (LTSI)	No Impact (NI)
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Therefore, the proposed Project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b). Impacts to VMT are considered less than significant.

- c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? ☐ ☐ ☐ ☒

No Impact. As part of the TIA, a Queuing Analysis was performed. Table TRN-7 provides a queue length summary for left-turn and right-turn lanes at the study intersections under all study scenarios: Existing, Existing Plus Project, Near-Term Plus Project; and Cumulative Year 2035 Plus Project. The queues shown on Table TRB-7 are the 95th percentile queue lengths for the respective lane movements (JLB 2020, p. 17).

The Highway Design Manual (HDM) provides guidance for determining deceleration lengths for the left-turn and right-turn lanes based on design speeds. Per the HDM criteria, “tapers for right-turn lanes are usually unnecessary since the main line traffic need not be shifted laterally to provide space for the right-turn lane. If, in some rare instances, a lateral shift was needed, the approach taper would use the same formula as for a left-turn lane.” Therefore, a bay taper length pursuant to the Caltrans HDM would need to be added, as necessary, to the storage lengths presented in Table TRN-7.

The storage capacity for the Cumulative Year 2035 scenario shall be based on the SimTraffic output files and engineering judgement. The values in bold presented in Table TRN-7 are the projected queue lengths that will likely need to be accommodated by the Cumulative Year 2035 scenario. While the City of Fresno does not have minimum storage length requirements for left-turn and right-turn lanes on major streets, it does prefer that these be set at 200 feet for left-turns and 75 feet for right-turns (JLB 2020, p. 28).

Table TRN-7
Queuing Analysis

ID	Intersection	Existing Queue Storage Length (in feet)		Existing	Existing plus Project	Near Term plus Project	Cumulative Year 2035 plus Project
				PM	PM	PM	PM
1	South Winery Avenue/ East Butler Avenue	EB Left	105	100	114	122	132
		EB Thru-Right	>500	131	143	151	164
		WB Left	100	23	18	26	22
		WB Thru-Right	>500	105	125	126	151
		NB Left	100	66	62	67	79
		NB Thru-Right	>500	56	73	86	67
		SB Left	100	100	73	87	111
		SB Thru-Right	>500	110	111	95	147

Source: JLB 2020, p. 28

Note:* = Does not exist or is not projected to exist.

At the remaining approaches, the greater of the existing storage capacity or the 200 feet left-turn lanes and 75 feet right-turn lanes will be sufficient to accommodate the maximum queue. Based on the Queuing Analysis, it is recommended that the City consider left-turn and right-turn lane storage lengths (JLB 2020, p. 30).

Historic Collisions

In the five-year period from January 1, 2015 to December 31, 2019, a total of three collisions were reported within the influence zone of the intersection of South Winery Avenue and East Butler Avenue. Based on the collision data recorded during the five-year period, the existing study intersection has experienced a relatively low average number of collisions per year with a total of three reported collisions during the five-year period. JLB analyzed the data contained within the Statewide Integrated Traffic Records System Reports database for the five-year analysis period but was unable to reach a conclusion that would justify the modification of lane geometrics or traffic controls at the existing study intersection. As a result, the number of correctable collisions experienced at the study intersection are considered less than significant (JLB 2020, p. 29).

Access

JLB analyzed the location of the proposed access points relative to the existing local roads and driveways in the Project's vicinity. A review of the Project access point to be constructed indicates that it is located at a point that minimizes traffic operational impacts to the existing roadway network. No impact would occur regarding a substantial increase in hazards due to a geometric design feature (JLB 2020, p. 29).

Bike Lanes

Currently, Class II Bike Lanes are in place adjacent to the proposed Project site along East Butler Avenue. The City of Fresno 2017 Active Transportation Plan recommends that Class II Bike Lanes be implemented on: 1) Butler Avenue between "O" Street and Highland Avenue and 2) Winery Avenue between Balch Avenue and Butler Avenue. Furthermore, the City of Fresno 2017 Active Transportation Plan recommends that a Class III Bike Route be implemented along: 1) Winery Avenue between Butler Avenue and Hamilton Avenue. Therefore, it is recommended that the Project retain the Class II Bike Lane along its frontage to Butler Avenue (JLB 2020, p. 16).

Walkways

Currently, walkways exist adjacent to the proposed Project site along East Butler Avenue and South Winery Avenue. The City of Fresno 2017 Active Transportation Plan recommends that walkways be implemented on: 1) Butler Avenue through the City of Fresno Sphere of Influence; and 2) Winery Avenue between Balch Avenue and Hamilton Avenue. Therefore, it is recommended that the Project retain walkways that are ADA compliant along its frontage to Butler Avenue (JLB 2020, p. 16).

Parking

Based on the latest Project Site Plan, the Project will provide 70 on-site parking stalls. An additional 537 paved parking stalls are adjacent to the Project site within the existing campus. An additional 70 overflow parking stalls are available at Butler Church located at 4884 East Butler Avenue per an existing parking MOU (Attachment A). The Project site will need 123 on-site paved parking stalls to meet City code (JLB 2020, p. 14). The overall total of both on-site parking and parking at Butler Church is 140 stalls. This exceeds the required number of 123 stalls by 17. The City of Fresno will condition the Project requiring that a covenant be recorded for shared parking and access. The Covenant will be between the City, FPU and Butler Church.

- d) Result in inadequate emergency access? ☐ ☐ ☐ ☒

No Impact. Access to and from the Project site will be from three (3) proposed access points located along East Butler Avenue and East Townsend Avenue. Two (2) proposed access points are located

along the south side of East Butler Avenue approximately 200 and 625 feet east of South Chestnut Avenue and are proposed as full access. The other access point is located along the north side of Townsend Avenue and is an exit only access. The location of the proposed access points relative to the existing local roads and driveways in the Project's vicinity were analyzed in the TIA. A review of the Project access point to be constructed indicates that it is located at a point that minimizes traffic operational impacts to the existing roadway network (JLB 2020, p. 14).

In order to help improve traffic safety and operation at the exit only access, the TIA recommended that two (2) 12" x 18" "EXIT ONLY, DO NOT ENTER" signs be installed to prevent traffic from entering the Project site in the wrong direction of travel. The signs shall be installed on each side of the driveway with one located on the west side of the driveway facing southeast and one on the east side of the driveway facing southwest. It is also recommended that a Type 1 arrow be added approximately five (5) feet behind the back of the driveway and be repainted once it starts to fade. No impact would occur regarding emergency access.

XVIII. TRIBAL CULTURAL RESOURCES

- a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place or object with cultural value to a California Native American tribe, and that is:

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Less than Significant Impact. As described in item a) above, it is not likely that human remains would be found on the Project site based on prior disturbance of the site to develop the existing student housing and single-family homes. The impact is considered less than significant. While unlikely, if human remains are discovered, MEIR mitigation measure CUL-4 would be implemented (Attachment E):

CUL-4: In the event that human remains are unearthed during excavation and grading activities of any future development project, all activity shall cease immediately. Pursuant to Health and Safety Code (HSC) Section 7050.5, no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to PRC Section 5097.98(a). If the remains are determined to be of Native American descent, the coroner shall within 24 hours notify the Native American Heritage Commission (NAHC). The NAHC shall then contact the most likely descendent of the deceased Native American, who shall then serve as the consultant on how to proceed with the remains.

Pursuant to PRC Section 5097.98(b), upon the discovery of Native American remains, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located is not damaged or disturbed by further development activity until the landowner has discussed and conferred with the most likely descendants regarding their recommendations, if applicable, taking into account the possibility of multiple human remains. The landowner shall discuss and confer with the descendants all reasonable options regarding the descendants' preferences for treatment.

Pursuant to Assembly Bill 52 (AB 52), the Table Mountain Rancheria Tribe and the Dumna Wo Wah were invited to consult under AB 52. The City of Fresno mailed notices regarding the project to both

tribes on March 27, 2020 which included the required 30-day time period for tribes to request consultation. The notices were delivered on March 30, 2020 and the city received the signed certified card back on April 2, 2020.

On March 4, 2020, Governor Gavin Newsom signed Executive Order (EO) N-54-20 proclaiming a State of Emergency to exist in the State of California as a result of the threat of COVID-19. The EO postponed requests for consultation and was effective April 22, 2020. The suspension ended on June 21, 2020. As reflected above, the request for consultation letter was sent out on March 27, 2020 prior to the date the EO took effect. In accordance with the EO, the Tribes had four days to respond after June 21, 2020, due to the 26 days that had already passed. With the postponement directed by the EO, the response period closed June 25, 2020. Because neither Tribe requested consultation, and because existing cultural resources protection laws exist that would require construction activities to cease if artifacts are discovered, there is no impact to tribal cultural resources. The proposed project would not result in any cultural resource environmental impacts beyond those analyzed in MEIR SCH No. 2012111015.

- | | | | | |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| i.) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as define in Public Resources Code Section 5020.1(k), or | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|

No Impact. The proposed Project is in an urban setting within the boundaries of the FPU campus. The area has been developed and disturbed for over 60 years. Existing development on the site includes student housing (five duplexes), one garage and four single-family homes. The original construction dates for the four single-family homes are as follows according to the Fresno County Assessor: 4383 East Butler Avenue (APN 473-061-01), 1962; 4846 East Butler Avenue (APN 473-061-02), 1957; 4845 East Townsend Avenue (APN 473-061-09), 1956; and 4837 East Townsend (APN 473-061-10), 1957.

Because the construction dates for these homes are greater than 50 years of age, they each meet the threshold for consideration of historic designation. Each of the homes is an example of the tract homes built in the late 1950's and early 1960's, thousands of which exist throughout Fresno. Upon initial review, none of these homes appear to be eligible for National, California, or Local Register listing as they possess no outstanding features, unique design or architectural distinctives. Because these homes are not listed or eligible for listing in the California Register of Historical Resources or in a local register of historical resources as defined IN PRC Section 5020.1(k), no impact would occur.

- | | | | | |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| ii.) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth is subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American Tribe. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|

No Impact. Refer to item a) and ai), above. The Project site does not contain any resources determined to be significant for either the California Register of Historical Resources or a California Native American Tribe, specifically the Table Mountain Rancheria Tribe and the Dumna Wo Wah.

XIX. UTILITIES AND SERVICE SYSTEMS Would the project:

- a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects? ☐ ☐ ☐ ☒

The utilities will be maintained by the City of Fresno Public Works Department and any other entities that have facilities within the easement. The Public Utility Easement (PUE) that will be in place after the vacation of the street will allow the City and utility entities access to maintain the utilities as needed. The PUE will encompass the street right-of-way that was vacated, which is 60' wide for East Townsend, South Garden and East Heaton Avenues. FPU would be responsible for maintaining the surface improvements within the PUE (Bader, pers. comm. 2020).

Given that the street vacation encompasses area that has been urbanized for many decades, no biological, botanical, cultural or historic resources exist within proposed right-of-way to be vacated.

Ministerial permits and adopted city of Fresno development standards, proven to be effective in reducing potential environmental impacts, will reduce the potential environmental consequences of the proposed street vacation to an insignificant level.

No Impact. Construction of the proposed Culture and Arts Center would rely on existing and new infrastructure to provide required utilities and service systems as described below.

Water

Domestic, fire and irrigation water infrastructure are currently in place extending south from a 12-inch water line in East Butler Avenue. There is also an 8-inch raw water line that aligns east-west on the south side of East Butler Avenue. Existing infrastructure includes a 4-inch water line for potable water and a 2-inch water line for irrigation, and 6-inch line for fire water sprinklers. There is no separate fire loop. A new water meter, backflow preventer and detector check valve are proposed on the north side of the project within and south of the sidewalk adjacent to East Butler Avenue.

An existing fire hydrant is located within the sidewalk on the south side of East Butler Avenue.

Three existing water meters on the north side of the site and two on the south side of the site (which served the student housing and single-family homes to be demolished) will be removed. The existing water meter north of the existing student housing will remain in place with a 2-inch water line extension. A PUE will be established for City water infrastructure. No impact would occur with regard to relocation or construction of new or expanded water facilities which could cause significant environmental effects

Wastewater Treatment

The City of Fresno owns and maintains the majority of the wastewater collection systems that convey wastewater to the Fresno-Clovis Regional Reclamation Facility (FCRWRF), and all of the wastewater collection system that conveys wastewater to the North Fresno Wastewater Reclamation Facility (NFWRF). The Project would not increase demand such that the additional wastewater treatment capacity would be needed.

The City's wastewater collection system consists of more than 1,380 miles of gravity flow pipelines ranging in size from 4 inches to 84 inches in diameter and ranging in age from new to more than 100 years old (FCS p. 5.15-8).

A 24-inch City sewer main is located north of the site within the right-of-way of East Butler Avenue. An existing 10-inch sewer line extends south from the main through the middle of the site (along the current property line) will be relocated to accommodate the proposed project. Sewer manholes are distributed throughout the site.

Four-inch sewer lines also extend south from East Butler Avenue connecting to the residences to be demolished. These lines will be removed up to the public right-of-way then capped. No impact would occur with regard to relocation or construction of new or expanded wastewater facilities which could cause significant environmental effects.

Storm Water Drainage

FMFCD provides drainage service to the Fresno metropolitan area. In order to provide this service, FMFCD has organized the metropolitan area into over 170 urban drainage areas or watersheds. Collection systems convey the stormwater to disposal facilities, which in the majority of cases are excavated, unlined basins. The collection systems are designed to provide one foot of freeboard in the pipeline collection system designed to convey runoff rates generated by rainfall intensity up to and including a 50% probability of occurrence (a 2-year return frequency) (FCS 2014, p. 5.15-10).

A 24-inch FMFCD storm drainpipe aligns east-west within the north side of the right-of-way of East Butler Avenue. This line does not have adequate capacity to accommodate additional flows. Thus, the project includes a temporary detention basin to capture on-site flows. The basin is approximately 70 feet by 150 feet and approximately 3 feet deep. The unlined basin is proposed in the southwest corner of the site.

Based on conversations/agreement with FMFCD and FPU, at the time the next phase of development occurs, FPU will need to construct an 18-inch main that would align down Heaton Avenue to the west, through a portion of the campus before extending out onto Chestnut Avenue. The 18-inch line would then extend south as a 30-inch main parallel to the existing 36-inch main until it reaches the California alignment. At this point, the line would extend west as a 48-inch line into Basin "A" (Ciesla pers. comm., 2020). The environmental impacts of construction of these improvements would be analyzed at the time they are undertaken. Impacts associated with construction of the on-site temporary detention basin are analyzed in this document.

Electric Power

Currently overhead electrical poles align east-west along East Butler Avenue to the north. A line connecting to this alignment extends south into the site then extends east-west through the existing backyards of the four single-family residences to be removed. The overhead line extending east-

west through the backyards of the homes will be relocated to the east and extend north-south from Butler Avenue between 4854 East Butler and the residence to the east. The remaining homes will be served from this line.

Three existing overhead powerlines within the footprint of the project (one on the north, one on the east and one on the west) would be removed to accommodate construction. In addition, three existing power poles extending north-south along the current property line would also be removed. A new electrical transformer is proposed to the west of the Culture and Arts Center Utility Yard.

FPU will be required to provide a permanent easement for PG&E at the time the streets (East Townsend Avenue, East Garden Avenue, South Heaton Avenue) are vacated. The City would hold the rights to the easement. No impact would occur with regard to undergrounding the power poles that would cause significant environmental effects as such undergrounding is subject to a ministerial permit issued by the City of Fresno.

Natural Gas

A 4-inch PG&E gas line is within the right-of-way of East Butler Avenue. Four ¾-inch gas distribution lines extend south from the 4-inch line into the project site. A new gas meter is proposed on the west side of the building, to the west of the Service Yard. No impact would occur with regard to relocation or construction of new or expanded natural gas facilities which could cause significant environmental effects.

Telecommunications

AT&T has a 4-inch line within the north side of the right-of-way of East Butler Avenue. There is also a 4-inch fiber optic line that aligns east-west on the south side of East Butler Avenue. No impact would occur with regard to relocation or construction of new or expanded telecommunication facilities which could cause significant environmental effects.

In conclusion, removal, relocation and extension of new facilities would occur within existing right-of-way and the project footprint and would not result in significant environmental effects due to ministerial permits and adopted development standards that will assure adequate capacity exists to provide water wastewater, electric power, natural gas and telecommunications. In accordance with established City of Fresno and FMFCD standards, storm drainage would be temporarily captured on site until the FPU site is able to connect to the City's system. No significant environmental impacts would occur as all improvements are within existing right-of-way/areas that have been previously disturbed.

Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Less than Significant Impact. The City of Fresno Department of Public Utilities (DPU) provides potable water to most of the City as well as some users within the portion of the Planning Area outside of the City limits and to the Project. Fresno's primary source of potable water is groundwater stored in an aquifer. This is groundwater is supplemented with surface water from the Kings River, the Central Valley Project and wastewater recycle exchange with Fresno Irrigation District.

The proposed Project is a maximum of 26,758 square foot Culture and Arts Building. As planned, the project could accommodate 400 people. The Project could operate 7-days a week for limited

hours, but that is unlikely. The Project is not of sufficient size to require preparation of Water Supply Assessment under SB 610. Historically, the five student housing buildings and four single-family residences that occupied the Project site would have had a domestic water demand that exceeded the proposed Project. According to the City of Fresno Water Capacity Fee Study, "After the Metro Plan Update was developed, the City's water demands decreased and the City reduced its projections of future water demand through buildout. The most recent projections are developed in the City's January 2014 Metro Plan Update Addendum which projects that potable water demand will increase to 195,000 acre-feet through buildout in 2035. This level of demand is equal to the total projected demand of 220,100 acre-feet (based on the 2035 General Plan Population with SBx7-7 Water Conservation Act compliance), less an estimated 25,000 AF of anticipated future recycled water supply" (Bartle Wells Associates 2016, p. 9). Thus, the proposed Project would have a less than significant impact on water supply.

- c) Result in a determination by the waste water treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? ☐ ☐ ☐ ☒

No Impact. The proposed Project is a 26,758 square foot Culture and Arts Center. As planned, the Project could accommodate 400 people. The Project could operate 7-days a week for limited hours. The Project would generate wastewater flows from toilets and sinks. Historically, the five student housing buildings and four single-family residences that occupied the Project site generated approximately a greater amount of residential wastewater than would be generated by the proposed Culture and Arts Center based on its limited hours of operation.

The City of Fresno owns and operates two wastewater treatment facilities that serve the Fresno metropolitan area: the Fresno-Clovis Regional Wastewater Reclamation Facility (FCRWRF) and the North Fresno Wastewater Reclamation Facility (NFWRF) (FCS, p. 5.15-6). The Project would be served by the FCRWRF and the City has indicated that existing wastewater facilities are available to provide service to the site subject to the following requirements:

1. Abandon existing 10-inch sewer main and vacate existing sewer easement.
2. Realign sewer system alignment From East Townsend Avenue to East Butler Avenue.
3. Submit engineering design plans of 10-inch realigned sewer main to DPU regarding plan check.
4. Provide new sewer easement to proposed 10-inch sewer main.
5. All sewer main easements shall be clear and unobstructed by buildings or other structures. No fencing or wall shall either enclose or be located above the sewer main. The planting plan, for any proposed landscape within the easement, shall be approved by the Department of Public Utilities. No Trees shall be located within 8 feet of the sewer main.
6. The proposed public 10-inch sewer main is design to be constructed along the westerly boundary of the proposed development. Provide a 20-foot sewer main easement along the center of the existing 8-inch sewer main. Easement shall be clearly marked with signage above indicating the exact location and type of facility below.
7. In the event City damages any street, sidewalk, landscaping or other improvements in exercising reasonable care, use and enjoyment of the Sewer Main Easement, City shall not be obligated to restore any street, sidewalk, landscaping or other improvements so damaged. City

shall have the right, without notice and at the property owner's expense, to remove from the Sewer Main Easement any building, fence, tree, or other encroachment not approved by City's Director of Public Utilities.

8. The Sewer Main Easement shall be maintained by the property owner free of any surface obstructions, except for those that may be approved by City's Director of Public Utilities, so that City may have vehicular access to and through the Sewer Main Easement at all times.
9. Engineered improvement plans prepared by a Registered Civil Engineer shall be submitted for Department of Public Utilities review and approvals for proposed additions to the City Sewer System.
10. All public sanitary sewer facilities shall be constructed in accordance with City Standards, specifications, and policies.
11. Installation of sewer house branch(s) shall be required.
12. Street work permit is required for any work in the Right-of-Way.
13. On-site sanitary sewer facilities shall be private.
14. The Project Developer shall contact Wastewater Management Division/Environmental Services at (559) 621-5100 prior to pulling building permits regarding conditions of service for special users.

As outlined above, adequate wastewater capacity is available to serve the proposed. Therefore, no impact to wastewater treatment would occur.

- d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals? ☐ ☐ ☐ ☒

No Impact. The proposed Project is a 26,758 square foot Culture and Arts Center. As planned, the project could accommodate 400 people. The Project could operate 7-days a week for limited hours. The facility is not anticipated to generate appreciable quantities of waste given its use and would be subject to waste diversion protocols and procedures. Solid waste service is provided by the City of Fresno. Waste is disposed of at the American Avenue Landfill which has an estimated closure date of August 31, 2031.

- e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste? ☐ ☐ ☐ ☒

No Impact. Refer to item d) above.

XX. WILDFIRE

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project

- a) Substantially impair an adopted emergency response plan or emergency evacuation plan? ☐ ☐ ☐ ☒

No Impact. According to the City of Fresno General Plan Master Environmental Impact Report, "The City does not maintain formal evacuation routes, as the most appropriate routes away from

	Potentially Significant Impact (PSI)	Potentially Significant Unless Mitigation Incorporated (PSUMI)	Less Than Significant Impact (LTSI)	No Impact (NI)
an area that may have been affected by a major disaster would be determined by the location and type of incident. Plans for such incidents would also be heavily subject to change” (FCS 2014, p. 5.8-9). The Project would have no impact on substantially impairing an adopted emergency response plan or emergency evacuation plan.				
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
No Impact. According to the City of Fresno General Plan Master EIR, “although the City of Fresno is proximate to high and very high fire hazard designated areas, the city is largely categorized as little or no threat or moderate fire hazard, which is largely attributed to paved areas” (FCS 2014, p. 5.8-24). Therefore, no impact would occur regarding exposing project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.				
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
No Impact. The proposed Project would construct a Culture and Arts Center on the campus of FPU served by adequate urban infrastructure. Due to the nature of the Project and its location within the City of Fresno in an urban setting, the proposed Project would not require new roads, fuel breaks, emergency water sources, power lines, or other utilities for construction that may exacerbate fire risk.				
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
No Impact. The proposed Project is located on flat land in the City of Fresno, specifically within the campus of FPU, an urban setting. The Project would be built compliant with applicable development codes. No impact would occur that would result in exposing people or structures to significant risks, including downslope or downstream flooding or landslides as a result of runoff, post-fire slope instability, or drainage changes.				

Note: Authority cited: Sections 21083 and 21083.05, Public Resources Code. Reference: Section 65088.4, Gov. Code; Sections 21080(c), 21080.1, 21080.3, 21083, 21083.05, 21083.3, 21093, 21094, 21095, and 21151, Public Resources Code; Sundstrom v. County of Mendocino, (1988) 202 Cal.App.3d 296; Leonoff v. Monterey Board of Supervisors, (1990) 222 Cal.App.3d 1337; Eureka Citizens for Responsible Govt. v. City of Eureka (2007) 147 Cal.App.4th 357; Protect the Historic Amador Waterways v. Amador Water Agency (2004) 116 Cal.App.4th at 1109; San Franciscans Upholding the Downtown Plan v. City and County of San Francisco (2002) 102 Cal.App.4th 656.

SECTION 3

III. MANDATORY FINDINGS OF SIGNIFICANCE

The following are Mandatory Findings of Significance in accordance with Section 15065 of the CEQA Guidelines.

- a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?

☐ ☐ ☐ ☒

No Impact. Implementation of the proposed Project would construct a 26,758 square foot Culture and Arts Building on the FPU campus. The site and surrounding area have been developed and the Project would replace existing vacant housing rather than disturbing undeveloped, vacant land. The proposed Project would have no impact with regard to degrading the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory.

- b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)

☐ ☐ ☐ ☒

No Impact. The proposed Project would not result in any impacts that are individually limited but cumulatively considerable.

- c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?

☐ ☐ ☐ ☒

No Impact. The proposed Project would provide a venue for performing arts and community gatherings on the campus of FPU. The Project would be developed consistent with applicable plans and standards and would be beneficial to the student body and larger community. Therefore, the proposed Project would not cause a substantial adverse effect on human beings either directly or indirectly. No impact would occur.

IV. PERSONS AND ORGANIZATIONS CONSULTED

This section identifies those persons who prepared or contributed to preparation of this document. This section is prepared in accordance with Section 15129 of the CEQA Guidelines.

A. CITY OF FRESNO

Will Tackett, Planning Manager - City of Fresno

Jose Valenzuela, Planner III – City of Fresno

McKencie Perez, Supervising Planner – City of Fresno

B. OTHER AGENCIES/ORGANIZATIONS

San Joaquin Valley Air Pollution Control District

C. ARCHITECT

Paul Halajian, AIA, LEED AP – Paul Halajian Architects

Peter Lau, Senior Architect – Paul Halajian Architects

D. ENGINEER

Lane Bader, PE, Project Manager - Blair Church & Flynn

E. PROJECT REPRESENTATIVE

Dirk Poeschel, AICP, Land Development Services, Inc.

F. MND PREPARERS

Kevin L. Grant, Managing Principal Ericsson-Grant, Inc.

Melanie J. Halajian, AICP, Senior Planner – Ericsson-Grant, Inc.

(Written or oral comments received on the checklist prior to circulation)

V. REFERENCES

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ATTACHMENT A

MEMORANDUM OF UNDERSTANDING BETWEEN FRESNO PACIFIC UNIVERSITY AND BUTLER CHURCH

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Memorandum of Understanding

between

Fresno Pacific University and Butler Church

This Memorandum of Understanding (MOU) is entered into between Fresno Pacific University, a California non-profit religious corporation (FPU) and Butler Church, a California non-profit religious corporation.

Whereas FPU is interested in using parking spaces in the Butler Church parking lot, and

Whereas Butler Church is interested in FPU's Campus Safety monitoring and being available to help address security issues for the church, and

Whereas Butler Church acknowledges that the services provided by FPU Campus Safety are not intended to secure the persons and property of Butler Church, and

Whereas entering into this agreement it is to the mutual benefit of both parties, with both parties agreeing that monetary compensation shall neither be expected nor received by either party,

Now therefore, FPU and Butler Church set forth their agreements and responsibilities as follow:

Responsibilities of Butler Church:

- Provide Campus Safety the authority to contact trespassers and ask them to leave.
- Maintain contact with the Director/ Chief of Campus Safety.
- Make available the west parking lot (70 parking stalls) of Butler Church for the primary parking of FPU faculty, staff, students, and guests except during the hours of 8:00 am to 12:30 pm every Sunday.
- Provide lighting throughout the night seven days a week.
- Maintain, seal and stripe the small lot.

Responsibilities of the Fresno Pacific University:

- Maintain contact with Butler Church management.
- Provide signage to the parking lot.
- At the request of staff, contact and request trespassers to leave Butler Church property.
- To the extent permitted by Campus Safety resources, provide security patrols 24 hours a day 7 days a week in and around the property of Butler Church.

- Notify a Campus Safety Supervisor when Campus Safety officers are dispatched to a call at Butler Church to determine if it will be necessary to document the call.
- Maintain, seal and stripe the large lot.
- Forward any medical related calls for service to 911.
- Enforce FPU parking policy at this location.

Terms and Conditions

The terms and provisions of this MOU constitute the entire agreement in relation to the subject matter hereof between the parties. This MOU shall supersede all previous communications, oral or written, between the parties with respect to the subject matter hereof.

This MOU will commence on July 1st, 2019 and will remain in effect until revised or terminated. Any revision to this MOU must be in writing and signed by both parties. Either party may terminate this agreement by giving 30 days written notice to the other party.

FPU and Butler Church agree to defend, indemnify, and hold each other and their respective officers, employees, and agents harmless from any claims, demands or liabilities of any kind or nature, including but not limited to personal injury and property damage arising from or related to the MOU, except for negligent performance pursuant to this MOU.

The parties shall not be liable for failure to perform any obligation under this MOU where such failure is due to fire, flood, earthquake, riot, labor dispute, natural calamity, or other causes that are beyond the reasonable control of such party.



Scott Holman, Lead Pastor
Butler Church

10-11-19

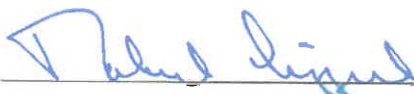
Date



Javier Campos, Chief of Campus Safety
Fresno Pacific University

10-10-2019

Date



Robert Lippert, Vice President for Finance
Fresno Pacific University

10 02-19

Date

ATTACHMENT B

FRESNO PACIFIC UNIVERSITY CULTURE AND ARTS CENTER EMISSIONS MEMORANDUM

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May 2020

Ericsson-Grant, Inc.
418 Parkwood Lane, Suite 200
Encinitas, California 92024

RE: *Fresno Pacific University Culture and Arts Center – Emissions Memorandum*

PROJECT DESCRIPTION

The Fresno Pacific University Culture and Arts Center Project (Project) proposes the demolition of several existing residential buildings located on five parcels totaling 5.5 acres at the existing Fresno Pacific University (FPU) campus at 4824 E. Butler Avenue. The demolition of these buildings would make way for the construction of a new 26,758 square foot (SF), Culture and Arts Center in the City of Fresno. The Project site is located at the southeast corner of East Butler Avenue and South Chestnut Avenue adjacent to FPU. The proposed Project would provide a venue for students to plan, perform and manage events in a campus-like environment.

Two distinct components are proposed for the Culture and Arts Center. The first is the main auditorium which would seat approximately 400 people and accommodate a wide range of events. The second component of the center is the "Black Box" which would provide an open seating and flexible use arrangement for 99 people. The Project would provide 75 parking spaces on the Project site including 60 standard stalls, one compact stall, and three handicapped accessible stalls. FPU would utilize its existing staff and students to facilitate events at the Center. The proposed Project would begin construction in October of 2020 and is anticipated to last approximately 21 months.

ENVIRONMENTAL SETTING

San Joaquin Valley Air Basin

The Project site is located in the City of Fresno in Fresno County, in the Central Valley of California. The city lies in a region identified as the San Joaquin Valley Air Basin (SJVAB). The SJVAB occupies the southern two-thirds of the Central Valley and includes eight counties. The SJVAB is mostly flat, less than 1,000 feet in elevation, and is surrounded on three sides by the Sierra Nevada, Tehachapi, and Coast Range mountains. This bowl-shaped feature forms a natural barrier to the dispersion (spreading over an area) of air pollutants. As a result, the SJVAB is highly susceptible to pollutant accumulation over time (SJVAPCD 2002).

San Joaquin Valley Air Pollution Control District

The local air quality agency affecting the SJVAB is the San Joaquin Valley Air Pollution Control District (SJVAPCD), which is charged with the responsibility of implementing air quality programs, ensuring that national and state ambient air quality standards are not exceeded and that air quality conditions are maintained in the SJVAB. In an attempt to achieve national and state ambient air quality standards and maintain air quality, the air district has completed several air quality attainment plans and reports, which

together constitute the State Implementation Plan (SIP) for the portion of the SJVAB encompassing the Project.

The SJVAPCD has also adopted various rules and regulations for the control of stationary and area sources of emissions. Provisions applicable to the proposed Project are summarized as follows:

- **Regulation IV (Visible Emissions), Rule 4101, Nuisance.** The purpose of this rule is to protect the health and safety of the public from source operations that emit or may emit air contaminants or other materials. It prohibits emissions of air contaminants or other materials “which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public.”
- **Regulation IV (Visible Emissions), Rule 4601, Architectural Coatings.** The rule limits volatile organic compound (VOC) emissions from architectural coatings and specifies practices for proper storage, cleanup, and labeling requirements. Rule 4601 applies to “any person who supplies, sells, offers for sale, applies, or solicits the application of any architectural coating, or who manufactures, blends or repackages any architectural coating for use within the District.” Materials covered by the rule include adhesives, architectural coatings, paints, varnishes, sealers, stains, concrete curing compounds, concrete/masonry sealers, and waterproofing sealers.
- **Regulation IV (Visible Emissions), Rule 4641, Cutback, Slow Curve and Emulsified Asphalt, Paving and Maintenance Operations.** The purpose of this rule is to limit VOC emissions by restricting the application and manufacturing of certain types of asphalt and maintenance operations and applies to the use of these materials. Specifically, certain types of asphalt cannot be used for penetrating prime coat, dust palliative, or other paving: rapid cure and medium cure cutback asphalt, slow cure asphalt that contains more than 0.5 percent of organic compound which evaporates at 500°F or lower, and emulsified asphalt containing VOC in excess of 3 percent which evaporates at 500°F or lower.
- **Regulation VIII (Fugitive PM₁₀ Prohibitions), Rules 8021–8071, Fugitive PM₁₀ Prohibitions.** The purpose of these rules is to limit airborne particulate emissions associated with construction, demolition, excavation, extraction, and other earthmoving activities, as well as with open disturbed land and emissions associated with paved and unpaved roads. Accordingly, these rules include specific measures to be employed to prevent and reduce fugitive dust emissions from anthropogenic sources.
- **Regulation IX (Mobile and Indirect Sources), Rule 9510, Indirect Source Review.** This rule is the result of state requirements outlined in California Health and Safety Code Section 40604 and the SIP. The air district’s SIP commitments were originally contained in the SJVAPCD’s 2003 PM₁₀ Plan and Extreme Ozone Attainment Demonstration Plans, which presented the SJVAPCD’s strategy to reduce PM₁₀ and NO_x in order to reach the ambient air pollution standards on schedule, which had been 2010. The plans quantify the reduction from current SJVAPCD rules and proposed rules, as well as state and federal regulations, and then model future emissions to determine whether the SJVAPCD may reach attainment for applicable pollutants.

This rule will reduce emissions of NO_x and PM₁₀ from new development projects that attract or generate motor vehicle trips. In general, new development contributes to the air pollution problem in the SJVAB by increasing the number of vehicles and vehicle miles traveled. Although newer, cleaner technology is

reducing per-vehicle pollution, the emissions increase from new development partially offsets emission reductions gained from technology advances. Indirect Source Review applies to larger development projects that have not yet gained discretionary approval. A discretionary permit is a permit from a public agency, which requires some amount of deliberation by that agency, including the potential to require modifications or conditions on the project. In accordance with this rule, developers of larger residential, commercial, and industrial projects are required to reduce smog-forming NO_x and PM₁₀ emissions from their projects' baselines as follows (SJVAPCD 2005):

- o 20 percent of construction NO_x exhaust
- o 45 percent of construction PM₁₀ exhaust
- o 33 percent of operational NO_x over 10 years
- o 50 percent of operational PM₁₀ over 10 years

These reductions are intended to be achieved through incorporation of on-site reduction measures. If, after implementation of on-site emissions reduction measures project emissions still exceed the minimum baseline reduction, the Indirect Source Review requires a project applicant to pay an off-site fee to the SJVAPCD, which is then used to fund clean-air projects within the air basin.

Criteria Air Pollutants

Criteria air pollutants are defined as those pollutants for which the federal and state governments have established air quality standards for outdoor or ambient concentrations to protect public health with a determined margin of safety. Ozone (O₃), coarse particulate matter (PM₁₀), and fine particulate matter (PM_{2.5}) are generally considered to be regional pollutants because they or their precursors affect air quality on a regional scale. Pollutants such as carbon monoxide (CO), nitrogen dioxide (NO₂), and sulfur dioxide (SO₂) are considered to be local pollutants because they tend to accumulate in the air locally. PM is also considered a local pollutant.

AIR QUALITY IMPACT ANALYSIS

Methodology

Air quality emissions-related impacts were assessed in accordance with methodologies recommended by the California Air Resources Board (CARB) and the SJVAPCD. Where quantification is required, emissions are modeled using the California Emissions Estimator Model (CalEEMod), version 2016.3.2. CalEEMod is a statewide land use emissions computer model designed to quantify potential criteria pollutant emissions associated with both construction and operations from a variety of land use projects. Project construction-generated emissions were primarily calculated using CalEEMod model defaults for Fresno County, though the span of construction has been adjusted to reflect the timing anticipated by FPU. Operational air pollutant emissions were calculated based on the Project site plans and the estimated traffic trip generation rates from JLB Traffic Engineering, Inc. (2020).

Impact Discussion

Would the Project Conflict with or Obstruct Implementation of the Applicable Air Quality Plan?

As part of its enforcement responsibilities, the U.S. Environmental Protection Agency requires each state with nonattainment areas to prepare and submit a State Implementation Plan (SIP) that demonstrates the means to attain the federal standards. The SIP must integrate federal, state, and local plan components and regulations to identify specific measures to reduce pollution in areas that do not meet federal and/or state air quality standards (nonattainment areas), using a combination of performance standards and market-based programs. Similarly, under State law, the California Clean Air Act (CAA) requires an air quality attainment plan to be prepared for areas designated as nonattainment with regard to the federal and state ambient air quality standards. Air quality attainment plans outline emissions limits and control measures to achieve and maintain these standards by the earliest practical date. The Project site lies within the boundaries of the SJVAB and is in nonattainment for exceeding state and federal criteria pollutant levels.

As previously mentioned, the Project site is located within the SJVAB, which is under the jurisdiction of the SJVAPCD. The SJVAPCD is required, pursuant to the federal CAA, to reduce emissions of criteria pollutants for which the SJVAB is in nonattainment. In order to reduce such emissions, the SJVAPCD prepared the 2004 Extreme Ozone Attainment Demonstration Plan and 2013 Plan for the Revoked 1-Hour Ozone Standard, 2007 Ozone Plan, 2009 Reasonably Available Control Technology Demonstration for Ozone State Implementation Plan, 2016 Plan for the 2008 8-Hour Ozone Standard and 2016 Moderate Area Plan for the 2012 PM_{2.5} Standard. These plans collectively address the air basin's nonattainment status with the national and state ozone standards as well as particulate matter by establishing a program of rules and regulations directed at reducing air pollutant emissions and achieving state (California) and national air quality standards. Pollutant control strategies are based on the latest scientific and technical information and planning assumptions, updated emission inventory methodologies for various source categories, and the latest population growth projections and associated vehicle miles traveled projections for the region. SJVAPCD's latest population growth forecasts were defined in consultation with local governments and with reference to local general plans. A project conforms with the SJVAPCD air quality plans if it complies with all applicable district rules and regulations, does not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new air quality violations, and is consistent with the growth forecasts in the applicable plans.

The proposed Project would not increase the number of residents in the area and would not increase the number of students attending FPU. The Project is proposing the development of a 26,758 SF Culture and Arts Center for students, faculty and residents of the surrounding area and thus would not conflict with the growth forecasts in the applicable plans. Furthermore, as shown in Table 1 and Table 3 below, both Project construction and Project operations would not generate emissions that would exceed SJVAPCD significance thresholds and therefore would not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new air quality violations. The Project would be required to adhere to all applicable SJVAPCD rules and regulations. Implementation of **MM-1**, described

below, would reduce construction-generated emissions below what is required in Rule 9510 and **MM-2** would reduce operational-generated emissions or offset the emissions with payment of a fee.

For these reasons, the Project would not conflict with or obstruct implementation of any applicable air quality plan.

Would the Project Result in a Cumulative Considerable Net Increase of Any Criteria Pollutant for which the Project Region is Non-Attainment Under an Applicable Federal or State Ambient Air Quality Standard?

By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size, by itself, to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's individual emissions exceed its identified significance thresholds, the project would be cumulatively considerable. Projects that do not exceed significance thresholds would not be considered cumulative considerable.

A portion of the proposed Project's air quality impacts are attributable to construction activities. The majority of the long-term air quality impacts will be due to the operation of motor vehicles traveling to and from the site. For purposes of impact assessment, air quality impacts have been separated into construction impacts and operational impacts.

Construction Emission Impacts

Construction-generated emissions are temporary and short-term but have the potential to represent a significant air quality impact. Three basic sources of short-term emissions will be generated through construction of the proposed Project: operation of the construction vehicles (i.e., excavators, trenchers, dump trucks), the creation of fugitive dust during clearing and grading, and the use of asphalt or other oil-based substances during paving activities. Construction activities such as excavation and grading operations, construction vehicle traffic, and wind blowing over exposed soils would generate exhaust emissions and fugitive PM emissions that affect local air quality at various times during construction. Effects would be variable depending on the weather, soil conditions, the amount of activity taking place, and the nature of dust control efforts. The dry climate of the area during the summer months creates a high potential for dust generation. Construction activities would be subject to SJVAPCD Regulation VIII, which specifies the following measures to control fugitive dust:

- Apply water to unpaved surfaces and areas.
- Use nontoxic chemical or organic dust suppressants on unpaved roads and traffic areas.
- Limit or reduce vehicle speed on unpaved roads and traffic areas to a maximum 15 miles per hour.
- Maintain areas in a stabilized condition by restricting vehicle access.
- Install wind barriers.
- During high winds, cease outdoor activities that disturb the soil.

- Keep bulk materials sufficiently wet when handling.
- Store and handle materials in a three-sided structure.
- When storing bulk materials, apply water to the surface or cover the storage pile with a tarp.
- Don't overload haul trucks. Overloaded trucks are likely to spill bulk materials.
- Cover haul trucks with a tarp or other suitable cover. Or, wet the top of the load enough to limit visible dust emissions.
- Clean the interior of cargo compartments on emptied haul trucks prior to leaving a site.
- Prevent trackout by installing a trackout control device.
- Clean up trackout at least once a day. If along a busy road or highway, clean up trackout immediately.
- Monitor dust-generating activities and implement appropriate measures for maximum dust control.

Construction-generated emissions associated with the proposed Project were calculated using the CARB-approved CalEEMod computer program, which is designed to model emissions for land use development projects, based on typical construction requirements. See Attachment A for more information regarding the construction assumptions, including construction equipment and duration, used in this analysis.

The SJVAPCD's (2015) Guidance for Assessing and Mitigation Air Quality Impacts identifies significance thresholds for ROG, CO, and NO_x, SO₂, PM₁₀, and PM_{2.5}. Predicted maximum daily construction-generated emissions for the proposed Project are summarized in Table 1. Construction-generated emissions are short-term and of temporary duration, lasting only as long as construction activities occur, but would be considered a significant air quality impact if the volume of pollutants generated exceeds the SJVAPCD's thresholds of significance.

Table 1. Construction-Related Emissions						
Construction Year	Maximum Pollutants (tons per year)					
	ROG	NO_x	CO	SO₂	PM₁₀	PM_{2.5}
Construction in the Year 2020	0.2	2.0	1.3	0.0	0.5	0.3
Construction in the Year 2021	1.0	4.2	4.2	0.0	0.3	0.2
Construction in the Year 2022	0.3	2.1	2.5	0.0	0.1	0.1
<i>SJVAPCD Potentially Significant Impact Threshold</i>	10	10	100	27	15	15
Exceed SCAQMD Regional Threshold?	No	No	No	No	No	No

Source: CalEEMod version 2016.3.2. Refer to Attachment A for Model Data Outputs.

Notes: Emission reduction/credits for construction emissions are applied based on the required implementation of SJVAPCD Regulation VIII. The specific regulation applied in CalEEMod was watering unpaved surfaces two times per day with a maximum vehicle speed of 15 mph.

As shown in Table 1, construction-generated emissions would not exceed SJVAPCD significance thresholds.

In addition to the SJVAPCD criteria air pollutant thresholds, SJVAPCD Rule 9510, Indirect Source Review, aims to fulfill the District's emission reduction commitments in the PM₁₀ and Ozone Attainment Plans. This rule applies to the following construction projects within the jurisdiction of the SJVAPCD:

- 50 residential units
- 2,000 square feet of commercial space
- 25,000 square feet of light industrial space
- 100,000 square feet of heavy industrial space
- 20,000 square feet of medical office space
- 39,000 square feet of general office space
- 9,000 square feet of educational space
- 10,000 square feet of government space
- 20,000 square feet of recreational space; or
- 9,000 square feet of space not identified above.

This rule also applies to any transportation or transit project where construction exhaust emissions equal or exceed two tons of NO_x or two tons of PM₁₀. The project developers are required to reduce concentrations of NO_x by 20 percent and PM₁₀ by 45 percent during construction activities.

The Project is proposing the construction of more than 9,000 square feet of educational space. Therefore, the proposed Project is required to comply with Rule 9510. In accordance with Rule 9510, the Project applicant is required to prepare a detailed air impact assessment (AIA) for submittal to the SJVAPCD, which demonstrates reduction of NO_x emissions from the Project's baseline by 20 percent and PM₁₀ emissions from the Project's baseline by 45 percent. Therefore, the following mitigation is required.

Mitigation Measure

MM-1 In accordance with SJVAPCD Rule 9510, a detailed air impact assessment (AIA) shall be prepared detailing the specific construction requirement (i.e., equipment required, hours of use, etc.) and operational characteristics associated with the proposed Project. In accordance with this rule, emissions of NO_x from construction equipment greater than 50 horsepower used or associated with the development Project shall be reduced by 20 percent from baseline (unmitigated) emissions and PM₁₀ emissions by 45 percent. The Project will demonstrate compliance with Rule 9510, including payment of all applicable fees, before issuance of the first building permit. Examples of mitigation measures that would reduce emissions attributable to the proposed Project in compliance with Rule 9510 include, but are not limited to, the following:

- During all construction activities, all diesel-fueled construction equipment including, but not limited to, rubber-tired dozers, graders, scrapers, excavators, asphalt paving equipment, cranes, and tractors shall be California Air Resources Board (CARB) Tier 4 Certified as set forth in Section 2423 of Title 13 of the California Code of Regulations, and Part 89 of Title 40 of the Code of Federal Regulations.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturers' specifications. Equipment maintenance records shall be kept on-site and made available upon request by the SJVAPCD or the City of Fresno.
- The Project applicant shall comply with all applicable SJVAPCD rules and regulations. Copies of any applicable air quality permits and/or monitoring plans shall be provided to the City.

