Appendix B

Infill Environmental Checklist

2128 Oxford Street Mixed-Use Project

Updated Infill Environmental Checklist

prepared by

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Land Use Division
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RINCON CONSULTANTS, INC. SINCE 1994

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Abbreviations and Acronyms

AB	Assembly Bill
AC Transit	Alameda-Contra Costa Transit District
ADA	Americans with Disabilities Act
BAAQMD	Bay Area Air Quality Management District
BART	Bay Area Rapid Transit
BPD	Berkeley Police Department
BFD	Berkeley Fire Department
bgs	below ground surface
BMC	Berkeley Municipal Code
BUSD	Berkeley Unified School District
CAP	Clean Air Plan
CalEEMod	California Emissions Estimator Model
CALGreen	California Green Building Code
CARB	California Air Resources Board
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CH_4	methane
CO	carbon monoxide
CO_2	carbon dioxide
CNEL	Community Noise Equivalent Level
DAP	Downtown Area Plan
dB	decibels
dBA	A-weighted sound pressure level
DOC	(California) Department of Conservation
EBMUD	East Bay Municipal Utility District
EIR	Environmental Impact Report
ESA	Environmental Site Assessment
FTA	Federal Transit Administration
GHG	greenhouse gases
L_{dn}	Day-Night Average (noise) Level
L_{eq}	single steady A-weighted (noise) level

LOS	level of service
MERV	Minimum Efficiency Reporting Value
mgd	million gallons per day
MLD	Most Likely Descendent
MT	megatons
N_2O	nitrous oxides
NAHC	Native American Heritage Commission
NO_2	nitrogen dioxide
NO_X	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NWIC	Northwest Information Center
O_3	ozone
PG&E	Pacific Gas & Electric
$PM_{2.5}$	particulate matter with a diameter of up to 2.5 microns
PM_{10}	particulate matter with a diameter of up to ten microns
PRC	Public Resources Code
ROG	reactive organic gases
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
sf	square foot
SFBAAB	San Francisco Bay Area Air Basin
SO_2	sulfur dioxide
SR	State Route
SWRCB	State Water Resource Control Board
TAC	Toxic Air Contaminant
TAZ	traffic analysis zones
TMD	Toxics Management Division
UC Berkeley	University of California, Berkeley
UWMP	Urban Water Management Plan
VMT	vehicle miles traveled
VdB	vibration decibels

Introduction

This document assesses a proposed infill project according to the procedures provided in Public Resources Code (PRC) Section 21094.5. The content satisfies the requirements in Section 15183.3 of the California Environmental Quality Act (CEQA) *Guidelines*, Streamlining for Infill Projects, which is included in Appendix A of this report for reference.

1 Project Title

2128 Oxford Street Mixed-Use Project

2 Project Applicant and Contact Person

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Contact: Jonathan Kubow, (312)-593-3895

3 Lead Agency and Contact Person

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4 Project Location

The project site encompasses two parcels totaling 0.82 acres (35,522 square feet) at 2128-2136 Oxford and 2132-2154 Center Street) in the City of Berkeley, Alameda County. The project site has two parcels but three Assessor Parcel Numbers: 057-2031-001-01 (2128-2136 Oxford Street), 057-2031-013 (2132-2154 Center Street), and 057-2031-014 (2142 Center Street). The project site is located on the southwest corner of Center Street and Oxford Street, with its longer frontage along Center Street and its shorter frontage along Oxford Street. The project site is bounded by Center Street to the north, Oxford Street to the east, and residential and commercial development to the west and south. Across Oxford Street to the east is the University of California, Berkeley (U.C. Berkeley) campus and across Center Street to the north is the Berkeley Art Museum and Pacific Film Archive (BAMFA).

Figure 1 shows the regional location of the project site and Figure 2 shows the project site's immediate location and selected nearby land uses.

Figure 1 Regional Location

Figure 2 Project Site Location

Imagery provided by Microsoft Bing and its licensors © 2023.

22-12758 EPS
Fig 2 Project Location

5 Land Use Designations

General Plan

The project site is designated as "Downtown (DT)" in the Berkeley General Plan. This land use designation allows for both residential and commercial uses.

Zoning

The project site is in the Core Sub-Area of the Downtown Mixed Use (C-DMU) Zoning District. As stated in the Berkeley Municipal Code (BMC), the purpose of the Code Sub-Area in the C-DMU district is to implement the vision and goals of the Downtown Area Plan (DAP) which includes goals and policies pertaining to environmental sustainability, land use, access, historic preservation and urban design, streets and open space, housing and community health and services, and economic development.