As demonstrated in Table 2, implementation of mitigation measure **MM-1** has the potential to reduce total NO_x emissions by 156 percent and total PM₁₀ emissions by 127 percent, which is beyond the reduction needed to achieve the SJVAPCD Rule 9510 target.

Table 2. Construction Related NO _x & PM ₁₀ Emissions- Baseline and Mitigated (tons per year)			
Construction	NO _x Baseline	NO _x Mitigated	Percent Reduction
Total Construction	8.3	1.0	156%
SJVAPCD Rule 9510 NO _x Reduction Target			20%
Construction Year	PM ₁₀ Baseline	PM ₁₀ Mitigated	Percent Reduction
Total Construction	0.9	0.2	127%
SJVAPCD Rule 9510 PM ₁₀ Reduction Target			45%

Source: CalEEMod version 2013.2.2. See Attachment A for emission outputs

As previously stated, construction-generated emissions would not exceed SJVAPCD significance thresholds. However, construction activities include the construction of more than 9,000 square feet of educational space, instigating the implementation of Rule 9510 and the requirement to reduce NO_x emissions from the Project's unmitigated baseline by 20 percent and PM₁₀ emissions from the Project unmitigated baseline by 45 percent. Mitigation measure **MM-1** would result in a greater than 20 percent reduction of NO_x emissions from the unmitigated baseline and a greater than 45 percent reduction of PM₁₀ emissions from the unmitigated baseline for all construction activities.

Criteria pollutant emissions generated during Project construction would not result in a violation of air quality standards.

Operational Emission Impacts

Implementation of the Project would result in long-term operational emissions of criteria air pollutants such as PM₁₀, PM_{2.5}, CO, and SO₂ as well as ozone precursors such as ROG and NO_x. Project-generated increases in emissions would be predominantly associated with motor vehicle use. Operational air

pollutant emissions were based on the Project site plans and the estimated traffic trip generation rates from JLB Traffic Engineering, Inc. (2020).

Long-term operational emissions attributable to the Project are identified in Table 3 and compared to the regional operational significance thresholds promulgated by the SJVAPCD.

Table 3. Operational-Related Emissions (Regional Significance Analysis)						
Construction Year	Maximum Pollutants (tons per year)					
	ROG	NO_x	CO	SO₂	PM₁₀	PM_{2.5}
Annual (Maximum Tons per Year)						
Area Source	0.1	0.0	0.0	0.0	0.0	0.0
Energy Use	0.0	0.0	0.0	0.0	0.0	0.0
Mobile Source	0.1	1.0	0.8	0.0	0.2	0.1
Total	0.2	1.0	0.8	0.0	0.2	0.1
<i>SJVAPCD Significance Threshold</i>	<i>10</i>	<i>10</i>	<i>15</i>	<i>15</i>	<i>100</i>	<i>27</i>
Exceed SJVAPCD Threshold?	No	No	No	No	No	No

Source: CalEEMod version 2016.3.2. Refer to Attachment A for Model Data Outputs.

Notes: Emissions projections account for 296 vehicle trips per day according to the traffic trip generation rates from JLB Traffic Engineering, Inc. (2020).

As indicated in Table 3, operational-generated emissions would not exceed SJVAPCD significance thresholds.

Although operational emissions are low the proposed Project is still subject to Rule 9510 and would be required to consult with the SJVAPCD regarding the specific applicability of Rule 9510 in relation to Project operations. In accordance with Rule 9510, the Project applicant would be required to prepare a detailed AIA for submittal to the SJVAPCD demonstrating the reduction from the Project's baseline of NO_x emissions by 33.3 percent. Mitigation measure **MM-2**, described below, is required. Operational emissions from the proposed Project would not exceed SJVAPCD significance thresholds and will abide by SJVAPCD Rule 9510 with implementation of Mitigation Measure **MM-2**.

Mitigation Measure

MM-2 In accordance with SJVAPCD Rule 9510, a detailed air impact assessment shall be prepared detailing the operational characteristics associated with the proposed Project. In accordance with this rule, operational emissions of NO_x shall be reduced by a minimum of 33.3 percent. (Emissions reductions are in comparison to the Project's operational baseline emissions presented in Table 3.) The Project would demonstrate compliance with Rule 9510, including payment of all applicable fees, before issuance of the first building permit.

Based on the findings of the air impact assessment, the applicant shall pay the SJVAPCD a monetary sum necessary to offset the required operational emissions that are not reduced by the emission reduction measures contained in the air impact assessment. The quantity of operational emissions that need to be offset will be calculated in accordance with the methodologies identified in Rule 9510, Indirect Source Review, and approved by the SJVAPCD. Operational emissions reduction methods will be selected under the direction of the SJVAPCD according to the air impact assessment process detailed in, and required by Rule 9510, Indirect Source Review (see Rule 9510, subsection 5).

Would the Project Expose Sensitive Receptors to Substantial Pollutant Concentrations?

Sensitive receptors are defined as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. CARB has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis. The sensitive receptors surrounding the Project site are residents to the north and west, the Butler Church and residents to the east, and FPU and residents to the south. The nearest sensitive receptors to the development site are the residences located to the east with the closest one located approximately 25 feet distant.

Construction Generated Air Contaminants

Construction-related activities would result in temporary, short-term proposed Project-generated emissions of diesel particulate matter (DPM), ROG, NO_x, CO, and PM₁₀ from the exhaust of off-road, heavy-duty diesel equipment for site preparation (e.g., clearing, grading); soil hauling truck traffic; paving; and other miscellaneous activities. However, as shown in Table 1 the Project would not exceed the SJVAPCD emission thresholds. The portion of the SJVAB which encompasses the Project area is designated as a nonattainment area for state standards of O₃, PM₁₀ and PM_{2.5} while also being designated as a nonattainment area for federal standards of O₃ and PM_{2.5} (CARB 2018a). Thus, existing these levels in the SJVAB are at unhealthy levels during certain periods.

The health effects associated with O₃ are generally associated with reduced lung function. Because the Project would not involve construction activities that would result in O₃ precursor emissions (ROG or NO_x) in excess of the SJVAPCD thresholds, the Project is not anticipated to substantially contribute to regional O₃ concentrations and the associated health impacts.

CO tends to be a localized impact associated with congested intersections. In terms of adverse health effects, CO competes with oxygen, often replacing it in the blood, reducing the blood's ability to transport oxygen to vital organs. The results of excess CO exposure can include dizziness, fatigue, and impairment of central nervous system functions. The Project would not involve construction activities that would result in CO emissions in excess of the SJVAPCD thresholds. Thus, the Project's CO emissions would not contribute to the health effects associated with this pollutant.

Particulate matter (PM₁₀ and PM_{2.5}) contains microscopic solids or liquid droplets that are so small that they can get deep into the lungs and cause serious health problems. Particulate matter exposure has been linked to a variety of problems, including premature death in people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms such as irritation of the airways, coughing, or difficulty breathing. For construction activity, DPM is the primary toxic air contaminant (TAC) of concern. Particulate exhaust emissions from diesel-fueled engines (i.e., DPM) were identified as a TAC by the CARB in 1998. The potential cancer risk from the inhalation of DPM, as discussed below, outweighs the potential for all other health impacts (i.e., non-cancer chronic risk, short-term acute risk) and health impacts from other TACs. Based on the emission modeling conducted, the maximum onsite construction-related daily emissions of exhaust PM_{2.5}, considered a surrogate for DPM, would be 0.08 pounds/day during 2020, 2021 and 2022 construction activities (see Appendix A). (PM_{2.5} exhaust is considered a surrogate for DPM because more than 90 percent of DPM is less than 1 microgram in diameter and therefore is a subset of particulate matter under 2.5 microns in diameter (i.e., PM_{2.5}). Most PM_{2.5} derives from combustion, such as use of gasoline and diesel fuels by motor vehicles.) As with O₃ and NO_x, the Project would not generate emissions of PM₁₀ or PM_{2.5} that would exceed the SJVAPCD's thresholds. Additionally, the Project would be required to comply with SJVAPCD Regulation VIII described above, which limits the amount of fugitive dust generated during construction. Accordingly, the Project's PM₁₀ and PM_{2.5} emissions are not expected to cause any increase in related regional health effects for these pollutants.

In summary, the Project would not result in a potentially significant contribution to regional concentrations of nonattainment pollutants and would not result in a significant contribution to the adverse health impacts associated with those pollutants.

Project Operations

Operation of the proposed Project would not result in the development of any substantial sources of air toxics. There are no stationary sources associated with the operations of the Project; nor would the Project attract mobile sources that spend long periods queuing and idling at the site. Thus, by its very nature, would not be a source of TAC concentrations during proposed Project operations.

Naturally Occurring Asbestos

Another potential air quality issue associated with construction-related activities is the airborne entrainment of asbestos due to the disturbance of naturally occurring asbestos-containing soils. The proposed Project is not located within an area designated by the State of California as likely to contain naturally occurring asbestos (Department of Conservation [DOC] 2000). As a result, construction-related activities would not be anticipated to result in increased exposure of sensitive land uses to asbestos.

Valley Fever

Coccidioidomycosis (CM), often referred to as San Joaquin Valley Fever or Valley Fever, is one of the most studied and oldest known fungal infections. Valley Fever most commonly affects people who live in hot dry areas with alkaline soil and varies with the season. This disease, which affects both humans and animals, is caused by inhalation of arthroconidia (spores) of the fungus *Coccidioides immitis* (CI). CI spores

are found in the top few inches of soil and the existence of the fungus in most soil areas is temporary. The cocci fungus lives as a saprophyte in dry, alkaline soil. When weather and moisture conditions are favorable, the fungus "blooms" and forms many tiny spores that lie dormant in the soil until they are stirred up by wind, vehicles, excavation, or other ground-moving activities and become airborne. Agricultural workers, construction workers, and other people who work outdoors and who are exposed to wind and dust are more likely to contract Valley Fever. Children and adults whose hobbies or sports activities expose them to wind and dust are also more likely to contract Valley Fever. After the fungal spores have settled in the lungs, they change into a multicellular structure called a spherule. Fungal growth in the lungs occurs as the spherule grows and bursts, releasing endospores, which then develop into more spherules.

Valley fever (Coccidioidomycosis) is found in California, including Fresno County. In about 50 to 75 percent of people, valley fever causes either no symptoms or mild symptoms and those infected never seek medical care; when symptoms are more pronounced, they usually present as lung problems (cough, shortness of breath, sputum production, fever, and chest pains). The disease can progress to chronic or progressive lung disease and may even become disseminated to the skin, lining tissue of the brain (meninges), skeleton, and other body areas.

Fresno County is considered a highly endemic area for valley fever. When soil containing this fungus is disturbed by ground-disturbing activities such as digging or grading, by vehicles raising dust, or by the wind, the fungal spores get into the air. When people breathe the spores into their lungs, they may get valley fever. Fungal spores are small particles that can grow and reproduce in the body. The highest infection period for valley fever occurs during the driest months in California, between June and November. Infection from valley fever during ground-disturbing activities can be partially mitigated through the control of Project-generated dust. As noted, Project-generated dust would be controlled by adhering to SJVAPCD dust-reducing measures (Regulation VIII), which includes the preparation of a SJVAPCD-approved dust control plan describing all fugitive dust control measures that are to be implemented before, during, and after any dust-generating activity.

With minimal site grading and conformance with SJVAPCD Regulation VIII, dust from the construction of the Project would not add significantly to the existing exposure level of people to this fungus, including construction workers.

Carbon Monoxide Hot Spots

It has long been recognized that CO exceedances are caused by vehicular emissions, primarily when idling at intersections. Concentrations of CO are a direct function of the number of vehicles, length of delay, and traffic flow conditions. Under certain meteorological conditions, CO concentrations close to congested intersections that experience high levels of traffic and elevated background concentrations may reach unhealthy levels, affecting nearby sensitive receptors. Given the high traffic volume potential, areas of high CO concentrations, or "hot spots," are typically associated with intersections that are projected to operate at unacceptable levels of service during the peak commute hours. However, transport of this criteria pollutant is extremely limited, and CO disperses rapidly with distance from the source under normal meteorological conditions. Furthermore, vehicle emissions standards have become increasingly

more stringent in the last 20 years. Currently, the CO standard in California is a maximum of 3.4 grams per mile for passenger cars (requirements for certain vehicles are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology on industrial facilities, CO concentrations in the Project vicinity have steadily declined.

Accordingly, with the steadily decreasing CO emissions from vehicles, even very busy intersections do not result in exceedances of the CO standard. The analysis prepared for CO attainment in the South Coast Air Quality Management District's (SCAQMD's) *1992 Federal Attainment Plan for Carbon Monoxide* in Los Angeles County can be used to demonstrate the potential for CO exceedances. The SCAQMD CO hot spot analysis was conducted for four busy intersections in Los Angeles County during the peak morning and afternoon time periods. The intersections evaluated included Long Beach Boulevard and Imperial Highway (Lynwood), Wilshire Boulevard and Veteran Avenue (Westwood), Sunset Boulevard and Highland Avenue (Hollywood), and La Cienega Boulevard and Century Boulevard (Inglewood). The busiest intersection evaluated was at Wilshire Boulevard and Veteran Avenue, which has a traffic volume of approximately 100,000 vehicles per day. The Los Angeles County Metropolitan Transportation Authority evaluated the level of service (LOS) in the vicinity of the Wilshire Boulevard/Veteran Avenue intersection and found it to be LOS E at peak morning traffic and LOS F at peak afternoon traffic (LOS E and F are the two least efficient traffic LOS ratings). Even with the inefficient LOS and volume of traffic, the CO analysis concluded that there was no violation of CO standards (SCAQMD 1992).

According to the Traffic Impact Assessment prepared for the Project (JLB Traffic Engineering, Inc. 2020), the Project is anticipated to generate approximately 296 daily trips on average. Because the proposed Project would not generate traffic volumes at any intersection of more than 100,000 vehicles per day, there is no likelihood of the Project traffic exceeding CO values.

Would the Project Result in Other Emissions (Such as Those Leading to Odors) Adversely Affecting a Substantial Number of People?

Typically, odors are regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

With respect to odors, the human nose is the sole sensing device. The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals have the ability to smell minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor; in fact, an odor that is offensive to one person (e.g., from a fast-food restaurant) may be perfectly acceptable to another. It is also important to note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, the person is

describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word “strong” to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air. When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

Project Construction

During construction, the proposed Project presents the potential for generation of objectionable odors in the form of diesel exhaust in the immediate vicinity of the site. However, these emissions are short term in nature and will rapidly dissipate and be diluted by the atmosphere downwind of the emission sources. Additionally, odors would be localized and generally confined to the construction area.

Project Operations

Land uses commonly considered to be potential sources of obnoxious odorous emissions include agriculture (farming and livestock), wastewater treatment plants, food processing plants, chemical plants, composting facilities, refineries, landfills, dairies, and fiberglass molding. The proposed Project does not include any uses identified as being associated with odors.

GREENHOUSE GAS EMISSIONS IMPACT ANALYSIS

Greenhouse gas (GHG) emissions are released as byproducts of fossil fuel combustion, waste disposal, energy use, land use changes, and other human activities. This release of gases, such as carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and chlorofluorocarbons, creates a blanket around the earth that allows light to pass through but traps heat at the surface, preventing its escape into space. While this is a naturally occurring process known as the greenhouse effect, human activities have accelerated the generation of GHGs beyond natural levels. The overabundance of GHGs in the atmosphere has led to an unexpected warming of the earth and has the potential to severely impact the earth’s climate system.

Each GHG differs in its ability to absorb heat in the atmosphere based on the lifetime, or persistence, of the gas molecule in the atmosphere. CH₄ traps over 25 times more heat per molecule than CO₂, and N₂O absorbs 298 times more heat per molecule than CO₂. Often, estimates of GHG emissions are presented in carbon dioxide equivalents (CO₂e). Expressing GHG emissions in carbon dioxide equivalents takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO₂ were being emitted.

The local air quality agency regulating the SJVAB is the SJVAPCD, the regional air pollution control officer for the basin. To provide guidance to local lead agencies on determining significance for GHG emissions in CEQA documents, the SJVAPCD provides a tiered approach in assessing significance of project specific GHG emission increases as shown below.

- Projects complying with an approved GHG emission reduction plan or GHG mitigation program which avoids or substantially reduces GHG emissions within the geographic area in which the

project is located would be determined to have a less-than-significant individual and cumulative impact for GHG emissions. Such plans or programs must be specified in law or approved by the lead agency with jurisdiction over the affected resource and supported by a CEQA-compliant environmental review document adopted by the lead agency. Projects complying with an approved GHG emission reduction plan or GHG mitigation program would not be required to implement Best Performance Standards (BPS).

- Projects implementing BPS would not require quantification of project-specific GHG emissions. Consistent with CEQA Guidelines, such projects would be determined to have a less-than-significant individual and cumulative impact for GHG emissions.
- Projects not implementing BPS would require quantification of project-specific GHG emissions and demonstration that project-specific GHG emissions would be reduced or mitigated by at least 29 percent, and compared to Business-as-Usual (BAU), including GHG emission reductions achieved since the 2002-2004 baseline period, consistent with GHG emission reduction targets established in the 2017 Scoping Plan. Projects achieving at least a 29 percent GHG emission reduction compared to BAU would be determined to have a less-than-significant individual and cumulative impact for GHGs.

In terms of approved GHG emission reduction plans, the Fresno Greenhouse Gas Reduction Plan (GHG Plan) was required as a policy in the Fresno General Plan and adopted as an appendix to the General Plan Master EIR in 2014. The GHG Plan includes GHG emission reduction targets, strategies, and implementation measures developed to help the City reach these targets. Reduction strategies address GHG emissions associated with land use and transportation, transportation facilities strategies, transportation demand strategies, energy conservation strategies for new and existing buildings, waste diversion and recycling and energy recovery, strategies for existing development, and municipal strategies. The GHG Plan focuses on emissions generated by activities under the control or influence of the City.

Additionally, the Project site is in Fresno County where the Fresno Council of Governments (Fresno COG) serves as the Metropolitan Planning Organization (MPO). As the MPO, Fresno COG is required to produce certain documents that maintain the region's eligibility for federal transportation assistance. Fresno COG adopted its Sustainable Communities Strategy in 2014 and adopted its Regional Transportation Plan and updated Sustainable Communities Strategy in 2018. The Fresno COG Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) charts a course for closely integrating land use and transportation – so that the region can grow smartly and sustainably. The RTP/SCS is a long-range visioning plan that balances future mobility and housing needs with economic, environmental and public health goals. The Fresno COG region strives toward sustainability through integrated land use and transportation planning. The Fresno COG region, which encompasses the Project site, must achieve specific federal air quality standards and is required by state law to lower regional GHG emissions. Fresno COG has been tasked by CARB to achieve a 6 percent and a 13 percent per capita reduction by 2020 and 2035, respectively (CARB 2018b).

The BPS and the BAU portion of the SJVAPCD tiered approach are problematic based on the 2015 California Supreme Court Newhall Ranch decision, which stated that an GHG-related impact determination based on the BAU approach is “not supported by a reasoned explanation based on substantial evidence.”

For the purposes of this analysis, Project GHG emissions are quantified and compared to the thresholds issued by the California Air Pollution Control Officers Association (CAPCOA), which is an association of the air pollution control officers from all 35 local air quality agencies throughout California, including the SJVAPCD. CAPCOA recommends a significance threshold of 900 metric tons annually. This threshold is based on a capture rate of 90 percent of land use development projects, which in turn translates into a 90 percent capture rate of all GHG emissions. The 900 metric ton threshold, the lowest promulgated in any region in the state, is considered by CAPCOA to be low enough to capture a substantial fraction of future projects that will be constructed to accommodate future statewide population and economic growth, while setting the emission threshold high enough to exclude small projects that will in aggregate contribute a relatively small fraction of the cumulative statewide GHG emissions. Additionally, the Project is compared to the City GHG Plan, which includes GHG emission reduction targets, strategies, and implementation measures developed to help the City reach its GH reduction targets. The Project is also compared to the Fresno COG RTP/SCS, which establishes an overall GHG target for the Project region consistent with statewide GHG reduction goals.

Methodology

GHG emissions-related impacts were assessed in accordance with methodologies recommended by CARB. Where quantification is required, emissions are modeled using CalEEMod. CalEEMod is a statewide land use emissions computer model designed to quantify potential criteria pollutant emissions associated with both construction and operations from a variety of land use projects. Project construction-generated emissions were primarily calculated using CalEEMod model defaults for Fresno County, though the span of construction has been adjusted to reflect the timing anticipated by FPU. Operational GHG emissions were calculated based on the Project site plans and the estimated traffic trip generation rates from JLB Traffic Engineering, Inc. (2020).

Impact Discussion

Would the Project Generate Greenhouse Gas Emissions, Either Directly or Indirectly, That May Have a Significant Impact on the Environment?

Construction-Generated Greenhouse Gas Emissions

A potent source of GHG emissions associated with the proposed Project would be combustion of fossil fuels during construction activities. The construction phase of the proposed Project is temporary but would result in GHG emissions from the use of heavy construction equipment and construction-related vehicle trips.

Construction-related activities that would generate GHGs include worker commute trips, haul trucks carrying supplies and materials to and from the Project site, and off-road construction equipment (e.g.,

dozers, loaders, excavators). Table 4 illustrates the specific construction-generated GHG emissions that would result from construction of the Project.

Table 4. Construction-Related Greenhouse Gas Emissions	
Emission Source	CO₂e (Metric Tons/ Year)
2020 Construction	227
2022 Construction	640
2023 Construction	367
<i>CAPCOA's Potentially Significant Impact Threshold</i>	900
Exceed Significance Threshold?	No

Source: CalEEMod version 2016.3.2. Refer to Attachment A for Model Data Outputs.

As shown in Table 4, Project construction would not result in the exceedance of 900 metric tons of CO₂e during any year of construction. Once construction is complete, the generation of these GHG emissions would cease.

Operational-Generated Greenhouse Gas Emissions

Operation of the Project would result in GHG emissions predominantly associated with the use of motor vehicles traveling to and from the site. Long-term operational GHG emissions attributable to the Project are identified in Table 5.

Table 5. Operational-Related GHG Emissions	
Emissions Source	CO₂e (Metric Tons/ Year)
Area Source Emissions	0
Energy Source Emissions	99
Mobile Source Emissions	373
Solid Waste Emissions	0
Water Emissions	35
Total Emissions	507
<i>CAPCOA's Potentially Significant Impact Threshold</i>	900
Exceed Significance Threshold?	No

Source: CalEEMod version 2016.3.2. Refer to Attachment A for Model Data Outputs.

As shown in Table 5, Project operations would result in the generation of approximately 507 metric tons of CO₂e annually and would not exceed CAPCOA's significance threshold of 900 metric tons annually.

Would the Project Conflict with an Applicable Plan, Policy, or Regulation Adopted for the Purpose of Reducing the Emissions of Greenhouse Gases?

City of Fresno GHG Plan

The City GHG Plan (2014) is a strategic planning document that identifies sources of GHG emissions within the city's boundaries, presents current and future emissions estimates, identifies a GHG reduction target for future years, and presents strategic programs, policies, and projects to reduce emissions from the energy, transportation, land use, water use, and waste sectors. The emissions reduction program developed by the City follows the following criteria in order to use CEQA tiering and streamlining provisions.

- A. Quantify greenhouse gas emissions, both existing and projected over a specified time period, resulting from activities within a defined geographic area;
- B. Establish a level, based on substantial evidence, below which the contribution to GHG emissions from activities covered by the plan would not be cumulatively considerable;
- C. Identify and analyze the GHG emissions resulting from specific actions or categories of actions anticipated within the geographic area;
- D. Specify measures or group of measures, including performance standards, that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level;
- E. Establish a mechanism to monitor the plan's progress toward achieving the level and to require amendment if the plan is not achieving specified levels;
- F. Be adopted in a public process following environmental review.

According to the City of Fresno, its GHG Plan is structured to meet the streamlining criteria listed above. Compliance with the applicable GHG Plan strategies would result in less-than-significant impacts related to GHG emissions. The reduction measures contained in the GHG Plan build on inventory results and key opportunities prioritized by City staff. The CAP strategies consist of measures and actions that identify the steps the City will take to support reductions in GHG emissions. The City will achieve these reductions in GHG emissions through a mix of voluntary programs and new strategic standards. All standards presented in the GHG Plan respond to the needs of development, avoiding unnecessary regulation, streamlining new development, and achieving more efficient use of resources.

The Project is consistent with the GHG inventory and forecast in the GHG Plan. Both the existing and the projected GHG inventories in the GHG Plan were derived based on the land use designations and associated densities defined in the City's General Plan. The proposed Project is located on the FPU campus and intended to serve existing FPU students. The Project is not proposing to amend the City General Plan and is thereby consistent with all land use designations applied to the site. As such, the Project is consistent with the GHG inventory and forecast in the GHG Plan. Additionally, the Project would be required to adhere to all applicable City General Plan and GHG Plan policy provisions intended to

reduce community GHG emissions. All development in the City, including the Project, is required to adhere to all City-adopted policy provisions, including those contained in the GHG Plan. The City ensures all provisions of the City General Plan and GHG Plan are incorporated into projects and their permits through development review and applications of conditions of approval as applicable.

Fresno COG RTP/SCS

The Fresno COG region, which encompasses the Project site, must achieve specific federal air quality standards and is required by state law to lower regional GHG emissions. Specifically, the region has been tasked by CARB to achieve a 6 percent and a 13 percent per capita reduction by 2020 and 2035, respectively (CARB 2018b). The Fresno COG RTP/SCS charts a course for closely integrating land use and transportation so that the region can grow smartly and sustainably. The RTP/SCS identifies existing and future transportation related needs, while considering all modes of travel, analyzing alternative solutions, and identifies what can be completed with anticipated available funding for the over 3,000 projects. The goals objectives and policies are organized into six broad transportation mode categories and are as followed; general transportation, highway, streets and railroads, mass transportation, aviation, active transportation, and rail. The RTP/SCS further identifies that land use strategies which focus new housing and job growth in areas served by high quality transit and other opportunity areas would be consistent with a land use development pattern that supports and complements the proposed transportation network, which emphasizes system preservation, active transportation, and transportation demand management measures. The RTP/SCS incorporates local land use projections and circulation networks from the region's municipal general plans, including the City of Fresno General Plan. The projected regional development pattern in the RTP/SCS, including location of land uses and residential densities in local general plans, when integrated with the proposed regional transportation network identified in the RTP/SCS, would reduce per capita vehicular travel-related GHG emissions and achieve the GHG reduction per capita targets for the Fresno COG region.

The proposed Project is located on the FPU campus and intended to serve existing FPU students. The Project is not proposing to amend the City General Plan and is thereby consistent with all land use designations applied to the site. Thus, the proposed Project is consistent with the types, intensity, and patterns of land use envisioned for the site vicinity in the General Plan. As a result, the Project would not conflict with the land use assumptions or exceed the population or job growth projections used by Fresno COG to develop the RTP/SCS. The Fresno COG regional population, housing, and employment forecasts are based on the local plans and policies; and Fresno COG has incorporated these same projections into the RTP/SCS. Therefore, the proposed Project would be considered consistent with the population, housing, and employment growth projections utilized in the preparation of the RTP/SCS. Furthermore, FPU would utilize its existing staff and students to facilitate events at the Culture and Arts Center thus reducing the number of trips needed for new employees. Additionally, the Project site is located within 0.5 miles of 10 bus stops for the Fresno Area Express, promoting the use of bus transit within the City. The Project would not conflict with Fresno COG's regional forecasts for the location of the proposed land uses. While the Project would emit GHG emissions, implementing Fresno COG's RTP/SCS would greatly reduce the regional GHG emissions from transportation, helping to achieve 2020 and 2035 emission reduction targets.

The Project is consistent with the applicable plans and policies adopted for the purpose of reducing GHG emissions.

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ATTACHMENT A

Emissions Modeling Output

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Fresno Pacific University Culture and Arts Center

San Joaquin Valley Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Arena	26.76	1000sqft	5.50	26,758.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	45
Climate Zone	3			Operational Year	2022
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

Project Characteristics -

Land Use - Lot acreage updated to match the Project

Construction Phase - Dates updated to match the development scheduel. Construcion, paving and coating assumed to occur at the same time.

Demolition - Building area to be demolished estimated from google earth

Construction Off-road Equipment Mitigation - Tier 4 Final for Project Mitigation.

Mobile Land Use Mitigation -

Area Mitigation -

Water Mitigation -

Vehicle Trips - Treips updated to match the traffic impact analysis

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[illegible]

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tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	427.00
tblConstructionPhase	NumDays	230.00	427.00
tblConstructionPhase	NumDays	20.00	44.00
tblConstructionPhase	NumDays	20.00	427.00
tblConstructionPhase	NumDays	10.00	30.00
tblLandUse	LandUseSquareFeet	26,760.00	26,758.00
tblLandUse	LotAcreage	8.60	5.50
tblVehicleTrips	ST_TR	10.71	11.50
tblVehicleTrips	SU_TR	10.71	11.50
tblVehicleTrips	WD_TR	10.71	11.50

2.0 Emissions Summary

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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	0.0205	2.0291	1.2739	2.5500e-003	0.4401	0.0985	0.5386	0.2001	0.0912	0.2913	0.0000	226.1092	226.1092	0.0576	0.0000	227.5493
2021	0.5701	4.2270	4.4197	7.3000e-003	0.0327	0.2262	0.2589	8.7600e-003	0.2116	0.2204	0.0000	636.1984	636.1984	0.1615	0.0000	640.2349
2022	0.2998	2.1473	2.5130	4.1900e-003	0.0188	0.1096	0.1284	5.0400e-003	0.1026	0.1076	0.0000	365.1332	365.1332	0.0924	0.0000	367.4431
Maximum	0.5701	4.2270	4.4197	7.3000e-003	0.4401	0.2262	0.5386	0.2001	0.2116	0.2913	0.0000	636.1984	636.1984	0.1615	0.0000	640.2349

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	0.0403	0.2378	1.3409	2.5500e-003	0.1807	3.8900e-003	0.1846	0.0805	3.8700e-003	0.0844	0.0000	226.1090	226.1090	0.0576	0.0000	227.5490
2021	0.2129	0.5339	4.8819	7.3000e-003	0.0327	0.0111	0.0438	8.7600e-003	0.0111	0.0198	0.0000	636.1977	636.1977	0.1615	0.0000	640.2342
2022	0.1217	0.3045	2.8003	4.1900e-003	0.0188	6.3500e-003	0.0251	5.0400e-003	6.3400e-003	0.0114	0.0000	365.1328	365.1328	0.0924	0.0000	367.4427
Maximum	0.2129	0.5339	4.8819	7.3000e-003	0.1807	0.0111	0.1846	0.0805	0.0111	0.0844	0.0000	636.1977	636.1977	0.1615	0.0000	640.2342

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	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
Percent Reduction	65.04	87.19	-9.95	0.00	52.77	95.09	72.62	55.92	94.75	81.34	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	5-4-2020	8-3-2020	0.5070	0.0936
2	8-4-2020	11-3-2020	0.9838	0.1089
3	11-4-2020	2-3-2021	1.1852	0.1433
4	2-4-2021	5-3-2021	1.1687	0.1822
5	5-4-2021	8-3-2021	1.2079	0.1881
6	8-4-2021	11-3-2021	1.2080	0.1883
7	11-4-2021	2-3-2022	1.1581	0.1880
8	2-4-2022	5-3-2022	1.0374	0.1809
9	5-4-2022	8-3-2022	1.0267	0.1789
		Highest	1.2080	0.1883

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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	0.1231	0.0000	2.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.8000e-004	4.8000e-004	0.0000	0.0000	5.1000e-004
Energy	3.0100e-003	0.0274	0.0230	1.6000e-004		2.0800e-003	2.0800e-003		2.0800e-003	2.0800e-003	0.0000	98.4572	98.4572	3.6800e-003	1.1900e-003	98.9033
Mobile	0.0927	1.0039	0.8260	4.0000e-003	0.2279	3.3500e-003	0.2312	0.0613	3.1600e-003	0.0644	0.0000	371.8339	371.8339	0.0301	0.0000	372.5863
Waste						0.0000	0.0000		0.0000	0.0000	0.1502	0.0000	0.1502	8.8800e-003	0.0000	0.3722
Water						0.0000	0.0000		0.0000	0.0000	3.6571	18.8947	22.5518	0.3765	9.0500e-003	34.6594
Total	0.2189	1.0312	0.8492	4.1600e-003	0.2279	5.4300e-003	0.2333	0.0613	5.2400e-003	0.0665	3.8073	489.1863	492.9936	0.4191	0.0102	506.5217

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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	0.1231	0.0000	2.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.8000e-004	4.8000e-004	0.0000	0.0000	5.1000e-004
Energy	3.0100e-003	0.0274	0.0230	1.6000e-004		2.0800e-003	2.0800e-003		2.0800e-003	2.0800e-003	0.0000	98.4572	98.4572	3.6800e-003	1.1900e-003	98.9033
Mobile	0.0927	1.0039	0.8260	4.0000e-003	0.2279	3.3500e-003	0.2312	0.0613	3.1600e-003	0.0644	0.0000	371.8339	371.8339	0.0301	0.0000	372.5863
Waste						0.0000	0.0000		0.0000	0.0000	0.1502	0.0000	0.1502	8.8800e-003	0.0000	0.3722
Water						0.0000	0.0000		0.0000	0.0000	3.2051	16.6519	19.8570	0.3300	7.9300e-003	30.4685
Total	0.2189	1.0312	0.8492	4.1600e-003	0.2279	5.4300e-003	0.2333	0.0613	5.2400e-003	0.0665	3.3553	486.9435	490.2988	0.3726	9.1200e-003	502.3308

	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
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.87	0.46	0.55	11.10	10.94	0.83

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	Demolition	Demolition	7/1/2020	8/31/2020	5	44	
2	Site Preparation	Site Preparation	10/1/2020	11/11/2020	5	30	
3	Grading	Grading	11/12/2020	12/9/2020	5	20	
4	Building Construction	Building Construction	12/10/2020	7/31/2022	5	427	
5	Paving	Paving	12/10/2020	7/29/2022	5	427	
6	Architectural Coating	Architectural Coating	12/10/2020	7/29/2022	5	427	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 40,137; Non-Residential Outdoor: 13,379; Striped Parking Area: 0
(Architectural Coating – sqft)

OffRoad Equipment

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Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	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

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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
Demolition	6	15.00	0.00	807.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	11.00	4.00	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	2.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

3.2 Demolition - 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					0.0887	0.0000	0.0887	0.0134	0.0000	0.0134	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0729	0.7304	0.4786	8.5000e-004		0.0365	0.0365		0.0339	0.0339	0.0000	74.7969	74.7969	0.0211	0.0000	75.3248
Total	0.0729	0.7304	0.4786	8.5000e-004	0.0887	0.0365	0.1252	0.0134	0.0339	0.0474	0.0000	74.7969	74.7969	0.0211	0.0000	75.3248

Fresno Pacific University Culture and Arts Center - San Joaquin Valley Air Basin, Annual

3.2 Demolition - 2020**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	3.2200e-003	0.1124	0.0163	3.2000e-004	6.9000e-003	3.9000e-004	7.2900e-003	1.9000e-003	3.7000e-004	2.2700e-003	0.0000	30.6568	30.6568	1.7100e-003	0.0000	30.6996
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	1.3900e-003	9.5000e-004	9.6200e-003	3.0000e-005	2.6400e-003	2.0000e-005	2.6600e-003	7.0000e-004	2.0000e-005	7.2000e-004	0.0000	2.3692	2.3692	7.0000e-005	0.0000	2.3709
Total	4.6100e-003	0.1134	0.0259	3.5000e-004	9.5400e-003	4.1000e-004	9.9500e-003	2.6000e-003	3.9000e-004	2.9900e-003	0.0000	33.0260	33.0260	1.7800e-003	0.0000	33.0705

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					0.0346	0.0000	0.0346	5.2400e-003	0.0000	5.2400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0102	0.0441	0.5122	8.5000e-004		1.3600e-003	1.3600e-003		1.3600e-003	1.3600e-003	0.0000	74.7969	74.7969	0.0211	0.0000	75.3247
Total	0.0102	0.0441	0.5122	8.5000e-004	0.0346	1.3600e-003	0.0359	5.2400e-003	1.3600e-003	6.6000e-003	0.0000	74.7969	74.7969	0.0211	0.0000	75.3247

Fresno Pacific University Culture and Arts Center - San Joaquin Valley Air Basin, Annual

3.2 Demolition - 2020**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	3.2200e-003	0.1124	0.0163	3.2000e-004	6.9000e-003	3.9000e-004	7.2900e-003	1.9000e-003	3.7000e-004	2.2700e-003	0.0000	30.6568	30.6568	1.7100e-003	0.0000	30.6996
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	1.3900e-003	9.5000e-004	9.6200e-003	3.0000e-005	2.6400e-003	2.0000e-005	2.6600e-003	7.0000e-004	2.0000e-005	7.2000e-004	0.0000	2.3692	2.3692	7.0000e-005	0.0000	2.3709
Total	4.6100e-003	0.1134	0.0259	3.5000e-004	9.5400e-003	4.1000e-004	9.9500e-003	2.6000e-003	3.9000e-004	2.9900e-003	0.0000	33.0260	33.0260	1.7800e-003	0.0000	33.0705

3.3 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					0.2710	0.0000	0.2710	0.1490	0.0000	0.1490	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0612	0.6363	0.3227	5.7000e-004		0.0330	0.0330		0.0303	0.0303	0.0000	50.1460	50.1460	0.0162	0.0000	50.5515
Total	0.0612	0.6363	0.3227	5.7000e-004	0.2710	0.0330	0.3040	0.1490	0.0303	0.1793	0.0000	50.1460	50.1460	0.0162	0.0000	50.5515

Fresno Pacific University Culture and Arts Center - San Joaquin Valley Air Basin, Annual

3.3 Site Preparation - 2020**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	1.1400e-003	7.7000e-004	7.8700e-003	2.0000e-005	2.1600e-003	2.0000e-005	2.1700e-003	5.7000e-004	1.0000e-005	5.9000e-004	0.0000	1.9384	1.9384	6.0000e-005	0.0000	1.9398
Total	1.1400e-003	7.7000e-004	7.8700e-003	2.0000e-005	2.1600e-003	2.0000e-005	2.1700e-003	5.7000e-004	1.0000e-005	5.9000e-004	0.0000	1.9384	1.9384	6.0000e-005	0.0000	1.9398

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					0.1057	0.0000	0.1057	0.0581	0.0000	0.0581	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.9800e-003	0.0303	0.3130	5.7000e-004		9.3000e-004	9.3000e-004		9.3000e-004	9.3000e-004	0.0000	50.1460	50.1460	0.0162	0.0000	50.5514
Total	6.9800e-003	0.0303	0.3130	5.7000e-004	0.1057	9.3000e-004	0.1066	0.0581	9.3000e-004	0.0590	0.0000	50.1460	50.1460	0.0162	0.0000	50.5514

Fresno Pacific University Culture and Arts Center - San Joaquin Valley Air Basin, Annual

3.3 Site Preparation - 2020**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	1.1400e-003	7.7000e-004	7.8700e-003	2.0000e-005	2.1600e-003	2.0000e-005	2.1700e-003	5.7000e-004	1.0000e-005	5.9000e-004	0.0000	1.9384	1.9384	6.0000e-005	0.0000	1.9398
Total	1.1400e-003	7.7000e-004	7.8700e-003	2.0000e-005	2.1600e-003	2.0000e-005	2.1700e-003	5.7000e-004	1.0000e-005	5.9000e-004	0.0000	1.9384	1.9384	6.0000e-005	0.0000	1.9398

3.4 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					0.0655	0.0000	0.0655	0.0337	0.0000	0.0337	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0243	0.2639	0.1605	3.0000e-004		0.0127	0.0127		0.0117	0.0117	0.0000	26.0588	26.0588	8.4300e-003	0.0000	26.2694
Total	0.0243	0.2639	0.1605	3.0000e-004	0.0655	0.0127	0.0783	0.0337	0.0117	0.0454	0.0000	26.0588	26.0588	8.4300e-003	0.0000	26.2694

Fresno Pacific University Culture and Arts Center - San Joaquin Valley Air Basin, Annual

3.4 Grading - 2020**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	6.3000e-004	4.3000e-004	4.3700e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0769	1.0769	3.0000e-005	0.0000	1.0777
Total	6.3000e-004	4.3000e-004	4.3700e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0769	1.0769	3.0000e-005	0.0000	1.0777

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					0.0256	0.0000	0.0256	0.0131	0.0000	0.0131	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.6300e-003	0.0157	0.1775	3.0000e-004		4.8000e-004	4.8000e-004		4.8000e-004	4.8000e-004	0.0000	26.0587	26.0587	8.4300e-003	0.0000	26.2694
Total	3.6300e-003	0.0157	0.1775	3.0000e-004	0.0256	4.8000e-004	0.0260	0.0131	4.8000e-004	0.0136	0.0000	26.0587	26.0587	8.4300e-003	0.0000	26.2694

Fresno Pacific University Culture and Arts Center - San Joaquin Valley Air Basin, Annual

3.4 Grading - 2020**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	6.3000e-004	4.3000e-004	4.3700e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0769	1.0769	3.0000e-005	0.0000	1.0777
Total	6.3000e-004	4.3000e-004	4.3700e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0769	1.0769	3.0000e-005	0.0000	1.0777

3.5 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	0.0170	0.1535	0.1348	2.2000e-004		8.9400e-003	8.9400e-003		8.4000e-003	8.4000e-003	0.0000	18.5288	18.5288	4.5200e-003	0.0000	18.6418
Total	0.0170	0.1535	0.1348	2.2000e-004		8.9400e-003	8.9400e-003		8.4000e-003	8.4000e-003	0.0000	18.5288	18.5288	4.5200e-003	0.0000	18.6418

Fresno Pacific University Culture and Arts Center - San Joaquin Valley Air Basin, Annual

3.5 Building Construction - 2020**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	1.3000e-004	3.9000e-003	7.4000e-004	1.0000e-005	2.1000e-004	2.0000e-005	2.3000e-004	6.0000e-005	2.0000e-005	8.0000e-005	0.0000	0.8641	0.8641	7.0000e-005	0.0000	0.8658
Worker	3.7000e-004	2.5000e-004	2.5700e-003	1.0000e-005	7.0000e-004	1.0000e-005	7.1000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.6318	0.6318	2.0000e-005	0.0000	0.6322
Total	5.0000e-004	4.1500e-003	3.3100e-003	2.0000e-005	9.1000e-004	3.0000e-005	9.4000e-004	2.5000e-004	2.0000e-005	2.7000e-004	0.0000	1.4958	1.4958	9.0000e-005	0.0000	1.4980

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	2.6200e-003	0.0179	0.1397	2.2000e-004		3.3000e-004	3.3000e-004		3.3000e-004	3.3000e-004	0.0000	18.5288	18.5288	4.5200e-003	0.0000	18.6418
Total	2.6200e-003	0.0179	0.1397	2.2000e-004		3.3000e-004	3.3000e-004		3.3000e-004	3.3000e-004	0.0000	18.5288	18.5288	4.5200e-003	0.0000	18.6418

Fresno Pacific University Culture and Arts Center - San Joaquin Valley Air Basin, Annual

3.5 Building Construction - 2020**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	1.3000e-004	3.9000e-003	7.4000e-004	1.0000e-005	2.1000e-004	2.0000e-005	2.3000e-004	6.0000e-005	2.0000e-005	8.0000e-005	0.0000	0.8641	0.8641	7.0000e-005	0.0000	0.8658
Worker	3.7000e-004	2.5000e-004	2.5700e-003	1.0000e-005	7.0000e-004	1.0000e-005	7.1000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.6318	0.6318	2.0000e-005	0.0000	0.6322
Total	5.0000e-004	4.1500e-003	3.3100e-003	2.0000e-005	9.1000e-004	3.0000e-005	9.4000e-004	2.5000e-004	2.0000e-005	2.7000e-004	0.0000	1.4958	1.4958	9.0000e-005	0.0000	1.4980

3.5 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	0.2481	2.2749	2.1631	3.5100e-003		0.1251	0.1251		0.1176	0.1176	0.0000	302.2867	302.2867	0.0729	0.0000	304.1099
Total	0.2481	2.2749	2.1631	3.5100e-003		0.1251	0.1251		0.1176	0.1176	0.0000	302.2867	302.2867	0.0729	0.0000	304.1099

Fresno Pacific University Culture and Arts Center - San Joaquin Valley Air Basin, Annual

3.5 Building Construction - 2021**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	1.6800e-003	0.0576	0.0105	1.5000e-004	3.4600e-003	1.6000e-004	3.6200e-003	1.0000e-003	1.5000e-004	1.1500e-003	0.0000	13.9641	13.9641	1.0700e-003	0.0000	13.9907
Worker	5.5900e-003	3.6600e-003	0.0380	1.1000e-004	0.0115	8.0000e-005	0.0116	3.0500e-003	7.0000e-005	3.1200e-003	0.0000	9.9476	9.9476	2.6000e-004	0.0000	9.9542
Total	7.2700e-003	0.0612	0.0485	2.6000e-004	0.0149	2.4000e-004	0.0152	4.0500e-003	2.2000e-004	4.2700e-003	0.0000	23.9117	23.9117	1.3300e-003	0.0000	23.9450

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	0.0428	0.2916	2.2786	3.5100e-003		5.3200e-003	5.3200e-003		5.3200e-003	5.3200e-003	0.0000	302.2863	302.2863	0.0729	0.0000	304.1095
Total	0.0428	0.2916	2.2786	3.5100e-003		5.3200e-003	5.3200e-003		5.3200e-003	5.3200e-003	0.0000	302.2863	302.2863	0.0729	0.0000	304.1095

Fresno Pacific University Culture and Arts Center - San Joaquin Valley Air Basin, Annual

3.5 Building Construction - 2021**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	1.6800e-003	0.0576	0.0105	1.5000e-004	3.4600e-003	1.6000e-004	3.6200e-003	1.0000e-003	1.5000e-004	1.1500e-003	0.0000	13.9641	13.9641	1.0700e-003	0.0000	13.9907
Worker	5.5900e-003	3.6600e-003	0.0380	1.1000e-004	0.0115	8.0000e-005	0.0116	3.0500e-003	7.0000e-005	3.1200e-003	0.0000	9.9476	9.9476	2.6000e-004	0.0000	9.9542
Total	7.2700e-003	0.0612	0.0485	2.6000e-004	0.0149	2.4000e-004	0.0152	4.0500e-003	2.2000e-004	4.2700e-003	0.0000	23.9117	23.9117	1.3300e-003	0.0000	23.9450

3.5 Building Construction - 2022**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	0.1280	1.1712	1.2273	2.0200e-003		0.0607	0.0607		0.0571	0.0571	0.0000	173.7939	173.7939	0.0416	0.0000	174.8348
Total	0.1280	1.1712	1.2273	2.0200e-003		0.0607	0.0607		0.0571	0.0571	0.0000	173.7939	173.7939	0.0416	0.0000	174.8348

Fresno Pacific University Culture and Arts Center - San Joaquin Valley Air Basin, Annual

3.5 Building Construction - 2022**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	9.0000e-004	0.0313	5.5700e-003	8.0000e-005	1.9900e-003	8.0000e-005	2.0700e-003	5.7000e-004	8.0000e-005	6.5000e-004	0.0000	7.9508	7.9508	5.9000e-004	0.0000	7.9656
Worker	2.9800e-003	1.8800e-003	0.0199	6.0000e-005	6.6000e-003	4.0000e-005	6.6400e-003	1.7500e-003	4.0000e-005	1.7900e-003	0.0000	5.5127	5.5127	1.3000e-004	0.0000	5.5161
Total	3.8800e-003	0.0332	0.0255	1.4000e-004	8.5900e-003	1.2000e-004	8.7100e-003	2.3200e-003	1.2000e-004	2.4400e-003	0.0000	13.4635	13.4635	7.2000e-004	0.0000	13.4817

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	0.0246	0.1676	1.3095	2.0200e-003		3.0600e-003	3.0600e-003		3.0600e-003	3.0600e-003	0.0000	173.7937	173.7937	0.0416	0.0000	174.8346
Total	0.0246	0.1676	1.3095	2.0200e-003		3.0600e-003	3.0600e-003		3.0600e-003	3.0600e-003	0.0000	173.7937	173.7937	0.0416	0.0000	174.8346

Fresno Pacific University Culture and Arts Center - San Joaquin Valley Air Basin, Annual

3.5 Building Construction - 2022**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	9.0000e-004	0.0313	5.5700e-003	8.0000e-005	1.9900e-003	8.0000e-005	2.0700e-003	5.7000e-004	8.0000e-005	6.5000e-004	0.0000	7.9508	7.9508	5.9000e-004	0.0000	7.9656
Worker	2.9800e-003	1.8800e-003	0.0199	6.0000e-005	6.6000e-003	4.0000e-005	6.6400e-003	1.7500e-003	4.0000e-005	1.7900e-003	0.0000	5.5127	5.5127	1.3000e-004	0.0000	5.5161
Total	3.8800e-003	0.0332	0.0255	1.4000e-004	8.5900e-003	1.2000e-004	8.7100e-003	2.3200e-003	1.2000e-004	2.4400e-003	0.0000	13.4635	13.4635	7.2000e-004	0.0000	13.4817

3.6 Paving - 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	0.0109	0.1125	0.1172	1.8000e-004		6.0200e-003	6.0200e-003		5.5400e-003	5.5400e-003	0.0000	16.0226	16.0226	5.1800e-003	0.0000	16.1521
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0109	0.1125	0.1172	1.8000e-004		6.0200e-003	6.0200e-003		5.5400e-003	5.5400e-003	0.0000	16.0226	16.0226	5.1800e-003	0.0000	16.1521

Fresno Pacific University Culture and Arts Center - San Joaquin Valley Air Basin, Annual

3.6 Paving - 2020**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	5.1000e-004	3.4000e-004	3.5000e-003	1.0000e-005	9.6000e-004	1.0000e-005	9.7000e-004	2.5000e-004	1.0000e-005	2.6000e-004	0.0000	0.8615	0.8615	2.0000e-005	0.0000	0.8621
Total	5.1000e-004	3.4000e-004	3.5000e-003	1.0000e-005	9.6000e-004	1.0000e-005	9.7000e-004	2.5000e-004	1.0000e-005	2.6000e-004	0.0000	0.8615	0.8615	2.0000e-005	0.0000	0.8621

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	2.2400e-003	9.7200e-003	0.1384	1.8000e-004		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	16.0226	16.0226	5.1800e-003	0.0000	16.1521
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	2.2400e-003	9.7200e-003	0.1384	1.8000e-004		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	16.0226	16.0226	5.1800e-003	0.0000	16.1521

Fresno Pacific University Culture and Arts Center - San Joaquin Valley Air Basin, Annual

3.6 Paving - 2020**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	5.1000e-004	3.4000e-004	3.5000e-003	1.0000e-005	9.6000e-004	1.0000e-005	9.7000e-004	2.5000e-004	1.0000e-005	2.6000e-004	0.0000	0.8615	0.8615	2.0000e-005	0.0000	0.8621
Total	5.1000e-004	3.4000e-004	3.5000e-003	1.0000e-005	9.6000e-004	1.0000e-005	9.7000e-004	2.5000e-004	1.0000e-005	2.6000e-004	0.0000	0.8615	0.8615	2.0000e-005	0.0000	0.8621

3.6 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	0.1639	1.6859	1.9123	2.9700e-003		0.0884	0.0884		0.0814	0.0814	0.0000	261.3064	261.3064	0.0845	0.0000	263.4192
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.1639	1.6859	1.9123	2.9700e-003		0.0884	0.0884		0.0814	0.0814	0.0000	261.3064	261.3064	0.0845	0.0000	263.4192

Fresno Pacific University Culture and Arts Center - San Joaquin Valley Air Basin, Annual

3.6 Paving - 2021**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	7.6200e-003	4.9900e-003	0.0518	1.5000e-004	0.0157	1.1000e-004	0.0158	4.1600e-003	1.0000e-004	4.2600e-003	0.0000	13.5650	13.5650	3.6000e-004	0.0000	13.5739
Total	7.6200e-003	4.9900e-003	0.0518	1.5000e-004	0.0157	1.1000e-004	0.0158	4.1600e-003	1.0000e-004	4.2600e-003	0.0000	13.5650	13.5650	3.6000e-004	0.0000	13.5739

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	0.0366	0.1586	2.2571	2.9700e-003		4.8800e-003	4.8800e-003		4.8800e-003	4.8800e-003	0.0000	261.3061	261.3061	0.0845	0.0000	263.4189
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0366	0.1586	2.2571	2.9700e-003		4.8800e-003	4.8800e-003		4.8800e-003	4.8800e-003	0.0000	261.3061	261.3061	0.0845	0.0000	263.4189

Fresno Pacific University Culture and Arts Center - San Joaquin Valley Air Basin, Annual

3.6 Paving - 2021**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	7.6200e-003	4.9900e-003	0.0518	1.5000e-004	0.0157	1.1000e-004	0.0158	4.1600e-003	1.0000e-004	4.2600e-003	0.0000	13.5650	13.5650	3.6000e-004	0.0000	13.5739
Total	7.6200e-003	4.9900e-003	0.0518	1.5000e-004	0.0157	1.1000e-004	0.0158	4.1600e-003	1.0000e-004	4.2600e-003	0.0000	13.5650	13.5650	3.6000e-004	0.0000	13.5739

3.6 Paving - 2022**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	0.0827	0.8344	1.0935	1.7100e-003		0.0426	0.0426		0.0392	0.0392	0.0000	150.2067	150.2067	0.0486	0.0000	151.4212
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0827	0.8344	1.0935	1.7100e-003		0.0426	0.0426		0.0392	0.0392	0.0000	150.2067	150.2067	0.0486	0.0000	151.4212

Fresno Pacific University Culture and Arts Center - San Joaquin Valley Air Basin, Annual

3.6 Paving - 2022**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	4.0600e-003	2.5600e-003	0.0271	8.0000e-005	8.9900e-003	6.0000e-005	9.0500e-003	2.3900e-003	6.0000e-005	2.4500e-003	0.0000	7.5174	7.5174	1.8000e-004	0.0000	7.5220
Total	4.0600e-003	2.5600e-003	0.0271	8.0000e-005	8.9900e-003	6.0000e-005	9.0500e-003	2.3900e-003	6.0000e-005	2.4500e-003	0.0000	7.5174	7.5174	1.8000e-004	0.0000	7.5220

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	0.0210	0.0912	1.2972	1.7100e-003		2.8000e-003	2.8000e-003		2.8000e-003	2.8000e-003	0.0000	150.2065	150.2065	0.0486	0.0000	151.4210
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0210	0.0912	1.2972	1.7100e-003		2.8000e-003	2.8000e-003		2.8000e-003	2.8000e-003	0.0000	150.2065	150.2065	0.0486	0.0000	151.4210

Fresno Pacific University Culture and Arts Center - San Joaquin Valley Air Basin, Annual

3.6 Paving - 2022**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	4.0600e-003	2.5600e-003	0.0271	8.0000e-005	8.9900e-003	6.0000e-005	9.0500e-003	2.3900e-003	6.0000e-005	2.4500e-003	0.0000	7.5174	7.5174	1.8000e-004	0.0000	7.5220
Total	4.0600e-003	2.5600e-003	0.0271	8.0000e-005	8.9900e-003	6.0000e-005	9.0500e-003	2.3900e-003	6.0000e-005	2.4500e-003	0.0000	7.5174	7.5174	1.8000e-004	0.0000	7.5220

3.7 Architectural Coating - 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					
Archit. Coating	6.9700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9400e-003	0.0135	0.0147	2.0000e-005		8.9000e-004	8.9000e-004		8.9000e-004	8.9000e-004	0.0000	2.0426	2.0426	1.6000e-004	0.0000	2.0466
Total	8.9100e-003	0.0135	0.0147	2.0000e-005		8.9000e-004	8.9000e-004		8.9000e-004	8.9000e-004	0.0000	2.0426	2.0426	1.6000e-004	0.0000	2.0466

Fresno Pacific University Culture and Arts Center - San Joaquin Valley Air Basin, Annual

3.7 Architectural Coating - 2020**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	7.0000e-005	5.0000e-005	4.7000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1149	0.1149	0.0000	0.0000	0.1150
Total	7.0000e-005	5.0000e-005	4.7000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1149	0.1149	0.0000	0.0000	0.1150

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	6.9700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.4000e-004	1.0300e-003	0.0147	2.0000e-005		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	2.0426	2.0426	1.6000e-004	0.0000	2.0466
Total	7.2100e-003	1.0300e-003	0.0147	2.0000e-005		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	2.0426	2.0426	1.6000e-004	0.0000	2.0466

Fresno Pacific University Culture and Arts Center - San Joaquin Valley Air Basin, Annual

3.7 Architectural Coating - 2020**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	7.0000e-005	5.0000e-005	4.7000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1149	0.1149	0.0000	0.0000	0.1150
Total	7.0000e-005	5.0000e-005	4.7000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1149	0.1149	0.0000	0.0000	0.1150

3.7 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	0.1137					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0286	0.1993	0.2372	3.9000e-004		0.0123	0.0123		0.0123	0.0123	0.0000	33.3200	33.3200	2.2900e-003	0.0000	33.3771
Total	0.1423	0.1993	0.2372	3.9000e-004		0.0123	0.0123		0.0123	0.0123	0.0000	33.3200	33.3200	2.2900e-003	0.0000	33.3771

Fresno Pacific University Culture and Arts Center - San Joaquin Valley Air Basin, Annual

3.7 Architectural Coating - 2021**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	1.0200e-003	6.7000e-004	6.9000e-003	2.0000e-005	2.0900e-003	1.0000e-005	2.1000e-003	5.5000e-004	1.0000e-005	5.7000e-004	0.0000	1.8087	1.8087	5.0000e-005	0.0000	1.8099
Total	1.0200e-003	6.7000e-004	6.9000e-003	2.0000e-005	2.0900e-003	1.0000e-005	2.1000e-003	5.5000e-004	1.0000e-005	5.7000e-004	0.0000	1.8087	1.8087	5.0000e-005	0.0000	1.8099

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	0.1137					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.8800e-003	0.0168	0.2391	3.9000e-004		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	33.3199	33.3199	2.2900e-003	0.0000	33.3771
Total	0.1176	0.0168	0.2391	3.9000e-004		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	33.3199	33.3199	2.2900e-003	0.0000	33.3771

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3.7 Architectural Coating - 2021**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	1.0200e-003	6.7000e-004	6.9000e-003	2.0000e-005	2.0900e-003	1.0000e-005	2.1000e-003	5.5000e-004	1.0000e-005	5.7000e-004	0.0000	1.8087	1.8087	5.0000e-005	0.0000	1.8099
Total	1.0200e-003	6.7000e-004	6.9000e-003	2.0000e-005	2.0900e-003	1.0000e-005	2.1000e-003	5.5000e-004	1.0000e-005	5.7000e-004	0.0000	1.8087	1.8087	5.0000e-005	0.0000	1.8099

3.7 Architectural Coating - 2022**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	0.0654					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0153	0.1056	0.1360	2.2000e-004		6.1300e-003	6.1300e-003		6.1300e-003	6.1300e-003	0.0000	19.1494	19.1494	1.2500e-003	0.0000	19.1806
Total	0.0807	0.1056	0.1360	2.2000e-004		6.1300e-003	6.1300e-003		6.1300e-003	6.1300e-003	0.0000	19.1494	19.1494	1.2500e-003	0.0000	19.1806

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3.7 Architectural Coating - 2022**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	5.4000e-004	3.4000e-004	3.6200e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0023	1.0023	2.0000e-005	0.0000	1.0029
Total	5.4000e-004	3.4000e-004	3.6200e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0023	1.0023	2.0000e-005	0.0000	1.0029

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	0.0654					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.2300e-003	9.6600e-003	0.1374	2.2000e-004		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	19.1494	19.1494	1.2500e-003	0.0000	19.1806
Total	0.0676	9.6600e-003	0.1374	2.2000e-004		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	19.1494	19.1494	1.2500e-003	0.0000	19.1806

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3.7 Architectural Coating - 2022**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	5.4000e-004	3.4000e-004	3.6200e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0023	1.0023	2.0000e-005	0.0000	1.0029
Total	5.4000e-004	3.4000e-004	3.6200e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0023	1.0023	2.0000e-005	0.0000	1.0029

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

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	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	0.0927	1.0039	0.8260	4.0000e-003	0.2279	3.3500e-003	0.2312	0.0613	3.1600e-003	0.0644	0.0000	371.8339	371.8339	0.0301	0.0000	372.5863
Unmitigated	0.0927	1.0039	0.8260	4.0000e-003	0.2279	3.3500e-003	0.2312	0.0613	3.1600e-003	0.0644	0.0000	371.8339	371.8339	0.0301	0.0000	372.5863

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Arena	307.74	307.74	307.74	597,613	597,613
Total	307.74	307.74	307.74	597,613	597,613

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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
Arena	9.50	7.30	7.30	0.00	81.00	19.00	66	28	6

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Arena	0.511925	0.031902	0.170344	0.119204	0.018408	0.005097	0.021580	0.111258	0.001794	0.001564	0.005229	0.000954	0.000741

5.0 Energy Detail

Historical Energy Use: N

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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	68.6567	68.6567	3.1000e-003	6.4000e-004	68.9257
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	68.6567	68.6567	3.1000e-003	6.4000e-004	68.9257
NaturalGas Mitigated	3.0100e-003	0.0274	0.0230	1.6000e-004		2.0800e-003	2.0800e-003		2.0800e-003	2.0800e-003	0.0000	29.8005	29.8005	5.7000e-004	5.5000e-004	29.9776
NaturalGas Unmitigated	3.0100e-003	0.0274	0.0230	1.6000e-004		2.0800e-003	2.0800e-003		2.0800e-003	2.0800e-003	0.0000	29.8005	29.8005	5.7000e-004	5.5000e-004	29.9776

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					
Arena	558439	3.0100e-003	0.0274	0.0230	1.6000e-004		2.0800e-003	2.0800e-003		2.0800e-003	2.0800e-003	0.0000	29.8005	29.8005	5.7000e-004	5.5000e-004	29.9776
Total		3.0100e-003	0.0274	0.0230	1.6000e-004		2.0800e-003	2.0800e-003		2.0800e-003	2.0800e-003	0.0000	29.8005	29.8005	5.7000e-004	5.5000e-004	29.9776

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5.2 Energy by Land Use - NaturalGas**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					
Arena	558439	3.0100e-003	0.0274	0.0230	1.6000e-004		2.0800e-003	2.0800e-003		2.0800e-003	2.0800e-003	0.0000	29.8005	29.8005	5.7000e-004	5.5000e-004	29.9776
Total		3.0100e-003	0.0274	0.0230	1.6000e-004		2.0800e-003	2.0800e-003		2.0800e-003	2.0800e-003	0.0000	29.8005	29.8005	5.7000e-004	5.5000e-004	29.9776

5.3 Energy by Land Use - Electricity**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Arena	236006	68.6567	3.1000e-003	6.4000e-004	68.9257
Total		68.6567	3.1000e-003	6.4000e-004	68.9257

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5.3 Energy by Land Use - Electricity**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Arena	236006	68.6567	3.1000e-003	6.4000e-004	68.9257
Total		68.6567	3.1000e-003	6.4000e-004	68.9257

6.0 Area Detail**6.1 Mitigation Measures Area**

No Hearths Installed

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	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	0.1231	0.0000	2.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.8000e-004	4.8000e-004	0.0000	0.0000	5.1000e-004
Unmitigated	0.1231	0.0000	2.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.8000e-004	4.8000e-004	0.0000	0.0000	5.1000e-004

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	0.0186					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1045					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e-005	0.0000	2.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.8000e-004	4.8000e-004	0.0000	0.0000	5.1000e-004
Total	0.1231	0.0000	2.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.8000e-004	4.8000e-004	0.0000	0.0000	5.1000e-004

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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	0.0186					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1045					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e-005	0.0000	2.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.8000e-004	4.8000e-004	0.0000	0.0000	5.1000e-004
Total	0.1231	0.0000	2.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.8000e-004	4.8000e-004	0.0000	0.0000	5.1000e-004

7.0 Water Detail**7.1 Mitigation Measures Water**

Install Low Flow Bathroom Faucet

Install Low Flow Toilet

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	19.8570	0.3300	7.9300e-003	30.4685
Unmitigated	22.5518	0.3765	9.0500e-003	34.6594

7.2 Water by Land Use**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Arena	11.5274 / 0.735792	22.5518	0.3765	9.0500e-003	34.6594
Total		22.5518	0.3765	9.0500e-003	34.6594

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7.2 Water by Land Use**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Arena	10.1026 / 0.735792	19.8570	0.3300	7.9300e-003	30.4685
Total		19.8570	0.3300	7.9300e-003	30.4685

8.0 Waste Detail**8.1 Mitigation Measures Waste****Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.1502	8.8800e-003	0.0000	0.3722
Unmitigated	0.1502	8.8800e-003	0.0000	0.3722

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8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Arena	0.74	0.1502	8.8800e-003	0.0000	0.3722
Total		0.1502	8.8800e-003	0.0000	0.3722

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Arena	0.74	0.1502	8.8800e-003	0.0000	0.3722
Total		0.1502	8.8800e-003	0.0000	0.3722

9.0 Operational Offroad

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

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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

ATTACHMENT C

FRESNO PACIFIC UNIVERSITY CULTURE AND ARTS CENTER TRAFFIC IMPACT ANALYSIS

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Traffic Impact Analysis

Fresno Pacific University Culture and Arts Center

Located on the Southeast Quadrant of
Chestnut Avenue and Butler Avenue

In the City of Fresno, California

Prepared for:

Fresno Pacific University
1717 S. Chestnut Avenue
Fresno, CA 93702

March 19, 2020

Project No. 004-108



Traffic Engineering, Transportation Planning, & Parking Solutions

516 W. Shaw Ave., Ste. 103

Fresno, CA 93704

Phone: (559) 570-8991

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Traffic Engineering, Transportation Planning, & Parking Solutions

Traffic Impact Analysis

For the Fresno Pacific University Culture and Arts Center located on the southeast quadrant of Chestnut Avenue and Butler Avenue

In the City of Fresno, CA

March 19, 2020

This Traffic Impact Analysis has been prepared under the direction of a licensed Traffic Engineer. The licensed Traffic Engineer attests to the technical information contained therein and has judged the qualifications of any technical specialists providing engineering data from which recommendations, conclusions, and decisions are based.

Prepared by:

A handwritten signature in black ink, reading "Jose L Benavides", is written over a horizontal line.

Jose Luis Benavides, PE, TE

President



Traffic Engineering, Transportation Planning, & Parking Solutions

516 W. Shaw Ave., Ste. 103

Fresno, CA 93704

Phone: (559) 570-8991

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Table of Contents

Introduction and Summary.....	1
Introduction	1
Summary	1
Existing Traffic Conditions.....	1
Existing plus Project Traffic Conditions.....	2
Near Term plus Project Traffic Conditions.....	2
Cumulative Year 2035 plus Project Traffic Conditions.....	2
Queuing Analysis.....	2
Scope of Work	3
Study Facilities	4
Study Intersections	4
Study Scenarios.....	5
Existing Traffic Conditions.....	5
Existing plus Project Traffic Conditions.....	5
Near Term plus Project Traffic Conditions.....	5
Cumulative Year 2035 plus Project Traffic Conditions.....	5
Level of Service Analysis Methodology	6
Criteria of Significance	7
Operational Analysis Assumptions and Defaults	8
Existing Traffic Conditions	9
Roadway Network.....	9
Collision Analysis.....	10
Results of Existing Level of Service Analysis	11
Existing plus Project Traffic Conditions	14
Project Description.....	14
Project Access	14
Project Parking.....	14
Project Trip Generation	15
Trip Distribution	16
Bikeways	16

Walkways	16
Transit	16
Vehicle Miles Traveled Evaluation	17
Results of Existing plus Project Level of Service Analysis	18
Near Term plus Project Traffic Conditions.....	22
Description of Near Term Projects.....	22
Results of Near Term plus Project Level of Service Analysis.....	23
Cumulative Year 2035 plus Project Traffic Conditions.....	26
Results of Cumulative Year 2035 plus Project Level of Service Analysis	26
Queuing Analysis	28
Conclusions and Recommendations.....	29
Existing Traffic Conditions.....	29
Existing plus Project Traffic Conditions.....	29
Near Term plus Project Traffic Conditions.....	30
Cumulative Year 2035 plus Project Traffic Conditions.....	30
Queuing Analysis.....	30
Study Participants	31
References.....	32

List of Figures

Figure 1: Vicinity Map	12
Figure 2: Existing - Traffic Volumes, Geometrics and Controls.....	13
Figure 3: Project Site Plan	19
Figure 4: Project Only Trips	20
Figure 5: Existing plus Project - Traffic Volumes, Geometrics and Controls	21
Figure 6: Near Term Projects' Trip Assignment	24
Figure 7: Near Term plus Project - Traffic Volumes, Geometrics and Controls.....	25
Figure 8: Cumulative Year 2035 plus Project - Traffic Volumes, Geometrics and Controls.....	27

List of Tables

Table I: Five-Year Intersection Collision Analysis.....	10
Table II: Existing Intersection LOS Results	11
Table III: Project Trip Generation	15
Table IV: Existing Trip Generation	15
Table V: Difference in Trip Generation.....	15
Table VI: Existing plus Project Intersection LOS Results	18
Table VII: Near Term Projects' Trip Generation.....	22
Table VIII: Near Term plus Project Intersection LOS Results.....	23
Table IX: Cumulative Year 2035 plus Project Intersection LOS Results	26
Table X: Queuing Analysis.....	28

List of Appendices

Appendix A: Scope of Work
Appendix B: Traffic Counts
Appendix C: Traffic Modeling
Appendix D: Methodology
Appendix E: Collision Data
Appendix F: Existing Traffic Conditions
Appendix G: Existing plus Project Traffic Conditions
Appendix H: Near Term plus Project Traffic Conditions
Appendix I: Cumulative Year 2035 plus Project Traffic Conditions
Appendix J: Parking Covenant

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Introduction and Summary

Introduction

This report describes a Traffic Impact Analysis (TIA) prepared by JLB Traffic Engineering, Inc. (JLB) for the proposed Fresno Pacific University Culture and Arts Center (Project) located on the southeast quadrant of Chestnut Avenue and Butler Avenue in the City of Fresno. The Project proposes to construct a 26,758 square-foot culture and arts center with a maximum auditorium capacity of 400 seats.

The proposed Project will assist in fulfilling Fresno Pacific University's mission to provide a range of faith-based social and cultural experiences for their students and its host community by providing a venue for acting, cultural, educational, and music events. The proposed Project will also provide a venue for students to plan, perform and manage such events. Community sponsored events will also occur at the proposed Project site providing a peaceful and attractive venue for cultural and social events. Fresno Pacific University owns the properties on which the proposed Project site is located. The existing residences owned by Fresno Pacific University will be removed to accommodate the proposed Project. The residences to be removed include five (5) seminary homes – one (1) garage and four (4) single-family homes – at the following locations: a) 4824 E. Butler Ave. (APN 473-020-37), b) 4838 E. Butler Ave. (APN 473-061-01), c) 4846 E. Butler Ave. (APN 473-061-02), d) 4845 E. Townsend Ave. (APN 473-061-09), and e) 4837 E. Townsend Ave. (APN 473-061-10). Based on information provided to JLB, the Project is consistent with the City of Fresno 2035 General Plan. Figure 1 shows the location of the proposed Project site relative to the surrounding roadway network.

The purpose of the TIA is to evaluate the potential on-site and off-site traffic impacts, identify short-term and long-term roadway and circulation needs, determine potential mitigation measures, and identify any critical traffic issues that should be addressed in the on-going planning process. The TIA primarily focused on evaluating traffic conditions at study intersections that may potentially be impacted by the proposed Project. The Scope of Work was prepared via consultation with City of Fresno, County of Fresno and Caltrans staff.

Summary

The potential traffic impacts of the proposed Project were evaluated in accordance with the standards set forth by the Level of Service (LOS) policy of the City of Fresno, County of Fresno and Caltrans.

Existing Traffic Conditions

- JLB conducted a search of the Statewide Integrated Traffic Records System (SWITRS) to review collision reports for the most recent five-year period (January 1, 2015 to December 31, 2019). In the five-year period, a total of 3 collisions were reported within the influence zone of the existing study intersection.
- JLB analyzed the data contained within the SWITRS database for the five-year analysis period, but was unable to reach a conclusion that would justify the modification of lane geometrics or traffic controls at the existing study intersection. As a result, the number of correctable collisions experienced at the study intersection are considered less than significant.

- At present, the intersection of Winery Avenue and Butler Avenue operates at an acceptable LOS during the PM peak period.

Existing plus Project Traffic Conditions

- JLB analyzed the location of the proposed access points relative to the existing local roads and driveways in the Project's vicinity. A review of the Project access point to be constructed indicates that it is located at a point that minimizes traffic operational impacts to the existing roadway network.
- In order to help improve traffic safety and operation at the exit only access, it is recommended that two (2) 12" x 18" "EXIT ONLY, DO NOT ENTER" signs be installed to prevent traffic from entering the Project site in the wrong direction of travel. The signs shall be installed on each side of the driveway with one located on the west side of the driveway facing southeast and one on the east side of the driveway facing southwest. It is also recommended that a Type 1 arrow be added approximately five (5) feet behind the back of the driveway and be repainted once it starts to fade.
- It is recommended that the Project retain the Class II Bike Lane along its frontage to Butler Avenue.
- It is recommended that the Project retain walkways that are ADA compliant along its frontage to Butler Avenue.
- At buildout, the proposed Project is estimated to generate a maximum of 296 daily trips and 132 PM peak hour trips.
- Based on the Fresno COG model run, the Project is anticipated to generate an average of 6.20 VMT per trip.
- Under this scenario, the intersection of Winery Avenue and Butler Avenue is projected to operate at an acceptable LOS during the PM peak period.

Near Term plus Project Traffic Conditions

- The total trip generation for the Near Term Projects is 51,510 daily trips and 5,077 PM peak hour trips.
- Under this scenario, the intersection of Winery Avenue and Butler Avenue is projected to operate at an acceptable LOS during the PM peak period.

Cumulative Year 2035 plus Project Traffic Conditions

- Under this scenario, the intersection of Winery Avenue and Butler Avenue is projected to operate at an acceptable LOS during the PM peak period.

Queuing Analysis

- It is recommended that the City consider left-turn and right-turn lane storage lengths as indicated in the Queuing Analysis.

Scope of Work

The TIA focused on evaluating traffic conditions at study intersections that may potentially be impacted by the proposed Project. On January 9, 2020, a Draft Scope of Work for the preparation of a Traffic Impact Analysis for this Project was provided to the City of Fresno, County of Fresno and Caltrans for their review and comment. Any comments to the proposed Scope of Work were to be provided by January 30, 2020.

On January 24, 2020, Caltrans responded and approved the Draft Scope of Work as presented. On January 27, 2020, the County of Fresno responded to the Draft Scope of Work. The County of Fresno requested that an updated Draft Scope of Work that included trip distribution percentages, a near term no project scenario, and a cumulative year no project scenario be provided. On January 29, 2020, the City of Fresno responded to the Draft Scope of Work and requested a trip trace for all access points to the Project. On January 30, 2020, JLB provided the City and County of Fresno with the Project's trip trace to all access points. On January 31, 2020, the County of Fresno recommended for a Traffic Management Plan but deferred this request to the City. On February 4, 2020, the City of Fresno noted no additional comments to the Scope of Work and requested that the Project's trip trace to all access points be included in the Report. On February 5, 2020, the County of Fresno retracted their request to include a near term no project scenario and a cumulative year no project scenario since the proposed Project is consistent with the City of Fresno 2035 General Plan. Based on the comments received, the TIA includes the Project's trip trace to all access points as requested by the City of Fresno. The Draft Scope of Work and the comments received from the lead agency and responsible agencies are included in Appendix A.

Study Facilities

The existing peak hour turning movement volume counts were conducted at the study intersection on October 2019, while schools in the vicinity of the proposed Project were in session. The intersection turning movement counts included pedestrian volumes. The traffic counts for the existing study intersections are contained in Appendix B. The existing intersection turning movement volumes, intersection geometrics and traffic controls are illustrated in Figure 2.

Study Intersections

1. Winery Avenue / Butler Avenue

Study Scenarios

Existing Traffic Conditions

This scenario evaluates the Existing Traffic Conditions based on existing traffic volumes and roadway conditions from traffic counts and field surveys conducted on October 2019.

Existing plus Project Traffic Conditions

This scenario evaluates total traffic volumes and roadway conditions based on the Existing plus Project Traffic Conditions. The Existing plus Project traffic volumes were obtained by adding the Project Only Trips to the Existing Traffic Conditions scenario. The Project Only Trips to the study facilities were developed based on existing travel patterns, the Fresno COG Project Select Zone, the existing roadway network, engineering judgment, data provided by the developer, knowledge of the study area, existing residential and commercial densities, and the City of Fresno 2035 General Plan Circulation Element in the vicinity of the Project. The Fresno COG Models for the Project Select Zone are contained in Appendix C.

Near Term plus Project Traffic Conditions

This scenario evaluates total traffic volumes and roadway conditions based on the Near Term plus Project Traffic Conditions. The Near Term plus Project traffic volumes were obtained by adding the Near Term related trips to the Existing plus Project Traffic Conditions scenario.

Cumulative Year 2035 plus Project Traffic Conditions

This scenario evaluates total traffic volumes and roadway conditions based on the Cumulative Year 2035 plus Project Traffic Conditions. The Cumulative Year 2035 plus Project traffic volumes were obtained from the Fresno COG traffic model runs (Base Year 2020 and Cumulative Year 2035) and existing traffic counts. Under this scenario, the increment method, as recommended by the Model Steering Committee was utilized to determine the Cumulative Year 2035 plus Project traffic volumes. The Fresno COG Models are contained in Appendix C.

Level of Service Analysis Methodology

Level of Service (LOS) is a qualitative index of the performance of an element of the transportation system. LOS is a rating scale running from “A” to “F”, with “A” indicating no congestion of any kind and “F” indicating unacceptable congestion and delays. LOS in this study describes the operating conditions for signalized and unsignalized intersections.

The *Highway Capacity Manual* (HCM) 6th Edition is the standard reference published by the Transportation Research Board and contains the specific criteria and methods to be used in assessing LOS. Synchro software was used to define LOS in this study. Details regarding these calculations are included in Appendix D.

Criteria of Significance

The City of Fresno 2035 General Plan has established various degrees of acceptable LOS on its major streets, which are dependent on four (4) Traffic Impact Zones (TIZ) within the City. The standard LOS threshold for TIZ I is LOS F, that for TIZ II is LOS E, that for TIZ III is LOS D, and that for TIZ IV is LOS E. Additionally, the 2035 MEIR made findings of overriding consideration to allow a lower LOS threshold than that established by the underlying TIZ's. For those cases in which a LOS criterion for a roadway segment differs from that of the underlying TIZ, such criteria are identified in the roadway description. In this analysis, the study intersection falls within TIZ II and utilizes LOS E to evaluate the potential significance of LOS impacts pursuant to the City of Fresno 2035 General Plan.

The County of Fresno has established LOS C as the acceptable level of traffic congestion on county roads and streets that fall entirely outside the Sphere of Influence (SOI) of a City. For those areas that fall within the SOI of a City, the LOS criteria of the City are the criteria of significance used in this report. LOS C is used to evaluate the potential significance of LOS impacts to Fresno County intersections that fall outside the City of Fresno SOI. In this case, all study facilities fall within the City of Fresno SOI, therefore, the City of Fresno LOS is utilized.

Caltrans endeavors to maintain a target LOS at the transition between LOS C and D on State highway facilities consistent with the *Caltrans Guide for the Preparation of Traffic Impact Studies* dated December 2002. However, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS. In this TIA, however, all study facilities fall within the City of Fresno SOI. Therefore, the City of Fresno LOS threshold is utilized.

Operational Analysis Assumptions and Defaults

The following operational analysis values, assumptions and defaults were used in this study to ensure a consistent analysis of LOS among the various scenarios.

- Yellow time consistent with the California Manual of Uniform Traffic Control Devices (CA MUTCD) based on approach speeds
- Yellow time of 3.2 seconds for left-turn phases
- All-red clearance intervals of 1.0 second for all phases
- Walk intervals of 7.0 seconds
- Flashing Don't Walk based on 3.5 feet/second walking speed with yellow plus all-red clearance subtracted and 2.0 seconds added
- All new or modified signals utilize protective left-turn phasing
- A 3 percent heavy vehicle factor
- The number of observed pedestrians at the existing intersection was utilized under all study scenarios
- An average of 3 pedestrian calls per hour at the signalized intersection
- At the existing intersection, the observed approach Peak Hour Factor (PHF) is utilized in the Existing, Existing plus Project, and Near Term plus Project scenarios
- A PHF of 0.92, or the existing PHF if higher, is utilized for the existing intersection under the Cumulative Year 2035 scenario

Existing Traffic Conditions

Roadway Network

The Project site and surrounding study area are illustrated in Figure 1. Important roadways serving the Project are discussed below.

Winery Avenue is an existing north-south two-lane undivided roadway in the vicinity of the proposed Project site. In this area, Winery Avenue exists as a two-lane undivided local roadway between Balch Avenue and Lane Avenue, a two-lane undivided collector between Lane Avenue and Butler Avenue, and a two-lane undivided local roadway between Butler Avenue and Hamilton Avenue. The City of Fresno 2035 General Plan Circulation Element designates Winery Avenue as two-lane undivided local roadway between Balch Avenue and Hamilton Avenue.

Butler Avenue is an existing east-west two-lane collector divided by a two-way left-turn lane adjacent to the proposed Project site. In this area, Butler Avenue exists as a four-lane undivided collector between "O" Street and Parallel Avenue, a two-lane collector divided by a two-way left-turn lane between Parallel Avenue and Orange Avenue, a two-lane undivided collector between Orange Avenue and Cedar Avenue, a two-lane collector divided by a two-way left-turn lane between Cedar Avenue and Bailey Avenue, a two-lane undivided scenic drive between Bailey Avenue and Fowler Avenue, and a two-lane undivided local roadway east of Fowler Avenue through the City of Fresno SOI. The City of Fresno 2035 General Plan Circulation Element designates Butler Avenue as a four-lane collector between "O" Street and Parallel Avenue, a two-lane collector between Parallel Avenue and Peach Avenue, a two-lane scenic drive between Peach Avenue and Fowler Avenue, a two-lane local roadway between Fowler Avenue and Temperance Avenue, and a two-lane connector east of Temperance Avenue through the City of Fresno SOI.

Collision Analysis

JLB conducted a search of the Statewide Integrated Traffic Records System (SWITRS) to review collision reports for the most recent five-year period (January 1, 2015 to December 31, 2019). The SWITRS "is a database that serves as a means to collect and process data gathered from a collision scene. The internet SWITRS application is a tool by which CHP staff and members of its Allied Agencies throughout California can request various types of statistical reports in an electronic format." All collision reports found in SWITRS between January 1, 2015 and December 31, 2019 were included in the analysis. Collision data for the existing study intersection are contained in Appendix E. In the five-year period, a total of 3 collisions were reported within the influence zone of the existing study intersection.

Table I summarizes the total number of collisions reported at the existing study intersection, the type of collision, the severity of the collision, the type of violation, and whether the collision involved another motor vehicle, a pedestrian/bicyclist or a fixed object. Based on the collision data recorded during the five-year period, the existing study intersection has experienced a relatively low average number of collisions per year with a total of 3 reported collisions during the five-year period. JLB analyzed the data contained within the SWITRS database for the five-year analysis period but was unable to reach a conclusion that would justify the modification of lane geometrics or traffic controls at the existing study intersection. As a result, the number of correctable collisions experienced at the study intersection are considered less than significant.

Table I: Five-Year Intersection Collision Analysis

ID	Intersection	Number of Collisions	Type of Collision							Severity				Type of Violation							Motor Vehicle Involved with...				
			Broadside	Rear End	Head-On	Object	Sideswipe	Other	Unknown	Fatal	Severe Injury	Other Visible Injury	Complaint of Pain Injury	Property Damage Only	Traffic Signals & Signs	Right of Way	Unsafe Speed	Improper Turning	Driving Under Influence	Pedestrian Violation	Other	Pedestrian/Bicyclist	Other Motor Vehicle	Fixed Object	Unknown
1	Winery Avenue / Butler Avenue	3	1	1	-	-	-	1	-	1	-	-	1	1	-	-	1	-	2	-	-	1	2	-	-

Results of Existing Level of Service Analysis

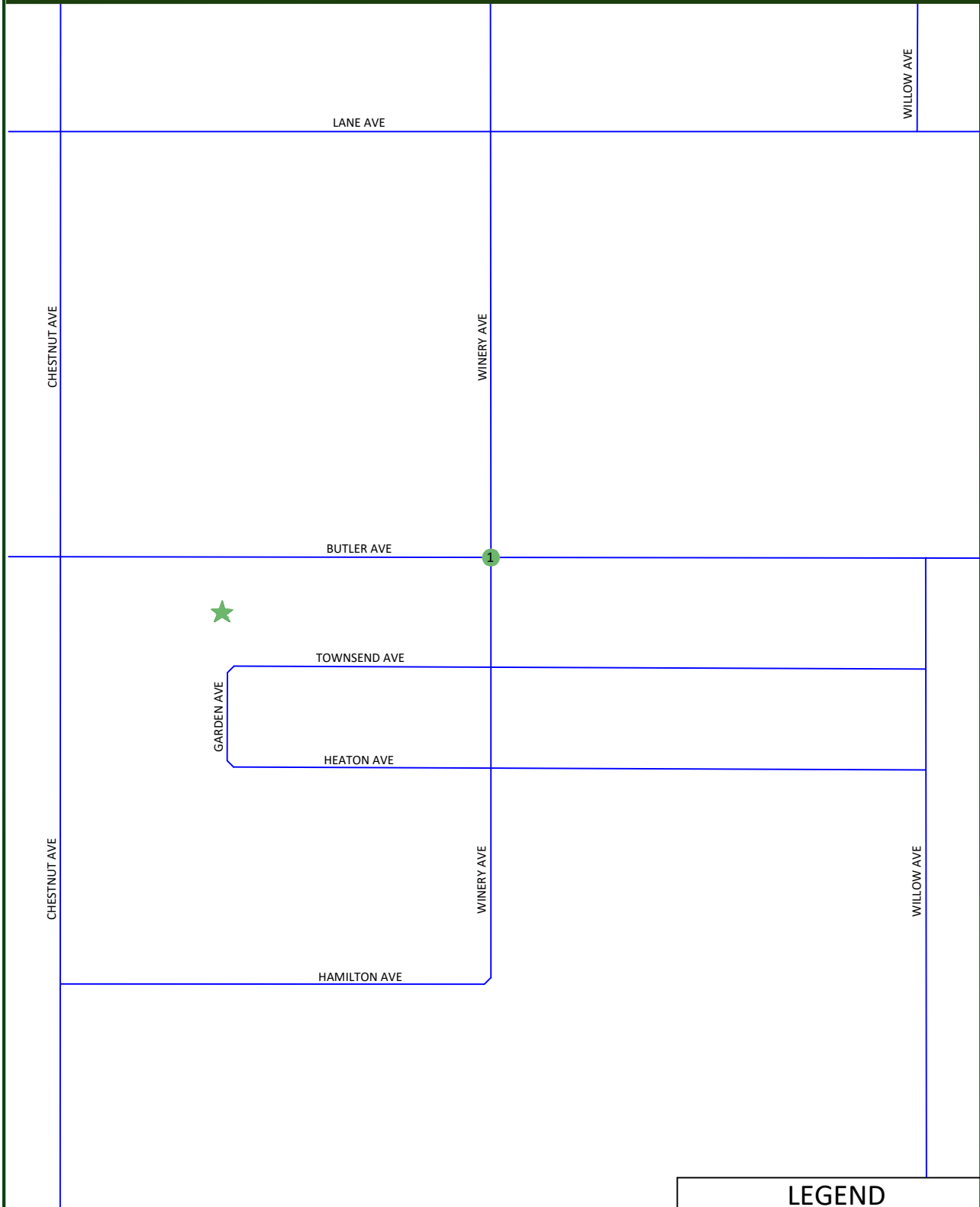
Figure 2 illustrates the Existing Traffic Conditions turning movement volumes, intersection geometrics and traffic controls. LOS worksheets for the Existing Traffic Conditions scenario are provided in Appendix F. Table II presents a summary of the Existing peak hour LOS at the study intersection.

At present, the intersection of Winery Avenue and Butler Avenue operates at an acceptable LOS during the PM peak period.

Table II: Existing Intersection LOS Results



ID	Intersection	Intersection Control	PM (4-6) Peak Hour	
			Average Delay (sec/veh)	LOS
1	Winery Avenue / Butler Avenue	Signalized	11.3	B

Note: LOS = Level of Service based on average delay on signalized intersections and All-Way STOP Controls
LOS for two-way and one-way STOP controlled intersections are based on the worst approach/movement of the minor street.