The C-DMU District designation allows for up to two buildings with a minimum height of 75 feet and a maximum height of 120 feet in the combined Core and Outer Core Sub-Areas. Up to three buildings are allowed with a minimum height of 120 feet and a maximum height of 180 feet in the Core Sub-Area. Allowed uses within the three tallest buildings in the Core Sub-Area include: two residential buildings with ground-level commercial and one hotel with conference facilities and accessory commercial uses (BMC Section 23.204.130).

Downtown Area Plan (DAP)

The Core Sub-Area designation allows for multi-family housing, commercial uses, cultural and community uses, educational uses, and public and private open space uses. The DAP allows for the tallest buildings, including three buildings up to 180 feet, to be located within the Core Sub-Area due to the locations proximity to Bay Area Rapid Transit (BART) stations, multiple bus lines, and nearby walk-to conveniences (City of Berkeley 2012). DAP land use designations are shown on Figure 3.

6 Prior Environmental Document(s) Analyzing the Effects of the Infill Project (including State Clearinghouse Number)

Berkeley Downtown Area Plan (DAP) Final Environmental Impact Report (EIR), certified 2012 State Clearinghouse Number 2008102032.

7 Location of Prior Environmental Document(s) Analyzing the Effects of the Infill Project

City of Berkeley Planning & Development Department
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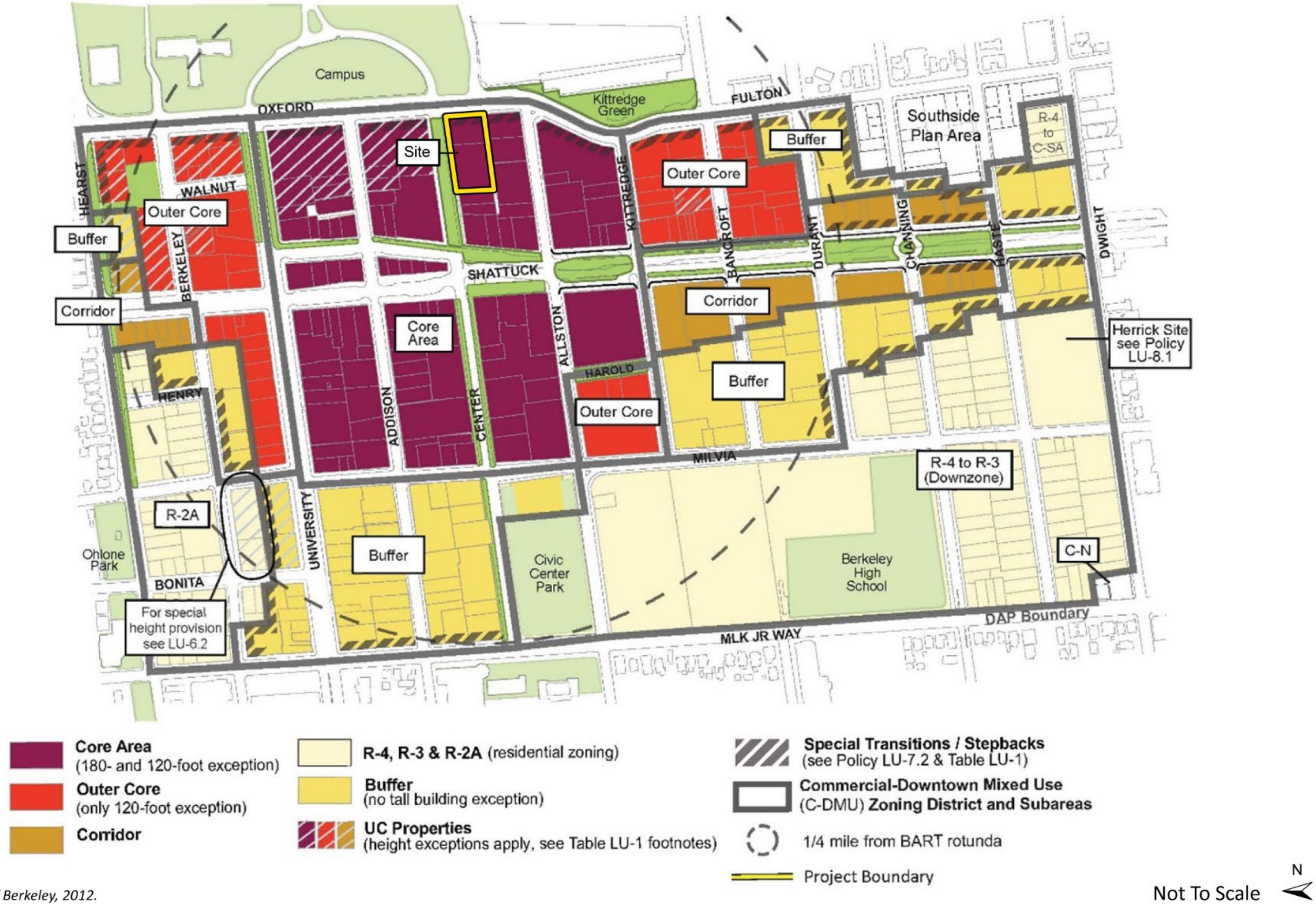
Figure 3 Downtown Area Plan Land Use Designations