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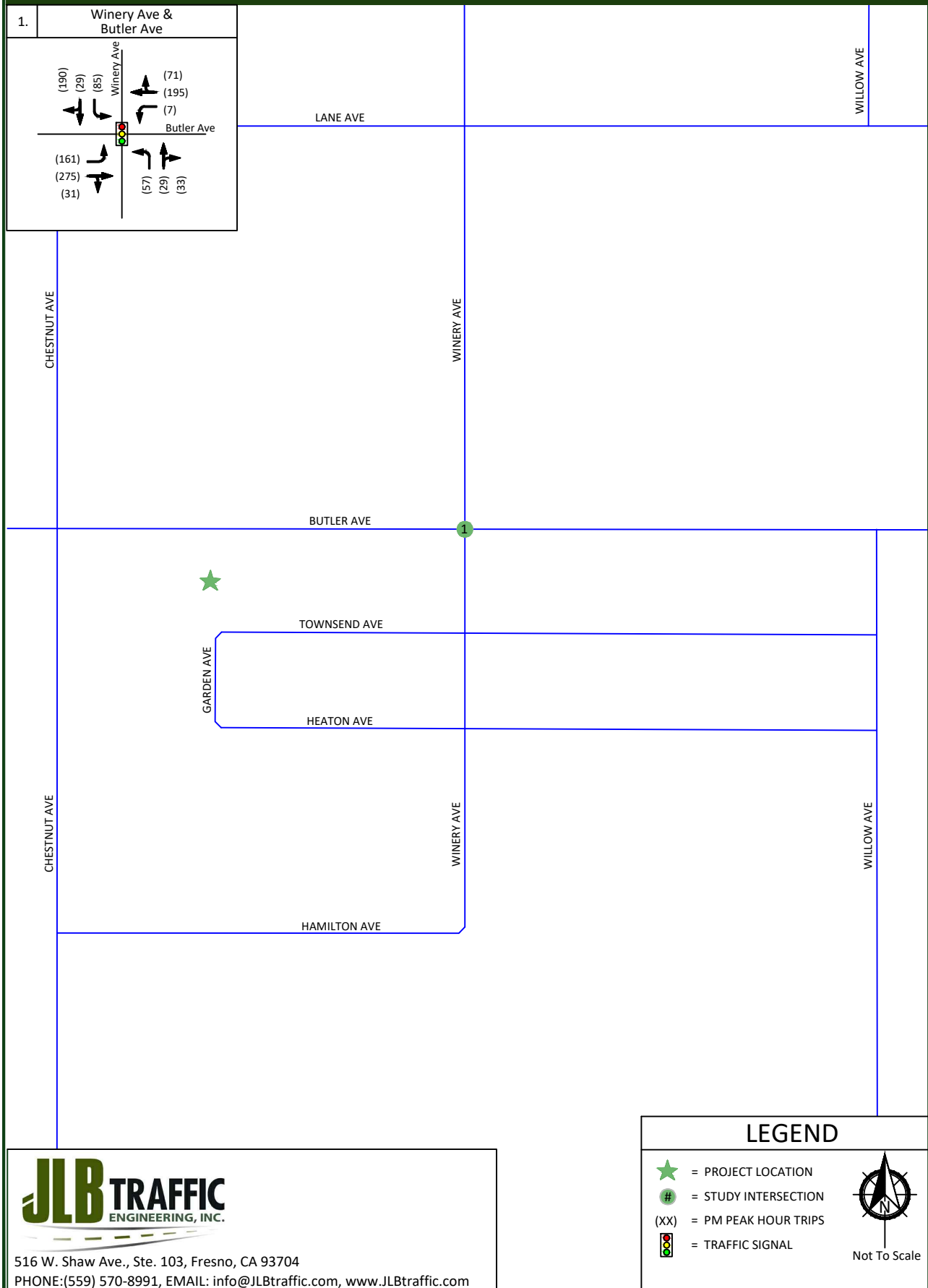
-  = PROJECT LOCATION
-  = STUDY INTERSECTION



Not To Scale

Fresno Pacific University Culture and Arts Center - City of Fresno Existing - Traffic Volumes, Geometrics and Controls

Figure 2



Existing plus Project Traffic Conditions

Project Description

The Project proposes to construct a 26,758 square-foot culture and arts center with a maximum auditorium capacity of 400 seats. The proposed Project will assist in fulfilling Fresno Pacific University's mission to provide a range of faith-based social and cultural experiences for their students and its host community by providing a venue for acting, cultural, educational, and music events. The proposed Project will also provide a venue for students to plan, perform and manage such events. Community sponsored events will also occur at the proposed Project site providing a peaceful and attractive venue for cultural and social events. Fresno Pacific University owns the properties on which the proposed Project site is located. The existing residences owned by Fresno Pacific University will be removed to accommodate the proposed Project. The residences to be removed include five (5) seminary homes – one (1) garage and four (4) single-family homes – at the following locations: a) 4824 E. Butler Ave. (APN 473-020-37), b) 4838 E. Butler Ave. (APN 473-061-01), c) 4846 E. Butler Ave. (APN 473-061-02), d) 4845 E. Townsend Ave. (APN 473-061-09), and e) 4837 E. Townsend Ave. (APN 473-061-10). Based on information provided to JLB, the Project is consistent with the City of Fresno 2035 General Plan. Figure 3 illustrates the latest Project Site Plan.

Project Access

Based on the latest Project Site Plan, access to and from the Project site will be from three (3) proposed access points located along Butler Avenue and Townsend Avenue. Two (2) proposed access points are located along the south side of Butler Avenue approximately 200 and 625 feet east of Chestnut Avenue and are proposed as full access. The other access point is located along the north side of Townsend Avenue and is an exit only access. JLB analyzed the location of the proposed access points relative to the existing local roads and driveways in the Project's vicinity. A review of the Project access point to be constructed indicates that it is located at a point that minimizes traffic operational impacts to the existing roadway network.

In order to help improve traffic safety and operation at the exit only access, it is recommended that two (2) 12" x 18" "EXIT ONLY, DO NOT ENTER" signs be installed to prevent traffic from entering the Project site in the wrong direction of travel. The signs shall be installed on each side of the driveway with one located on the west side of the driveway facing southeast and one on the east side of the driveway facing southwest. It is also recommended that a Type 1 arrow be added approximately five (5) feet behind the back of the driveway and be repainted once it starts to fade.

Project Parking

Based on the latest Project Site Plan, the Project will provide 75 on-site parking stalls. Adjacent to the Project site are 537 existing paved parking stalls as part of the existing campus. An additional 70 overflow parking stalls are available at Butler Church located at 4884 E. Butler Avenue per a parking covenant. The parking covenant is included in Appendix J. The Project site will need 123 on-site paved parking stalls to meet City code.

Project Trip Generation

Trip generation rates for the proposed Project were obtained from the Transportation Study for the Ford Theaters Project prepared by Gibson Transportation Consulting, Inc. dated June 2014 (hereinafter Gibson Study). The Gibson Study presents a PM peak hour trip generation rate of 0.33 with an 85/15 inbound and outbound split. The Daily rate was derived based on information provided by the developer that the Project would serve as a venue for up to two (2) events during a day. Table III presents the trip generation for the proposed Project. At buildout, the proposed Project is estimated to generate a maximum of 296 daily trips and 132 PM peak hour trips.

Table III: Project Trip Generation

Land Use (ITE Code)	Size	Unit	Daily		PM (4-6) Peak Hour					
			Rate	Total	Trip Rate	In	Out	In	Out	Total
						%				
Culture and Arts Center*	400	seats	0.74	296	0.33	85	15	112	20	132
Total Driveway Trips				296				112	20	132

* PM Trip Generation Rate and inbound and outbound split is based on the Transportation Study for the Ford Theaters Project prepared by Gibson Transportation Consultants, Inc. dated June 2014. Daily Trip Generation Rate is based on information provided by the developer.

It is worth noting that the proposed Project will replace eight (8) existing single-family residential dwelling units. Table IV presents the existing trip generation of the site with trip generation rates for Single-Family Detached Housing pursuant to the Trip Generation Manual published by the Institute of Transportation Engineers. At present, the existing site is estimated to generate a maximum of 76 daily trips and 8 PM peak hour trips. Table V presents the net new trip generation estimated for the Project site. When considering the existing traffic generated by the site, the Project is estimated to generate more traffic by 220 daily trips and 124 PM peak hour trips. However, the analysis assumes no reduction in the Project's estimated maximum trip generation so the results are considered conservative.

Table IV: Existing Trip Generation

Land Use (ITE Code)	Size	Unit	Daily		PM (4-6) Peak Hour					
			Rate	Total	Trip Rate	In	Out	In	Out	Total
						%				
Single-Family Detached Housing (210)	8	d.u.	9.44	76	0.99	63	37	5	3	8
Total Driveway Trips				76				5	3	8

Note: d.u. = Dwelling Units

Table V: Difference in Trip Generation

Land Use	Daily	PM (4-6) Peak Hour		
	Total	In	Out	Total
Project	296	112	20	132
Existing	76	5	3	8
Difference in Trip Generation	220	107	17	124

Trip Distribution

The trip distribution assumptions were developed based on existing travel patterns, the Fresno COG Project Select Zone, the existing roadway network, engineering judgment, data provided by the developer, knowledge of the study area, existing residential and commercial densities, and the City of Fresno 2035 General Plan Circulation Element in the vicinity of the Project. Figure 4 illustrates the Project Only Trips to the study intersection.

Bikeways

Currently, Class II Bike Lanes exist adjacent to the proposed Project site along Butler Avenue. The City of Fresno 2017 Active Transportation Plan recommends that Class II Bike Lanes be implemented on: 1) Butler Avenue between "O" Street and Highland Avenue and 2) Winery Avenue between Balch Avenue and Butler Avenue. Furthermore, the City of Fresno 2017 Active Transportation Plan recommends that a Class III Bike Route be implemented along: 1) Winery Avenue between Butler Avenue and Hamilton Avenue. Therefore, it is recommended that the Project retain the Class II Bike Lane along its frontage to Butler Avenue.

Walkways

Currently, walkways exist adjacent to the proposed Project site along Butler Avenue and Winery Avenue. The City of Fresno 2017 Active Transportation Plan recommends that walkways be implemented on: 1) Butler Avenue through the City of Fresno SOI and 2) Winery Avenue between Balch Avenue and Hamilton Avenue. Therefore, it is recommended that the Project retain walkways that are ADA compliant along its frontage to Butler Avenue.

Transit

Fresno Area Express (FAX) is the transit operator in the City of Fresno. At present, there are two (2) FAX transit routes that operate adjacent to the proposed Project site – FAX Route 26 and FAX Route 41. FAX Route 26, which runs on Butler Avenue and Winery Avenue, operates at 30-minute intervals on weekdays and weekends. Its nearest stop to the Project site is located along the north side of Butler Avenue approximately 300 feet west of Winery Avenue. This route provides a direct connection to Bullard High School, Fresno High School, Tower District, Fresno Fairgrounds, Mosqueda Community Center, Fresno Pacific University, Peter Piper Pizza, and Fresno Yosemite International Airport. FAX Route 41, which runs on Butler Avenue, operates at 30-minute intervals on weekdays and weekends. Its nearest stop to the Project site is located along the east side of Chestnut Avenue approximately 200 feet north of Butler Avenue. Retention of the existing and expansion of future transit routes is dependent on transit ridership demand and available funding.

Vehicle Miles Traveled Evaluation

Senate Bill (SB) 743 (Steinberg 2013) was approved by then Governor Brown on September 27, 2013. SB 743 created a path to revise the definition of transportation impacts according to CEQA. The revised CEQA Guidelines requiring VMT analysis became effective December 28, 2018; however, agencies have until July 1, 2020 to finalize their local guidelines on VMT analysis. Therefore, as agencies finalize their VMT analysis protocol, CEQA transportation impacts are to be determined using LOS of intersections and roadways, which is a measure of congestion. The intent of SB 743 is to align CEQA transportation study methodology with and promote the statewide goals and policies of reducing vehicle miles traveled (VMT) and greenhouse gases (GHG). Three objectives of SB 743 related to development are to reduce GHG, diversify land uses, and focus on creating a multimodal environment. It is hoped that this will spur infill development.

The Technical Advisory on Evaluating Transportation Impacts in CEQA published by the Governor's Office of Planning and Research (OPR) dated December 2018 acknowledges that lead agencies should set criteria and thresholds for VMT and transportation impacts. However, the Technical Advisory provides guidance to residential, office and retail uses, citing these as the most common land uses. Beyond these three land uses, there is no guidance provided for any other land use type. The Technical Advisory also notes that land uses may have a less than significant impact if located within low VMT areas of a region and suggests that screening maps be used for this determination.

VMT is simply the product of a number of trips and those trips' lengths. The first step in a VMT analysis is to establish the baseline average VMT, which requires the definition of a region. The Technical Advisory states that existing VMT may be measured at the regional or city level. On the contrary, the Technical Advisory also notes that VMT analyses should not be truncated due to "jurisdictional or other boundaries."

Currently, Fresno COG and its member agencies, which include the City of Fresno, have begun the process to develop recommended criteria and thresholds that balance the direction from OPR and the goals of SB 743 with the vision of Fresno and economic development, access to goods and services, and overall quality of life. While these regional recommended criteria are not anticipated to be completed until mid-2020, Fresno COG was able to provide estimated VMT data for the proposed Project. Based on the Fresno COG model run, the Project is anticipated to generate an average of 6.20 VMT per trip.

Results of Existing plus Project Level of Service Analysis

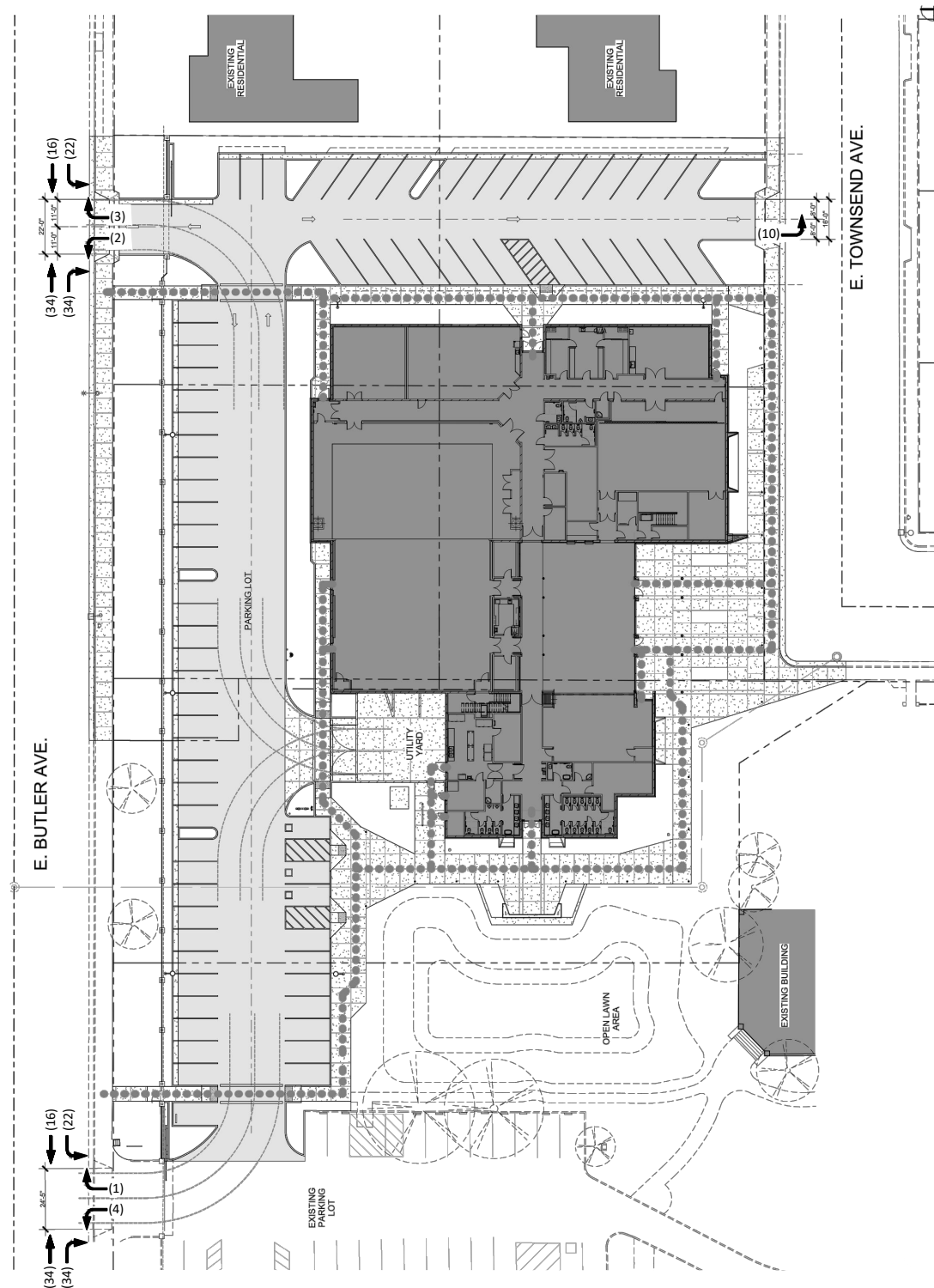
The Existing plus Project Traffic Conditions scenario assumes that the existing roadway geometrics and traffic controls remain in place. Figure 5 illustrates the Existing plus Project turning movement volumes, intersection geometrics and traffic controls. LOS worksheets for the Existing plus Project Traffic Conditions scenario are provided in Appendix G. Table VI presents a summary of the Existing plus Project peak hour LOS at the study intersection.

Under this scenario, the intersection of Winery Avenue and Butler Avenue is projected to operate at an acceptable LOS during the PM peak period.

Table VI: Existing plus Project Intersection LOS Results

ID	Intersection	Intersection Control	PM (4-6) Peak Hour	
			Average Delay (sec/veh)	LOS
1	Winery Avenue / Butler Avenue	Signalized	11.6	B

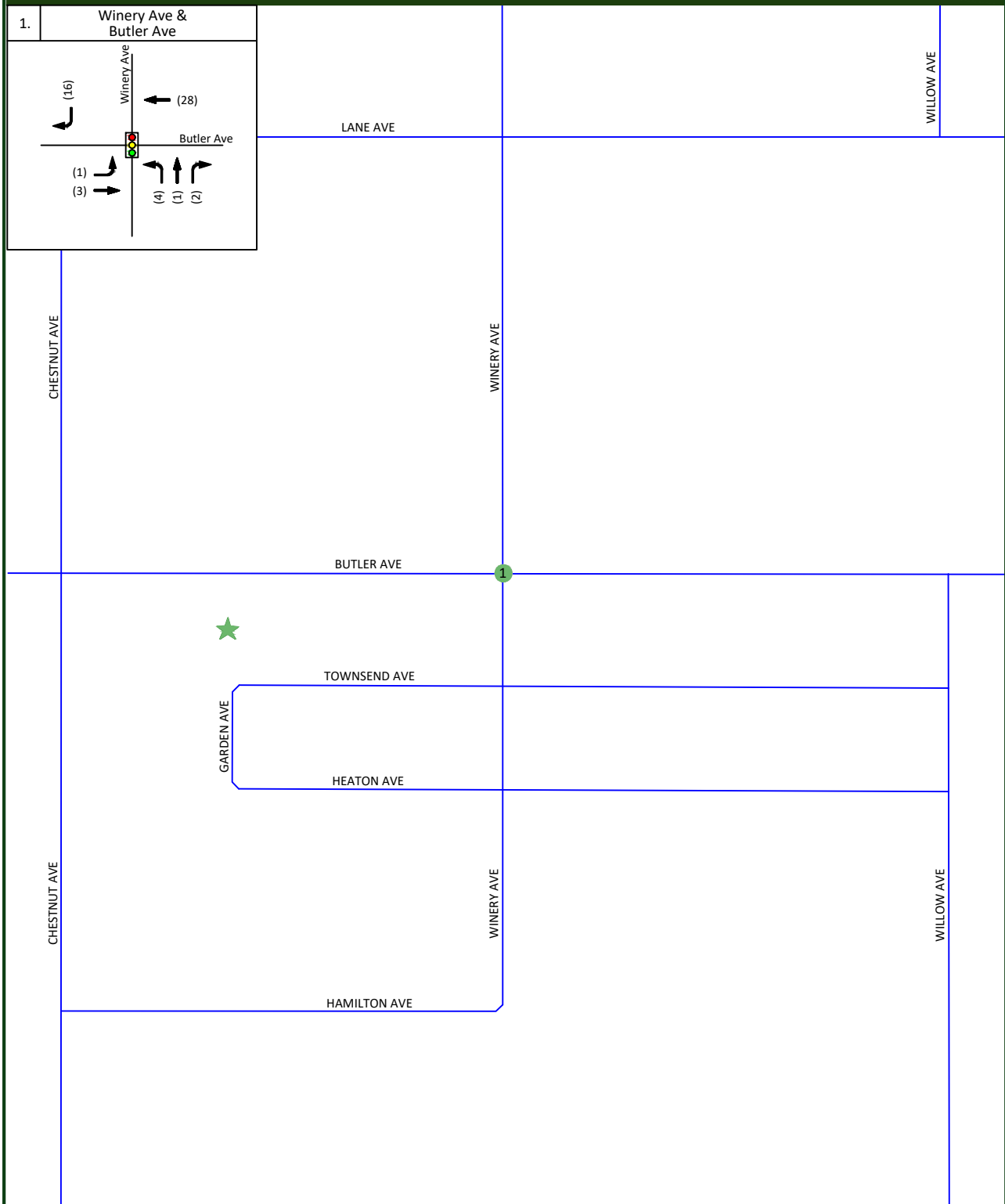
Note: LOS = Level of Service based on average delay on signalized intersections and All-Way STOP Controls
LOS for two-way and one-way STOP controlled intersections are based on the worst approach/movement of the minor street.



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Not To Scale



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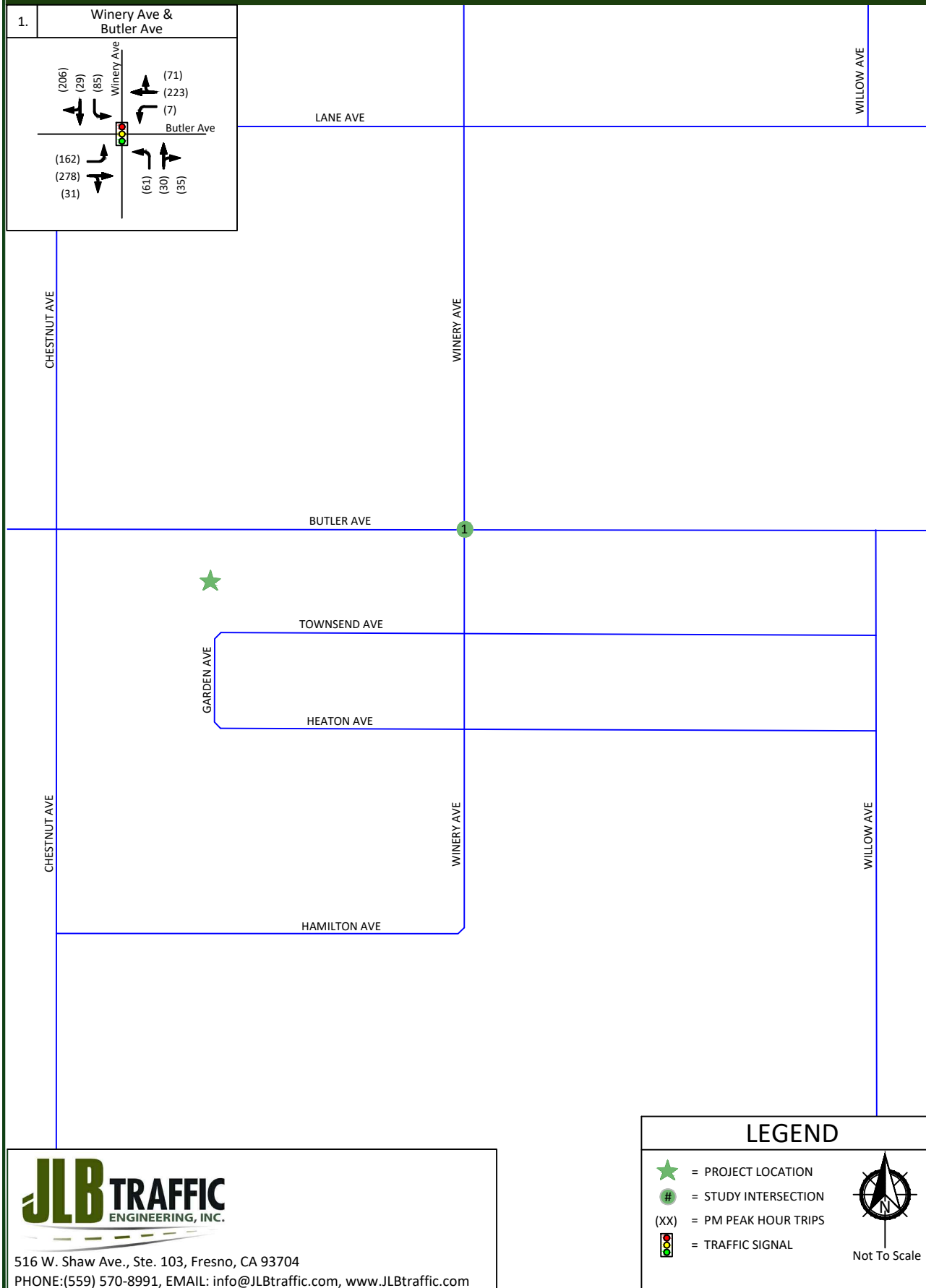
LEGEND

- ★ = PROJECT LOCATION
- # = STUDY INTERSECTION
- (XX) = PM PROJECT ONLY TRIPS
- 🚦 = TRAFFIC SIGNAL



Fresno Pacific University Culture and Arts Center - City of Fresno Existing plus Project - Traffic Volumes, Geometrics and Controls

Figure 5



Near Term plus Project Traffic Conditions

Description of Near Term Projects

Near Term Projects are approved and/or known projects that are either under construction, built but not fully occupied, are not built but have final site development review (SDR) approval, or for which the lead agency or responsible agencies have knowledge of. The City of Fresno, County of Fresno and Caltrans staff were consulted throughout the preparation of this TIA regarding near term projects that could potentially impact the study intersections. JLB staff conducted a reconnaissance of the surrounding area to confirm the near term projects. Subsequently, it was agreed that the projects listed in Table VII were approved, near approval, or in the pipeline within the proximity of the proposed Project.

The trip generation listed in Table VII is that which is anticipated to be added to the streets and highways by the near term projects between the time of the preparation of this report and five years from 2020. As shown in Table VIII, the total trip generation for the Near Term Projects is 51,510 daily trips and 5,077 PM peak hour trips. Figure 6 illustrates the location of the approved, near approval, or pipeline projects and their combined trip assignment to the study intersections under the Near Term plus Project Traffic Conditions scenario.

Table VII: Near Term Projects' Trip Generation

<i>Approved Project Location</i>	<i>Approved or Pipeline Project Name</i>	<i>Daily Trips</i>	<i>PM Peak Hour</i>
A	TT 5464 (portion of) ¹	76	8
B	TT 5498 ¹	755	79
C	TT 5638 ¹	3,351	351
D	TT 5913 ¹	1,029	108
E	TT 5953 ¹	887	93
F	TT 6095 (portion of) ¹	47	5
G	Lennar Heirloom Chateau Series ¹	1,964	206
H	Fresno Unified School District Alternative Education ²	2,459	221
I	Sanger Unified School District ²	7,597	640
J	Fresno Unified School District ²	5,243	935
K	4780 S Maple Avenue Rezone ²	1,036	145
L	Orange Industrial Park ³	6,260	873
M	North Pointe (portion of) ⁴	6,552	438
N	North and Orange Commercial Development ²	5,907	439
O	RP East Industrial ²	1,041	128
P	BDM Builders Mixed-Use Development ²	7,306	408
Total Approved and Pipeline Project Trips		51,510	5,077

Note: 1 = Trip Generation prepared by JLB Traffic Engineering, Inc. based on readily available information

2 = Trip Generation based on JLB Traffic Engineering, Inc. Traffic Impact Analysis Report

3 = Trip Generation based on Precision Civil Engineering, Inc. Traffic Impact Study Report

4 = Trip Generation based on TJKM Transportation Consultants Traffic Impact Study Report

Results of Near Term plus Project Level of Service Analysis

The Near Term plus Project Traffic Conditions scenario assumes that the existing roadway geometrics and traffic controls remain in place. Figure 7 illustrates the Near Term plus Project turning movement volumes, intersection geometrics and traffic controls. LOS worksheets for the Near Term plus Project Traffic Conditions scenario are provided in Appendix H. Table XII presents a summary of the Near Term plus Project peak hour LOS at the study intersection.

Under this scenario, the intersection of Winery Avenue and Butler Avenue is projected to operate at an acceptable LOS during the PM peak period.

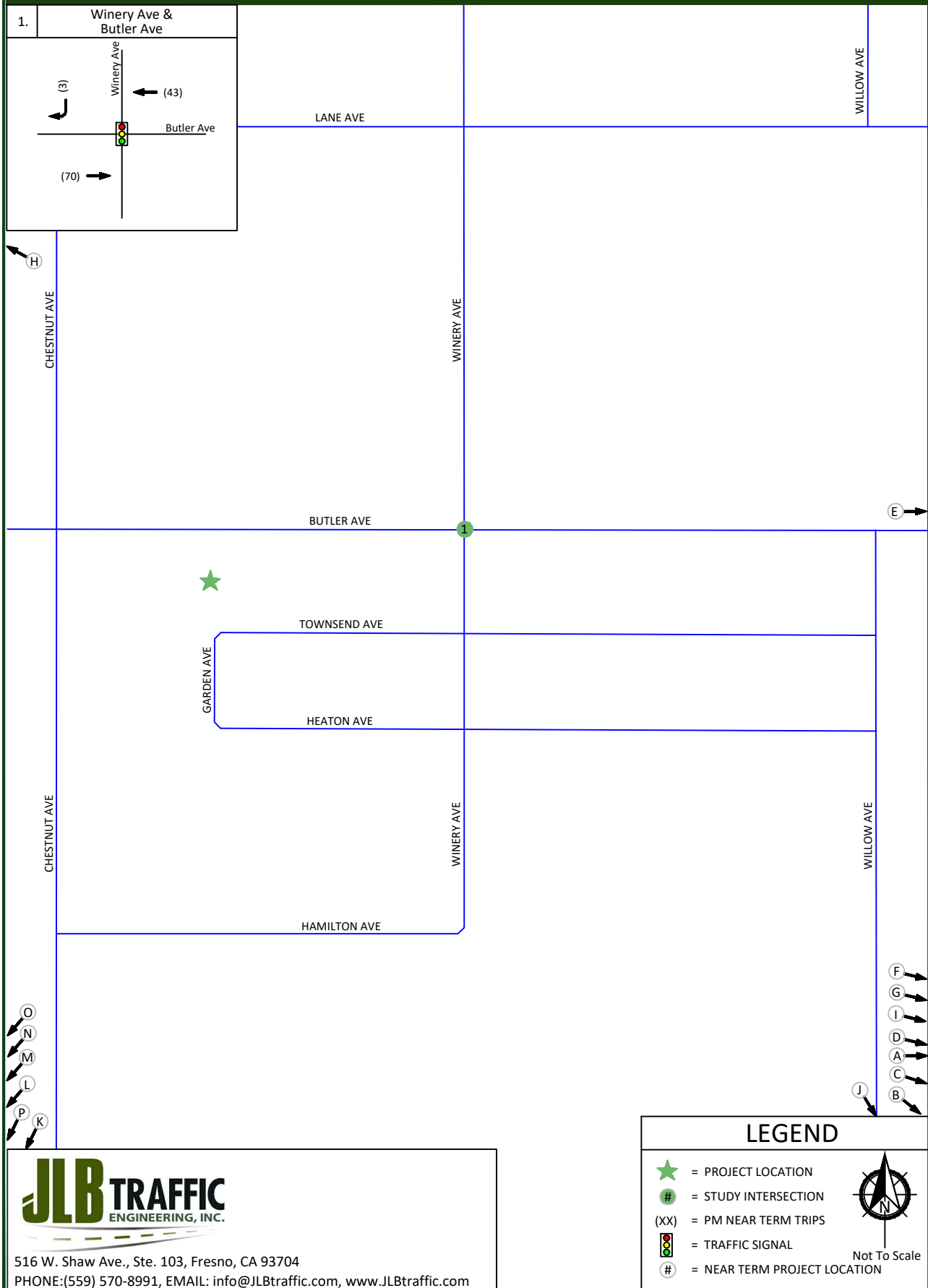
Table VIII: Near Term plus Project Intersection LOS Results

ID	Intersection	Intersection Control	PM (4-6) Peak Hour	
			Average Delay (sec/veh)	LOS
1	Winery Avenue / Butler Avenue	Signalized	12.2	B

Note: LOS = Level of Service based on average delay on signalized intersections and All-Way STOP Controls
LOS for two-way and one-way STOP controlled intersections are based on the worst approach/movement of the minor street.

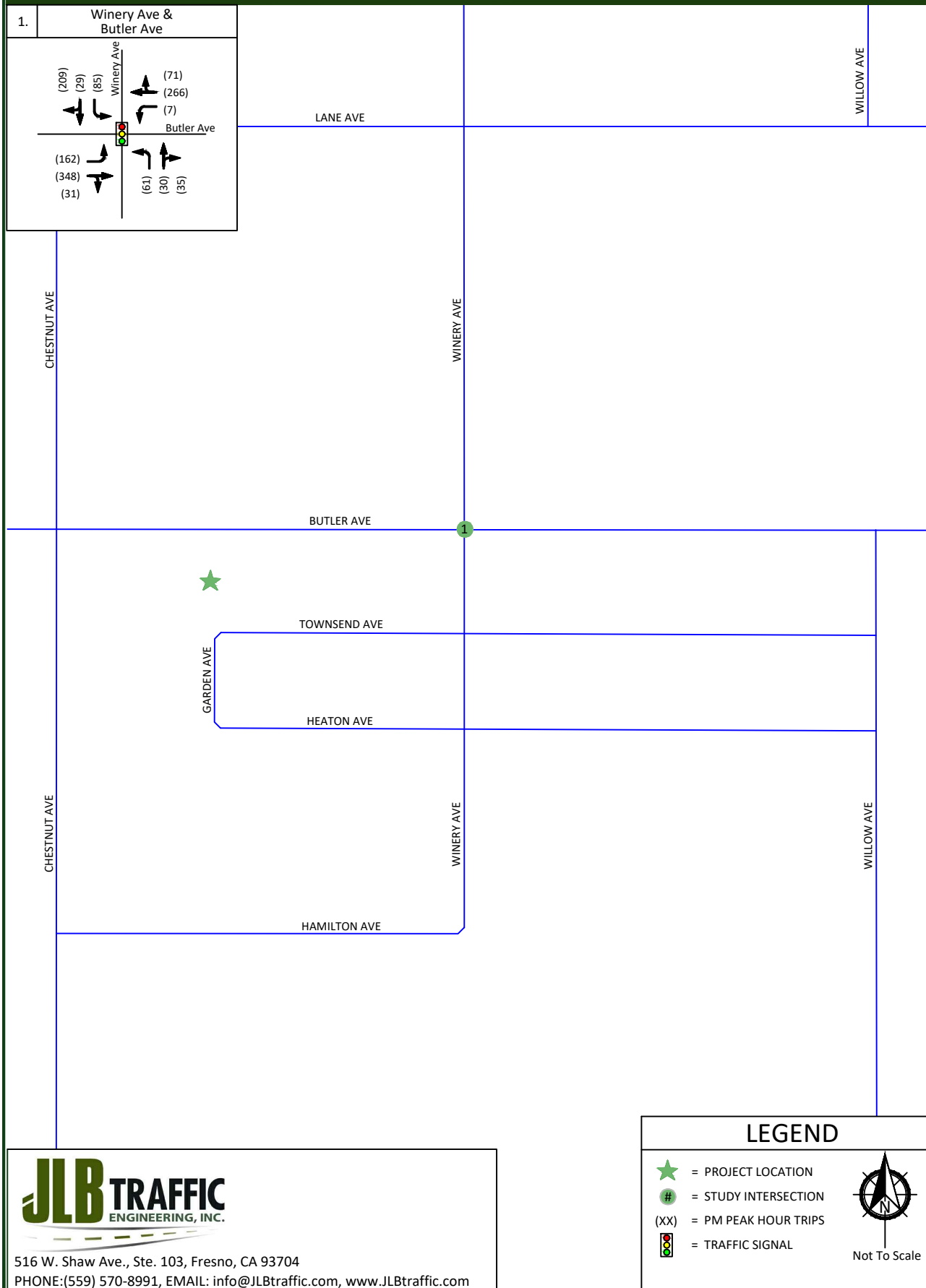
Fresno Pacific University Culture and Arts Center - City of Fresno Near Term Projects' Trip Assignment

Figure 6



Fresno Pacific University Culture and Arts Center - City of Fresno Near Term plus Project - Traffic Volumes, Geometrics and Controls

Figure 7



Cumulative Year 2035 plus Project Traffic Conditions

Results of Cumulative Year 2035 plus Project Level of Service Analysis

The Cumulative Year 2035 plus Project Traffic Conditions scenario assumes that the existing roadway geometrics and traffic controls remain in place. Figure 8 illustrates the Cumulative Year 2035 plus Project turning movement volumes, intersection geometrics and traffic controls. LOS worksheets for the Cumulative Year 2035 plus Project Traffic Conditions scenario are provided in Appendix I. Table IX presents a summary of the Cumulative Year 2035 plus Project peak hour LOS at the study intersections.

Under this scenario, the intersection of Winery Avenue and Butler Avenue is projected to operate at an acceptable LOS during the PM peak period.

Table IX: Cumulative Year 2035 plus Project Intersection LOS Results

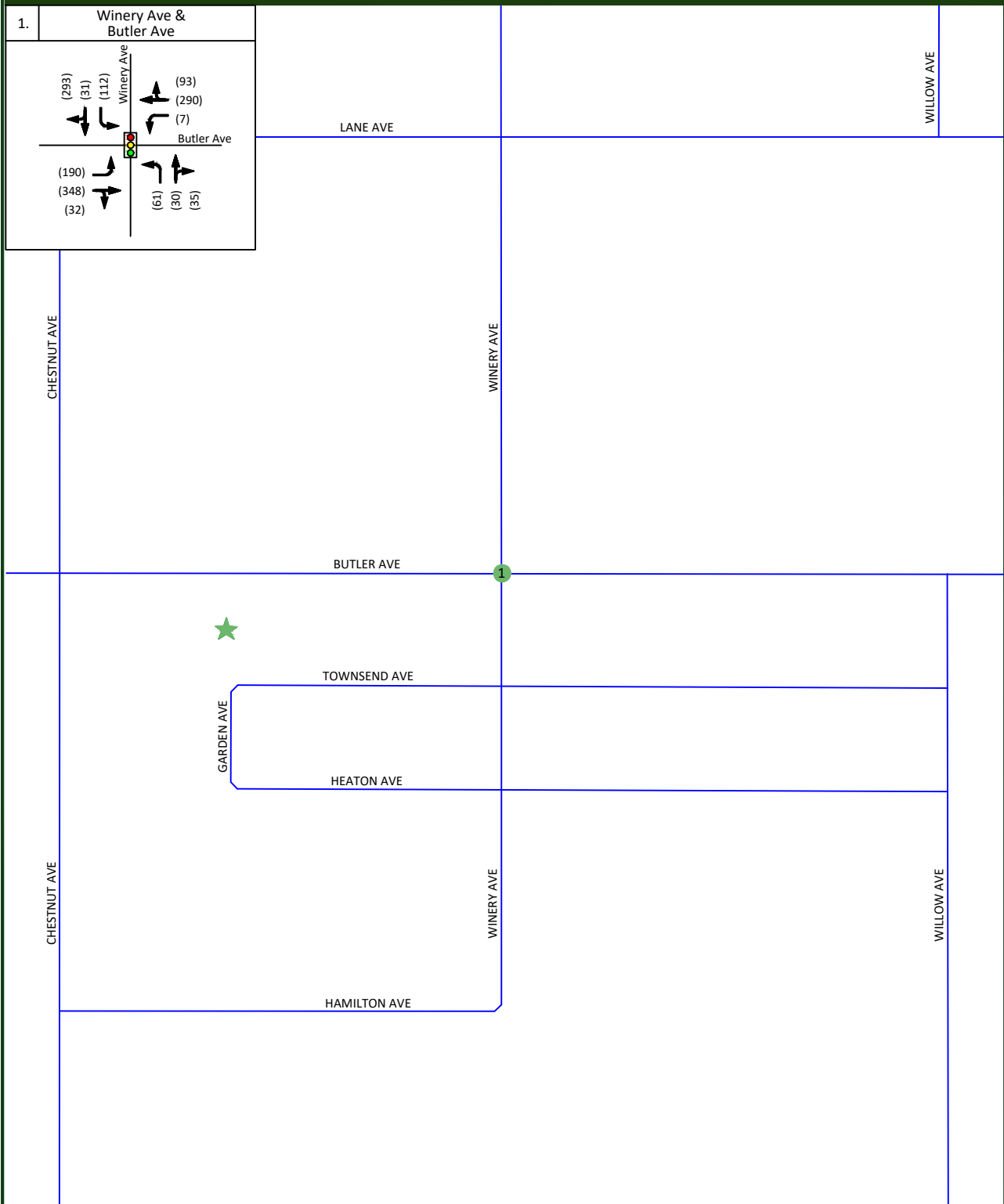
ID	Intersection	Intersection Control	PM (4-6) Peak Hour	
			Average Delay (sec/veh)	LOS
1	Winery Avenue / Butler Avenue	Signalized	14.0	B

Note: LOS = Level of Service based on average delay on signalized intersections and All-Way STOP Controls.
LOS for two-way STOP controlled intersections are based on the worst approach/movement of the minor street.

Fresno Pacific University Culture and Arts Center - City of Fresno

Figure 8

Cumulative Year 2035 plus Project - Traffic Volumes, Geometrics and Controls



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ENGINEERING, INC.

516 W. Shaw Ave., Ste. 103, Fresno, CA 93704
PHONE: (559) 570-8991, EMAIL: info@JLBtraffic.com, www.JLBtraffic.com

LEGEND

- = PROJECT LOCATION
- = STUDY INTERSECTION
- (XX) = PM PEAK HOUR TRIPS
- = TRAFFIC SIGNAL



Queuing Analysis

Table X provides a queue length summary for left-turn and right-turn lanes at the study intersections under all study scenarios. The queuing analyses for the study intersections are contained in the LOS worksheets for the respective scenarios. Appendix D contains the methodologies used to evaluate these intersections. Queuing analyses were completed using Sim Traffic output information. Synchro provides both 50th and 95th percentile maximum queue lengths (in feet). According to the Synchro manual, “the 50th percentile maximum queue is the maximum back of queue on a typical cycle and the 95th percentile queue is the maximum back of queue with 95th percentile volumes.” The queues shown on Table X are the 95th percentile queue lengths for the respective lane movements.

The Highway Design Manual (HDM) provides guidance for determining deceleration lengths for the left-turn and right-turn lanes based on design speeds. Per the HDM criteria, “tapers for right-turn lanes are usually un-necessary since the main line traffic need not be shifted laterally to provide space for the right-turn lane. If, in some rare instances, a lateral shift were needed, the approach taper would use the same formula as for a left-turn lane.” Therefore, a bay taper length pursuant to the Caltrans HDM would need to be added, as necessary, to the recommended storage lengths presented in Table X.

The storage capacity for the Cumulative Year 2035 scenario shall be based on the SimTraffic output files and engineering judgement. The values in bold presented in Table X are the projected queue lengths that will likely need to be accommodated by the Cumulative Year 2035 scenario. While the City of Fresno does not have minimum storage length requirements for left-turn and right-turn lanes on major streets, it does prefer that these be set at 200 feet for left-turns and 75 feet for right-turns. At the remaining approaches, the greater of the existing storage capacity or the 200 feet left-turn lanes and 75 feet right-turn lanes will be sufficient to accommodate the maximum queue.

Table X: Queuing Analysis

ID	Intersection	Existing Queue Storage Length (ft.)		Existing	Existing plus Project	Near Term plus Project	Cumulative Year 2035 plus Project
				PM	PM	PM	PM
1	Winery Avenue / Butler Avenue	EB Left	105	100	114	122	132
		EB Thru-Right	>500	131	143	151	164
		WB Left	100	23	18	26	22
		WB Thru-Right	>500	105	125	126	151
		NB Left	100	66	62	67	79
		NB Thru-Right	>500	56	73	86	67
		SB Left	100	100	73	87	111
		SB Thru-Right	>500	110	111	95	147

Note: * = Does not exist or is not projected to exist

Conclusions and Recommendations

Conclusions and recommendations regarding the proposed Project are presented below.

Existing Traffic Conditions

- JLB conducted a search of the Statewide Integrated Traffic Records System (SWITRS) to review collision reports for the most recent five-year period (January 1, 2015 to December 31, 2019). In the five-year period, a total of 3 collisions were reported within the influence zone of the existing study intersection.
- JLB analyzed the data contained within the SWITRS database for the five-year analysis period, but was unable to reach a conclusion that would justify the modification of lane geometrics or traffic controls at the existing study intersection. As a result, the number of correctable collisions experienced at the study intersection are considered less than significant.
- At present, the intersection of Winery Avenue and Butler Avenue operates at an acceptable LOS during the PM peak period.

Existing plus Project Traffic Conditions

- JLB analyzed the location of the proposed access points relative to the existing local roads and driveways in the Project's vicinity. A review of the Project access point to be constructed indicates that it is located at a point that minimizes traffic operational impacts to the existing roadway network.
- In order to help improve traffic safety and operation at the exit only access, it is recommended that two (2) 12" x 18" "EXIT ONLY, DO NOT ENTER" signs be installed to prevent traffic from entering the Project site in the wrong direction of travel. The signs shall be installed on each side of the driveway with one located on the west side of the driveway facing southeast and one on the east side of the driveway facing southwest. It is also recommended that a Type 1 arrow be added approximately five (5) feet behind the back of the driveway and be repainted once it starts to fade.
- It is recommended that the Project retain the Class II Bike Lane along its frontage to Butler Avenue.
- It is recommended that the Project retain walkways that are ADA compliant along its frontage to Butler Avenue.
- At buildout, the proposed Project is estimated to generate a maximum of 296 daily trips and 132 PM peak hour trips.
- Based on the Fresno COG model run, the Project is anticipated to generate an average of 6.20 VMT per trip.
- Under this scenario, the intersection of Winery Avenue and Butler Avenue is projected to operate at an acceptable LOS during the PM peak period.

Near Term plus Project Traffic Conditions

- The total trip generation for the Near Term Projects is 51,510 daily trips and 5,077 PM peak hour trips.
- Under this scenario, the intersection of Winery Avenue and Butler Avenue is projected to operate at an acceptable LOS during the PM peak period.

Cumulative Year 2035 plus Project Traffic Conditions

- Under this scenario, the intersection of Winery Avenue and Butler Avenue is projected to operate at an acceptable LOS during the PM peak period.

Queuing Analysis

- It is recommended that the City consider left-turn and right-turn lane storage lengths as indicated in the Queuing Analysis.

Study Participants

JLB Traffic Engineering, Inc. Personnel:

Jose Luis Benavides, PE, TE	Project Manager
Susana Maciel, EIT	Project Engineer
Matthew Arndt, EIT	Engineer I/II
Jove Alcazar, EIT	Engineer I/II
Javier Rios	Engineer I/II
Jesus Garcia	Engineer I/II
Carlos Ayala-Magana	Engineer I/II
Dennis Wynn	Sr. Engineering Technician
Adrian Benavides	Engineering Aide
Justin Barnett	Engineering Aide
Michael McConnell	Engineering Aide
Christian Sanchez	Engineering Aide

Persons Consulted:

Robert Lippert	Fresno Pacific University
Peter Lau	Paul Halajian Architects
Dirk Poeschel	Land Development Services, Inc.
Harmanjit Dhaliwal	City of Fresno
Brian Spaunhurst	County of Fresno
David Padilla	Caltrans
Kai Han	Fresno COG
Lang Yu	Fresno COG

References

1. City of Fresno, *2035 General Plan*.
2. County of Fresno, *2000 General Plan*.
3. *Guide for the Preparation of Traffic Impact Studies*, Caltrans, dated December 2002.
4. *Trip Generation*, 10th Edition, Washington D.C., Institute of Transportation Engineers, 2017.
5. *2014 California Manual on Uniform Traffic Control Devices*, Caltrans, November 7, 2014.
6. City of Fresno, *Active Transportation Plan*, December 2016, adopted March 2, 2017.