Source: City of Berkeley, 2012.

8 Surrounding Area Setting

The project site is located in a fully developed block of downtown Berkeley. The surrounding area is characterized by a mix of uses, including restaurants, commercial, hotel, museum, educational (U.C. Berkeley) and residential. Building heights in the immediate vicinity range from two stories (commercial and residential buildings along Center and Oxford Streets) to 16 stories (Residence Inn across Center Street to the northwest of the project site). The Berkeley Art Museum and Pacific Film Archive is located across Center Street to the north of the project site. The U.C. Berkeley campus is located across Oxford Street to the east of the project site. The project site is approximately one block (350 feet) east of the Downtown Berkeley BART Station, as shown on Figure 2. Because the project site is within 0.5-mile of the Downtown Berkeley BART Station, it is within a Transit Priority Area (TPA), which is defined in California Public Resource Code Section 21099 as “an area within one-half mile of a major transit stop that is existing or planned.” A “major transit stop” includes a rail or bus rapid transit station.

9 Project Site Existing Setting

The project site includes two existing buildings. The building located at 2128-2130 Oxford Street (referred to as “2128 Oxford Street”) is two stories tall and includes a bakery, restaurant/bar, and vacant storefronts on the ground floor. There is also a parklet located on the ground floor along the Oxford Street frontage. The building located at 2132-2154 Center Street (referred to as “2124 Center Street”) is a two-story building with five restaurants and two cafes on the ground floor, along with presently vacant storefronts. The building at 2142 Center Street includes 16 rent-controlled residential units on the second floor, all of which are currently vacant.

The 2142 Center Street building was evaluated for listing in the National Register of Historic Places (NRHP) and the California Register of Historical Resources (CRHR), and for designation as a City of Berkeley Landmark. It was found eligible for the NRHP, CRHR, and local designation, and is a contributor to the historic downtown Shattuck Avenue District.

Table 1 lists the existing site characteristics and Figure 4 and Figure 5 include photographs of the project site.

Table 1 Existing Site Characteristics

Address:	2128-2130 Oxford Street and 2132-2168 Center Street
Assessor's Parcel Number:	057-2031-001-01, 057-2031-013, 057-2031-014
Site Size:	35,522 square feet (0.82 acres)
General and Specific Plan Land Use Designations:	General Plan: Downtown (DT) DAP: Core Sub-Area
Zoning Designation:	Downtown Mixed Use District (C-DMU, Core Sub-Area)
Current Use and Development:	Two-story commercial and residential buildings
Surrounding General and Specific Plan Land Use Designations:	General Plan: Avenue Commercial, Downtown, High Density Residential DAP: Core Area, Outer Core
Surrounding Zoning Designations:	C-DMU Corridor, C-DMU Buffer, C-DMU Outer Core
Regional Access: Local Access:	I-580, SR 24, SR 123, SR 13 Center Street, Oxford Street, Oxford Lane, Kala Bagai Way/Shattuck Avenue
Public Services:	Water: East Bay Municipal Utility District (EBMUD) Wastewater: EBMUD for wastewater treatment, City of Berkeley for wastewater collection Solid Waste: City of Berkeley Fire Protection: Berkeley Fire Department Police Protection: Berkeley Police Department School District: Berkeley Unified, Central Zone

Figure 4 Project Site Photographs – Photos 1 and 2

Photograph 1. View from the northeast corner of Center Street and Oxford Street looking southwest towards the project site.

Photograph 2. View from the east side of Oxford Street looking west towards the 2128 Oxford Street building. The existing ground floor parklet can be seen in the foreground and the 16-story Residence Inn hotel building can be seen in the background.

Figure 5 Project Site Photographs – Photos 3 and 4

Photograph 3. View from Center Street looking southeast at the 2132-2154 Center Street building.

Photograph 4. View of the frontage of the 2132-2154 Center Street building looking west from the Center Street sidewalk.