Appendix A: Scope of Work



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(559) 570-8991

A p p | A

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January 9, 2020

Jill Gormley
Traffic Engineer
City of Fresno
2600 Fresno Street
Fresno, CA 93721-3616

Via Email Only: Jill.Gormley@fresno.gov

Subject: *Draft Scope of Work for the Preparation of a Traffic Impact Analysis in Support of the Fresno Pacific University Culture and Arts Center Project Located on the southeast quadrant of Chestnut Avenue and Butler Avenue in the City of Fresno (JLB Project 004-108)*

Dear Mrs. Gormley,

JLB Traffic Engineering, Inc. (JLB) hereby submits this Draft Scope of Work for the preparation of a Traffic Impact Analysis (TIA) for the Fresno Pacific University Culture and Arts Center (Project) located on the southeast quadrant of Chestnut Avenue and Butler Avenue in the City of Fresno. The Project proposes to construct a 25,300 square-foot Culture and Arts Center with a 400-seat auditorium where several existing residential units will be removed. Based on information provided by the developer, the Project will namely serve as a venue for events that service students who may already be on campus. However, the Project will also serve as a venue for non-school related events that may take place on a Thursday, Friday and/or Saturday evening. Per information provided to JLB, the Project is consistent with the City of Fresno 2035 General Plan. An aerial of the Project vicinity and Project Site Plan are shown in Exhibit A and Exhibit B, respectively.

The purpose of the TIA is to evaluate the potential on-site and off-site traffic impacts, identify short-term roadway and circulation needs, determine potential mitigation measures and identify any critical traffic issues that should be addressed in the on-going planning process. To evaluate the on-site and off-site traffic impacts of the proposed Project, JLB proposes the following Scope of Work.

Scope of Work

- Request a Fresno Council of Governments (Fresno COG) traffic forecast model run for the project (Select Zone Analysis) which will include the project and the streets to be analyzed. The Fresno COG traffic forecasting model will be used to forecast traffic volumes for the Base Year 2019 and Cumulative Year 2035 scenarios.
- JLB will, as necessary, obtain recent (less than 12 months) or schedule and conduct new traffic counts at the study facilities. These counts will include pedestrians and vehicles. These counts will be conducted on typical school schedule and non-inclement weather days as soon as possible. These counts will not take place during weeks with holidays, non-school days, roadway construction, etc.



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Fresno, CA 93704
(559) 570-8991

Page | 1

- JLB will perform a site visit to observe existing traffic conditions, especially during the PM peak hours. Existing roadway conditions including intersection geometrics and traffic controls will be verified.
- JLB will evaluate onsite circulation and provide recommendations as necessary to improve circulation to and within the Project site. Particular attention will be paid to conflicting traffic movements, location of local roadways to major streets, and onsite vehicular ingress and egress routes.
- JLB will conduct an evaluation of the existing and planned circulation network to include, the study intersections, roadway segments, and those facilities agreed upon.
- JLB will prepare CA MUTCD Warrant 3 "Peak Hour" for unsignalized study intersections under all study scenarios.
- JLB will qualitatively analyze existing and planned transit routes in the vicinity of the Project.
- JLB will qualitatively analyze existing and planned bikeways in the vicinity of the Project.
- JLB will qualitatively analyze existing and planned walkways in the vicinity of the Project.
- JLB will forecast trip distribution based on turn count information and knowledge of the existing and planned circulation network in the vicinity of the Project.
- JLB will evaluate existing and forecasted levels of service (LOS) at the study intersection(s). JLB will use HCM 6th or HCM 2000 methodologies (as appropriate) within Synchro to perform this analysis for the PM peak hour. JLB will identify the causes of poor LOS.
- JLB will prepare a five-year collision analysis based on the Statewide Integrated Traffic Reporting System (SWITRS) database for all existing study facilities.
- JLB will qualitatively analyze Vehicle Miles Traveled (VMT).

Study Scenarios:

1. Existing Traffic Conditions with needed improvements (if any);
2. Existing plus Project Traffic Conditions with proposed mitigation measures (if any);
3. Near Term plus Project, plus Approved and Pending Developments Traffic Conditions with proposed mitigation measures (if any); and
4. Cumulative Year 2035 plus Project Traffic Conditions with proposed mitigation measures (if any).

Weekday peak hours to be analyzed (Tuesday through Thursday only):

1. 4 - 6 PM peak hour

Study Intersections:

1. Winery Avenue / Butler Avenue

Queuing analysis is included in the proposed Scope of Work for the study intersection(s) listed above under all study scenarios. This analysis will be utilized to recommend minimum storage lengths for left-turn and right-turn lanes at all study intersections.

Study Segments:

1. None

Project Only Trip Assignment to State Facilities:

1. None



Access to the Project

Access to and from the Project site is proposed from a total of three (3) existing access points. Two (2) existing access points are located along the south side of Butler Avenue approximately 200 feet and 625 feet east of Chestnut Avenue and allow full access to Butler Avenue. One (1) existing access point is located on along the north side of Townsend Avenue and is also a full access. Additional Project details are found on Exhibit B.

Project Trip Generation

Trip generation rates for the proposed Project were obtained from the Transportation Study for the Ford Theaters Project prepared by Gibson Transportation Consulting, Inc. dated June 2014. The Study presents a PM peak hour trip generation rate of 0.33 with an 85/15 inbound and outbound split. The Daily rate was derived based on information provided by the District that the Project would serve as a venue for up to two (2) events during a day. Table I presents the trip generation for the proposed Project with trip generation rates for a Performing Arts Center. At buildout, the proposed Project is estimated to generate a maximum of 296 daily trips, 0 AM peak hour trips and 132 PM peak hour driveway trips.

Table I: Project Trip Generation

Land Use (ITE Code)	Size	Unit	Daily		AM (7-9) Peak Hour						PM (4-6) Peak Hour					
			Rate	Total	Trip Rate	In	Out	In	Out	Total	Trip Rate	In	Out	In	Out	Total
						%						%				
Culture and Arts Center	400	seats	0.74**	296	0.00	50	50	0	0	0	0.33*	85*	15*	112	20	132
Total Driveway Trips				296				0	0	0				112	20	132

Note: * = Trip Generation rate and inbound and outbound split based on the Transportation Study for the Ford Theaters Project prepared by Gibson Transportation Consulting, Inc. dated June 2014

** = Trip Generation rate based on information provided by the Developer.

Near Term Projects to be Included

Based on our local knowledge of the study area and consultation with City of Fresno Planning & Development staff, JLB proposes to include near term projects in the vicinity of the proposed Project under the Near Term plus Project scenario. The near term projects proposed to be included in the Near Term scenario are:

Project Name

1. TT 5171 (portion of)
2. TT 5464
3. TT 5466
4. TT 5498
5. TT 5531
6. TT 5626
7. TT 5638
8. TT 5913
9. TT 5953
10. TT 6095

General Location

SWQ Clovis Avenue and Church Avenue
SWC Temperance Avenue and Hamilton Avenue
NEC Minnewawa Avenue and Church Avenue
NEC Peach Avenue and Church Avenue
SWC Temperance Avenue and California Avenue
SEC Fowler Avenue and Hamilton Avenue
NWQ Armstrong Avenue and Church Avenue
NEC Armstrong Avenue and California Avenue
NEC Armstrong Avenue and Butler Avenue
NEQ Armstrong Avenue and Church Avenue

11. Sanger Unified School District	NEC Fowler Avenue and Jensen Avenue
12. Fresno Unified School District	SWC Peach Avenue and Church Avenue
13. 4780 S Maple Avenue Rezone	NEC Maple Avenue and American Avenue
14. 2778 S Willow Avenue Rezone (portion of)	NWC Willow Avenue and Annadale Avenue
15. G3 Development (Ultra) (portion of)	NWQ East Avenue and Central Avenue
16. TPM 2012-06 (Amazon) (portion of)	NWQ Orange Avenue and Central Avenue
17. Orange Industrial Park	NEQ Orange Avenue and Central Avenue
18. North Pointe (portion of)	SWC Orange Avenue and North Avenue
19. Commercial Development	NEC Orange Avenue and North Avenue
20. RP East Industrial	NEQ East Avenue and Central Avenue

Other Near Term Projects the City, County or Caltrans has knowledge and for which it is anticipated that said project(s) is/are projected to be whole or partially built by the Near Term Project Year 2025. City, County and Caltrans as appropriate would provide JLB with project details such as a project description, location, proposed land uses with breakdowns and type of residential units and amount of square footages for non-residential uses.

The Scope of Work is based on our understanding of this Project and our experience with similar TIAs. In the absence of comments by January 30, 2020 it will be assumed that the Scope of Work is acceptable to the agency(ies) that have not submitted any comments. If you have any questions or require additional information, please contact me by phone at (559) 664-3159 or by email at jgarcia@JLBtraffic.com.

Sincerely,



Jesus Garcia
Engineer I/II

cc: Harmanjit Dhaliwal, City of Fresno
Brian Spaunhurst, County of Fresno
David Padilla, Caltrans
Susana Maciel, JLB Traffic Engineering, Inc.

Z:\01 Projects\004 Fresno\004-108 Fresno Pacific TIA\Draft Scope of Work\L01092020 Draft Scope of Work (004-108).docx



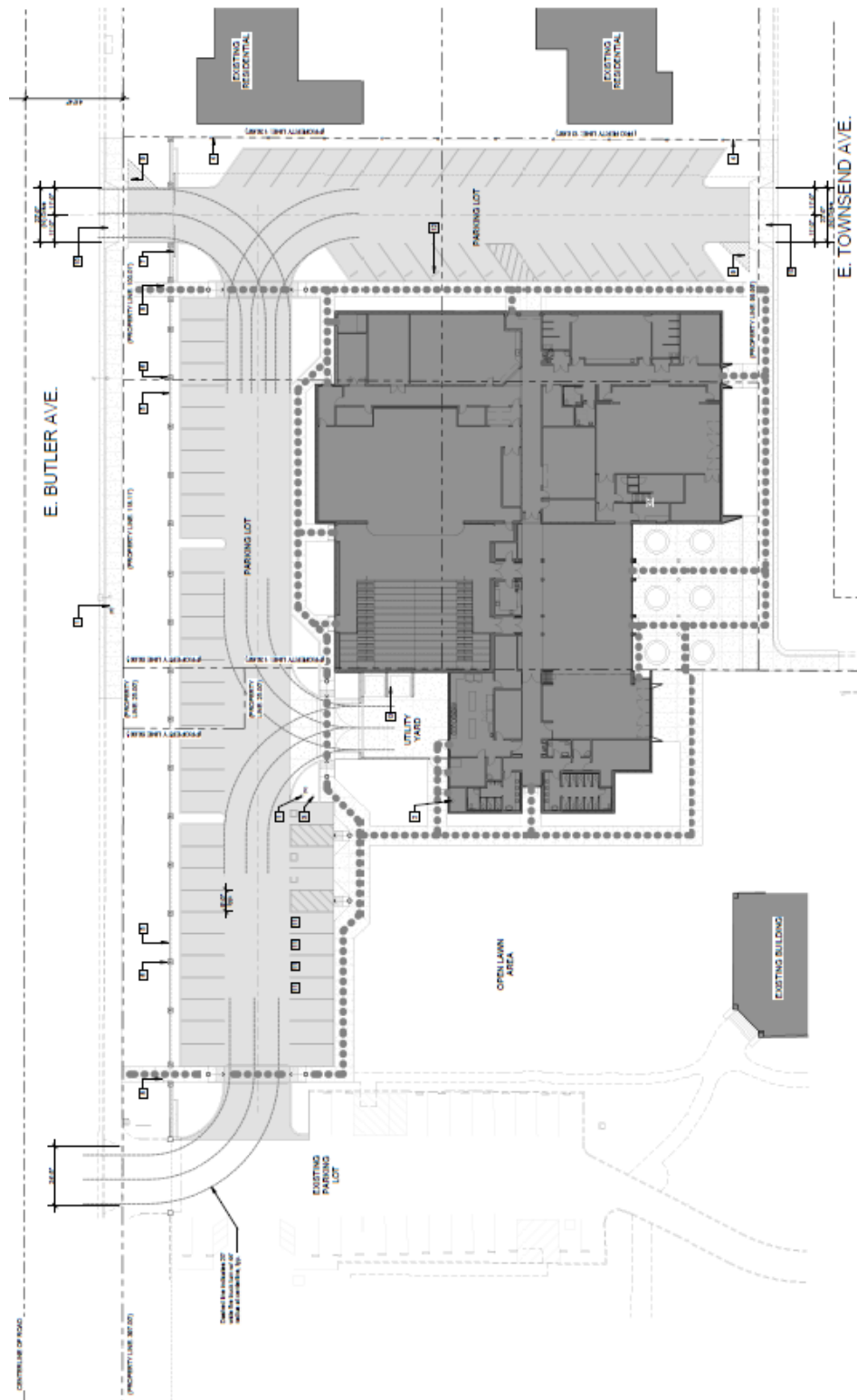
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info@JLBtraffic.com

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Fresno, CA 93704
(559) 570-8991

Exhibit A – Project Site Aerial



Exhibit B – Project Site Plan



Jesus Garcia

From: Padilla, Dave@DOT <dave.padilla@dot.ca.gov>
Sent: Friday, January 24, 2020 3:26 PM
To: Jesus Garcia; Jill.Gormley@fresno.gov
Cc: Harmanjit Dhaliwal; bspaunhurst@fresnocountyca.gov; Susana Maciel
Subject: RE: Fresno Pacific University Culture and Arts Center TIA: Draft Scope of Work

Hello Jesus,

We have no concerns with the proposed SOW.

Thank you,

DAVID PADILLA

Associate Transportation Planner
Caltrans
Office of Planning & Local Assistance
1352 W. Olive Avenue
Fresno, CA 93778-2616
Office: (559) 444-2493, Fax: (559) 445-5875

From: Jesus Garcia <jgarcia@jlbtraffic.com>
Sent: Monday, November 18, 2019 5:35 PM
To: Jill.Gormley@fresno.gov
Cc: Harmanjit Dhaliwal <Harmanjit.Dhaliwal@fresno.gov>; bspaunhurst@fresnocountyca.gov; Padilla, Dave@DOT <dave.padilla@dot.ca.gov>; Susana Maciel <smaciel@jlbtraffic.com>
Subject: Fresno Pacific University Culture and Arts Center TIA: Draft Scope of Work

Good evening Mrs. Gormley,

Attached you will find a Draft Scope of Work for the preparation of a Traffic Impact Analysis for a Project in the City of Fresno.

We kindly ask that you take a moment to review and comment on the proposed Scope of Work. In the absence of comments by December 9, 2019, it will be assumed that the proposed Scope of Work is acceptable to the agency(ies) that have not submitted any comments.

If you have any questions or require additional information, please contact me by phone at 559.664.3159 or by e-mail at jgarcia@JLBtraffic.com. We appreciate your time and attention to this matter.

Sincerely,

Jesus Garcia
Engineering Aide

Susana Maciel

From: Harmanjit Dhaliwal <Harmanjit.Dhaliwal@fresno.gov>
Sent: Tuesday, February 04, 2020 1:49 PM
To: Susana Maciel; bspaunhurst@fresnocountyca.gov
Cc: david.padilla@dot.ca.gov; Jesus Garcia; Jose Benavides; Jill Gormley; Sufia Samaan
Subject: RE: FPU Culture and Arts Center TIA: Draft Scope of Work

Good Afternoon Susana,

We do not have any additional comments on the Scope of Work. The request for the trip trace from the access points was intended to be shown on the TIS diagram when the study is submitted.

Thanks,

Harman



Public Works Department

Traffic Operations & Planning Division

2600 Fresno Street, Room 4064

Fresno, CA 93721

Ph: (559) 621-8694

Harmanjit.Dhaliwal@fresno.gov

From: Susana Maciel [mailto:smaciel@jlbtraffic.com]
Sent: Thursday, January 30, 2020 9:51 AM
To: Harmanjit Dhaliwal; bspaunhurst@fresnocountyca.gov
Cc: david.padilla@dot.ca.gov; Jesus Garcia; Jose Benavides; Jill Gormley; Sufia Samaan
Subject: RE: FPU Culture and Arts Center TIA: Draft Scope of Work

External Email: Use caution with links and attachments

Good afternoon,

As requested by the City and County of Fresno, attached is a PDF copy of the Fresno COG Project Select Zone model plot. The Project trips anticipated at the Project's proposed access points are presented in the "Project Trips at Access Points" pdf, also attached. Lastly, a copy of the Project Site Plan is attached to aide in your review.

Please feel welcome to contact me if I can provide you with any additional information.

Best,

Susana Maciel



Traffic Engineering, Transportation Planning and Parking Solutions

Certified Disadvantaged Business Enterprise (DBE) and Small Business Enterprise (SBE)

From: Harmanjit Dhaliwal <Harmanjit.Dhaliwal@fresno.gov>

Sent: Wednesday, January 29, 2020 8:16 AM

To: Susana Maciel <smaciel@jlbtraffic.com>

Cc: bspaunhurst@fresnocountyca.gov; david.padilla@dot.ca.gov; Jesus Garcia <jgarcia@jlbtraffic.com>; Jose Benavides <jbenavides@jlbtraffic.com>; Jill Gormley <Jill.Gormley@fresno.gov>; Sufia Samaan <Sufia.Samaan@fresno.gov>

Subject: RE: FPU Culture and Arts Center TIA: Draft Scope of Work

Good Morning Susana,

The City has reviewed the proposed Draft Scope of Work and will require a trip trace for all of the access points to the project.

Thanks,

Harmanjit Dhaliwal, PE



Public Works Department

Traffic Operations & Planning Division

2600 Fresno Street, Room 4064

Fresno, CA 93721

Ph: (559) 621-8694

Harmanjit.Dhaliwal@fresno.gov

Effective January 2, 2020, new security measures have been implemented at City Hall to include security screening for all visitors. For additional information please see the following link:

<https://www.fresno.gov/news/city-announces-new-security-measures-at-city-hall/>

From: Harmanjit Dhaliwal [<mailto:harmanjitdhaliwal@gmail.com>]

Sent: Wednesday, January 29, 2020 8:12 AM

To: Harmanjit Dhaliwal

Subject: Fwd: FPU Culture and Arts Center TIA: Draft Scope of Work

External Email: Use caution with links and attachments

----- Forwarded message -----

From: Susana Maciel <smaciel@jlbtraffic.com>

Date: Jan 9, 2020, 2:37 PM -0800

To: Jill Gormley <Jill.Gormley@fresno.gov>

Cc: Harmanjit Dhaliwal <harmanjitdhaliwal@gmail.com>, Spaunhurst, Brian
(bspaunhurst@fresnocountyca.gov) <bspaunhurst@fresnocountyca.gov>, david.padilla@dot.ca.gov
<david.padilla@dot.ca.gov>, Jesus Garcia <jgarcia@jlbtraffic.com>, Jose Benavides
<jbenavides@jlbtraffic.com>

Subject: FPU Culture and Arts Center TIA: Draft Scope of Work

Good afternoon, Mrs. Gormley,

JLB has prepared a Draft Scope of Work for the preparation of a Traffic Impact Analysis for the Fresno Pacific University Culture and Arts Center Project located in the City of Fresno.

I kindly ask that you and other responsible agencies take some time to review the letter attached to this email and provide any comments by January 30, 2020. If you have no comments, please let me know as well.

If you have any questions or require any additional information, please feel welcome to contact me by phone at 559.317.6273 or by email at smaciel@jlbtraffic.com. I sincerely appreciate your time and attention to this matter and look forward to hearing from you soon.

Best,

Susana Maciel



Traffic Engineering, Transportation Planning and Parking Solutions

Certified Disadvantaged Business Enterprise (DBE) and Small Business Enterprise (SBE)

516 W. Shaw Ave., Ste. 103

Fresno, CA 93704

Direct: (559) 317-6273

Susana Maciel

From: Spaunhurst, Brian <bspaunhurst@fresnocountyca.gov>
Sent: Monday, January 27, 2020 11:53 AM
To: Susana Maciel
Cc: Hensley, Gloria; Nakagawa, Wendy
Subject: RE: FPU Culture and Arts Center TIA: Draft Scope of Work

Good Morning Susie,

County Transportation Planning has reviewed the DSOW and we have the following comments:

- Please provide an updated DSOW that includes:
 - Trip Distribution Percentages (map)
 - Addition of "Near Term No Project" Study Scenario
 - Addition of "Cumulative No Project" Study Scenario

County Roads Maintenance and Operations may have additional comments to provide. In order to limit requested revisions, please defer your DSOW resubmittal until confirmation is received from County RMO.

Respectfully,



Brian Spaunhurst | Senior Planner
Department of Public Works and Planning | Design Division
2220 Tulare St. 7th Floor Fresno, CA 93721
Main Office: (559) 600-4109 Direct: (559) 600-4532
[Your input matters! Customer Service Survey](#)

From: Susana Maciel <smaciel@jlbtraffic.com>
Sent: Thursday, January 9, 2020 2:52 PM
To: Jill Gormley <Jill.Gormley@fresno.gov>
Cc: Harmanjit Dhaliwal <harmanjitdhaliwal@gmail.com>; Spaunhurst, Brian <bspaunhurst@fresnocountyca.gov>; david.padilla@dot.ca.gov; Jesus Garcia <jgarcia@jlbtraffic.com>; Jose Benavides <jbenavides@jlbtraffic.com>
Subject: RE: FPU Culture and Arts Center TIA: Draft Scope of Work

CAUTION!!! - EXTERNAL EMAIL - THINK BEFORE YOU CLICK

All,

Please disregard the previously attached Draft Scope of Work and review this one instead. My apologies.

Best,

Susana Maciel



Traffic Engineering, Transportation Planning and Parking Solutions

Certified Disadvantaged Business Enterprise (DBE) and Small Business Enterprise (SBE)

From: Susana Maciel

Sent: Thursday, January 09, 2020 2:37 PM

To: Jill Gormley <Jill.Gormley@fresno.gov>

Cc: Harmanjit Dhaliwal <harmanjitdhaliwal@gmail.com>; Spaunhurst, Brian (bspaunhurst@fresnocountyca.gov) <bspaunhurst@fresnocountyca.gov>; david.padilla@dot.ca.gov; Jesus Garcia <jgarcia@jlbtraffic.com>; Jose Benavides (jbenavides@jlbtraffic.com) <jbenavides@jlbtraffic.com>

Subject: FPU Culture and Arts Center TIA: Draft Scope of Work

Good afternoon, Mrs. Gormley,

JLB has prepared a Draft Scope of Work for the preparation of a Traffic Impact Analysis for the Fresno Pacific University Culture and Arts Center Project located in the City of Fresno.

I kindly ask that you and other responsible agencies take some time to review the letter attached to this email and provide any comments by January 30, 2020. If you have no comments, please let me know as well.

If you have any questions or require any additional information, please feel welcome to contact me by phone at 559.317.6273 or by email at smaciel@jlbtraffic.com. I sincerely appreciate your time and attention to this matter and look forward to hearing from you soon.

Best,

Susana Maciel



Traffic Engineering, Transportation Planning and Parking Solutions

Certified Disadvantaged Business Enterprise (DBE) and Small Business Enterprise (SBE)

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Fresno, CA 93704

Direct: (559) 317-6273

Office: (559) 570-8991

Cell: (559) 232-9474

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Susana Maciel

From: Spaunhurst, Brian <bspaunhurst@fresnocountyca.gov>
Sent: Friday, January 31, 2020 1:22 PM
To: Susana Maciel; Harmanjit Dhaliwal
Cc: david.padilla@dot.ca.gov; Jesus Garcia; Jose Benavides; Jill Gormley; Sufia Samaan; Hensley, Gloria
Subject: RE: FPU Culture and Arts Center TIA: Draft Scope of Work

Good Afternoon Susie,

Thank you for providing the follow up information. Upon reviewing the information the County would recommend for a Traffic Management Plan to accompany this project, however this recommendation is deferred to the City as it would need to be reviewed and approved by them. No additional comments from the County for this project. Please forward a digital copy of the TIS when it is ready.

Respectfully,



Brian Spaunhurst | **Senior Planner**
Department of Public Works and Planning | Design Division
2220 Tulare St. 7th Floor Fresno, CA 93721
Main Office: (559) 600-4109 Direct: (559) 600-4532
[Your input matters! Customer Service Survey](#)

From: Susana Maciel <smaciel@jlbtraffic.com>
Sent: Thursday, January 30, 2020 9:51 AM
To: Harmanjit Dhaliwal <Harmanjit.Dhaliwal@fresno.gov>; Spaunhurst, Brian <bspaunhurst@fresnocountyca.gov>
Cc: david.padilla@dot.ca.gov; Jesus Garcia <jgarcia@jlbtraffic.com>; Jose Benavides <jbenavides@jlbtraffic.com>; Jill Gormley <Jill.Gormley@fresno.gov>; Sufia Samaan <Sufia.Samaan@fresno.gov>
Subject: RE: FPU Culture and Arts Center TIA: Draft Scope of Work

CAUTION!!! - EXTERNAL EMAIL - THINK BEFORE YOU CLICK

Good afternoon,

As requested by the City and County of Fresno, attached is a PDF copy of the Fresno COG Project Select Zone model plot. The Project trips anticipated at the Project's proposed access points are presented in the "Project Trips at Access Points" pdf, also attached. Lastly, a copy of the Project Site Plan is attached to aide in your review.

Please feel welcome to contact me if I can provide you with any additional information.

Best,

Susana Maciel



Traffic Engineering, Transportation Planning and Parking Solutions

Certified Disadvantaged Business Enterprise (DBE) and Small Business Enterprise (SBE)

From: Harmanjit Dhaliwal <Harmanjit.Dhaliwal@fresno.gov>

Sent: Wednesday, January 29, 2020 8:16 AM

To: Susana Maciel <smaciel@jlbtraffic.com>

Cc: bspaunhurst@fresnocountyca.gov; david.padilla@dot.ca.gov; Jesus Garcia <jgarcia@jlbtraffic.com>; Jose Benavides <jbenavides@jlbtraffic.com>; Jill Gormley <Jill.Gormley@fresno.gov>; Sufia Samaan <Sufia.Samaan@fresno.gov>

Subject: RE: FPU Culture and Arts Center TIA: Draft Scope of Work

Good Morning Susana,

The City has reviewed the proposed Draft Scope of Work and will require a trip trace for all of the access points to the project.

Thanks,

Harmanjit Dhaliwal, PE



Public Works Department

Traffic Operations & Planning Division

2600 Fresno Street, Room 4064

Fresno, CA 93721

Ph: (559) 621-8694

Harmanjit.Dhaliwal@fresno.gov

Effective January 2, 2020, new security measures have been implemented at City Hall to include security screening for all visitors. For additional information please see the following link:

<https://www.fresno.gov/news/city-announces-new-security-measures-at-city-hall/>

From: Harmanjit Dhaliwal [<mailto:harmanjitdhaliwal@gmail.com>]

Sent: Wednesday, January 29, 2020 8:12 AM

To: Harmanjit Dhaliwal

Subject: Fwd: FPU Culture and Arts Center TIA: Draft Scope of Work

External Email: Use caution with links and attachments

----- Forwarded message -----

From: Susana Maciel <smaciel@jlbtraffic.com>

Date: Jan 9, 2020, 2:37 PM -0800

To: Jill Gormley <Jill.Gormley@fresno.gov>
Cc: Harmanjit Dhaliwal <harmanjitdhaliwal@gmail.com>, Spaunhurst, Brian
(bspaunhurst@fresnocountyca.gov) <bspaunhurst@fresnocountyca.gov>, david.padilla@dot.ca.gov
<david.padilla@dot.ca.gov>, Jesus Garcia <jgarcia@jlbtraffic.com>, Jose Benavides
<jbenavides@jlbtraffic.com>
Subject: FPU Culture and Arts Center TIA: Draft Scope of Work

Good afternoon, Mrs. Gormley,

JLB has prepared a Draft Scope of Work for the preparation of a Traffic Impact Analysis for the Fresno Pacific University Culture and Arts Center Project located in the City of Fresno.

I kindly ask that you and other responsible agencies take some time to review the letter attached to this email and provide any comments by January 30, 2020. If you have no comments, please let me know as well.

If you have any questions or require any additional information, please feel welcome to contact me by phone at 559.317.6273 or by email at smaciel@jlbtraffic.com. I sincerely appreciate your time and attention to this matter and look forward to hearing from you soon.

Best,

Susana Maciel



Traffic Engineering, Transportation Planning and Parking Solutions

Certified Disadvantaged Business Enterprise (DBE) and Small Business Enterprise (SBE)

516 W. Shaw Ave., Ste. 103

Fresno, CA 93704

Direct: (559) 317-6273

Susana Maciel

From: Spaunhurst, Brian <bspaunhurst@fresnocountyca.gov>
Sent: Wednesday, February 05, 2020 7:34 AM
To: Dirk Poeschel
Cc: Susana Maciel; Jose Benavides
Subject: RE: Update: FPU Culture and Arts Center TIA

Good Morning Dirk,

I appreciate the breakdown and I understand the logic here.

Jose and Susie, please disregard my comment pertaining to “No Project” alternatives.

In addition, I believe this is the same logic that would apply to the Reedley project that Susie was trying to explain to me. I will send a follow up e-mail in that thread so that project comments aren’t crossed.

Respectfully,



Brian Spaunhurst | Senior Planner

Department of Public Works and Planning | Design Division

2220 Tulare St. 7th Floor Fresno, CA 93721

Main Office: (559) 600-4109 Direct: (559) 600-4532

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From: Dirk Poeschel <dirk@dplds.com>
Sent: Tuesday, February 4, 2020 4:01 PM
To: Spaunhurst, Brian <bspaunhurst@fresnocountyca.gov>
Cc: Susana Maciel <smaciel@jlbtraffic.com>; Jose Benavides <jbenavides@jlbtraffic.com>
Subject: FW: Update: FPU Culture and Arts Center TIA

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Brain

I am working with Fresno Pacific University on their cultural event center that prompted your comment that the university’s traffic engineer study various “No Project” alternatives. The project is consistent with the adopted City of Fresno 2035 General Plan. The City does not require/utilize “No Project” scenarios when a project is consistent with the City of Fresno 2035 General Plan. Also, the City of Fresno approved the Scope of Work as proposed by Jose Benavides/JLB.

From a CEQA perspective, the “No Project” analysis is already known because the traffic was assumed and calculated in the regional model to occur as part of the general plan adoption and related plan EIR certification. In other words, whatever the traffic volumes exist on adjacent streets would remain the same. Therefore, the project does not cause or generate new traffic not assumed to occur with general plan and its EIR that has the potential to *change the environment*.

All applicable traffic mitigation fees will be paid by the University. Please reconsider the requirement for the “No Project” analysis. Thank you in advance for your consideration.

Dirk Poeschel, AICP

Land Development Services, Inc.

923 Van Ness Ave., Suite 200

Fresno, Ca. 93721

Ph- 559-445-0374

CalBRE No. 01882606

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Appendix B: Traffic Counts



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info@JLBtraffic.com

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(559) 570-8991

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File Name : Winery and Butler

Site Code : 00000000

Start Date : 10/24/2019

Page No : 1

Groups Printed- Unshifted

	WINERY Southbound				BUTLER Westbound				WINERY Northbound				BUTLER Eastbound				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Int. Total
07:00 AM	7	2	11	3	2	41	7	1	2	4	1	2	10	28	3	1	125
07:15 AM	8	5	3	2	7	62	17	0	4	3	1	6	6	46	5	1	176
07:30 AM	21	6	9	0	2	116	27	0	3	5	1	4	17	63	4	2	280
07:45 AM	21	6	33	1	3	118	38	0	3	3	1	0	27	86	13	1	354
Total	57	19	56	6	14	337	89	1	12	15	4	12	60	223	25	5	935
08:00 AM	17	3	28	2	6	74	33	2	2	2	3	0	29	33	10	0	244
08:15 AM	6	3	21	2	3	48	16	1	3	2	0	0	20	24	8	0	157
08:30 AM	7	7	21	1	4	36	17	0	5	2	0	0	14	28	14	0	156
08:45 AM	5	5	16	0	11	43	18	0	6	1	3	1	14	27	13	0	163
Total	35	18	86	5	24	201	84	3	16	7	6	1	77	112	45	0	720

04:00 PM	16	11	42	2	2	50	13	0	15	5	7	0	29	55	10	0	257
04:15 PM	7	8	33	1	2	40	19	0	7	5	4	1	43	59	7	1	237
04:30 PM	16	7	36	1	3	57	19	2	9	3	9	1	28	55	4	0	250
04:45 PM	21	7	47	1	0	58	14	0	7	6	6	1	36	61	9	0	274
Total	60	33	158	5	7	205	65	2	38	19	26	3	136	230	30	1	1018
05:00 PM	19	6	47	2	4	48	13	0	26	7	14	4	44	72	6	0	312
05:15 PM	24	9	45	5	1	51	24	0	8	8	9	1	46	85	9	0	325
05:30 PM	21	7	51	0	2	38	20	3	16	8	4	4	35	57	7	0	273
05:45 PM	18	2	53	3	4	59	18	1	12	5	3	1	39	32	2	0	252
Total	82	24	196	10	11	196	75	4	62	28	30	10	164	246	24	0	1162
Grand Total	234	94	496	26	56	939	313	10	128	69	66	26	437	811	124	6	3835
Apprch %	27.5	11.1	58.4	3.1	4.2	71.2	23.7	0.8	44.3	23.9	22.8	9	31.7	58.9	9	0.4	
Total %	6.1	2.5	12.9	0.7	1.5	24.5	8.2	0.3	3.3	1.8	1.7	0.7	11.4	21.1	3.2	0.2	

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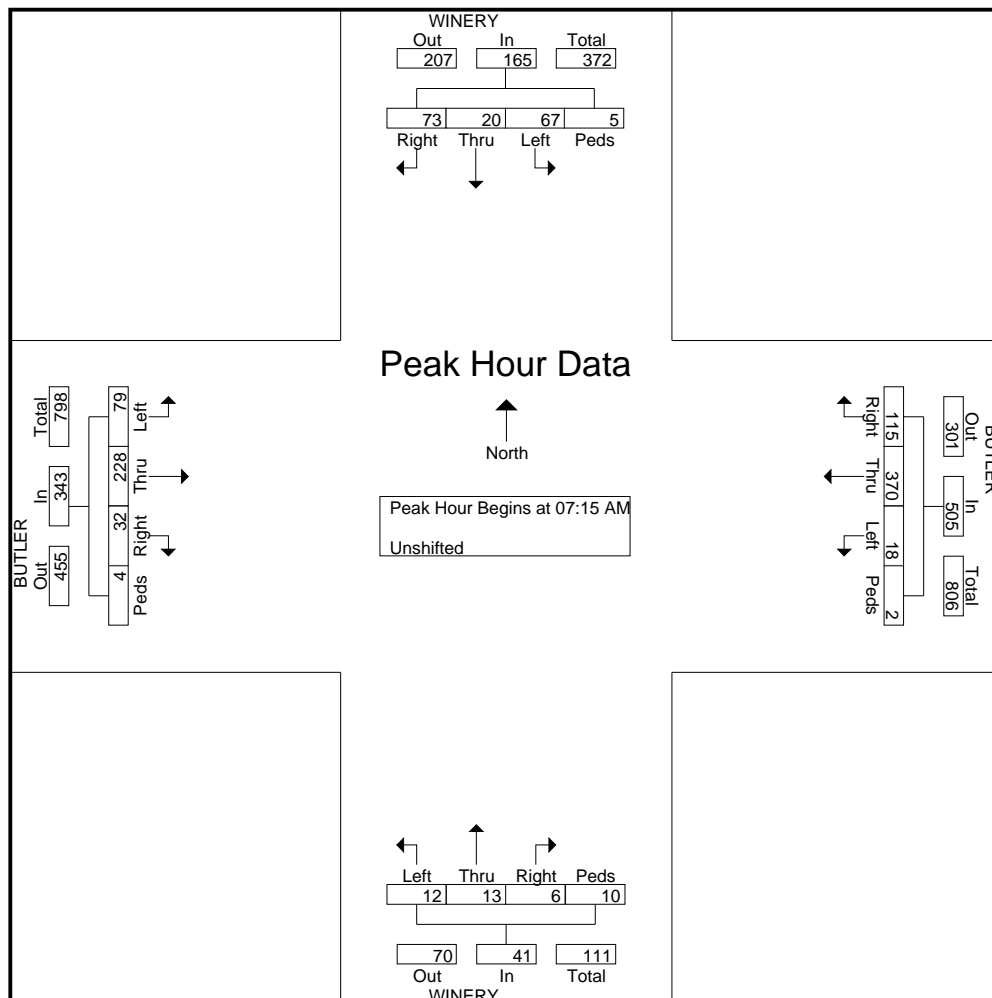
File Name : Winery and Butler

Site Code : 00000000

Start Date : 10/24/2019

Page No : 2

	WINERY Southbound					BUTLER Westbound					WINERY Northbound					BUTLER Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	8	5	3	2	18	7	62	17	0	86	4	3	1	6	14	6	46	5	1	58	176
07:30 AM	21	6	9	0	36	2	116	27	0	145	3	5	1	4	13	17	63	4	2	86	280
07:45 AM	21	6	33	1	61	3	118	38	0	159	3	3	1	0	7	27	86	13	1	127	354
08:00 AM	17	3	28	2	50	6	74	33	2	115	2	2	3	0	7	29	33	10	0	72	244
Total Volume	67	20	73	5	165	18	370	115	2	505	12	13	6	10	41	79	228	32	4	343	1054
% App. Total	40.6	12.1	44.2	3		3.6	73.3	22.8	0.4		29.3	31.7	14.6	24.4		23	66.5	9.3	1.2		
PHF	.798	.833	.553	.625	.676	.643	.784	.757	.250	.794	.750	.650	.500	.417	.732	.681	.663	.615	.500	.675	.744



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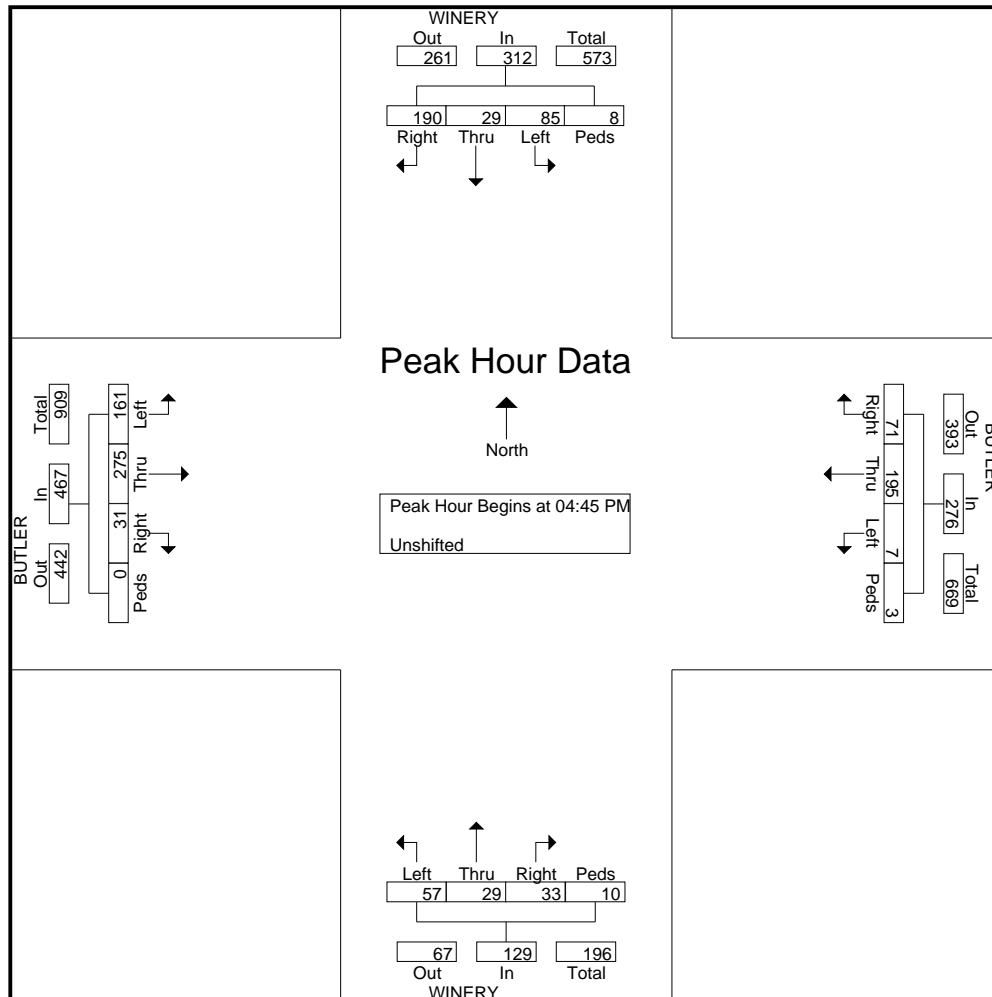
File Name : Winery and Butler

Site Code : 00000000

Start Date : 10/24/2019

Page No : 3

	WINERY Southbound					BUTLER Westbound					WINERY Northbound					BUTLER Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	21	7	47	1	76	0	58	14	0	72	7	6	6	1	20	36	61	9	0	106	274
05:00 PM	19	6	47	2	74	4	48	13	0	65	26	7	14	4	51	44	72	6	0	122	312
05:15 PM	24	9	45	5	83	1	51	24	0	76	8	8	9	1	26	46	85	9	0	140	325
05:30 PM	21	7	51	0	79	2	38	20	3	63	16	8	4	4	32	35	57	7	0	99	273
Total Volume	85	29	190	8	312	7	195	71	3	276	57	29	33	10	129	161	275	31	0	467	1184
% App. Total	27.2	9.3	60.9	2.6		2.5	70.7	25.7	1.1		44.2	22.5	25.6	7.8		34.5	58.9	6.6	0		
PHF	.885	.806	.931	.400	.940	.438	.841	.740	.250	.908	.548	.906	.589	.625	.632	.875	.809	.861	.000	.834	.911



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File Name : Winery and Butler

Site Code : 00000000

Start Date : 10/24/2019

Page No : 1

Groups Printed- Bank 1 - Bikes

	WINERY Southbound				BUTLER Westbound				WINERY Northbound				BUTLER Eastbound				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Int. Total

07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2

Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2

08:15 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1

Total	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1

04:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1

04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Total	0	0	0	0	0	1	0	0	0	0	0	0	0	2	1	0	4

05:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
05:30 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	3
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
Total	0	2	0	0	0	0	0	0	0	0	1	0	1	1	0	0	5
Grand Total	0	2	0	0	0	2	0	0	0	0	1	0	1	4	2	0	12
Apprch %	0	100	0	0	0	100	0	0	0	0	100	0	14.3	57.1	28.6	0	
Total %	0	16.7	0	0	0	16.7	0	0	0	0	8.3	0	8.3	33.3	16.7	0	

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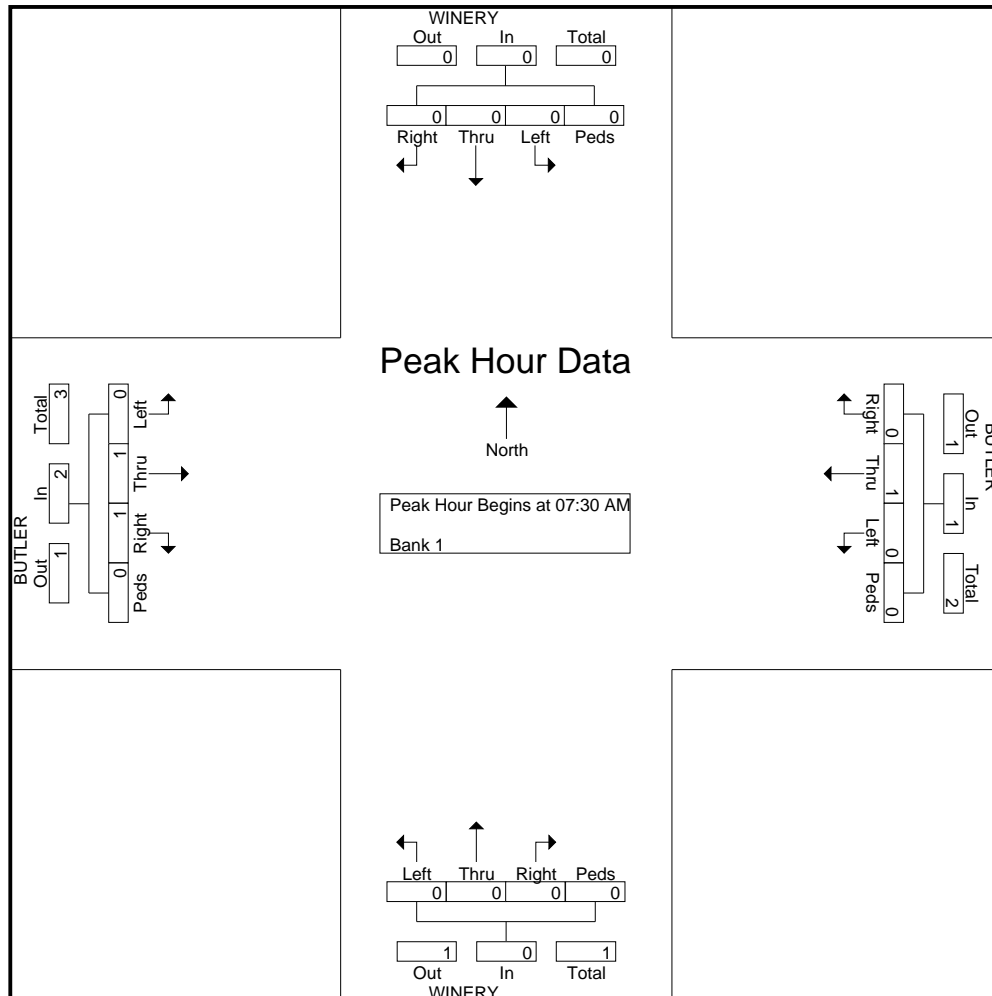
File Name : Winery and Butler

Site Code : 00000000

Start Date : 10/24/2019

Page No : 2

	WINERY Southbound					BUTLER Westbound					WINERY Northbound					BUTLER Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	2
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	1	0	2	3
% App. Total	0	0	0	0	0	0	100	0	0		0	0	0	0		0	50	50	0		
PHF	.000	.000	.000	.000	.000	.000	.250	.000	.000	.250	.000	.000	.000	.000	.000	.000	.250	.250	.000	.250	.375



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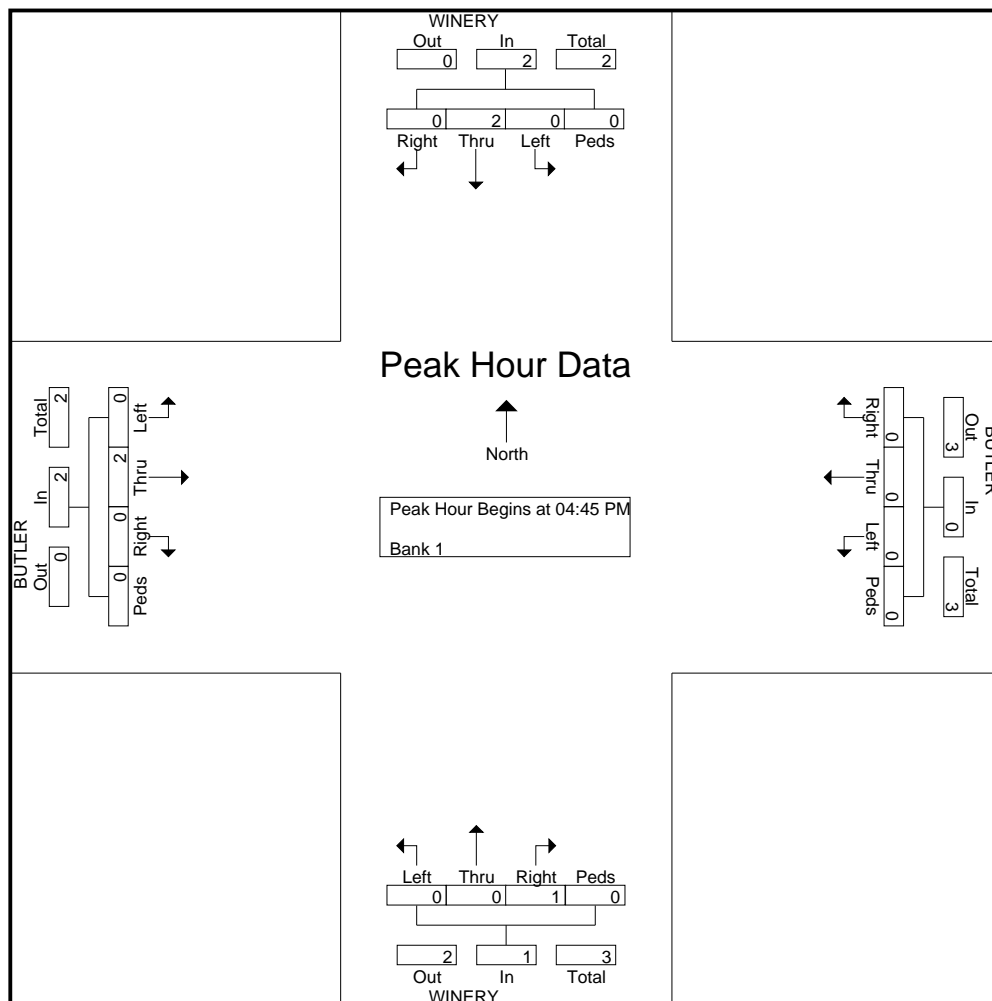
File Name : Winery and Butler

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Page No : 3

	WINERY Southbound					BUTLER Westbound					WINERY Northbound					BUTLER Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
05:30 PM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	3
Total Volume	0	2	0	0	2	0	0	0	0	0	0	0	1	0	1	0	2	0	0	2	5
% App. Total	0	100	0	0		0	0	0	0		0	0	100	0		0	100	0	0		
PHF	.000	.250	.000	.000	.250	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	.000	.500	.000	.000	.500	.417



Appendix C: Traffic Modeling



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(559) 570-8991

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January 9, 2020

Kai Han, TE
Council of Fresno County Governments
2035 Tulare Street, Suite 201
Fresno, CA 93721

Via E-mail Only: khan@fresnocog.org

Subject: *Revised Traffic Modeling Request for the Preparation of a Traffic Impact Analysis in Support of the Fresno Pacific University Culture and Arts Center Project Located on the southeast quadrant of Chestnut Avenue and Butler Avenue in the City of Fresno (JLB Project 004-108)*

Dear Mr. Han,

JLB Traffic Engineering, Inc. (JLB) hereby requests traffic modeling for the preparation of a Traffic Impact Analysis (TIA) for the proposed Fresno Pacific University Culture and Arts Center (Project) located on the southeast quadrant of Chestnut Avenue and Butler Avenue in the City of Fresno. The Project proposes to construct a 25,300 square-foot Culture and Arts Center with a 400-seat auditorium where several existing residential units will be removed. Based on information provided by the developer, the Project will namely serve as a venue for events that service students who may already be on campus. However, the Project will serve as a venue for non-school related events that may take place on a Thursday, Friday and/or Saturday evening. Per information provided to JLB, the Project is consistent with the City of Fresno 2035 General Plan. An aerial of the Project vicinity and the Project Site Plan are presented in Exhibits A and B, respectively

The purpose of the TIA is to evaluate the potential on-site and off-site traffic impacts, identify short-term roadway and circulation needs, determine potential mitigation measures and identify any critical traffic issues that should be addressed in the on-going planning process.