10 Description of Project

The project would involve demolition of the existing on-site buildings (including the 2142 Center Street building which was found individually eligible for local designation and is a contributor to the CRHR-eligible Shattuck Avenue Commercial Corridor Historic District) and construction of a new 26-story (297-foot) mixed-use building (see subsection 2.8.1, Affordable Housing and Density Bonus for further information on building height in relation to the DAP's 180-foot height provision). The project would include 456 units as currently proposed; however, because the project would be allowed up to 463 units under the Density Bonus, this analysis conservatively assumes up to 463 residential units with 40 of those units at below market rate, located on floors 2 through 25. The proposed project would also include approximately 15,000 square feet of retail and restaurant space. Approximately 10,500 square feet of retail and restaurant space would be on the ground floor and 4,500 square feet of restaurant space would be located on the roof.

The proposed project would also include a below-ground basement level which would include mail and package rooms, an office, and mechanical and utility storage rooms and equipment. A 36-space parking garage would be located at-grade, with access from a driveway on Oxford Lane and would include mechanical lifts in a pit that extend into the basement. There would also be an exterior amenity roof deck on level 25 and a restaurant on level 26 (discussed in detail below in the Open Space and Amenities subsection). The exterior design of the new building would be modern, with rectangular forms, and would include a combination of cementitious panels, storefront systems, and metal panels.

Table 2 lists selected project characteristics and Figure 6 shows the overall project site plan.

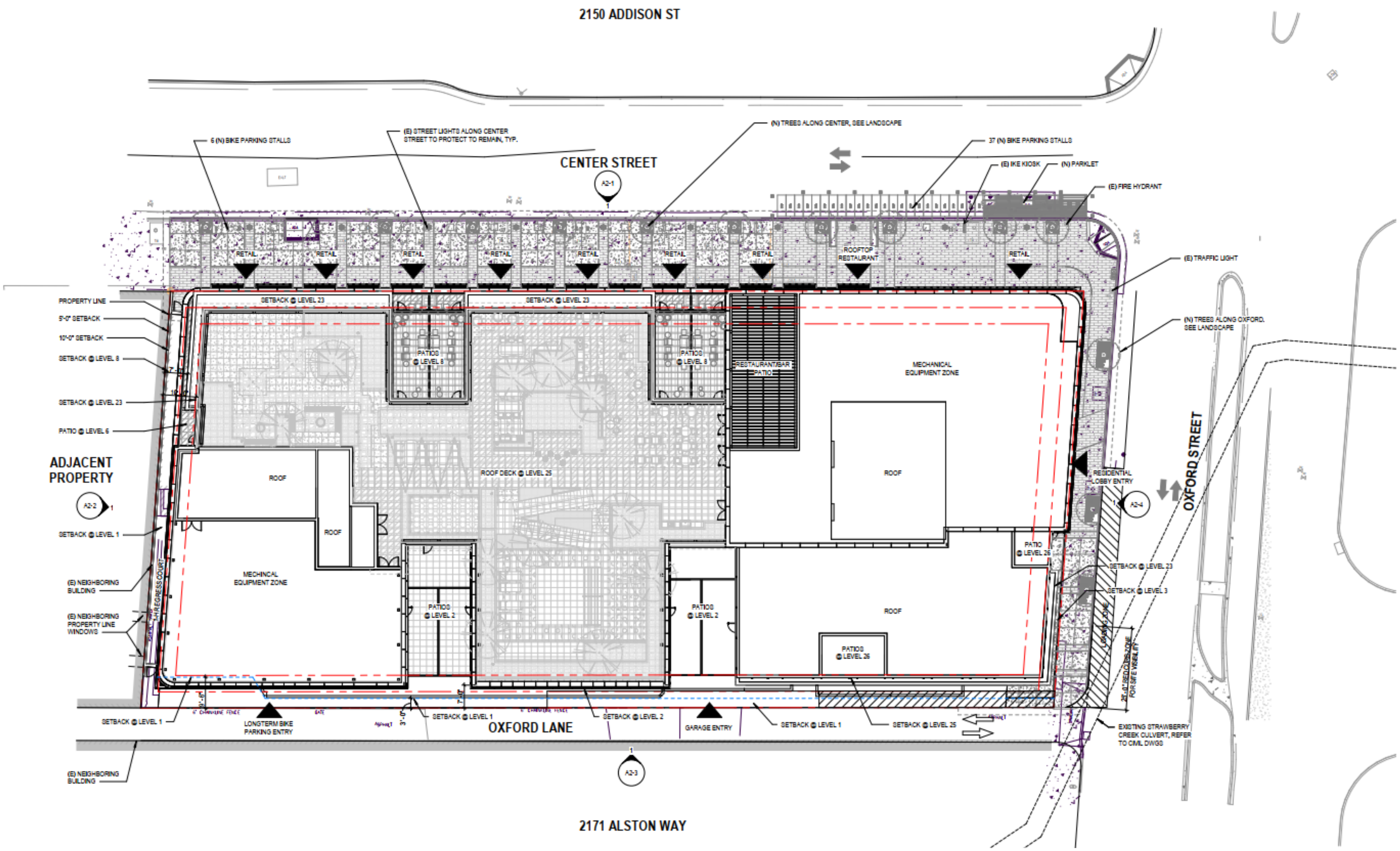
Table 2 Project Characteristics

Use	Gross Floor Area (square feet)
Height/Stories	285 feet, 4 inches to the highest roof point, 297 feet 4 inches to highest parapet 26 stories above grade 1 basement story below grade
Gross Floor Area	694,778 sf1
Garage (Ground Floor)	7,268 sf
Retail/Restaurant (Ground Floor and Level 26)	14,961 sf
Amenity/Lobby (Basement, Ground Floor, Level 1-2, Level 25-26)	16,804 sf
Common/ Corridor (Basement- Floor 26)	96,908 sf
Residential (Floors 2-25)	527,187 sf
Exterior Amenity (Floor 25)	11,135 sf

[1] The gross floor area is calculated not including the exterior amenity or basement.

sf = square feet

Figure 6 Overall Site Plan



Source: DLR Group 2024

Affordable Housing and Density Bonus

The proposed project would include 40 below-market rate units, including six extremely low-income units and 34 very-low-income units. This project is subject to the City of Berkeley's Inclusionary Housing requirement (BMC Chapter 23.328) and Affordable Housing Mitigation Fee (BMC Section 22.20.065). Together, these ordinance sections require a rental unit project to pay a fee or provide affordable units on-site in lieu of the fee.[1] The project applicant would provide a portion of required units on-site (40 units). For the remaining requirement, the project applicant would contribute approximately $11 million as an in-lieu fee toward Berkeley's Affordable Housing Trust Fund.

The base density for the project site would allow for 333 units. The project would provide at least 5 percent of the base project units (minimum of 36 units) as very low-income affordable units and is eligible for a density bonus under Government Code Section 65915. State Density Bonus Law allows for additional density ("bonus") and flexibility in development standards in exchange for providing affordable housing units on site. The proposed project would provide 12 percent of the base project units as very low-income units, which would achieve a 38.75 percent density bonus under state law for a total of 456proposed units (up to a maximum of 463 units). The project applicant is also requesting the following waivers:

- Waiver of BMC (Berkeley Municipal Code) Section 23.204.130(E)(2)(a) to exceed building height limits, to be 285 feet 4 inches to the roof and 297 feet 4 inches to the top of the parapet (twelve-foot parapet), where 180 feet is the maximum (plus five-foot parapet, by right)
- Waiver of BMC Section 23.204.130(E)(3)(a) to reduce the front yard setback requirement to zero feet, where 10 feet is the minimum, above 120-foot building height
- Waiver of BMC Section 23.204.130(E)(3)(a) to reduce the street side yard setback requirement to zero feet, where 15 feet is the minimum, above 120-foot building height
- Waiver of BMC Section 23.204.130(E)(3)(a) to reduce the interior side yard setback requirement to seven feet, where 15 feet is the minimum, above 120-foot building height
- Waiver of BMC Section 23.204.130(E)(3)(a) to reduce the rear yard setback requirement from to five feet, where 15 feet is the minimum, above 120-foot building height
- Waiver of BMC Section 23.204.130(E)(4) to reduce the usable open space requirement by providing 20,837 square feet of where 36,480 square feet is the minimum; and zero square feet of POPOS where 299 square feet is required
- Waiver of BMC Section 23.204.130(E)(3)(d)(i) to exceed diagonal width, to be 295 feet, 2 inches, where 120 feet is the maximum
- Waiver of BMC Section 23.304.050(A) to allow for structures above the height limit to cover 18% of the average floor area of all of the building's stories, where 15% is the maximum
- Waiver of BMC Section 23.322.090(A)(2) reduce the long-term residential bicycle parking requirement by providing 264 spaces, where 383 spaces is the minimum
- Waiver of BMC Section 23.322.100(A), to reduce the loading space requirement to zero where one is required

[1] Through a Senate Bill 330 Preliminary Application, the project vested the provisions in BMC Chapter 23.328, Inclusionary Housing and BMC Section 22.20.065, Affordable Housing Mitigation Fee, prior to revisions to these ordinance sections that became effective on February 28, 2023.