Scenarios:

The following scenarios are requested:

1. Base Year 2020 (with Link and TAZ modifications)
2. Cumulative Year 2035 plus Project Select Zone (with Link and TAZ modifications)
3. Differences between model runs 2 and 1 above

Changes and/or additions to the Model Network or TAZ's

JLB reviewed the Fresno COG model network for the Base Year 2020 and Cumulative Year 2035. Based on this review, JLB requests the following link and TAZ Network modifications. Details on the requested Link and TAZ modifications for Base Year 2020 and Cumulative Year 2035 are illustrated in Exhibit C.

LINK and TAZ MODIFICATIONS (Base Year 2020 Scenario Only):

1. Modify Peach Avenue to reduce lanes south of Node 3537 to one lane in each direction.



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(559) 570-8991

Page | 1

LINK and TAZ MODIFICATIONS (Base Year 2020 and Cumulative Year 2035 plus Project Select Zone Scenarios):

1. Modify Kings Canyon Avenue as follows:
 - a. Decrease lanes between Maple Avenue and Peach Avenue to two lanes in each direction.
 - b. Decrease speed between Chestnut Avenue and Willow Avenue to 35 MPH in each direction.
 - c. Decrease speed between Willow Avenue and Peach Avenue to 40 MPH in each direction.
2. Modify Winery Avenue as follows:
 - a. Create Winery Avenue between Kings Canyon Road and Lane Avenue as follows:
 - i. Classification: Local Roadway
 - ii. Lanes: One in each direction
 - iii. Speed: 30 MPH
 - b. Reduce lanes between Lane Avenue and Butler Avenue to one (1) lane in each direction.
 - c. Reduce speed between Lane Avenue and Butler Avenue to 30 MPH in each direction.
 - d. Create Winery Avenue between Butler Avenue and Hamilton Avenue as follows:
 - i. Classification: Local Roadway
 - ii. Lanes: One in each direction
 - iii. Speed: 30 MPH
3. Modify TAZ 1452 as follows:
 - a. Split TAZ 1452 into two (2) TAZs – TAZ 1452_A and TAZ 1452_B.
 - b. TAZ 1452_A shall be bound by Kings Canyon Road, Winery Avenue, Lane Avenue and Chestnut Avenue. TAZ 1452_A shall TAZ connectors to Kings Canyon Road, Winery Avenue, Lane Avenue and Chestnut Avenue.
 - c. TAZ 1452_B shall be bound by Kings Canyon Road, Willow Avenue, Lane Avenue and Winery Avenue. TAZ 1452_B shall TAZ connectors to Kings Canyon Road, Willow Avenue, Lane Avenue and Winery Avenue.
4. Modify Lane Avenue as follows:
 - a. Decrease speed between Chestnut Avenue and Winery Avenue to 35 MPH in each direction.
 - b. Decrease lanes between Willow Avenue and Peach Avenue to one lane in each direction.
5. Modify Peach Avenue as follows:
 - a. Increase lanes between Kings Canyon Avenue and Butler Avenue to two lanes in each direction.
 - b. Increase speed south of Node 3537 to 45 MPH in each direction.
6. Modify TAZ 1455 as follows:
 - a. Split TAZ 1455 into two (2) TAZs – TAZ 1455_A and TAZ 1455_B.
 - b. TAZ 1455_A shall be bound by Butler Avenue, Winery Avenue, the railroad tracks and Chestnut Avenue. TAZ 1455_A shall have TAZ connectors to Butler Avenue, Winery Avenue and Chestnut Avenue.
 - c. TAZ 1455_B shall be bound by Butler Avenue, Willow Avenue, the railroad tracks and Winery Avenue. TAZ 1455_B shall have TAZ connectors to Butler Avenue, Willow Avenue and Winery Avenue.

LINK and TAZ MODIFICATIONS (Cumulative Year 2035 plus Project Select Zone Scenario Only):

1. Modify Butler Avenue to decrease lanes between Maple Avenue and Peach Avenue to one lane in each direction.
2. Modify Willow Avenue to decrease lanes south of Butler Avenue to one lane in each direction.
3. Create TAZ A (Project) generally located on the southeast corner of Chestnut Avenue and Butler Avenue (See Exhibit C). TAZ A shall have one TAZ connector to Butler Avenue.

Project Trip Generation

Trip generation rates for the proposed Project were obtained from the Transportation Study for the Ford Theaters Project prepared by Gibson Transportation Consulting, Inc. dated June 2014. The Study presents a PM peak hour trip generation rate of 0.33 with an 85/15 inbound and outbound split. The Daily rate was derived based on information provided by the District that the Project would serve as a venue for up to two (2) events during a day. Table I presents the trip generation for the proposed Project with trip generation rates for a Performing Arts Center. At buildout, the proposed Project is estimated to generate a maximum of 296 daily trips, 0 AM peak hour trips and 132 PM peak hour driveway trips.

Table I: Project Trip Generation

Land Use (ITE Code)	Size	Unit	Daily		AM (7-9) Peak Hour					PM (4-6) Peak Hour						
			Rate	Total	Trip Rate	In	Out	In	Out	Total	Trip Rate	In	Out	In	Out	Total
						%						%				
Culture and Arts Center	400	seats	0.74**	296	0.00	50	50	0	0	0	0.33*	85*	15*	112	20	132
Total Driveway Trips				296				0	0	0				112	20	132

Note: * = Trip Generation rate and inbound and outbound split based on the Transportation Study for the Ford Theaters Project prepared by Gibson Transportation Consulting, Inc. dated June 2014

** = Trip Generation rate based on information provided by the Developer.

Access to the Project

Access to and from the Project site is proposed from a total of three (3) existing access points. Two (2) existing access points are located along the south side of Butler Avenue approximately 200 feet and 625 feet east of Chestnut Avenue and allow full access to Butler Avenue. One (1) existing access point is located on along the north side of Townsend Avenue and is also a full access. Additional Project details are found on Exhibit B.

Please feel welcome to contact me if you have any questions or require additional information. I can be reached by phone at 559.664.3159 or by e-mail at jgarcia@JLBtraffic.com.

Sincerely,



Jesus Garcia
Engineer I/II

cc: Susana Maciel, JLB Traffic Engineering, Inc.



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Mr. Han
Fresno COG Modeling Request (Project 004-108)
January 9, 2020

Lang Yu, Fresno Council of Governments

Z:\01 Projects\004 Fresno\004-108 Fresno Pacific TIA\Modeling\Model Request\L010692020 Revised Model Request (004-108).docx



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Page | 4

Exhibit A – Project Aerial



Exhibit B – Project Site Plan

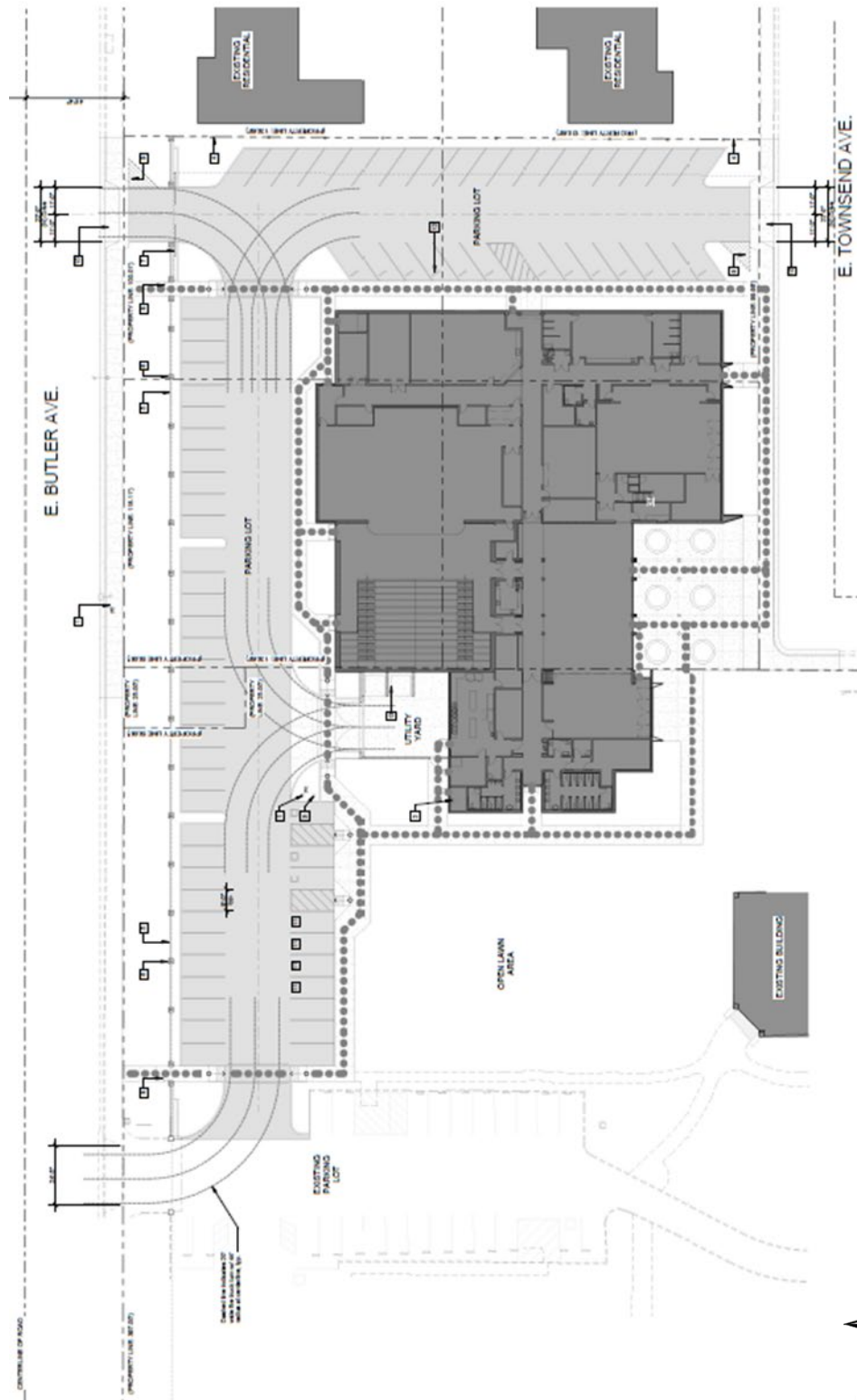
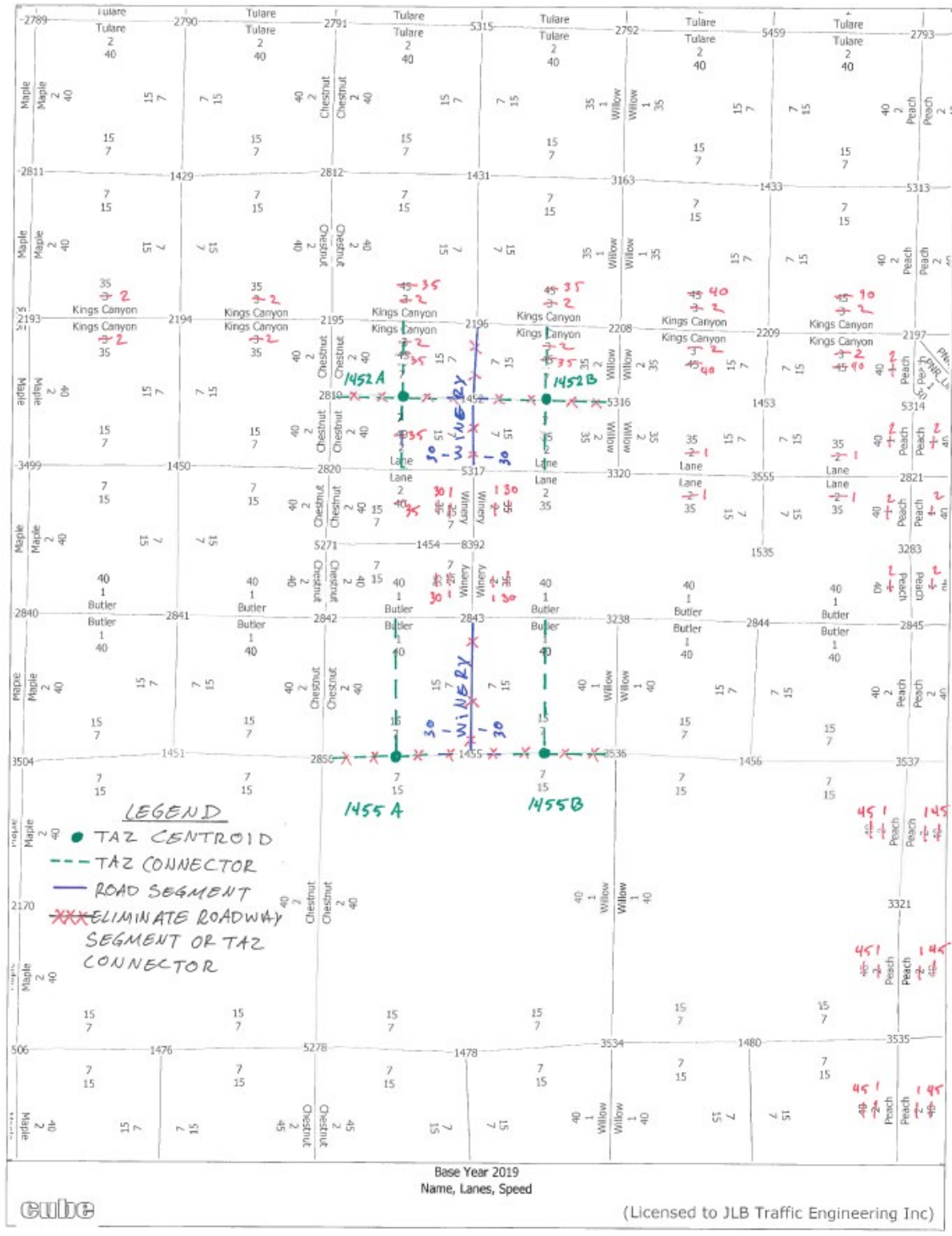
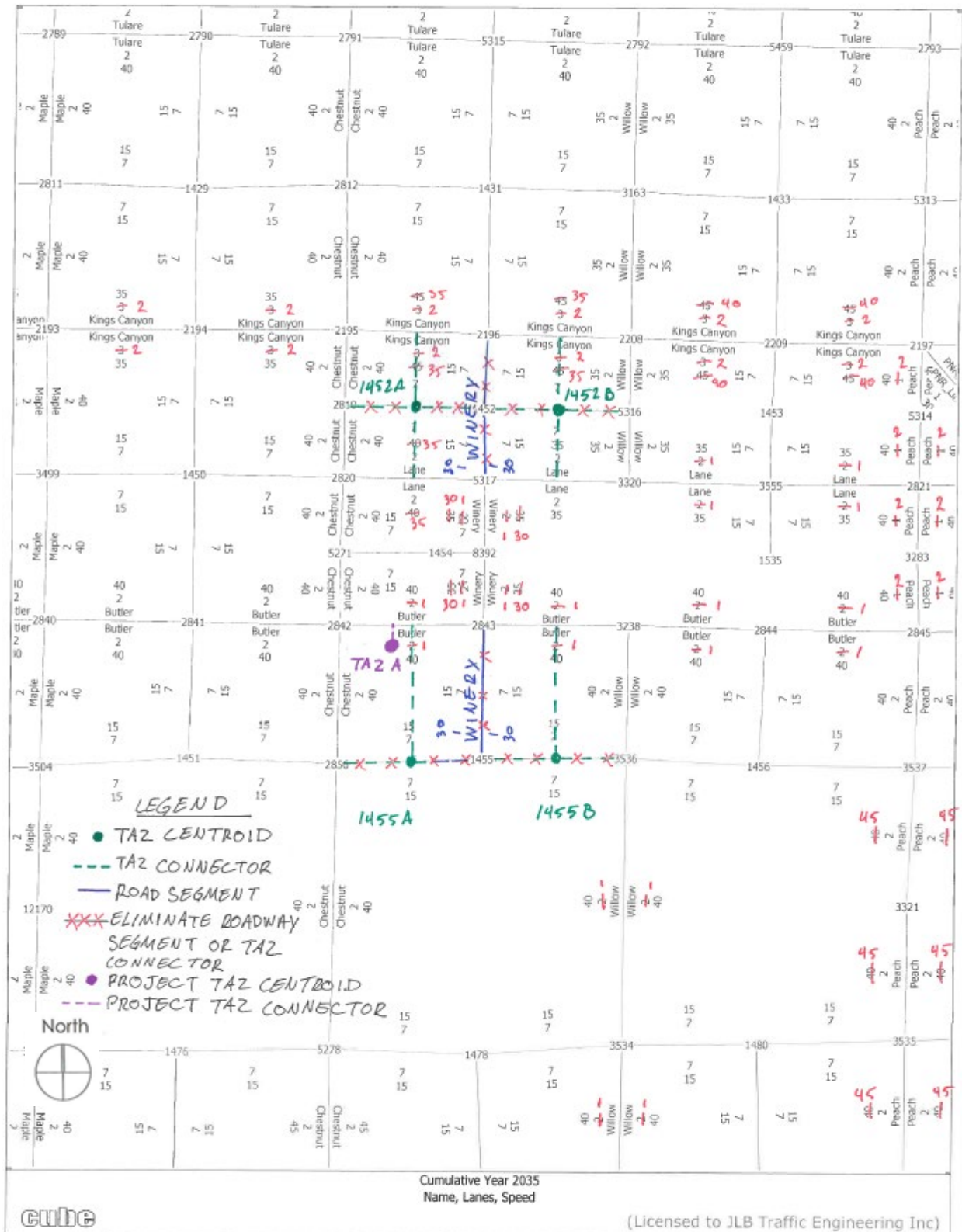



Exhibit C – Model TAZ Modification





499 445 6737 Butler	Chestnut 14280 1008 1313	1110 1262 14264 Chestnut	587 487 7514 Butler	587 487 7514 Butler	319 530 5290 Butler	105 102 1158 Winery 1190 86 114	64 37 656	85 123 1188	646 63 46	362 546 5565 Butler
Butler 6929 499 470	1043 682 11316 Chestnut	814 1045 11298 Chestnut	Butler 7703 651 533	Butler 7703 651 533	Butler 5479 258 465	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0 576 283 6468	Butler 5723 289 498
Base Year 2020 AM, PM & Daily Volumes										



(Licensed to JLB Traffic Engineering Inc)

Cumulative Year 2035 - Select Zone
AM, PM & Daily Volumes

[illegible]

[illegible]

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Appendix D: Methodology



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Levels of Service Methodology

The description and procedures for calculating capacity and level of service (LOS) are found in the Transportation Research Board, Highway Capacity Manual (HCM). The HCM 2010 represents the research on capacity and quality of service for transportation facilities.

Quality of service requires quantitative measures to characterize operational conditions within a traffic stream. Level of service is a quality measure describing operational conditions within a traffic stream, generally in terms of such service measures as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience.

Six levels of service are defined for each type of facility that has analysis procedures available. Letters designate each level of service (LOS), from A to F, with LOS A representing the best operating conditions and LOS F the worst. Each LOS represents a range of operating conditions and the driver's perception of these conditions. Safety is not included in the measures that establish a LOS.

Urban Streets (Automobile Mode)

The term "urban streets" refers to urban arterials and collectors, including those in downtown areas. Arterial streets are roads that primarily serve longer through trips. However, providing access to abutting commercial and residential land uses is also an important function of arterials. Collector streets provide both land access and traffic circulation within residential, commercial and industrial areas. Their access function is more important than that of arterials, and unlike arterials their operation is not always dominated by traffic signals. Downtown streets are signalized facilities that often resemble arterials. They not only move through traffic but also provide access to local businesses for passenger cars, transit buses, and trucks. Pedestrian conflicts and lane obstructions created by stopping or standing taxicabs, buses, trucks and parking vehicles that cause turbulence in the traffic flow are typical of downtown streets.

Flow Characteristics

The speed of vehicles on urban streets is influenced by three main factors, street environment, interaction among vehicles and traffic control.

The street environment includes the geometric characteristics of the facility, the character of roadside activity, and adjacent land uses. Thus, the environment reflects the number and width of lanes, type of median, driveway/access point density, spacing between signalized intersections, existence of parking, level of pedestrian and bicyclist activity and speed limit.

The interaction among vehicles is determined by traffic density, the proportion of trucks and buses, and turning movements. This interaction affects the operation of vehicles at intersections and, to a lesser extent, between signals.

Traffic controls (including signals and signs) forces a portion of all vehicles to slow or stop. The delays and speed changes caused by traffic control devices reduce vehicle speeds; however, such controls are needed to establish right-of-way.



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Page | D-1

Levels of Service (automobile Mode)

The average travel speed for through vehicles along an urban street is the determinant of the operating level of service (LOS). The travel speed along a segment, section or entire length of an urban street is dependent on the running speed between signalized intersections and the amount of control delay incurred at signalized intersections.

LOS A describes primarily free-flow operation. Vehicles are completely unimpeded in their ability to maneuver within the traffic stream. Control delay at signalized intersections is minimal. Travel speeds exceed 85 of the base free flow speed (FFS).

LOS B describes reasonably unimpeded operation. The ability to maneuver within the traffic stream is only slightly restricted and control delay at the boundary intersections is not significant. The travel speed is between 67 and 85 percent of the base FFS.

LOS C describes stable operations. The ability to maneuver and change lanes in midblock location may be more restricted than at LOS B. Longer queues at the boundary intersections may contribute to lower travel speeds. The travel speed is between 50 and 67 percent of the base FFS.

LOS D indicates a less stable condition in which small increases in flow may cause substantial increases in delay and decreases in travel speed. This operation may be due to adverse signal progression, high volumes, inappropriate signal timing, at the boundary intersections. The travel speed is between 40 and 50 percent of the base FFS.

LOS E is characterized unstable operation and significant delay. Such operations may be due to some combination of adverse progression, high volume, and inappropriate signal timing at the boundary intersections. The travel speed is between 30 and 40 percent of the base FFS.

LOS F is characterized by street flow at extremely low speed. Congestion is likely occurring at the boundary intersections, as indicated by high delay and extensive queuing. The travel speed is 30 percent or less of the base FFS.

Table A-1: Urban Street Levels of Service (Automobile Mode)

Travel Speed as a Percentage of Base Free-Flow Speed (%)	LOS by Critical Volume-to-Capacity Ratio ^a	
	≤1.0	>1.0
>85	A	F
>67 to 85	B	F
>50 to 67	C	F
>40 to 50	D	F
>30 to 40	E	F
≤30	F	F

a = The Critical volume-to-capacity ratio is based on consideration of the through movement-to-capacity ratio at each boundary intersection in the subject direction of travel. The critical volume-to-capacity ratio is the largest ratio of those considered.

Source: Highway Capacity Manual 2010, Exhibit 16-4. Urban Street LOS Criteria (Automobile Mode)

Intersection Levels of Service

One of the more important elements limiting, and often interrupting the flow of traffic on a highway is the intersection. Flow on an interrupted facility is usually dominated by points of fixed operation such as traffic signals, stop and yield signs.

Signalized Intersections – Performance Measures

For signalized intersections the performance measures include automobile volume-to-capacity ratio, automobile delay, queue storage length, ratio of pedestrian delay, pedestrian circulation area, pedestrian perception score, bicycle delay, and bicycle perception score. LOS is also considered a performance measure. For the automobile mode average control delay per vehicle per approach is determined for the peak hour. A weighted average of control delay per vehicle is then determined for the intersection. A LOS designation is given to the weighted average control delay to better describe the level of operation. A description of LOS for signalized intersections is found in Table A-2.



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Table A-2: Signalized Intersection Level of Service Description (Automobile Mode)

Level of Service	Description	Average Control Delay (seconds per vehicle)
A	Operations with a control delay of 10 seconds/vehicle or less and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when volume-to-capacity ratio is and either progression is exceptionally favorable or the cycle length is very short. If it's due to favorable progression, most vehicles arrive during the green indication and travel through the intersection without stopping.	≤10
B	Operations with control delay between 10.1 to 20.0 seconds/vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is highly favorable or the cycle length is short. More vehicles stop than with LOS A.	>10.0 to 20.0
C	Operations with average control delays between 20.1 to 35.0 seconds/vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio no greater than 1.0. This level is typically assigned when progression is favorable or the cycle length is moderate. Individual cycle failures (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear at this level. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.	>20 to 35
D	Operations with control delay between 35.1 to 55.0 seconds/vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high and either progression is ineffective or the cycle length is long. Many vehicles stop, and individual cycle failures are noticeable.	>35 to 55
E	Operations with control delay between 55.1 to 80.0 seconds/vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high, progression is unfavorable, and the cycle length is long. Individual cycle failures are frequent.	>55 to 80
F	Operations with unacceptable control delay exceeding 80.0 seconds/vehicle and a volume-to-capacity ratio greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.	>80

Source: Highway Capacity Manual 2010

Unsignalized Intersections

The HCM 2010 procedures use control delay as a measure of effectiveness to determine level of service. Delay is a measure of driver discomfort, frustration, fuel consumption, and increased travel time. The delay experienced by a motorist is made up of a number of factors that relate to control, traffic and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during base conditions, i. e., in the absence of traffic control, geometric delay, any incidents, and any other vehicles. Control delay is the increased time of travel for a vehicle approaching and passing through an unsignalized intersection, compared with a free-flow vehicle if it were not required to slow or stop at the intersection.

All-Way Stop Controlled Intersections

All-way stop controlled intersections is a form of traffic controls in which all approaches to an intersection are required to stop. Similar to signalized intersections, at all-way stop controlled intersections the average control delay per vehicle per approach is determined for the peak hour. A weighted average of control delay per vehicle is then determined for the intersection as a whole. In other words the delay measured for all-way stop controlled intersections is a measure of the average delay for all vehicles passing through the intersection during the peak hour. A LOS designation is given to the weighted average control delay to better describe the level of operation.

Two-Way Stop Controlled Intersections

Two-way stop controlled (TWSC) intersections in which stop signs are used to assign the right-of-way, are the most prevalent type of intersection in the United States. At TWSC intersections the stop-controlled approaches are referred as the minor street approaches and can be either public streets or private driveways. The approaches that are not controlled by stop signs are referred to as the major street approaches.

The capacity of movements subject to delay are determined using the "critical gap" method of capacity analysis. Expected average control delay based on movement volume and movement capacity is calculated. A LOS for TWSC intersection is determined by the computed or measured control delay for each minor movement. LOS is not defined for the intersection as a whole for three main reasons: (a) major-street through vehicles are assumed to experience zero delay; (b) the disproportionate number of major-street through vehicles at the typical TWSC intersection skews the weighted average of all movements, resulting in a very low overall average delay from all vehicles; and (c) the resulting low delay can mask important LOS deficiencies for minor movements. Table A-3 provides a description of LOS at unsignalized intersections.

Table A-3: Unsignalized Intersection Level of Service Description (Automobile Mode)

Control Delay (seconds per vehicle)	LOS by Volume-to-Capacity Ratio	
	$v/c \leq 1.0$	$v/c > 1.0$
≤ 10	A	F
>10 to 15	B	F
>15 to 25	C	F
>25 to 35	D	F
>35 to 50	E	F
>50	F	F

Source: HCM 2010 Exhibit 19-1.

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Appendix E: Collision Data



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Report Run On: 08/27/2018

Primary Rd BUTLER AV		Distance (ft) 177		Direction W		Secondary Rd WINERY AV		NCIC 1005		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy							
City	Fresno	County Fresno		Population 7		Rpt Dist 2762		Beat SEF		Type 0		CalTrans		Badge P1070		Collision Date 20170927		Time 1817		Day WED					
Primary Collision Factor		UNSAFE SPEED		Violation 22350		Collision Type		AUTO/PED		Severity FATAL		#Killed 1		#Injured 0		Tow Away? Y		Process Date 20180523							
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0													
Hit and Run		FELONY		Motor Vehicle Involved With		PED		Lighting DAYLIGHT		Ped Action		NOT IN X-		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int					
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	50	M	H	IMP UNK	IMP UNK	PROC ST	W	A	0700	FORD	2003	- 3	N	-	M	B								
2	PED	41	F	B	IMP UNK	IMP UNK		N	N	6000	-	-	1	A	21954	-	-	PED	KILLED	41	F	9	3	-	-

Primary Rd BUTLER AVE		Distance (ft) 0		Direction		Secondary Rd CLOVIS AVE		NCIC 9435		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy								
City	UNINCORP.	County Fresno		Population 9		Rpt Dist		Beat 034		Type 3		CalTrans		Badge 020586		Collision Date 20171021		Time 2200		Day SAT						
Primary Collision Factor		DRVR ALC DRG		Violation 23152A		Collision Type		HEAD-ON		Severity INJURY		#Killed 0		#Injured 1		Tow Away? Y		Process Date 20171027								
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0														
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting		DARK - ST		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int								
Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	24	F	W	HBD-UI		LFT TURN	E	A	0100	FORD	2012	- 3	A	21451	-	L	G	DRVR	POSSIBL	24	F	1	0	L	G
2	DRVR	27	M	A	HNBD		PROC ST	W	A	0800	HOND	2000	- 3	N	-	M	G									

Primary Rd BUTLER AVE.		Distance (ft) 0		Direction		Secondary Rd ARMSTRONG AVE.		NCIC 9435		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy								
City	Fresno	County Fresno		Population 7		Rpt Dist		Beat 034		Type 3		CalTrans		Badge 017518		Collision Date 20170501		Time 2230		Day MON						
Primary Collision Factor		UNKNOWN		Violation 21152		Collision Type		HIT OBJECT		Severity INJURY		#Killed 0		#Injured 3		Tow Away? Y		Process Date 20170510								
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0														
Hit and Run		Motor Vehicle Involved With		FIXED OBJ		Lighting		DARK - NO		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int								
Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	21	M	H	HBD-UI		PROC ST	E	D	2200	GMC	2000	- 3	A	22350	-	L	G	DRVR	COMP PN	21	M	1	0	L	G
																		PASS	OTH VIS	21	M	3	0	L	H	
																		PASS	COMP PN	19	F	2	0	L	D	

Primary Rd BUTLER AVENUE		Distance (ft) 0		Direction		Secondary Rd FOWLER AVENUE		NCIC 9435		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy							
City	UNINCORP.	County Fresno		Population 9		Rpt Dist		Beat 034		Type 3		CalTrans		Badge 013703		Collision Date 20171009		Time 0810		Day MON					
Primary Collision Factor		R-O-W AUTO		Violation 21802A		Collision Type		BROADSIDE		Severity PDO		#Killed 0		#Injured 0		Tow Away? N		Process Date 20171018							
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0													
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int							
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	33	F	H	HNBD		LFT TURN	E	A	0700	CHEV	2017	- 3	N	-	M	G								
2	DRVR	42	F	O	HNBD		PROC ST	S	A	0100	TOYOT	2002	- 3	N	-	M	G								

Primary Rd BUTOONWILLOW		Distance (ft) 0		Direction		Secondary Rd DINUBA AV		NCIC 1012		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy							
City	Reedley	County Fresno		Population 3		Rpt Dist REEDL		Beat 002		Type 0		CalTrans		Badge L016		Collision Date 20171211		Time 2340		Day MON					
Primary Collision Factor		R-O-W AUTO		Violation 21800A		Collision Type		REAR END		Severity PDO		#Killed 0		#Injured 0		Tow Away? N		Process Date 20180203							
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0													
Hit and Run		MSDMNR		Motor Vehicle Involved With		OTHER MV		Lighting		DUSK/DAWN		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int					
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	998	F	H		null		W	-	0000	-	-	-	-	-	-	-								
2	DRVR	44	F	H	HNBD		PROC ST	N	-	0000	CHEVR	2003	- 3	N	-	M	G	PASS		55	F	4	0	M	G
																		PASS		52	F	3	0	M	G

Include State Highways cases

Report Run On: 08/27/2018

Primary Rd		EAST BUTLER AV		Distance (ft) 0		Direction		Secondary Rd		SOUTH CEDAR AV		NCIC		1005		State Hwy?		N		Route		Postmile Prefix		Postmile		Side of Hwy																									
City		Fresno		County		Fresno		Population		7		Rpt Dist		2860		Beat		00H		Type		0		CalTrans		Badge		1416		Collision Date		20150413		Time		1805		Day		MON											
Primary Collision Factor		OTHER HAZ		Violation		21451A		Collision Type		BROADSIDE		Severity		INJURY		#Killed		0		#Injured		2		Tow Away?		Y		Process Date		20160223																					
Weather1		CLEAR		Weather2				Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2				Spec Cond		0																													
Hit and Run				Motor Vehicle Involved With		OTHER MV		Lighting		DAYLIGHT		Ped Action				Cntrl Dev		FNCTNG		Loc Type				Ramp/Int																											
Party		Type		Age		Sex		Race		Sobriety1		Sobriety2		Move Pre		Dir		SW Veh		CHP Veh		Make		Year		SP Info		OAF1		Viol		OAF2		Safety Equip		ROLE		Ext Of Inj		AGE		Sex		Seat Pos		Safety		EQUIP		Ejected	
1		DRVR		28		F		H		HNBD				PROC ST		W		A		0700		HYUND		2004		-		3		N		-		M		G		DRVR		COMP PN 28		F		1		0		M		G	
																																				PASS		COMP PN 13		F		4		0		M		G			
																																				PASS		6		F		6		0		M		G			
2F		DRVR		35		M		H		HNBD				LFT TURN		E		A		0800		GMC		1998		-		3		N		-		M		G															
3		DRVR		34		F		W		HNBD				STOPPED		S		A		0700		TOYOT		2007		-		3		N		-		M		G															

Primary Rd		EAST BUTLER AV		Distance (ft) 0		Direction		Secondary Rd		SOUTH CEDAR AV		NCIC		1005		State Hwy?		N		Route		Postmile Prefix		Postmile		Side of Hwy																									
City		Fresno		County		Fresno		Population		7		Rpt Dist		2860		Beat		00H		Type		0		CalTrans		Badge		1669		Collision Date		20150921		Time		1130		Day		MON											
Primary Collision Factor		R-O-W AUTO		Violation		21801A		Collision Type		SIDESWIPE		Severity		PDO		#Killed		0		#Injured		0		Tow Away?		N		Process Date		20160210																					
Weather1		CLEAR		Weather2				Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2				Spec Cond		0																													
Hit and Run				Motor Vehicle Involved With		OTHER MV		Lighting		DAYLIGHT		Ped Action				Cntrl Dev		FNCTNG		Loc Type				Ramp/Int																											
Party		Type		Age		Sex		Race		Sobriety1		Sobriety2		Move Pre		Dir		SW Veh		CHP Veh		Make		Year		SP Info		OAF1		Viol		OAF2		Safety Equip		ROLE		Ext Of Inj		AGE		Sex		Seat Pos		Safety		EQUIP		Ejected	
1F		DRVR		26		M		H		HNBD				LFT TURN		W		A		0100		TOYOT		2008		-		3		N		-		M		G		DRVR		COMP PN 20		M		1		0		L		G	
2		DRVR		29		F		H		HNBD				PROC ST		E		A		0100		CHEVR		2001		-		3		N		-		M		G		PASS		COMP PN 13		F		4		0		M		G	

Primary Rd		EAST BUTLER AV		Distance (ft) 0		Direction		Secondary Rd		SOUTH MAPLE AV		NCIC		1005		State Hwy?		N		Route		Postmile Prefix		Postmile		Side of Hwy																									
City		Fresno		County		Fresno		Population		7		Rpt Dist		SE286		Beat		00H		Type		0		CalTrans		Badge		P994		Collision Date		20150705		Time		2119		Day		SUN											
Primary Collision Factor		R-O-W AUTO		Violation		21801A		Collision Type		BROADSIDE		Severity		INJURY		#Killed		0		#Injured		2		Tow Away?		N		Process Date		20160414																					
Weather1		CLEAR		Weather2				Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2				Spec Cond		0																													
Hit and Run				Motor Vehicle Involved With		OTHER MV		Lighting		DARK - ST		Ped Action				Cntrl Dev		FNCTNG		Loc Type				Ramp/Int																											
Party		Type		Age		Sex		Race		Sobriety1		Sobriety2		Move Pre		Dir		SW Veh		CHP Veh		Make		Year		SP Info		OAF1		Viol		OAF2		Safety Equip		ROLE		Ext Of Inj		AGE		Sex		Seat Pos		Safety		EQUIP		Ejected	
1F		DRVR		20		M		B		HNBD				LFT TURN		-		A		0100		CHRY		2012		-		3		-		-		-		-		DRVR		COMP PN 20		M		1		0		L		G	
2		DRVR		19		M		H		HNBD				PROC ST		-		A		0100		NISSA		1996		-		3		-		-		G		-		PASS		COMP PN 18		F		3		0		G		-	
3		DRVR		33		F		H		HNBD				STOPPED		-		-		0000		DODGE		1968		-		3		-		-		-		-		PASS		15		F		5		0		G		-	

Primary Rd		EAST BUTLER AV		Distance (ft) 0		Direction		Secondary Rd		SOUTH WINERY		NCIC		1005		State Hwy?		N		Route		Postmile Prefix		Postmile		Side of Hwy																											
City		Fresno		County		Fresno		Population		7		Rpt Dist		SE286		Beat		00H		Type		0		CalTrans		Badge		P1577		Collision Date		20150418		Time		0136		Day		SAT													
Primary Collision Factor		DRVR ALC DRG		Violation		23152A		Collision Type		REAR END		Severity		PDO		#Killed		0		#Injured		0		Tow Away?		Y		Process Date		20160206																							
Weather1		CLEAR		Weather2				Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2				Spec Cond		0																															
Hit and Run				Motor Vehicle Involved With		OTHER MV		Lighting		DARK - ST		Ped Action				Cntrl Dev		FNCTNG		Loc Type				Ramp/Int																													
Party		Type		Age		Sex		Race		Sobriety1		Sobriety2		Move Pre		Dir		SW Veh		CHP Veh		Make		Year		SP Info		OAF1		Viol		OAF2		Safety Equip		ROLE		Ext Of Inj		AGE		Sex		Seat Pos		Safety		EQUIP		Ejected			
1F		DRVR		22		M		H		HBD-UI				PROC ST		E		A		0100		FORD		2005		-		-		A		21703		-		L		G		DRVR		COMP PN 20		M		1		0		L		G	
2		DRVR		19		M		H						STOPPED		E		A		0100		HONDA		2001		-		-		-		-		M		G		PASS		13		M		3		0		M		G			
																																				PASS		17		M		6		0		M		G					

Primary Rd		SOUTH MAPLE AV		Distance (ft) 0		Direction		Secondary Rd		E HAMILTON AV		NCIC		1005		State Hwy?		N		Route		Postmile Prefix		Postmile		Side of Hwy																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
City		Fresno		County		Fresno		Population		7		Rpt Dist		SE286		Beat		00H		Type		0		CalTrans		Badge		P759		Collision Date		20150905		Time		0933		Day		SAT																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
Primary Collision Factor		R-O-W AUTO		Violation		21802A		Collision Type		BROADSIDE		Severity		PDO		#Killed		0		#Injured		0		Tow Away?		Y		Process Date		20160203																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
Weather1		CLEAR		Weather2				Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2				Spec Cond		0																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
Hit and Run				Motor Vehicle Involved With		OTHER MV		Lighting		DAYLIGHT		Ped Action				Cntrl Dev		FNCTNG		Loc Type				Ramp/Int																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
Party		Type		Age		Sex		Race		Sobriety1		Sobriety2		Move Pre		Dir		SW Veh		CHP Veh		Make		Year		SP Info		OAF1		Viol		OAF2		Safety Equip		Victim Info																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
1F		DRVR		56		F		H		HNBD				LFT TURN		E		A		0100		FORD		2001		-		3		N		-		L		G		PASS		48		F		6		0		P		G																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
2		DRVR		35		M		H		HNBD				PROC ST		S		D		2200		CHEVR		1996		-		3		N		-		P		G																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
Primary Rd		SOUTH MAPLE AV		Distance (ft) 300		Direction		S		Secondary Rd		EAST BUTLER AV		NCIC		1005		State Hwy?		N		Route		Postmile Prefix		Postmile		Side of Hwy																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
City		Fresno		County		Fresno		Population		7		Rpt Dist		SE286		Beat		00H		Type		0		CalTrans		Badge		P1389		Collision Date		20150312		Time		1730		Day		THU																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
Primary Collision Factor		UNSAFE SPEED		Violation		22350		Collision Type		REAR END		Severity		INJURY		#Killed		0		#Injured		1		Tow Away?		Y		Process Date		20160201																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
Weather1		CLEAR		Weather2				Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2				Spec Cond		0																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
Hit and Run				Motor Vehicle Involved With		OTHER MV		Lighting		DAYLIGHT		Ped Action				Cntrl Dev		NT PRS/FCTR		Loc Type				Ramp/Int																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
Party		Type		Age		Sex		Race		Sobriety1		Sobriety2		Move Pre		Dir		SW Veh		CHP Veh		Make		Year		SP Info		OAF1		Viol		OAF2		Safety Equip		Victim Info																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
1F		DRVR		27		M		H		HNBD				PROC ST		S		A		0100		TOYOT		1999		-		3		A		22350		M		M		G		PASS		COMP PN		44		F		6		0		M		G																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
2		DRVR		47		M		H		HNBD				LFT TURN		S		A		0100		LINCO		1995		-		3		N		-		M		G		PASS		42		F		3		0		M		G																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									