Parking, Site Access, and Transportation Improvements

The proposed project would include a parking garage with mechanical car stackers with access from a driveway on Oxford Lane, which is the existing alley between Center and Oxford streets. The garage would include 36 parking spaces, including two Americans with Disabilities Act (ADA) accessible parking spaces and two ADA accessible van spaces. Charging infrastructure to accommodate electric vehicles (EVs) in accordance with California Green Building Code (CALGreen) Tier 2 standards would be provided, including 8 EV chargers and 8 spaces with potential for EV chargers. One of the ADA parking spaces and one of the van ADA spaces would also have EV chargers. The parking would be provided for the commercial (retail and restaurant) uses and building employees only. No residential parking would be provided. A loading space would also be provided and accessed via Oxford Lane.

A separate 2,627 square foot bike room located at the southwest corner of the building with a separate entrance from Oxford Lane would provide approximately 264 bicycle parking spaces and a 315 square foot electric bike storage area and bike repair area would also be provided in the bicycle storage room. Bicycle racks for short-term bicycle parking would also be provided along the Center Street project frontage.

The proposed project also includes payment of a proportionate share of the construction costs to install rapid rectangular flashing beacons (RRFBs) at crosswalks on Oxford Street at Allston Way to increase pedestrian safety where vehicle U-turns are anticipated to increase. The RRFB would be designed to meet City standards and requirements. Future City capital improvement plans include a traffic signal light at this intersection. The installation of a signal light would allow the RRFB to be removed.

Design and Architecture

The proposed project would include a base, shaft (middle floors) and capital (parapet and upper most floors) pursuant to the Downtown Design Guidelines and for consistency to the predominant Classical Revival style of architecture throughout Downtown Berkeley. The ground floor storefronts would include transparent glass with canopies for signage areas. Facades, storefront and entrances, materials, details, colors, and lighting have been designed to adhere to the Downtown Design Guidelines.

The proposed project would also incorporate the following design features to help discourage bird strikes and to reduce light spillover and glare:

- Exterior light fixtures would project light downward rather than toward the sky, as required by the BMC
- Interior plantings would be located away from glass areas that are lit at night
- Window coverings would be part of the furnishings package and provided for all units
- Opaque elements, including the ground-floor awnings and overhangs at Levels 6 and 7, would create shadows and break up expanses of glass

Open Space and Amenities

The project would include removal of the ground-floor parklet that is on the Oxford Street frontage along the project site boundary and replacement with a parklet on Center Street.

Private open space in the form of balconies and terraces are proposed for a portion of the residential units. Total balcony square footage would be 9,702 square feet. Levels 2 and 8 would include several shared common tenant terraces with lounge furnishings and large planters. Levels 6 and 7 would have green roof areas separating several unit terraces. These spaces would be planted decoratively for use by tenants.

The project would also include shared common space on Level 2, Level 24, and Level 25. Level 2 would include a fitness room, yoga room, and spa. Level 24 would include large and small study rooms and Level 25 would include a game room and a music room. The outdoor amenity deck on Level 25 would be the largest common open space on the project site, with outdoor grilling stations, dining and seating areas, firepits, and hot tubs. It would also include an open lawn, stormwater infiltration planters, and garden spaces. Planted areas would be irrigated and would be planted with drought-tolerant and native or adapted species.

While the project would provide 20,837 square feet of usable open space, it would not meet the open space requirement of 80 square feet per unit (38,800 total square feet); therefore, the project applicant requests a waiver, as noted above under Section 2.8.1, Affordable Housing and Density Bonus. The public would pay in-lieu fees for the publicly-accessible open space requirement based on the commercial floor area.

Table 3 summarizes the project’s proposed open space and amenities.

Table 3 Proposed Open Space and Amenities

Level	Size	Features
Public Open Space		
25	11,135 sf roof deck	Level 25 would include 11,135 sf of open space in the form of a roof deck and 3,470 sf of indoor residential amenities. The outdoor amenity deck would include outdoor grilling stations, dining and seating areas, firepits, and hot tubs. This area Also includes an open lawn, bio-infiltration planters, and mounded garden spaces.
Private Open Space		
2-24 and 26 (83 units total)	9,702 sf	Private tenant balconies and patios
Total	**20,837 sf**	

sf = square feet

Landscaping

Construction of the project would include removal of fourteen street trees: three red maples (*Acer rubrum*) and eleven Chinese Hackberry trees (*Celtis sinensis*). These would be replaced by approximately 15 new street trees –California Sycamore (*Platanus racemose*) or other species as directed by the City Arborist –as part of the proposed project.