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Appendix F: Existing Traffic Conditions



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info@JLBtraffic.com

516 W. Shaw Ave., Ste. 103
Fresno, CA 93704
(559) 570-8991





















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HCM 6th Signalized Intersection Summary

1: Winery Avenue & Butler Avenue

Existing PM Peak
02/05/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	161	275	31	7	195	71	57	29	33	85	29	190
Future Volume (veh/h)	161	275	31	7	195	71	57	29	33	85	29	190
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		0.98	0.98		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	177	302	34	8	214	78	63	32	36	93	32	209
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	671	955	108	637	756	276	278	208	234	434	55	361
Arrive On Green	0.58	0.58	0.58	0.58	0.58	0.58	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1077	1637	184	1035	1296	473	1119	789	887	1301	210	1368
Grp Volume(v), veh/h	177	0	336	8	0	292	63	0	68	93	0	241
Grp Sat Flow(s),veh/h/ln	1077	0	1822	1035	0	1769	1119	0	1676	1301	0	1578
Q Serve(g_s), s	5.4	0.0	5.2	0.2	0.0	4.5	2.9	0.0	1.7	3.2	0.0	7.3
Cycle Q Clear(g_c), s	9.9	0.0	5.2	5.4	0.0	4.5	10.1	0.0	1.7	5.0	0.0	7.3
Prop In Lane	1.00		0.10	1.00		0.27	1.00		0.53	1.00		0.87
Lane Grp Cap(c), veh/h	671	0	1063	637	0	1032	278	0	442	434	0	416
V/C Ratio(X)	0.26	0.00	0.32	0.01	0.00	0.28	0.23	0.00	0.15	0.21	0.00	0.58
Avail Cap(c_a), veh/h	671	0	1063	637	0	1032	511	0	792	705	0	746
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.2	0.0	5.9	7.2	0.0	5.7	22.0	0.0	15.5	17.4	0.0	17.6
Incr Delay (d2), s/veh	1.0	0.0	0.8	0.0	0.0	0.7	0.4	0.0	0.2	0.2	0.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	1.5	0.0	0.0	1.3	0.7	0.0	0.6	0.9	0.0	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.2	0.0	6.6	7.3	0.0	6.4	22.4	0.0	15.7	17.7	0.0	18.9
LnGrp LOS	A	A	A	A	A	A	C	A	B	B	A	B
Approach Vol, veh/h	513			300			131			334		
Approach Delay, s/veh	7.5			6.4			18.9			18.5		
Approach LOS	A			A			B			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	18.7			36.3			18.7			36.3		
Change Period (Y+Rc), s	* 4.2			* 4.2			* 4.2			* 4.2		
Max Green Setting (Gmax), s	* 26			* 21			* 26			* 21		
Max Q Clear Time (g_c+I1), s	12.1			11.9			9.3			7.4		
Green Ext Time (p_c), s	0.4			1.8			1.7			1.3		

Intersection Summary

HCM 6th Ctrl Delay	11.3
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection: 1: Winery Avenue & Butler Avenue

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	137	157	31	128	72	68	137	158
Average Queue (ft)	56	70	5	58	32	29	49	63
95th Queue (ft)	100	131	23	105	66	56	100	110
Link Distance (ft)		1222		1255		1257		1240
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	105		100		100		100	
Storage Blk Time (%)	1	2		0			1	1
Queuing Penalty (veh)	2	3		0			2	1

Network Summary

Network wide Queuing Penalty: 8

Appendix G: Existing plus Project Traffic Conditions



www.JLBtraffic.com
info@JLBtraffic.com

516 W. Shaw Ave., Ste. 103
Fresno, CA 93704
(559) 570-8991

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















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HCM 6th Signalized Intersection Summary

1: Winery Avenue & Butler Avenue

Existing plus Project PM Peak

02/10/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	162	278	31	7	223	71	61	30	35	85	29	206
Future Volume (veh/h)	162	278	31	7	223	71	61	30	35	85	29	206
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		0.98	0.98		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	178	305	34	8	245	78	67	33	38	93	32	226
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	630	937	104	620	771	245	278	214	247	447	54	381
Arrive On Green	0.57	0.57	0.57	0.57	0.57	0.57	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	1047	1639	183	1032	1348	429	1102	778	896	1298	196	1381
Grp Volume(v), veh/h	178	0	339	8	0	323	67	0	71	93	0	258
Grp Sat Flow(s),veh/h/ln	1047	0	1822	1032	0	1777	1102	0	1675	1298	0	1577
Q Serve(g_s), s	5.9	0.0	5.4	0.2	0.0	5.2	3.1	0.0	1.8	3.2	0.0	7.8
Cycle Q Clear(g_c), s	11.1	0.0	5.4	5.6	0.0	5.2	10.9	0.0	1.8	5.0	0.0	7.8
Prop In Lane	1.00		0.10	1.00		0.24	1.00		0.54	1.00		0.88
Lane Grp Cap(c), veh/h	630	0	1042	620	0	1016	278	0	461	447	0	435
V/C Ratio(X)	0.28	0.00	0.33	0.01	0.00	0.32	0.24	0.00	0.15	0.21	0.00	0.59
Avail Cap(c_a), veh/h	630	0	1042	620	0	1016	496	0	792	703	0	745
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.1	0.0	6.2	7.7	0.0	6.2	22.0	0.0	15.1	17.0	0.0	17.3
Incr Delay (d2), s/veh	1.1	0.0	0.8	0.0	0.0	0.8	0.4	0.0	0.2	0.2	0.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	1.6	0.0	0.0	1.5	0.8	0.0	0.6	0.9	0.0	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.2	0.0	7.0	7.7	0.0	7.0	22.4	0.0	15.2	17.2	0.0	18.6
LnGrp LOS	B	A	A	A	A	A	C	A	B	B	A	B
Approach Vol, veh/h		517			331			138			351	
Approach Delay, s/veh		8.1			7.0			18.7			18.2	
Approach LOS		A			A			B			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		19.4		35.6		19.4		35.6				
Change Period (Y+Rc), s		* 4.2		* 4.2		* 4.2		* 4.2				
Max Green Setting (Gmax), s		* 26		* 21		* 26		* 21				
Max Q Clear Time (g_c+I1), s		12.9		13.1		9.8		7.6				
Green Ext Time (p_c), s		0.5		1.6		1.8		1.5				
Intersection Summary												
HCM 6th Ctrl Delay				11.6								
HCM 6th LOS				B								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Intersection: 1: Winery Avenue & Butler Avenue

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	179	180	31	162	74	97	76	140
Average Queue (ft)	69	75	3	71	37	35	42	65
95th Queue (ft)	114	143	18	125	62	73	73	111
Link Distance (ft)		1222		1255		1257		1240
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	105		100		100		100	
Storage Blk Time (%)	1	2		2		0		2
Queuing Penalty (veh)	2	3		0		0		2

Network Summary

Network wide Queuing Penalty: 7

Appendix H: Near Term plus Project Traffic Conditions



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HCM 6th Signalized Intersection Summary

1: Winery Avenue & Butler Avenue

Near Term plus Project PM Peak

02/13/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	162	348	31	7	266	71	61	30	35	85	29	209
Future Volume (veh/h)	162	348	31	7	266	71	61	30	35	85	29	209
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		0.98	0.98		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	178	382	34	8	292	78	67	33	38	93	32	230
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	602	987	88	569	829	221	260	212	244	432	52	377
Arrive On Green	0.59	0.59	0.59	0.59	0.59	0.59	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	1003	1679	149	962	1410	377	1098	778	896	1298	192	1383
Grp Volume(v), veh/h	178	0	416	8	0	370	67	0	71	93	0	262
Grp Sat Flow(s),veh/h/ln	1003	0	1828	962	0	1787	1098	0	1674	1298	0	1576
Q Serve(g_s), s	6.7	0.0	7.3	0.3	0.0	6.5	3.4	0.0	1.9	3.5	0.0	8.7
Cycle Q Clear(g_c), s	13.2	0.0	7.3	7.6	0.0	6.5	12.1	0.0	1.9	5.5	0.0	8.7
Prop In Lane	1.00		0.08	1.00		0.21	1.00		0.54	1.00		0.88
Lane Grp Cap(c), veh/h	602	0	1075	569	0	1050	260	0	456	432	0	429
V/C Ratio(X)	0.30	0.00	0.39	0.01	0.00	0.35	0.26	0.00	0.16	0.22	0.00	0.61
Avail Cap(c_a), veh/h	602	0	1075	569	0	1050	438	0	728	643	0	686
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.9	0.0	6.6	8.6	0.0	6.4	24.3	0.0	16.6	18.7	0.0	19.1
Incr Delay (d2), s/veh	1.3	0.0	1.1	0.0	0.0	0.9	0.5	0.0	0.2	0.2	0.0	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	2.2	0.1	0.0	1.9	0.9	0.0	0.7	1.0	0.0	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.1	0.0	7.7	8.7	0.0	7.4	24.9	0.0	16.8	18.9	0.0	20.5
LnGrp LOS	B	A	A	A	A	A	C	A	B	B	A	C
Approach Vol, veh/h		594			378			138			355	
Approach Delay, s/veh		8.7			7.4			20.7			20.1	
Approach LOS		A			A			C			C	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		20.5		39.5		20.5		39.5				
Change Period (Y+Rc), s		* 4.2		* 4.2		* 4.2		* 4.2				
Max Green Setting (Gmax), s		* 26		* 26		* 26		* 26				
Max Q Clear Time (g_c+I1), s		14.1		15.2		10.7		9.6				
Green Ext Time (p_c), s		0.4		2.4		1.7		1.9				

Intersection Summary

HCM 6th Ctrl Delay	12.2
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection: 1: Winery Avenue & Butler Avenue

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	158	192	31	156	94	140	115	138
Average Queue (ft)	71	76	6	68	34	37	47	56
95th Queue (ft)	122	151	26	126	67	86	87	95
Link Distance (ft)		1222		1255		1257		1240
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	105		100		100		100	
Storage Blk Time (%)	4	2		3	0	1	0	1
Queuing Penalty (veh)	14	3		0	0	1	1	1

Network Summary

Network wide Queuing Penalty: 19

Appendix I: Cumulative Year 2035 plus Project Traffic Conditions



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HCM 6th Signalized Intersection Summary

1: Winery Avenue & Butler Avenue

Cumulative Year 2035 plus Project PM Peak

02/13/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	190	348	32	7	290	93	61	30	35	112	31	293
Future Volume (veh/h)	190	348	32	7	290	93	61	30	35	112	31	293
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	207	378	35	8	315	101	66	33	38	122	34	318
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	506	906	84	513	729	234	243	248	286	495	48	452
Arrive On Green	0.54	0.54	0.54	0.54	0.54	0.54	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	962	1672	155	964	1345	431	1014	779	898	1301	152	1421
Grp Volume(v), veh/h	207	0	413	8	0	416	66	0	71	122	0	352
Grp Sat Flow(s),veh/h/ln	962	0	1827	964	0	1776	1014	0	1677	1301	0	1573
Q Serve(g_s), s	9.8	0.0	8.0	0.3	0.0	8.4	3.7	0.0	1.8	4.4	0.0	11.8
Cycle Q Clear(g_c), s	18.3	0.0	8.0	8.3	0.0	8.4	15.5	0.0	1.8	6.2	0.0	11.8
Prop In Lane	1.00		0.08	1.00		0.24	1.00		0.54	1.00		0.90
Lane Grp Cap(c), veh/h	506	0	990	513	0	962	243	0	534	495	0	501
V/C Ratio(X)	0.41	0.00	0.42	0.02	0.00	0.43	0.27	0.00	0.13	0.25	0.00	0.70
Avail Cap(c_a), veh/h	506	0	990	513	0	962	362	0	730	647	0	684
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.7	0.0	8.1	10.6	0.0	8.2	24.7	0.0	14.6	16.8	0.0	18.0
Incr Delay (d2), s/veh	2.4	0.0	1.3	0.1	0.0	1.4	0.6	0.0	0.1	0.3	0.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	2.7	0.1	0.0	2.7	0.9	0.0	0.6	1.2	0.0	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.1	0.0	9.4	10.7	0.0	9.6	25.3	0.0	14.7	17.0	0.0	20.0
LnGrp LOS	B	A	A	B	A	A	C	A	B	B	A	B
Approach Vol, veh/h	620			424			137			474		
Approach Delay, s/veh	11.7			9.7			19.8			19.2		
Approach LOS	B			A			B			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	23.3			36.7			23.3			36.7		
Change Period (Y+Rc), s	* 4.2			* 4.2			* 4.2			* 4.2		
Max Green Setting (Gmax), s	* 26			* 26			* 26			* 26		
Max Q Clear Time (g_c+I1), s	17.5			20.3			13.8			10.4		
Green Ext Time (p_c), s	0.4			1.6			2.2			2.2		

Intersection Summary

HCM 6th Ctrl Delay	14.0
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection: 1: Winery Avenue & Butler Avenue

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	152	170	31	176	98	76	145	204
Average Queue (ft)	83	99	5	87	43	36	60	86
95th Queue (ft)	132	164	22	151	79	67	111	147
Link Distance (ft)		1222		1255		1257		1240
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	105		100		100		100	
Storage Blk Time (%)	5	3		6	0		1	3
Queuing Penalty (veh)	19	6		0	0		5	4

Network Summary

Network wide Queuing Penalty: 34

Appendix J: Parking Covenant



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Memorandum of Understanding

between

Fresno Pacific University and Butler Church

This Memorandum of Understanding (MOU) is entered into between Fresno Pacific University, a California non-profit religious corporation (FPU) and Butler Church, a California non-profit religious corporation.

Whereas FPU is interested in using parking spaces in the Butler Church parking lot, and

Whereas Butler Church is interested in FPU's Campus Safety monitoring and being available to help address security issues for the church, and

Whereas Butler Church acknowledges that the services provided by FPU Campus Safety are not intended to secure the persons and property of Butler Church, and

Whereas entering into this agreement it is to the mutual benefit of both parties, with both parties agreeing that monetary compensation shall neither be expected nor received by either party,

Now therefore, FPU and Butler Church set forth their agreements and responsibilities as follow:

Responsibilities of Butler Church:

- Provide Campus Safety the authority to contact trespassers and ask them to leave.
- Maintain contact with the Director/ Chief of Campus Safety.
- Make available the west parking lot (70 parking stalls) of Butler Church for the primary parking of FPU faculty, staff, students, and guests except during the hours of 8:00 am to 12:30 pm every Sunday.
- Provide lighting throughout the night seven days a week.
- Maintain, seal and stripe the small lot.

Responsibilities of the Fresno Pacific University:

- Maintain contact with Butler Church management.
- Provide signage to the parking lot.
- At the request of staff, contact and request trespassers to leave Butler Church property.
- To the extent permitted by Campus Safety resources, provide security patrols 24 hours a day 7 days a week in and around the property of Butler Church.

- Notify a Campus Safety Supervisor when Campus Safety officers are dispatched to a call at Butler Church to determine if it will be necessary to document the call.
- Maintain, seal and stripe the large lot.
- Forward any medical related calls for service to 911.
- Enforce FPU parking policy at this location.

Terms and Conditions

The terms and provisions of this MOU constitute the entire agreement in relation to the subject matter hereof between the parties. This MOU shall supersede all previous communications, oral or written, between the parties with respect to the subject matter hereof.

This MOU will commence on July 1st, 2019 and will remain in effect until revised or terminated. Any revision to this MOU must be in writing and signed by both parties. Either party may terminate this agreement by giving 30 days written notice to the other party.

FPU and Butler Church agree to defend, indemnify, and hold each other and their respective officers, employees, and agents harmless from any claims, demands or liabilities of any kind or nature, including but not limited to personal injury and property damage arising from or related to the MOU, except for negligent performance pursuant to this MOU.

The parties shall not be liable for failure to perform any obligation under this MOU where such failure is due to fire, flood, earthquake, riot, labor dispute, natural calamity, or other causes that are beyond the reasonable control of such party.



Scott Holman, Lead Pastor
Butler Church

10-11-19

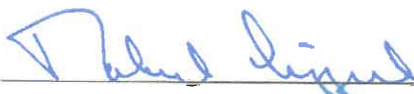
Date



Javier Campos, Chief of Campus Safety
Fresno Pacific University

10-10-2019

Date



Robert Lippert, Vice President for Finance
Fresno Pacific University

10 02-19

Date

ATTACHMENT D

FRESNO PACIFIC UNIVERSITY CULTURE AND ARTS CENTER ENERGY MEMORANDUM

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May 2020

Ericsson-Grant, Inc.
418 Parkwood Lane, Suite 200
Encinitas, California 92024

RE: *Fresno Pacific University Culture and Arts Center – Energy Memorandum*

PROJECT DESCRIPTION

The Fresno Pacific University Culture and Arts Center Project (Project) proposes the demolition of several existing residential buildings located on five parcels totaling 5.5 acres at the existing Fresno Pacific University (FPU) campus at 4824 E. Butler Avenue. The demolition of these buildings would make way for the construction of a new 26,758 square foot (SF), Culture and Arts Center in the City of Fresno. The Project site is located at the southeast corner of East Butler Avenue and South Chestnut Avenue adjacent to FPU. The proposed Project would provide a venue for students to plan, perform and manage events in a campus-like environment.

Two distinct components are proposed for the Culture and Arts Center. The first is the main auditorium which would seat approximately 400 people and accommodate a wide range of events. The second component of the center is the "Black Box" which would provide an open seating and flexible use arrangement for 99 people. The Project would provide 75 parking spaces on the Project site including 60 standard stalls, one compact stall, and three handicapped accessible stalls. FPU would utilize its existing staff and students to facilitate events at the Center. The proposed Project would begin construction in October of 2020 and is anticipated to last approximately 21 months.

ENVIRONMENTAL SETTING

Energy consumption is analyzed in this analysis due to the potential direct and indirect environmental impacts associated with the Project. Such impacts include the depletion of nonrenewable resources (oil, natural gas, coal, etc.) during both the construction and long-term operational phases.

Energy Types and Sources

California relies on a regional power system comprised of a diverse mix of natural gas, renewable, hydroelectric, and nuclear generation resources. Natural gas provides California with a majority of its electricity followed by renewables, large hydroelectric and nuclear (CEC 2018). The Pacific Gas and Electric Company (PG&E) provides electricity and natural gas to the City of Fresno. It generates or buys electricity from hydroelectric, nuclear, renewable, natural gas, and coal facilities. PG&E provides natural gas and electricity to most of the northern two-thirds of California, from Bakersfield and Barstow to near the Oregon, Nevada and Arizona State Line. It provides 5.2 million people with electricity and natural gas across 70,000 square miles. In 2017, PG&E announced that 80 percent of the company's delivered electricity comes from GHG-free sources, including renewables, nuclear, and hydropower.

ENERGY CONSUMPTION

Electricity use is measured in kilowatt-hours (kWh), and natural gas use is measured in therms. Vehicle fuel use is typically measured in gallons (e.g. of gasoline or diesel fuel), although energy use for electric vehicles is measured in kWh.

The electricity consumption associated with all non-residential uses in Fresno County from 2014 to 2018 is shown in Table 1. As indicated, the demand has remained constant since 2014.

Table 1. Non-Residential Electricity Consumption in Fresno County 2014-2018	
Year	Electricity Consumption (kilowatt hours)
2018	4,907,627,753
2017	4,641,655,361
2016	4,962,678,732
2015	5,012,233,259
2014	4,981,363,605

Source: ECDMS 2019

The natural gas consumption associated with all non-residential uses in Fresno County from 2014 to 2018 is shown in Table 2. As indicated, the demand has increased since 2014.

Table 2. Non-Residential Natural Gas Consumption in Fresno County 2014-2018	
Year	Natural Gas Consumption (therms)
2018	245,996,842
2017	238,870,384
2016	187,421,155
2015	202,520,120
2014	200,372,785

Source: ECDMS 2019

Automotive fuel consumption in Fresno County from 2015 to 2019 is shown in Table 3. Fuel consumption has slightly increased between 2015 and 2019.

Table 3. Automotive Fuel Consumption in Fresno County 2015-2019	
Year	Total Fuel Consumption (gallons)
2019	543,845,188
2018	550,087,720
2017	555,088,621
2016	561,997,488
2015	540,947,408

Source: CARB 2017

METHODOLOGY

Levels of construction and operational related energy consumption estimated to be consumed by the Project include the number of kWh of electricity, therms of natural gas and gallons of gasoline. Modeling was based on Project specific information such as the estimated traffic trip generation rates from JLB Traffic Engineering, Inc. (2020) and Project site plans. Energy consumption estimates were calculated using the California Emissions Estimator Model (CalEEMod), version 2016.3.2. CalEEMod is a statewide land use computer model designed to quantify resources associated with both construction and operations from a variety of land use projects.

ENERGY ANALYSIS

Would the Project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

The impact analysis focuses on the four sources of energy that are relevant to the proposed Project: electricity, natural gas, the equipment-fuel necessary for Project construction, and the automotive fuel necessary for Project operations. Addressing energy impacts requires an agency to make a determination as to what constitutes a significant impact. There are no established thresholds of significance, statewide or locally, for what constitutes a wasteful, inefficient, and unnecessary consumption of energy for a proposed land use project. For the purpose of this analysis, the amount of electricity and natural gas estimated to be consumed by the Project is quantified and compared to that consumed by all land uses in Fresno County. Similarly, the amount of fuel necessary for Project construction and operations is calculated and compared to that consumed in Fresno County.

The analysis of electricity gas usage is based on CalEEMod modeling conducted by ECORP Consulting (see May 2020 Emissions Memorandum), which quantifies energy use for Project operations. The amount of operational automotive fuel use was estimated using the CARB's EMFAC2017 computer program, which provides projections for typical daily fuel usage in Fresno County. The amount of total construction-related fuel use was estimated using ratios provided in the Climate Registry's General Reporting Protocol for the Voluntary Reporting Program, Version 2.1. Energy consumption associated with the proposed Project is summarized in Table 4.

Table 4. Proposed Project Energy and Fuel Consumption		
Energy Type	Annual Energy Consumption	Percentage Increase Countywide
Electricity Consumption ¹	236,006 kilowatt-hours	0.004 percent
Natural Gas ¹	5,584 therms	0.002 percent
<i>Automotive Fuel Consumption</i>		
Project Construction 2020 ²	22,365 gallons	0.004 percent
Project Construction 2021 ²	63,054 gallons	0.011 percent
Project Construction 2022 ²	36,158 gallons	0.006 percent
Project Operations ³	42,633 gallons	0.007 percent

Source: ¹CalEEMod; ²Climate Registry 2016; ³EMFAC2017 (CARB 2017)

Notes: The Project increases in electricity and natural gas consumption are compared with all of the non-residential buildings in Fresno County in 2018, the latest data available. The Project increases in automotive fuel consumption are compared with the countywide fuel consumption in 2019, the most recent full year of data.

Operations of the proposed Culture and Arts Center would include electricity and natural gas usage from lighting, space and water heating, and landscape maintenance activities. As shown in Table 4, the annual electricity consumption due to operations would be 236,006 kilowatt-hours resulting in an approximate 0.004 percent increase in the typical annual electricity consumption attributable to all non-residential uses in Fresno County. However, this is potentially a conservative estimate. In September 2018 Governor Jerry Brown Signed EO B-55-18, which establishing a new statewide goal "to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter." Carbon neutrality refers to achieving a net zero CO₂ emissions. This can be achieved by reducing or eliminating carbon emissions, balancing carbon emissions with carbon removal, or a combination of the two. This goal is in addition to existing statewide targets for GHG emission reduction. EO B-55-18 requires CARB to "work with relevant state agencies to ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal." Furthermore, the Project increases in natural gas usage, 0.002 percent, across all non-residential uses in the County would also be negligible. For these reasons, the Project would not result in the inefficient, wasteful, or unnecessary consumption of building energy.

Fuel necessary for Project construction would be required for the operation and maintenance of construction equipment and the transportation of materials to the Project site. The fuel expenditure necessary to construct the physical building and infrastructure would be temporary, lasting only as long as Project construction. As further indicated in Table 4, the Project's gasoline fuel consumption during the one-time construction period is estimated to be 22,365 gallons of fuel during 2020 construction, 63,054 gallons of fuel during 2021 construction, and 36,158 gallons of fuel during 2022 construction. This would increase the annual countywide gasoline fuel use in the county by 0.004 percent, 0.011 percent and 0.006 percent respectively. As such, Project construction would have a nominal effect on local and regional energy supplies. No unusual Project characteristics would necessitate the use of construction equipment that would be less energy efficient than at comparable construction sites in the region or the state. Construction contractors would purchase their own gasoline and diesel fuel from local suppliers and would judiciously use fuel supplies to minimize costs due to waste and subsequently maximize profits. Additionally, construction equipment fleet turnover and increasingly stringent state and federal regulations on engine efficiency combined with state regulations limiting engine idling times and

requiring recycling of construction debris, would further reduce the amount of transportation fuel demand during Project construction. For these reasons, it is expected that construction fuel consumption associated with the Project would not be any more inefficient, wasteful, or unnecessary than other similar development projects of this nature.

Per the Traffic Impact Analysis prepared by JLB Traffic Engineering, Inc (2020), the Project is estimated to generate a maximum of 296 daily trips. As indicated in Table 4, this would estimate to a consumption of approximately 42,633 gallons of automotive fuel per year, which would increase the annual countywide automotive fuel consumption by 0.007 percent. The amount of operational fuel use was estimated using CARB's EMFAC2017 computer program, which provides projections for typical daily fuel usage in Fresno County. This analysis conservatively assumes that all of the automobile trips projected to arrive at the Project during operations would be new to Fresno County. Further, a liberal approach was taken for vehicle trip estimation to ensure potential impacts due to operational gasoline usage were adequately accounted. Fuel consumption associated with vehicle trips generated by the Project would not be considered inefficient, wasteful, or unnecessary in comparison to other similar developments in the region.

Would the Project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

The Project would be designed in a manner that is consistent with relevant energy conservation plans designed to encourage development that results in the efficient use of energy resources. The Project will be built to the Energy Efficiency Standards for Residential and Nonresidential Buildings, as specified in Title 24, Part 6, of the California Code of Regulations (Title 24). Title 24 was established in 1978 in response to a legislative mandate to reduce California's energy consumption. Title 24 is updated approximately every three years; the 2013 standards became effective July 1, 2014. The 2016 Title 24 updates went into effect on January 1, 2017. The 2019 Energy Standards improve upon the 2016 Energy Standards for new construction of, and additions and alterations to, residential and nonresidential buildings. The 2019 update to the Energy Standards focuses on several key areas to improve the energy efficiency of newly constructed buildings and additions and alterations to existing buildings. The 2019 Energy Standards are a major step toward meeting Zero Net Energy. Buildings permitted on or after January 1, 2020, must comply with the 2019 Standards. Compliance with Title 24 is mandatory at the time new building permits are issued by city and county governments. Additionally, in January 2010, the State of California adopted the California Green Building Standards Code (CalGreen) that establishes mandatory green building standards for all buildings in California. The code was subsequently updated in 2013. The code covers five categories: planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and indoor environmental quality. Furthermore, the Project would also be consistent with the City's General Plan, specifically Objective RC-8 which strives to reduce the consumption of non-renewable energy resources by requiring and encouraging conservation measures and the use of alternative energy sources.

REFERENCES

- [CEC] California Energy Commission. 2018 (March). 2019 Building Energy Efficiency Standards: Frequently Asked Questions.
http://www.energy.ca.gov/title24/2019standards/documents/2018_Title_24_2019_Building_Standards_FAQ.pdf.
- [CARB] California Air Resources Board
2017. EMFAC2017 Web Database Emissions Inventory. <https://www.arb.ca.gov/emfac/2017/>.
- Climate Registry.
2016. *General Reporting Protocol for the Voluntary Reporting Program version 2.1*. January 2016.
<http://www.theclimateregistry.org/wp-content/uploads/2014/11/General-Reporting-Protocol-Version-2.1.pdf>
- [ECDMS] California Energy Commission
2019. California Energy Consumption Database. <http://www.ecdms.energy.ca.gov/Default.aspx>.

Energy Consumption Modeling Output

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Proposed Project Total Construction-Related and Operational Gasoline Usage				
Action	Carbon Dioxide Equivalents (CO ₂ e) in Metric Tons ¹	Conversion of Metric Tons to Kilograms ²	Construction Equipment Emission Factor ²	Total Gallons of Fuel Consumed
Project Construction	227	227000	10.15	22,365
		Per Climate Registry Equation 13e	Per Climate Registry Equation 13e	
Per CalEEMod Output Files.				

Total Gallons Consumed During Project Construction: 22,365

Notes:

Fuel used by all construction equipment, including vehicle hauling trucks, assumed to be diesel.

Sources:

¹ECORP Consulting, 2020.

²Climate Registry. 2016. *General Reporting Protocol for the Voluntary Reporting Program version 2.1.* January 2016.
<http://www.theclimateregistry.org/wp-content/uploads/2014/11/General-Reporting-Protocol-Version-2.1.pdf>

Total Gallons During Project Operations³

Area	Sub-Area	Cal. Year	Season	Veh_tech	EMFAC 2011 Category	Fuel_GAS Output	Daily Total	ANNUAL TOTAL
Sub-Areas	San Bernardino	2023	Annual	All Vehicles	All Vehicles ⁴	0.116803	116.803	42,633.1

Sources:

³Californai Air Resource Board. 2017. EMFAC2017 Mobile Emissions Model.

Notes:

⁴Excluding Heavy-Duty Highway Trucks, T6 Agricultural Truck, T6 Instate Construction (heavy and small), T7 Agricultural Truck, T7 CAIRP Construction, T7 Single Construction, T7 Tractor Truck, and T7 Tractor Construction

**Proposed Project
Total Construction-Related
and Operational
Gasoline Usage**

Action	Carbon Dioxide Equivalents (CO₂e) in Metric Tons¹	Conversion of Metric Tons to Kilograms²	Construction Equipment Emission Factor²	Total Gallons of Fuel Consumed
Project Construction	640	640000	10.15	63,054
		Per Climate Registry Equation 13e	Per Climate Registry Equation 13e	
	Per CalEEMod Output Files.			

Total Gallons Consumed During Project Construction: 63,054

Notes:

Fuel used by all construction equipment, including vehicle hauling trucks, assumed to be diesel.

Sources:

¹ECORP Consulting, 2020.

²Climate Registry. 2016. *General Reporting Protocol for the Voluntary Reporting Program version 2.1*. January 2016.
<http://www.theclimateregistry.org/wp-content/uploads/2014/11/General-Reporting-Protocol-Version-2.1.pdf>

**Proposed Project
Total Construction-Related
and Operational
Gasoline Usage**

Action	Carbon Dioxide Equivalents (CO₂e) in Metric Tons¹	Conversion of Metric Tons to Kilograms²	Construction Equipment Emission Factor²	Total Gallons of Fuel Consumed
Project Construction	367	367000	10.15	36,158
		Per Climate Registry Equation 13e	Per Climate Registry Equation 13e	
	Per CalEEMod Output Files.			

Total Gallons Consumed During Project Construction: 36,158

Notes:

Fuel used by all construction equipment, including vehicle hauling trucks, assumed to be diesel.

Sources:

¹ECORP Consulting, 2020.

²Climate Registry. 2016. *General Reporting Protocol for the Voluntary Reporting Program version 2.1*. January 2016.
<http://www.theclimateregistry.org/wp-content/uploads/2014/11/General-Reporting-Protocol-Version-2.1.pdf>

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ATTACHMENT E

MEIR MITIGATION MEASURE MONITORING CHECKLIST FOR EA NO. P19-05782

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MEIR Mitigation Measure Monitoring Checklist for EA No. P19-05782

June 2020

INCORPORATING MEASURES FROM THE MASTER ENVIRONMENTAL IMPACT REPORT (MEIR) CERTIFIED FOR THE CITY OF FRESNO GENERAL PLAN UPDATE (SCH No. 2012111015)

This mitigation measure monitoring and reporting checklist was prepared pursuant to California Environmental Quality Act (CEQA) Guidelines Section 15097 and Section 21081.6 of the Public Resources Code (PRC). It was certified as part of the Fresno City Council's approval of the MEIR for the Fresno General Plan update (Fresno City Council Resolution 2014-225, adopted December 18, 2014).

Letter designations to the right of each MEIR mitigation measure listed in this Exhibit note how the mitigation measure relates to the environmental assessment of the above-listed project, according to the key found at right and at the bottoms of the following pages:

- A** - Incorporated into Project
- B** - Mitigated
- C** - Mitigation in Progress
- D** - Responsible Agency Contacted
- E** - Part of City-wide Program
- F** - Not Applicable

The timing of implementing each mitigation measure is identified in in the checklist, as well as identifies the entity responsible for verifying that the mitigation measures applied to a project are performed. Project applicants are responsible for providing evidence that mitigation measures are implemented. As lead agency, the City of Fresno is responsible for verifying that mitigation is performed/completed.

MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
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Aesthetics:

AES-1. Lighting systems for street and parking areas shall include shields to direct light to the roadway surfaces and parking areas. Vertical shields on the light fixtures shall also be used to direct light away from adjacent light sensitive land uses such as residences. Verification comments:	Prior to issuance of building permits	Public Works Department (PW) and Development & Resource Management Dept. (DARM)	X				X	

Aesthetics (continued):

MEIR MITIGATION MEASURE MONITORING CHECKLIST FOR EA NO. P19-05782
June 2020

MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
AES-2: Lighting systems for public facilities such as active play areas shall provide adequate illumination for the activity; however, low intensity light fixtures and shields shall be used to minimize spillover light onto adjacent properties. Verification comments:	Prior to issuance of building permits	DARM	X				X	
AES-3: Lighting systems for non-residential uses, not including public facilities, shall provide shields on the light fixtures and orient the lighting system away from adjacent properties. Low intensity light fixtures shall also be used if excessive spillover light onto adjacent properties will occur. Verification comments:	Prior to issuance of building permits	DARM	X				X	
AES-4: Lighting systems for freestanding signs shall not exceed 100 foot Lamberts (FT-L) when adjacent to streets which have an average light intensity of less than 2.0 horizontal footcandles and shall not exceed 500 FT-L when adjacent to streets which have an average light intensity of 2.0 horizontal footcandles or greater. Verification comments:	Prior to issuance of building permits	DARM						X

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MEIR MITIGATION MEASURE MONITORING CHECKLIST FOR EA NO. P19-05782

June 2020

MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
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Aesthetics *(continued)*:

AES-5: Materials used on building facades shall be non-reflective. Verification comments:	Prior to development project approval	DARM	X					

Air Quality:

AIR-1: Projects that include five or more heavy-duty truck deliveries per day with sensitive receptors located within 300 feet of the truck loading area shall provide a screening analysis to determine if the project has the potential to exceed criteria pollutant concentration based standards and thresholds for NO2 and PM2.5. If projects exceed screening criteria, refined dispersion modeling and health risk assessment shall be accomplished and if needed, mitigation measures to reduce impacts shall be included in the project to reduce the impacts to the extent feasible. Mitigation measures include but are not limited to: <ul style="list-style-type: none"> Locate loading docks and truck access routes as far from sensitive receptors as reasonably possible considering site design limitations to comply with other City design standards. Post signs requiring drivers to limit idling to 5 minutes or less. Verification comments:	Prior to development project approval	DARM						X

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MEIR MITIGATION MEASURE MONITORING CHECKLIST FOR EA NO. P19-05782

June 2020

MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
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Air Quality *(continued):*

<p>AIR-2: Projects that result in an increased cancer risk of 10 in a million or exceed criteria pollutant ambient air quality standards shall implement site-specific measures that reduce toxic air contaminant (TAC) exposure to reduce excess cancer risk to less than 10 in a million. Possible control measures include but are not limited to:</p> <ul style="list-style-type: none"> • Locate loading docks and truck access routes as far from sensitive receptors as reasonably possible considering site design limitations to comply with other City design standards. • Post signs requiring drivers to limit idling to 5 minutes or less • Construct block walls to reduce the flow of emissions toward sensitive receptors • Install a vegetative barrier downwind from the TAC source that can absorb a portion of the diesel PM emissions • For projects proposing to locate a new building containing sensitive receptors near existing sources of TAC emissions, install HEPA filters in HVAC systems to reduce TAC emission levels exceeding risk thresholds. • Install heating and cooling services at truck stops to eliminate the need for idling during overnight stops to run onboard systems. <p style="text-align: right;"><i>(continued on next page)</i></p>	Prior to development project approval	DARM						X
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MEIR MITIGATION MEASURE MONITORING CHECKLIST FOR EA NO. P19-05782

June 2020

MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
Air Quality <i>(continued)</i> :								
AIR-2 <i>(continued from previous page)</i> <ul style="list-style-type: none"> For large distribution centers where the owner controls the vehicle fleet, provide facilities to support alternative fueled trucks powered by fuels such as natural gas or bio-diesel Utilize electric powered material handling equipment where feasible for the weight and volume of material to be moved. Verification comments:	<i>[see previous page]</i>	<i>[see previous page]</i>						
AIR-3: Require developers proposing projects on ARB's list of projects in its Air Quality and Land Use Handbook (Handbook) warranting special consideration to prepare a cumulative health risk assessment when sensitive receptors are located within the distance screening criteria of the facility as listed in the ARB Handbook. Verification comments:	Prior to development project approval	DARM					X	

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MEIR MITIGATION MEASURE MONITORING CHECKLIST FOR EA NO. P19-05782

June 2020

MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
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Air Quality *(continued)*:

<p>AIR-4: Require developers of projects containing sensitive receptors to provide a cumulative health risk assessment at project locations exceeding ARB Land Use Handbook distance screening criteria or newer criteria that may be developed by the San Joaquin Valley Air Pollution Control District (SJVAPCD).</p> <p>Verification comments:</p>	Prior to development project approval	DARM					X	
<p>AIR-5: Require developers of projects with the potential to generate significant odor impacts as determined through review of SJVAPCD odor complaint history for similar facilities and consultation with the SJVAPCD to prepare an odor impact assessment and to implement odor control measures recommended by the SJVAPCD or the City to the extent needed to reduce the impact to less than significant.</p> <p>Verification comments:</p>	Prior to development project approval	DARM				X	X	

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MEIR MITIGATION MEASURE MONITORING CHECKLIST FOR EA NO. P19-05782

June 2020

MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
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Biological Resources:

<p>BIO-1: Construction of a proposed project should avoid, where possible, vegetation communities that provide suitable habitat for a special-status species known to occur within the Planning Area. If construction within potentially suitable habitat must occur, the presence/absence of any special-status plant or wildlife species must be determined prior to construction, to determine if the habitat supports any special-status species. If special-status species are determined to occupy any portion of a project site, avoidance and minimization measures shall be incorporated into the construction phase of a project to avoid direct or incidental take of a listed species to the greatest extent feasible.</p> <p>Verification comments:</p>	Prior to development project approval	DARM	X				X	
<p>BIO-2: Direct or incidental take of any state or federally listed species should be avoided to the greatest extent feasible. If construction of a proposed project will result in the direct or incidental take of a listed species, consultation with the resources agencies and/or additional permitting may be required. Agency consultation through the California Department of Fish and Wildlife (CDFW) 2081 and U.S. Fish and Wildlife Service (USFWS) Section 7 or Section 10 permitting processes must take place prior to any action that</p> <p><i>(continued on next page)</i></p>	Prior to development project approval	DARM	X				X	

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MEIR MITIGATION MEASURE MONITORING CHECKLIST FOR EA NO. P19-05782

June 2020

MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
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Biological Resources *(continued)*:

<p>BIO-2 <i>(continued from previous page)</i></p> <p>may result in the direct or incidental take of a listed species. Specific mitigation measures for direct or incidental impacts to a listed species will be determined on a case-by-case basis through agency consultation.</p> <p>Verification comments:</p>	[see previous page]	[see previous page]						
<p>BIO-3: Development within the Planning Area should avoid, where possible, special-status natural communities and vegetation communities that provide suitable habitat for special-status species. If a proposed project will result in the loss of a special-status natural community or suitable habitat for special-status species, compensatory habitat-based mitigation is required under CEQA and the California Endangered Species Act (CESA). Mitigation will consist of preserving on-site habitat, restoring similar habitat or purchasing off-site credits from an approved mitigation bank. Compensatory mitigation will be determined through consultation with the City and/or resource agencies. An appropriate mitigation strategy and ratio will be agreed upon by the developer and lead agency to reduce project impacts to special-status natural communities to a less than significant</p> <p><i>(continued on next page)</i></p>	Prior to development project approval	DARM	X				X	

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MEIR MITIGATION MEASURE MONITORING CHECKLIST FOR EA NO. P19-05782

June 2020

MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
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Biological Resources *(continued):*

<p>BIO-3 <i>(continued from previous page):</i></p> <p>level. Agreed-upon mitigation ratios will depend on the quality of the habitat and presence/absence of a special-status species. The specific mitigation for project level impacts will be determined on a case-by-case basis.</p> <p>Verification comments:</p>	<p><i>[see previous page]</i></p>	<p><i>[see previous page]</i></p>						
<p>BIO-4: Proposed projects within the Planning Area should avoid, if possible, construction within the general nesting season of February through August for avian species protected under Fish and Game Code 3500 and the Migratory Bird Treaty Act (MBTA), if it is determined that suitable nesting habitat occurs on a project site. If construction cannot avoid the nesting season, a pre-construction clearance survey must be conducted to determine if any nesting birds or nesting activity is observed on or within 500-feet of a project site. If an active nest is observed during the survey, a biological monitor must be on site to ensure that no proposed project activities would impact the active nest. A suitable buffer will be established around the active nest until the nestlings have fledged and the nest is no longer active. Project activities</p> <p><i>(continued on next page)</i></p>	<p>Prior to development project approval and during construction activities</p>	<p>DARM</p>	<p>X</p>				<p>X</p>	

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MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
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Biological Resources *(continued)*:

BIO-4 <i>(continued from previous page)</i> : may continue in the vicinity of the nest only at the discretion of the biological monitor. Verification comments:	[see previous page]	[see previous page]						
BIO-5: If a proposed project will result in the removal or impact to any riparian habitat and/or a special-status natural community with potential to occur in the Planning Area, compensatory habitat-based mitigation shall be required to reduce project impacts. Compensatory mitigation must involve the preservation or restoration or the purchase of off-site mitigation credits for impacts to riparian habitat and/or a special-status natural community. Mitigation must be conducted in-kind or within an approved mitigation bank in the region. The specific mitigation ratio for habitat-based mitigation will be determined through consultation with the appropriate agency (<i>i.e.</i> , CDFW or USFWS) on a case-by-case basis. Verification comments:	Prior to development project approval	DARM						X

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MEIR MITIGATION MEASURE MONITORING CHECKLIST FOR EA NO. P19-05782

June 2020

MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
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Biological Resources *(continued)*:

<p>BIO-6: Project impacts that occur to riparian habitat may also result in significant impacts to streambeds or waterways protected under Section 1600 of Fish and Wildlife Code and Section 404 of the CWA. CDFW and/or USACE consultation, determination of mitigation strategy, and regulatory permitting to reduce impacts, as required for projects that remove riparian habitat and/or alter a streambed or waterway, shall be implemented.</p> <p>Verification comments:</p>	Prior to development project approval	DARM						X
<p>BIO-7: Project-related impacts to riparian habitat or a special-status natural community may result in direct or incidental impacts to special-status species associated with riparian or wetland habitats. Project impacts to special-status species associated with riparian habitat shall be mitigated through agency consultation, development of a mitigation strategy, and/or issuing incidental take permits for the specific special-status species, as determined by the CDFW and/or USFWS.</p> <p>Verification comments:</p>	Prior to development project approval	DARM						X

A - Incorporated into Project
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MEIR MITIGATION MEASURE MONITORING CHECKLIST FOR EA NO. P19-05782

June 2020

MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
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Biological Resources *(continued)*:

<p>BIO-8: If a proposed project will result in the significant alteration or fill of a federally protected wetland, a formal wetland delineation conducted according to U.S. Army Corps of Engineers (USACE) accepted methodology is required for each project to determine the extent of wetlands on a project site. The delineation shall be used to determine if federal permitting and mitigation strategy are required to reduce project impacts. Acquisition of permits from USACE for the fill of wetlands and USACE approval of a wetland mitigation plan would ensure a “no net loss” of wetland habitat within the Planning Area. Appropriate wetland mitigation/creation shall be implemented in a ratio according to the size of the impacted wetland.</p> <p>Verification comments:</p>	Prior to development project approval	DARM						X
<p>BIO-9: In addition to regulatory agency permitting, Best Management Practices (BMPs) identified from a list provided by the USACE shall be incorporated into the design and construction phase of the project to ensure that no pollutants or siltation drain into a federally protected wetland. Project design features such as fencing, appropriate drainage and</p> <p><i>(continued on next page)</i></p>	Prior to development project approval; but for long-term operational BMPs, prior to issuance of occupancy	DARM	X			X		

A - Incorporated into Project
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E - Part of City-Wide Program
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MEIR MITIGATION MEASURE MONITORING CHECKLIST FOR EA NO. P19-05782

June 2020

MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
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Biological Resources *(continued):*

<p>BIO-9 <i>(continued from previous page):</i></p> <p>incorporating detention basins shall assist in ensuring project-related impacts to wetland habitat are minimized to the greatest extent feasible.</p> <p>Verification comments:</p>	[see previous page]	[see previous page]					
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Cultural Resources:

<p>CUL-1: If previously unknown resources are encountered before or during grading activities, construction shall stop in the immediate vicinity of the find and a qualified historical resources specialist shall be consulted to determine whether the resource requires further study. The qualified historical resources specialist shall make recommendations to the City on the measures that shall be implemented to protect the discovered resources, including but not limited to excavation of the finds and evaluation of the finds in accordance with Section 15064.5 of the CEQA Guidelines and the City's Historic Preservation Ordinance.</p> <p>If the resources are determined to be unique historical resources as defined under Section 15064.5 of the CEQA Guidelines, measures shall be identified by the monitor and</p> <p><i>(continued on next page)</i></p>	Prior to commencement of, and during, construction activities	DARM	X				X	
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A - Incorporated into Project
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MEIR MITIGATION MEASURE MONITORING CHECKLIST FOR EA NO. P19-05782

June 2020

MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
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Cultural Resources *(continued)*:

<p>CUL-1 <i>(continued from previous page)</i></p> <p>recommended to the Lead Agency. Appropriate measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds.</p> <p>No further grading shall occur in the area of the discovery until the Lead Agency approves the measures to protect these. Any historical artifacts recovered as a result of mitigation shall be provided to a City-approved institution or person who is capable of providing long-term preservation to allow future scientific study.</p> <p>Verification comments:</p>	[see previous page]	[see previous page]						
<p>CUL-2: Subsequent to a preliminary City review of the project grading plans, if there is evidence that a project will include excavation or construction activities within previously undisturbed soils, a field survey and literature search for prehistoric archaeological resources shall be conducted. The following procedures shall be followed.</p> <p>If prehistoric resources are not found during either the field survey or literature search, excavation and/or construction activities can commence. In the event that buried prehistoric</p> <p><i>(continued on next page)</i></p>	Prior to commencement of, and during, construction activities	DARM	X					

A - Incorporated into Project
B - Mitigated

C - Mitigation in Process
D - Responsible Agency Contacted

E - Part of City-Wide Program
F - Not Applicable

MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
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Cultural Resources *(continued):*

<p>CUL-2 <i>(continued from previous page)</i></p> <p>archaeological resources are discovered during excavation and/or construction activities, construction shall stop in the immediate vicinity of the find and a qualified archaeologist shall be consulted to determine whether the resource requires further study. The qualified archaeologist shall make recommendations to the City on the measures that shall be implemented to protect the discovered resources, including but not limited to excavation of the finds and evaluation of the finds in accordance with CEQA Guidelines Section 15064.5.</p> <p>If the resources are determined to be unique prehistoric archaeological resources as defined under Section 15064.5 of the CEQA Guidelines, mitigation measures shall be identified by the monitor and recommended to the Lead Agency. Appropriate measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds. No further grading shall occur in the area of the discovery until the Lead Agency approves the measures to protect these resources. Any prehistoric archaeological artifacts recovered as a result of mitigation shall be provided</p> <p><i>(continued on next page)</i></p>	[see previous page]	[see previous page]					
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A - Incorporated into Project
B - Mitigated

C - Mitigation in Process
D - Responsible Agency Contacted

E - Part of City-Wide Program
F - Not Applicable

MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
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Cultural Resources *(continued)*:

<p>CUL-2 <i>(further continued from previous two pages)</i></p> <p>to a City-approved institution or person who is capable of providing long-term preservation to allow future scientific study.</p> <p>If prehistoric resources are found during the field survey or literature review, the resources shall be inventoried using appropriate State record forms and submit the forms to the Southern San Joaquin Valley Information Center. The resources shall be evaluated for significance. If the resources are found to be significant, measures shall be identified by the qualified archaeologist. Similar to above, appropriate mitigation measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds.</p> <p>In addition, appropriate mitigation for excavation and construction activities in the vicinity of the resources found during the field survey or literature review shall include an archaeological monitor. The monitoring period shall be determined by the qualified archaeologist. If additional prehistoric archaeological resources are found during</p> <p style="text-align: right;"><i>(continued on next page)</i></p>	[see Page 14]	[see Page 14]						
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Cultural Resources *(continued)*:

A - Incorporated into Project
B - Mitigated

C - Mitigation in Process
D - Responsible Agency Contacted

E - Part of City-Wide Program
F - Not Applicable

MEIR MITIGATION MEASURE MONITORING CHECKLIST FOR EA NO. P19-05782

June 2020

MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
<p>CUL-2 (further continued from previous three pages)</p> <p>excavation and/or construction activities, the procedure identified above for the discovery of unknown resources shall be followed.</p> <p>Verification comments:</p>	[see Page 14]	[see Page 14]						
<p>CUL-3: Subsequent to a preliminary City review of the project grading plans, if there is evidence that a project will include excavation or construction activities within previously undisturbed soils, a field survey and literature search for unique paleontological/geological resources shall be conducted. The following procedures shall be followed:</p> <p>If unique paleontological/geological resources are not found during either the field survey or literature search, excavation and/or construction activities can commence. In the event that unique paleontological/geological resources are discovered during excavation and/or construction activities, construction shall stop in the immediate vicinity of the find and a qualified paleontologist shall be consulted to determine whether the resource requires further study. The qualified paleontologist shall make recommendations to the City on the measures that shall be implemented to protect the discovered</p> <p style="text-align: right;"><i>(continued on next page)</i></p>	Prior to commencement of, and during, construction activities	DARM	X					

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MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
<p>CUL-3 (continued from previous page)</p> <p>resources, including but not limited to, excavation of the finds and evaluation of the finds. If the resources are determined to be significant, mitigation measures shall be identified by the monitor and recommended to the Lead Agency. Appropriate mitigation measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds. No further grading shall occur in the area of the discovery until the Lead Agency approves the measures to protect these resources. Any paleontological/geological resources recovered as a result of mitigation shall be provided to a City-approved institution or person who is capable of providing long-term preservation to allow future scientific study.</p> <p>If unique paleontological/geological resources are found during the field survey or literature review, the resources shall be inventoried and evaluated for significance. If the resources are found to be significant, mitigation measures shall be identified by the qualified paleontologist. Similar to above, appropriate mitigation measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds. In addition, appropriate mitigation for excavation and construction activities in the vicinity of the</p> <p style="text-align: right;">(continued on next page)</p>	[see previous page]	[see previous page]						

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MEIR MITIGATION MEASURE MONITORING CHECKLIST FOR EA NO. P19-05782

June 2020

MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
Cultural Resources <i>(continued)</i> :								
CUL-3 <i>(further continued from previous two pages)</i> resources found during the field survey or literature review shall include a paleontological monitor. The monitoring period shall be determined by the qualified paleontologist. If additional paleontological/geological resources are found during excavation and/or construction activities, the procedure identified above for the discovery of unknown resources shall be followed. Verification comments:	[see Page 17]	[see Page 17]						
CUL-4: In the event that human remains are unearthed during excavation and grading activities of any future development project, all activity shall cease immediately. Pursuant to Health and Safety Code (HSC) Section 7050.5, no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to PRC Section 5097.98(a). If the remains are determined to be of Native American descent, the coroner shall within 24 hours notify the Native American Heritage Commission (NAHC). The NAHC shall then contact the most <i>(continued on next page)</i>	Prior to commencement of, and during, construction activities	DARM	X				X	

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MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
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Cultural Resources *(continued):*

<p>CUL-4 <i>(continued from previous page)</i></p> <p>likely descendent of the deceased Native American, who shall then serve as the consultant on how to proceed with the remains.</p> <p>Pursuant to PRC Section 5097.98(b), upon the discovery of Native American remains, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located is not damaged or disturbed by further development activity until the landowner has discussed and conferred with the most likely descendants regarding their recommendations, if applicable, taking into account the possibility of multiple human remains. The landowner shall discuss and confer with the descendants all reasonable options regarding the descendants' preferences for treatment.</p> <p>Verification comments:</p>	<p><i>[see previous page]</i></p>	<p><i>[see previous page]</i></p>					
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MEIR MITIGATION MEASURE MONITORING CHECKLIST FOR EA NO. P19-05782

June 2020

MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
Hazards and Hazardous Materials								
HAZ-1: Re-designate the existing vacant land proposed for low density residential located northwest of the intersection of East Garland Avenue and North Dearing Avenue and located within Fresno Yosemite International Airport Zone 1-RPZ, to Open Space. Verification comments:	Prior to development approvals	DARM						X
HAZ-2: Limit the proposed low density residential (1 to 3 dwelling units per acre) located northwest of the airport, and located within Fresno Yosemite International Airport Zone 3-Inner Turning Area, to 2 dwelling units per acre or less. Verification comments:	Prior to development approvals	DARM						X
HAZ-3: Re-designate the current area within Fresno Yosemite International Airport Zone 5-Sideline located northeast of the airport to Public Facilities-Airport or Open Space. Verification comments:	Prior to development approvals	DARM						X

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MEIR MITIGATION MEASURE MONITORING CHECKLIST FOR EA NO. P19-05782

June 2020

MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
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Hazards and Hazardous Materials *(continued)*:

<p>HAZ-4: Re-designate the current vacant lots at the northeast corner of Kearney Boulevard and South Thorne Avenue to Public Facilities-Airport or Open Space.</p> <p>Verification comments:</p>	Prior to development approvals	DARM	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>HAZ-5: Prohibit residential uses within Safety Zone 1 northwest of the Hawes Avenue and South Thorne Avenue intersection.</p> <p>Verification comments:</p>	Prior to development approvals	DARM	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>HAZ-6: Establish an alternative Emergency Operations Center in the event the current Emergency Operations Center is under redevelopment or blocked.</p> <p>Verification comments:</p>	Prior to redevelopment of the current Emergency Operations Center	Fresno Fire Department and Mayor/ City Manager's Office	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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MEIR MITIGATION MEASURE MONITORING CHECKLIST FOR EA NO. P19-05782

June 2020

MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
Hydrology and Water Quality								
HYD-1: The City shall develop and implement water conservation measures to reduce the per capita water use to 215 gallons per capita per day. Verification comments:	Prior to water demand exceeding water supply	Department of Public Utilities (DPU)					X	
HYD-2: The City shall continue to be an active participant in the Kings Water Authority and the implementation of the Kings Basin IRWMP. Verification comments:	Ongoing	DPU					X	
HYD-5.1: The City and partnering agencies shall implement the following measures to reduce the impacts on the capacity of existing or planned storm drainage Master Plan collection systems to less than significant. <ul style="list-style-type: none"> Implement the existing Storm Drainage Master Plan (SDMP) for collection systems in drainage areas where the amount of imperviousness is unaffected by the change in land uses. <p style="text-align: right;"><i>(continued on next page)</i></p>	Prior to exceedance of capacity of existing stormwater drainage facilities	Fresno Metropolitan Flood Control District (FMFCD), DARM, and PW	X			X	X	

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MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
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Hydrology and Water Quality *(continued)*:

<p>HYD-5.1 <i>(continued from previous page)</i></p> <ul style="list-style-type: none"> Update the SDMP in those drainage areas where the amount of imperviousness increased due to the change in land uses to determine the changes in the collection systems that would need to occur to provide adequate capacity for the stormwater runoff from the increased imperviousness. Implement the updated SDMP to provide stormwater collection systems that have sufficient capacity to convey the peak runoff rates from the areas of increased imperviousness. <p>Require developments that increase site imperviousness to install, operate, and maintain FMFCD approved on-site detention systems to reduce the peak runoff rates resulting from the increased imperviousness to the peak runoff rates that will not exceed the capacity of the existing stormwater collection systems.</p> <p>Verification comments:</p>	[see previous page]	[see previous page]					
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MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
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Hydrology and Water Quality *(continued)*:

<p>HYD-5.2: The City and partnering agencies shall implement the following measures to reduce the impacts on the capacity of existing or planned storm drainage Master Plan retention basins to less than significant:</p> <p>Consult the SDMP to analyze the impacts to existing and planned retention basins to determine remedial measures required to reduce the impact on retention basin capacity to less than significant. Remedial measures would include:</p> <ul style="list-style-type: none"> • Increase the size of the retention basin through the purchase of more land or deepening the basin or a combination for planned retention basins. • Increase the size of the emergency relief pump capacity required to pump excess runoff volume out of the basin and into adjacent canal that convey the stormwater to a disposal facility for existing retention basins. • Require developments that increase runoff volume to install, operate, and maintain, Low Impact Development (LID) measures to reduce runoff volume to the runoff volume that will not exceed the capacity of the existing retention basins. <p>Verification comments:</p>	Prior to exceedance of capacity of existing retention basin facilities	FMFCD, DARM, and PW				X	X	
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MEIR MITIGATION MEASURE MONITORING CHECKLIST FOR EA NO. P19-05782

June 2020

MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
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Hydrology and Water Quality *(continued)*:

<p>HYD-5.3: The City and partnering agencies shall implement the following measures to reduce the impacts on the capacity of existing or planned storm drainage Master Plan urban detention (stormwater quality) basins to less than significant.</p> <p>Consult the SDMP to determine the impacts to the urban detention basin weir overflow rates and determine remedial measures required to reduce the impact on the detention basin capacity to less than significant. Remedial measures would include:</p> <ul style="list-style-type: none"> • Modify overflow weir to maintain the suspended solids removal rates adopted by the FMFCD Board of Directors. • Increase the size of the urban detention basin to increase residence time by purchasing more land. The existing detention basins are already at the adopted design depth. • Require developments that increase runoff volume to install, operate, and maintain, Low Impact Development (LID) measures to reduce peak runoff rates and runoff volume to the runoff rates and volumes that will not exceed the weir overflow rates of the existing urban detention basins. <p>Verification comments:</p>	<p>Prior to exceedance of capacity of existing urban detention basin (stormwater quality) facilities</p>	<p>FMFCD, DARM, and PW</p>					X	
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MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
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Hydrology and Water Quality *(continued)*:

<p>HYD-5.4: The City shall implement the following measures to reduce the impacts on the capacity of existing or planned storm drainage Master Plan pump disposal systems to less than significant.</p> <ul style="list-style-type: none"> • Consult the SDMP to determine the extent and degree to which the capacity of the existing pump system will be exceeded. • Require new developments to install, operate, and maintain FMFCD design standard on-site detention facilities to reduce peak stormwater runoff rates to existing planned peak runoff rates. • Provide additional pump system capacity to maximum allowed by existing permitting to increase the capacity to match or exceed the peak runoff rates determined by the SDMP. <p>Verification comments:</p>	Prior to exceedance of capacity of existing pump disposal systems	FMFCD, DARM, and PW					X	
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MEIR MITIGATION MEASURE MONITORING CHECKLIST FOR EA NO. P19-05782

June 2020

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Hydrology and Water Quality *(continued)*:

<p>HYD-5.5: The City shall work with FMFCD to develop and adopt an update to the SDMP for the Southeast Development Area that would be adequately designed to collect, convey and dispose of runoff at the rates and volumes which would be generated by the planned land uses in that area.</p> <p>Verification comments:</p>	Prior to development approvals in the Southeast Development Area	FMFCD, DARM, and PW					X	

Public Services:

<p>PS-1: As future fire facilities are planned, the fire department shall evaluate if specific environmental effects would occur. Typical impacts from fire facilities include noise, traffic, and lighting. Typical mitigation to reduce these impacts includes:</p> <ul style="list-style-type: none"> • <i>Noise:</i> Barriers and setbacks on the fire department sites. • <i>Traffic:</i> Traffic devices for circulation and a “keep clear zone” during emergency responses. • <i>Lighting:</i> Provision of hoods and deflectors on lighting fixtures on the fire department sites. <p>Verification comments:</p>	During the planning process for future fire department facilities	DARM					X	

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MEIR MITIGATION MEASURE MONITORING CHECKLIST FOR EA NO. P19-05782

June 2020

MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
Public Services <i>(continued)</i> :								
<p>PS-2: As future police facilities are planned, the police department shall evaluate if specific environmental effects would occur. Typical impacts from police facilities include noise, traffic, and lighting. Typical mitigation to reduce potential impacts from police department facilities includes:</p> <ul style="list-style-type: none"> • <i>Noise:</i> Barriers and setbacks on the police department sites. • <i>Traffic:</i> Traffic devices for circulation. • <i>Lighting:</i> Provision of hoods and deflectors on lighting fixtures on the police department sites. <p>Verification comments:</p>	During the planning process for future Police Department facilities	DARM					X	
<p>PS-3: As future public and private school facilities are planned, school districts shall evaluate if specific environmental effects would occur with regard to public schools, and DARM shall evaluate other school facilities. Typical impacts from school facilities include noise, traffic, and lighting. Typical mitigation to reduce potential impacts from school facilities includes:</p> <p style="text-align: right;"><i>(continued on next page)</i></p>	During the planning process for future school facilities	DARM, local school districts, and the Division of the State Architect					X	

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MEIR MITIGATION MEASURE MONITORING CHECKLIST FOR EA NO. P19-05782

June 2020

MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
Public Services <i>(continued)</i> :								
PS-3 <i>(continued from previous page)</i> <ul style="list-style-type: none"> • <i>Noise</i>: Barriers and setbacks placed on school sites. • <i>Traffic</i>: Traffic devices for circulation. • <i>Lighting</i>: Provision of hoods and deflectors on lighting fixtures for stadium lights. Verification comments:	<i>[see previous page]</i>	<i>[see previous page]</i>						
PS-4: As future parks and recreational facilities are planned, the City shall evaluate if specific environmental effects would occur. Typical impacts from school facilities include noise, traffic, and lighting. Typical mitigation to reduce potential impacts from park and recreational facilities includes: <ul style="list-style-type: none"> • <i>Noise</i>: Barriers and setbacks placed on school sites. • <i>Traffic</i>: Traffic devices for circulation. • <i>Lighting</i>: Provision of hoods and deflectors on lighting fixtures for outdoor play area/field lights. Verification comments:	During the planning process for future park and recreation facilities	DARM					X	

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Public Services *(continued)*:

<p>PS-5: As future detention, court, library, and hospital facilities are planned, the appropriate agencies shall evaluate if specific environmental effects would occur. Typical impacts from court, library, and hospital facilities include noise, traffic, and lighting. Typical mitigation to reduce potential impacts includes:</p> <ul style="list-style-type: none"> • <i>Noise:</i> Barriers and setbacks placed on school sites. • <i>Traffic:</i> Traffic devices for circulation. • <i>Lighting:</i> Provision of hoods and deflectors on outdoor lighting fixtures. <p>Verification comments:</p>	During the planning process for future detention, court, library, and hospital facilities	DARM, to the extent that agencies constructing these facilities are subject to City of Fresno regulation					X	
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Utilities and Service Systems

<p>USS-1: The City shall develop and implement a wastewater master plan update.</p> <p>Verification comments:</p>	Prior to wastewater conveyance and treatment demand exceeding capacity	DPU					X	
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MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
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Utilities and Service Systems *(continued)*:

USS-2: Prior to exceeding existing wastewater treatment capacity, the City shall evaluate the wastewater system and shall not approve additional development that contributes wastewater to the wastewater treatment facility that could exceed capacity until additional capacity is provided. By approximately the year 2025, the City shall construct the following improvements: <ul style="list-style-type: none"> Construct an approximately 70 MGD expansion of the Regional Wastewater Treatment and Reclamation Facility and obtain revised waste discharge permits as the generation of wastewater is increased. Construct an approximately 0.49 MGD expansion of the North Facility and obtain revised waste discharge permits as the generation of wastewater is increased. Verification comments:	Prior to exceeding existing wastewater treatment capacity	DPU					X	
USS-3: Prior to exceeding existing wastewater treatment capacity, the City shall evaluate the wastewater system and shall not approve additional development that contributes wastewater to the wastewater treatment facility that could exceed capacity until additional capacity is provided. After <i>(continued on next page)</i>	Prior to exceeding existing wastewater treatment capacity	DPU						X

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Utilities and Service Systems *(continued)*:

<p>USS-3 <i>(continued from previous page)</i></p> <p>approximately the year 2025, the City shall construct the following improvements:</p> <ul style="list-style-type: none"> Construct an approximately 24 MGD wastewater treatment facility within the Southeast Development Area and obtain revised waste discharge requirements as the generation of wastewater is increased. Construct an approximately 9.6 MGD expansion of the Regional Wastewater Treatment and Reclamation Facility and obtain revised waste discharge permits as the generation of wastewater is increased. <p>Verification comments:</p>	[see previous page]	[see previous page]						
<p>USS-4: A Traffic Control/Traffic Management Plan to address traffic impacts during construction of water and sewer facilities shall be prepared and implemented, subject to approval by the City (and Fresno County, when work is being done in unincorporated area roadways). The plan shall identify access and parking restrictions, pavement markings and signage, and hours of construction and for deliveries. It shall include haul routes, the notification plan, and coordination with emergency service providers and schools.</p> <p>Verification comments:</p>	Prior to construction of water and sewer facilities	PW for work in the City; PW and Fresno County Public Works and Planning when unincorporated area roadways are involved					X	

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Utilities and Service Systems *(continued)*:

<p>USS-5: Prior to exceeding capacity within the existing wastewater collection system facilities, the City shall evaluate the wastewater collection system and shall not approve additional development that would generate additional wastewater and exceed the capacity of a facility until additional capacity is provided. By approximately the year 2025, the following capacity improvements shall be provided.</p> <ul style="list-style-type: none"> • Orange Avenue Trunk Sewer: This facility shall be improved between Dakota and Jensen Avenues. Approximately 37,240 feet of new sewer main shall be installed and approximately 5,760 feet of existing sewer main shall be rehabilitated. The size of the new sewer main shall range from 27 inches to 42 inches in diameter. The associated project designations in the 2006 Wastewater Master Plan are RS03A, RL02, C01-REP, C02-REP, C03-REP, C04-REP, C05-REP, C06-REL and C07-REP. • Marks Avenue Trunk Sewer: This facility shall be improved between Clinton Avenue and Kearney Boulevard. Approximately 12,150 feet of new sewer main shall be installed. The size of the new sewer main shall range from 33 inches to 60 inches in diameter. The associated project designations in the 2006 Wastewater Master Plan are CM1-REP and CM2-REP. <p><i>(continued on next page)</i></p>	<p>Prior to exceeding capacity within the existing wastewater collection system facilities</p>	<p>DPU</p>					X	

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Utilities and Service Systems *(continued)*:

<p>USS-5 <i>(continued from previous page)</i></p> <ul style="list-style-type: none"> • North Avenue Trunk Sewer: This facility shall be improved between Polk and Fruit Avenues and also between Orange and Maple Avenues. Approximately 25,700 feet of new sewer main shall be installed. The size of the new sewer main shall range from 48 inches to 66 inches in diameter. The associated project designations in the 2006 Wastewater Master Plan are CN1-REL1 and CN3-REL1. • Ashlan Avenue Trunk Sewer: This facility shall be improved between Hughes and West Avenues and also between Fruit and Blackstone Avenues. Approximately 9,260 feet of new sewer main shall be installed. The size of the new sewer main shall range from 24 inches to 36 inches in diameter. The associated project designations in the 2006 Wastewater Master Plan are CA1-REL and CA2-REP. <p>Verification comments:</p>	[see previous page]	[see previous page]					
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MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
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Utilities and Service Systems *(continued)*:

<p>USS-6: Prior to exceeding capacity within the existing 28 pipeline segments shown in Figures 1 and 2 in Appendix J-1, the City shall evaluate the wastewater collection system and shall not approve additional development that would generate additional wastewater and exceed the capacity of one of the 28 pipeline segments until additional capacity is provided.</p> <p>Verification comments:</p>	Prior to exceeding capacity within the existing 28 pipeline segments shown in Figures 1 and 2 in Appendix J-1 of the MEIR	DPU					X	
<p>USS-7: Prior to exceeding existing water supply capacity, the City shall evaluate the water supply system and shall not approve additional development that demand additional water until additional capacity is provided. By approximately the year 2025, the following capacity improvements shall be provided.</p> <ul style="list-style-type: none"> Construct an approximately 80 million gallon per day (MGD) surface water treatment facility near the intersection of Armstrong and Olive Avenues, in accordance with Chapter 9 and Figure 9-1 of the City of Fresno Metropolitan Water Resources Management Plan Update (2014 Metro Plan Update) Phase 2 Report, dated January 2012. <p><i>(continued on next page)</i></p>	Prior to exceeding existing water supply capacity	DPU					X	

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MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
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Utilities and Service Systems *(continued)*:

<p>USS-7 <i>(continued from previous page)</i></p> <ul style="list-style-type: none"> Construct an approximately 30 MGD expansion of the existing northeast surface water treatment facility for a total capacity of 60 MGD, in accordance with Chapter 9 and Figure 9-1 of the 2014 Metro Plan Update. Construct an approximately 20 MGD surface water treatment facility in the southwest portion of the City, in accordance with Chapter 9 and Figure 9-1 of the 2014 Metro Plan Update. <p>Verification comments:</p>	<i>[see previous page]</i>	<i>[see previous page]</i>						
<p>USS-8: Prior to exceeding capacity within the existing water conveyance facilities, the City shall evaluate the water conveyance system and shall not approve additional development that would demand additional water and exceed the capacity of a facility until additional capacity is provided. The following capacity improvements shall be provided by approximately 2025.</p> <ul style="list-style-type: none"> Construct 65 new groundwater wells, in accordance with Chapter 9 and Figure 9-1 of the 2014 Metro Plan Update. <p><i>(continued on next page)</i></p>	Prior to exceeding capacity within the existing water conveyance facilities	DPU					X	

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B - Mitigated

C - Mitigation in Process
D - Responsible Agency Contacted

E - Part of City-Wide Program
F - Not Applicable

MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
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Utilities and Service Systems *(continued)*:

<p>USS-8 <i>(continued from previous page)</i></p> <ul style="list-style-type: none"> Construct a 2.0 million gallon potable water reservoir (Reservoir T2) near the intersection of Clovis and California Avenues, in accordance with Chapter 9 and Figure 9-1 of the 2014 Metro Plan Update. Construct a 3.0 million gallon potable water reservoir (Reservoir T3) near the intersection of Temperance and Dakota Avenues, in accordance with Chapter 9 and Figure 9-1 of the 2014 Metro Plan Update. Construct a 3.0 million gallon potable water reservoir (Reservoir T4) in the Downtown Planning Area, in accordance with Chapter 9 and Figure 9-1 of the 2014 Metro Plan Update. Construct a 4.0 million gallon potable water reservoir (Reservoir T5) near the intersection of Ashlan and Chestnut Avenues, in accordance with Chapter 9 and Figure 9-1 of the 2014 Metro Plan Update. Construct a 4.0 million gallon potable water reservoir (Reservoir T6) near the intersection of Ashlan Avenue and Highway 99, in accordance with Chapter 9 and Figure 9-1 of the 2014 Metro Plan Update. <p><i>(continued on next page)</i></p>	<i>[see previous page]</i>	<i>[see previous page]</i>					
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A - Incorporated into Project
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C - Mitigation in Process
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MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
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Utilities and Service Systems *(continued)*:

<p>USS-8 <i>(continued from previous two pages)</i></p> <ul style="list-style-type: none"> Construct 50.3 miles of regional water transmission mains ranging in size from 24-inch to 48-inch diameter, in accordance with Chapter 9 and Figure 9-1 of the 2014 Metro Plan Update. Construct 95.9 miles of 16-inch diameter transmission grid mains, in accordance with Chapter 9 and Figure 9-1 of the 2014 Metro Plan Update. <p>Verification comments:</p>	<i>[see Page 37]</i>	<i>[see Page 37]</i>						
<p>USS-9: Prior to exceeding capacity within the existing water conveyance facilities, the City shall evaluate the water conveyance system and shall not approve additional development that would demand additional water and exceed the capacity of a facility until additional capacity is provided. The following capacity improvements shall be provided after approximately the year 2025 and additional water conveyance facilities shall be provided prior to exceedance of capacity within the water conveyance facilities to accommodate full buildout of the General Plan Update.</p> <p><i>(continued on next page)</i></p>	Prior to exceeding capacity within the existing water conveyance facilities	DPU					X	

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MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
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Utilities and Service Systems *(continued)*:

<p>USS-9 <i>(continued from previous page)</i></p> <ul style="list-style-type: none"> Construct a 4.0 million gallon potable water reservoir (SEDA Reservoir 1) within the northern part of the Southeast Development Area. Construct a 4.0 million gallon potable water reservoir (SEDA Reservoir 2) within the southern part of the Southeast Development Area. <p>Additional water conveyance facilities shall be provided prior to exceedance of capacity within the water conveyance facilities to accommodate full buildout of the General Plan Update.</p> <p>Verification comments:</p>	<i>[see previous page]</i>	<i>[see previous page]</i>						
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Utilities and Service Systems - Hydrology and Water Quality

<p>USS-10: In order to maintain Fresno Irrigation District canal operability, FMFCD shall maintain operational intermittent flows during the dry season, within defined channel capacity and downstream capture capabilities, for recharge.</p> <p>Verification comments:</p>	During the dry season	Fresno Irrigation District (FID)				X		

A - Incorporated into Project
B - Mitigated

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D - Responsible Agency Contacted

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F - Not Applicable

MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
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Utilities and Service Systems - *Biological Resources*:

<p>USS-11: When FMFCD proposes to provide drainage service outside of urbanized areas:</p> <p>(a) FMFCD shall conduct preliminary investigations on undeveloped lands outside of highly urbanized areas. These investigations shall examine wetland hydrology, vegetation and soil types. These preliminary investigations shall be the basis for making a determination on whether or not more in-depth wetland studies shall be necessary. If the proposed project site does not exhibit wetland hydrology, support a prevalence of wetland vegetation and wetland soil types then no further action is required.</p> <p>(b) Where proposed activities could have an impact on areas verified by the Corps as jurisdictional wetlands or waters of the U.S. (urban and rural streams, seasonal wetlands, and vernal pools), FMFCD shall obtain the necessary Clean Water Act, Section 404 permits for activities where fill material shall be placed in a wetland, obstruct the flow or circulation of waters of the United States, impair or reduce the reach of such waters. As part of FMFCD's Memorandum of Understanding with CDFG, Section 404 and 401 permits would be obtained from the U.S. Army Corps of Engineers and from the</p> <p><i>(continued on next page)</i></p>	Prior to development approvals outside of highly urbanized areas	California Regional Water Quality Control Board (RWQCB), and USACE				X		
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F - Not Applicable

MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
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Utilities and Service Systems - *Biological Resources* (continued):

<p>USS-11 <i>(continued from previous page)</i></p> <p>Regional Water Quality Control Board for any activity involving filling of jurisdictional waters). At a minimum, to meet “no net loss policy,” the permits shall require replacement of wetland habitat at a 1:1 ratio.</p> <p>(c) Where proposed activities could have an impact on areas verified by the Corps as jurisdictional wetlands or waters of the U.S. (urban and rural streams, seasonal wetlands, and vernal pools), FMFCD shall submit and implement a wetland mitigation plan based on the wetland acreage verified by the U.S. Army Corps of Engineers. The wetland mitigation plan shall be prepared by a qualified biologist or wetland scientist experienced in wetland creation, and shall include the following or equally effective elements:</p> <ul style="list-style-type: none"> i. Specific location, size, and existing hydrology and soils within the wetland creation area. ii. Wetland mitigation techniques, seed source, planting specifications, and required buffer setbacks. In addition, the mitigation plan shall ensure adequate water supply is provided to the created wetlands in order to maintain the proper <p style="text-align: right;"><i>(continued on next page)</i></p>	[see previous page]	[see previous page]					
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MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
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Utilities and Service Systems - *Biological Resources* (continued):

<p>USS-11 <i>(continued from previous two pages)</i></p> <p>hydrologic regimes required by the different types of wetlands created. Provisions to ensure the wetland water supply is maintained in perpetuity shall be included in the plan.</p> <p>iii. A monitoring program for restored, enhanced, created, and preserved wetlands on the project site. A monitoring program is required to meet three objectives; 1) establish a wetland creation success criteria to be met; 2) to specify monitoring methodology; 3) to identify as far as is possible, specific remedial actions that will be required in order to achieve the success criteria; and 4) to document the degree of success achieved in establishing wetland vegetation.</p> <p>(d) A monitoring plan shall be developed and implemented by a qualified biologist to monitor results of any on-site wetland restoration and creation for five years. The monitoring plan shall include specific success criteria, frequency and timing of monitoring, and assessment of whether or not maintenance activities are being carried out and how these shall be adjusted if necessary.</p> <p><i>(continued on next page)</i></p>	[see Page 41]	[see Page 41]					
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A - Incorporated into Project
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C - Mitigation in Process
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MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
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Utilities and Service Systems - *Biological Resources* (continued):

<p>USS-11 <i>(continued from previous three pages)</i></p> <p>If monitoring reveals that success criteria are not being met, remedial habitat creation or restoration should be designed and implemented by a qualified biologist and subject to five years of monitoring as described above.</p> <p>Or</p> <p>(e) In lieu of developing a mitigation plan that outlines the avoidance, purchase, or creation of wetlands, FMFCD could purchase mitigation credits through a Corps approved Mitigation Bank.</p> <p>Verification comments:</p>	[see Page 41]	[see Page 41]						
<p>USS-12: When FMFCD proposes to provide drainage service outside in areas that support seasonal wetlands or vernal pools:</p> <p>(a) During facility design and prior to initiation of ground disturbing activities in areas that support seasonal wetlands or vernal pools, FMFCD shall conduct a preliminary rare plant assessment. The assessment will determine the likelihood on whether or not the project site could support rare plants. If it is determined that the project site would not support rare plants, then no further</p> <p><i>(continued on next page)</i></p>	During facility design and prior to initiation of ground disturbing activities in areas that support seasonal wetlands or vernal pools	California Department of Fish & Wildlife (CDFW) and U.S. Fish and Wildlife Service (USFWS)				X		

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MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
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Utilities and Service Systems - *Biological Resources* (continued):

<p>USS-12 <i>(continued from previous page)</i></p> <p>action is required. However, if the project site has the potential to support rare plants; then a rare plant survey shall be conducted. Rare plant surveys shall be conducted by qualified biologists in accordance with the most current CDFG/USFWS guidelines or protocols and shall be conducted at the time of year when the plants in question are identifiable.</p> <p>(b) Based on the results of the survey, prior to design approval, FMFCD shall coordinate with CDFG and/or implement a Section 7 consultation with USFWS, shall determine whether the project facility would result in a significant impact to any special status plant species. Evaluation of project impacts shall consider the following:</p> <ul style="list-style-type: none"> • The status of the species in question (e.g., officially listed by the State or Federal Endangered Species Acts). • The relative density and distribution of the on-site occurrence versus typical occurrences of the species in question. <p><i>(continued on next page)</i></p>	[see previous page]	[see previous page]					
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MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
Utilities and Service Systems - <i>Biological Resources</i> (continued):								
<p>USS-12 (continued from previous two pages)</p> <ul style="list-style-type: none"> The habitat quality of the on-site occurrence relative to historic, current or potential distribution of the population. <p>(c) Prior to design approval, and in consultation with the CDFG and/or the USFWS, FMFCD shall prepare and implement a mitigation plan, in accordance with any applicable State and/or federal statutes or laws, that reduces impacts to a less than significant level.</p> <p>Verification comments:</p>	[see Page 44]	[see Page 44]						
<p>USS-13: When FMFCD proposes to provide drainage service outside in areas that support seasonal wetlands or vernal pools:</p> <p>(a) During facility design and prior to initiation of ground disturbing activities in areas that support seasonal wetlands or vernal pools, FMFCD shall conduct a preliminary survey to determine the presence of listed vernal pool crustaceans.</p> <p>(continued on next page)</p>	During facility design and prior to initiation of ground disturbing activities in areas that support seasonal wetlands or vernal pools	CDFW and USFWS				X		

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D - Responsible Agency Contacted

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MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
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Utilities and Service Systems - *Biological Resources* (continued):

<p>USS-13 <i>(continued from previous page)</i></p> <p>(b) If potential habitat (vernal pools, seasonally inundated areas) or fairy shrimp exist within areas proposed to be disturbed, FMFCD shall complete the first and second phase of fairy shrimp presence or absence surveys. If an absence finding is determined and accepted by the USFWS, then no further mitigation shall be required for fairy shrimp.</p> <p>(c) If fairy shrimp are found to be present within vernal pools or other areas of inundation to be impacted by the implementation of storm drainage facilities, FMFCD shall mitigate impacts on fairy shrimp habitat in accordance with the USFWS requirements of the Programmatic Biological Opinion. This shall include on-site or off-site creation and/or preservation of fairy shrimp habitat at ratios ranging from 3:1 to 5:1 depending on the habitat impacted and the choice of on-site or off-site mitigation. Or mitigation shall be the purchase of mitigation credit through an accredited mitigation bank.</p> <p>Verification comments:</p>	[see previous page]	[see previous page]					
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MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
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Utilities and Service Systems - *Biological Resources* (continued):

<p>USS-14: When FMFCD proposes to construct drainage facilities in an area where elderberry bushes may occur:</p> <p>(a) During facility design and prior to initiation of construction activities, FMFCD shall conduct a project-specific survey for all potential Valley Elderberry Longhorn Beetle (VELB) habitats (elderberry shrubs), including a stem count and an assessment of historic or current VELB habitat.</p> <p>(b) FMFCD shall avoid and protect all potential identified VELB habitat where feasible.</p> <p>(c) Where avoidance is infeasible, develop and implement a VELB mitigation plan in accordance with the most current USFWS mitigation guidelines for unavoidable take of VELB habitat pursuant to either Section 7 or Section 10(a) of the Federal Endangered Species Act. The mitigation plan shall include, but might not be limited to, relocation of elderberry shrubs, planting of elderberry shrubs, and monitoring of relocated and planted elderberry shrubs.</p> <p>Verification comments:</p>	During facility design and prior to initiation of construction activities	CDFW and USFWS				X		

A - Incorporated into Project
B - Mitigated

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F - Not Applicable

MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
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Utilities and Service Systems - *Biological Resources* (continued):

<p>USS-15: Prior to ground disturbing activities during nesting season (March through July) for a project that supports bird nesting habitat, FMFCD shall conduct a survey of trees. If nests are found during the survey, a qualified biologist shall assess the nesting activity on the project site. If active nests are located, no construction activities shall be allowed within 250 feet of the nest until the young have fledged. If construction activities are planned during the non-breeding period (August through February), a nest survey is not necessary.</p> <p>Verification comments:</p>	Prior to ground disturbing activities during nesting season (March through July) for a project that supports bird nesting habitat	CDFW and USFWS				X		
<p>USS-16: When FMFCD proposes to construct drainage facilities in an area that supports bird nesting habitat:</p> <p>(a) FMFCD shall conduct a pre-construction breeding-season survey (approximately February 1 through August 31) of proposed project sites in suitable habitat (levee and canal berms, open grasslands with suitable burrows) during the same calendar year that construction is planned to begin. If phased construction procedures are planned for the proposed project, the results of the above survey shall be valid only for the season when it is conducted.</p> <p><i>(continued on next page)</i></p>	Prior to ground disturbing activities during nesting season (March through July) for a project that supports bird nesting habitat	CDFW and USFWS				X		

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Utilities and Service Systems - *Biological Resources* (continued):

<p>USS-16 <i>(continued from previous page)</i></p> <p>(b) During the construction stage, FMFCD shall avoid all burrowing owl nest sites potentially disturbed by project construction during the breeding season while the nest is occupied with adults and/or young. The occupied nest site shall be monitored by a qualified biologist to determine when the nest is no longer used. Avoidance shall include the establishment of a 160-foot diameter non-disturbance buffer zone around the nest site. Disturbance of any nest sites shall only occur outside of the breeding season and when the nests are unoccupied based on monitoring by a qualified biologist. The buffer zone shall be delineated by highly visible temporary construction fencing.</p> <p>Based on approval by CDFG, pre-construction and pre-breeding season exclusion measures may be implemented to preclude burrowing owl occupation of the project site prior to project-related disturbance. Burrowing owls can be passively excluded from potential nest sites in the construction area, either by closing the burrows or placing one-way doors in the burrows according to current CDFG protocol. Burrows shall be examined not more than 30 days before construction to ensure that no owls have recolonized the area of construction.</p> <p><i>(continued on next page)</i></p>	[see previous page]	[see previous page]					
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Utilities and Service Systems - *Biological Resources* (continued):

USS-16 <i>(continued from previous two pages)</i> For each burrow destroyed, a new burrow shall be created (by installing artificial burrows at a ratio of 2:1 on protected lands nearby). Verification comments:	[see Page 49]	[see Page 49]						
USS-17: When FMFCD proposes to construct drainage facilities in the San Joaquin River corridor: (a) FMFCD shall not conduct instream activities in the San Joaquin River between October 15 and April 15. If this is not feasible, FMFCD shall consult with the National Marine Fisheries Service and CDFW on the appropriate measures to be implemented in order to protect listed salmonids in the San Joaquin River. (b) Riparian vegetation shading the main-channel that is removed or damaged shall be replaced at a ratio and quantity sufficient to maintain the existing shading of the channel. The location of replacement trees on or within <i>(continued on next page)</i>	During instream activities conducted between October 15 and April 15	National Marine Fisheries Service (NMFS), CDFW, and Central Valley Flood Protection Board (CVFPB)				X		

A - Incorporated into Project
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E - Part of City-Wide Program
F - Not Applicable

MEIR MITIGATION MEASURE MONITORING CHECKLIST FOR EA NO. P19-05782

June 2020

MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
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Utilities and Service Systems / Biological Resources (continued):

<p>USS-17 (continued from previous page)</p> <p>FMFCD berms, detention ponds or river channels shall be approved by FMFCD and the Central Valley Flood Protection Board.</p> <p>Verification comments:</p>	[see previous page]	[see previous page]						
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Utilities and Service Systems – Recreation / Trails:

<p>USS-18: When FMFCD updates its District Service Plan:</p> <p>Prior to final design approval of all elements of the District Services Plan, FMFCD shall consult with Fresno County, City of Fresno, and City of Clovis to determine if any element would temporarily disrupt or permanently displace adopted existing or planned trails and associated recreational facilities as a result of the proposed District Services Plan. If the proposed project would not temporarily disrupt or permanently displace adopted existing or planned trails, no further mitigation is necessary. If the proposed project would have an effect on the trails and associated facilities, FMFCD shall implement the following:</p> <p>(continued on next page)</p>	Prior to final design approval of all elements of the District Services Plan	DARM, PW, City of Clovis, and County of Fresno				X		

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F - Not Applicable

MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
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Utilities and Service Systems – Recreation / Trails (continued):

<p>USS-18 (continued from previous page)</p> <p>(a) If short-term disruption of adopted existing or planned trails and associated recreational facilities occur, FMFCD shall consult and coordinate with Fresno County, City of Fresno, and City of Clovis to temporarily re-route the trails and associated facilities.</p> <p>(b) If permanent displacement of the adopted existing or planned trails and associated recreational facilities occur, the appropriate design modifications to prevent permanent displacement shall be implemented in the final project design or FMFCD shall replace these facilities.</p> <p>Verification comments:</p>	[see previous page]	[see previous page]						
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Utilities and Service Systems – Air Quality:

<p>USS-19: When District drainage facilities are constructed, FMFCD shall:</p> <p>(a) Minimize idling time of construction equipment vehicles to no more than ten minutes, or require that engines be shut off when not in use.</p> <p>(continued on next page)</p>	During storm water drainage facility construction activities	Fresno Metropolitan Flood Control District and SJVAPCD				X		
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Utilities and Service Systems – Air Quality (continued):

USS-19 (continued from previous page) (b) Construction shall be curtailed as much as possible when the Air Quality Index (AQI) is above 150. AQI forecasts can be found on the SJVAPCD web site. (c) Off-road trucks should be equipped with on-road engines if possible. (d) Construction equipment should have engines that meet the current off-road engine emission standard (as certified by CARB), or be re-powered with an engine that meets this standard. Verification comments:	[see previous page]	[see previous page]						
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Utilities and Service Systems – Adequacy of Storm Water Drainage Facilities:

USS-20: Prior to exceeding capacity within the existing storm water drainage facilities, the City shall coordinate with FMFCD to evaluate the storm water drainage system and shall not approve additional development that would convey additional storm water to a facility that would experience an exceedance of capacity until the necessary additional capacity is provided. Verification comments:	Prior to exceeding capacity within the existing storm water drainage facilities	FMFCD, PW, and DARM				X	X	
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MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
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Utilities and Service Systems – Adequacy of Water Supply Capacity:

<p>USS-21: Prior to exceeding existing water supply capacity, the City shall evaluate the water supply system and shall not approve additional development that demand additional water until additional capacity is provided. By approximately the year 2025, the City shall construct an approximately 25,000 AF/year tertiary recycled water expansion to the Fresno-Clovis Regional Wastewater Reclamation Facility in accordance with the 2013 Recycled Water Master Plan and the 2014 City of Fresno Metropolitan Water Resources Management Plan update.</p> <p>Implementation of Mitigation Measure USS-5 is also required prior to approximately the year 2025.</p> <p>Verification comments:</p>	Prior to exceeding existing water supply capacity	DPU and DARM				X	X	

Utilities and Service Systems – Adequacy of Landfill Capacity:

<p>USS-22: Prior to exceeding landfill capacity, the City shall evaluate additional landfill locations and shall not approve additional development that could contribute solid waste to a landfill that is at capacity until additional capacity is provided.</p> <p>Verification comments:</p>	Prior to exceeding landfill capacity	DPU and DARM					X	

A - Incorporated into Project
B - Mitigated

C - Mitigation in Process
D - Responsible Agency Contacted

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F - Not Applicable

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