The shared common open space areas and planters on floors 2, 6, 7, and 8 would be landscaped with shade tolerant species such as the seaside wooly sunflower (*Eriophyllum Staechadifolium*), Diamond Heights ceanothus (*Ceanothus ‘Diamond Heights*), redwood penstemon (*Keckiella corymbose*), Douglas iris (*Iris douglasiana ‘Canyon Snow’*), island alum root (*Heuchera maxima*), crevice alum root (*Heuchera micranthra*), seascape mat rush (*Lomdandra longifolia ‘Seascape’*), Zanzibar gem (*Dudleya farinose*), and woodland stonecrop (*Sedum ternatum*).

Floors 6 and 7 would also include some partial shade tolerant species such as common yarrow (*Achillea millefolium*), nodding onion (*Allium cernuum*), clustered field sage (*Carex praegracilis*), aurea stonecrop (*Sedum acre 'Aurea'*), white stonecrop (*Sedum album*), Kamaschatka stonecrop (*Sedum kamschaticum*), blue spruce stonecrop (*Sedum reflexum 'Blue Spruce*). Levels 6 and 7 would also include the planting of sun tolerant species such as California fuschia (*Epilobium canum*), coyote brush (*Baccharis pilularis*), Yankee Point ceanothus (*Ceanothus thrysiflorus 'Yankee Point'*), Seaside Wooly Sunflower (*Eriophyllum Staechadifolium*), bluff lettuce (*Dudleya farinosa*), cliff buckwheat (*Eriogonum parviflorum*), and dwarf coyote brush (*Baccharis 'Pigeon Point').*

Floor 25 would include a total of 3,084 square feet of irrigated area and 1,215 square feet stormwater infiltration area. Plantings would include Howard Mcminn manzanita (*Arctostaphylos densiflora 'Howard Mcminn'*), dwarf coastal manzanita (*Arctostaphylos edmundsii 'Big Sur'*), California juniper (*Juniperus califronica*), cliff buckwheat (*Eriogonum parviflorum*), seaside wooly sunflower (*Eriophyllum Staechadifolium*), dwarf coyote brush (*Baccharis 'Pigeon Point'),* California fuschia *(Epilobium canum),* common yarrow (*Achillea Millefolium*), Yankee Point ceanothus (*Ceanothus thrysiflorus 'Yankee Point'*), island alum root (*Heuchera maxima*), hummingbird sage (*Salvia spathacea*), douglas iris (*Iris douglasiana*), bluff lettuce (*Dudleya farinose)*, Zanzibar gem (*Zamioculcas zamiifolia*), seascape mat rush (*Lomdandra longifolia 'Seascape')*, Berkeley sedge (*Carex tumulicola*), Canyon Prince wild rye (*Elymus condenstatus 'Canyon Prince'*), and a grass lawn (on Level 25).

Green Building Features

The project proposes the following sustainable building design elements. These include measures incorporated in compliance with local and state green building regulations, as well as voluntary measures:

- All-electric building design and the use of air source heat pump water heaters in lieu of natural gas. The proposed new construction would be all-electric and would not include any natural gas infrastructure. A transformer would be located on the ground-floor in order to accommodate the all-electric design and be able to serve electricity to the building.
- Energy efficient lighting and appliances in all residential units
- Use of reclaimed stormwater for irrigation
- Water efficient appliances and fixtures in all residential units
- Electric vehicle charging infrastructure consistent with Tier 2 CALGreen standards.
- Pursuant to BMC Chapter 19.37, diversion of waste during construction would comply with BMC Chapter 19.37, including 100 percent of asphalt, concrete, excavated soil and land-clearing debris and a minimum of 65 percent of other nonhazardous construction and demolition waste.
- On site stormwater management, and the planting of mostly low and very low water use plants which would comply with the California Water Efficient Landscape Ordinance (WELO), outdoor landscaped areas would employ landscape irrigation and water efficiency best practices
- Low flow water fixtures and a heat recovery system

Interior space heating would be provided by air source heat pump water heaters and grey water heat recovery heat pump systems with electric backup boilers would be used for interior space heating and water heating in lieu of natural gas heating, because the building would be all-electric. A wastewater heat recovery system would transfer heat from the sanitary (black) water to the heating hot water loop. This heating hot water loop would be used to heat water for the space heating system and domestic hot water heating system (with double walled heat exchangers). Induction cooktops would also be used in lieu of natural gas ranges.

Construction

The project would involve demolition of 35,433 square feet of existing buildings. The entire project site would be graded and approximately 10,000 cubic yards of soil would be removed. Excavation for the subterranean parking stackers would reach a maximum depth of approximately 15 feet below ground surface. Demolition, site preparation, grading, construction, and paving would take an estimated 42 months (roughly three and a half years) and would occur during allowable construction hours: Monday-Thursday from 7:00 AM-6:00 PM and Saturday from 9:00 AM-4:00 PM.

Stormwater and Utilities

The project site currently has an estimated 31,544 square feet of impermeable surface. The proposed project would include stormwater control measures, such as the use of efficient irrigation systems designed to reduce runoff. The proposed project would include 1,215 square feet of stormwater filtration and treatment area on the Level 25 roof deck.

East Bay Municipal Utility District (EBMUD) supplies water to customers within Berkeley and would supply water for the proposed project. Electricity for the project would be supplied by East Bay Community Energy (ECBE). Due to the size of the project and because it would be an all-electric building, the project would require a 12 kilovolt (kV) Primary Service Station with customer owned substation. This would be located in an underground vault.

11 Requested Permits and Other Approvals

The project is subject to approval by the City of Berkeley's Zoning Adjustments Board, the decision of which would be appealable to the City Council. The project would require the following discretionary entitlements from the City of Berkeley:

- Use Permit under Berkeley Municipal Code (BMC) Section 23.326.070(A) to demolish a non-residential building
- Use Permit under BMC Section 23.326.030(A)(3) to demolish a building containing two or more units
- Use Permit under BMC Section 23.326.030(A) to demolish 16 dwelling units in a building constructed prior to June 1980
- Use Permit under BMC Section 23.204.020(A) to construct a new mixed-use development
- Use Permit under BMC 23.204.020(A) to construct dwelling units
- Use Permit under BMC Section 23.204.030(A)(1) to create new floor area of 10,000 square feet or more
- Use Permit under BMC Section 23.204.130(E)(2)(a) to construct a building that exceeds the district height limit, and that is over 120 feet but not more than 180 feet
- Use Permit under BMC Section 23.204.130(E)(3)(b) to modify the front, side, and rear setback requirements and to exceed 120 feet in width in diagonal measurement
- Use Permit under BMC Section 23.204.130(E)(6)(b) to pay a fee in-lieu of providing privately owned public open space.

- Use Permit under BMC Section 23.304.030(C)(2)(b) to reduce the front setbacks on a commercially zoned lot that confronts a residential district
- Use Permit under 23.304.130(D), to eliminate display window and fence requirements when abutting a residential district
- Administrative Use Permit under BMC 23.304.050(A) to allow architectural elements to exceed the district height limit
- Use Permit under BMC Section 23.310.020(B) to begin alcoholic beverage service (distilled spirits incidental to food service)
- Administrative Use Permit under BMC Section 23.302.070(E)(5)(2) to establish a food service establishment of more than 3,000 square feet
- Administrative Use Permit under BMC Section 23.302.070(E)(5)(a) for outdoor café seating abutting a residential district
- Use Permit pursuant to BMC Section 23.302.020(E)(4) for outdoor use abutting a residential district.

No additional discretionary public agency permits or approvals would be required for this project.

12 California Native American Tribal Consultation

On March 23, 2023, the City of Berkeley contacted California Native American Tribal governments by sending an Assembly Bill (AB) 52 notification letter via email to tribes with an affiliation with the project area based on a list provided by the Native American Heritage Commission (NAHC). Under AB 52, Native American tribes have 30 days to respond and request further project information and request formal consultation. A California Native American Tribe traditionally or culturally affiliated with the project area has requested consultation pursuant to PRC Section 21080.3.1. Impacts related to tribal cultural resources will be addressed in an Infill EIR.

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Satisfaction of Appendix M Performance Standards

CEQA Guidelines Section 15183.3 allows lead agencies to streamline the environmental review process for eligible infill projects by removing analysis of the following types of environmental effects from the CEQA document:

1. If an effect was addressed as a significant effect in a prior EIR for a planning level decision (such as the DAP), then, with some exceptions, that effect need not be analyzed again for an individual infill project, even when that effect was not reduced to a less than significant level in the prior EIR.
2. An effect need not be analyzed, even if it was not analyzed in a prior EIR or is more significant than previously analyzed, if the lead agency makes a finding that uniformly applicable development policies or standards, adopted by the lead agency or a city or county, apply to the infill project and would substantially mitigate that effect.

CEQA *Guidelines* 15183.3 is included in Appendix A of this Environmental Infill Checklist.

To be eligible for streamlined review under *CEQA Guidelines* Section 15183.3, a project must meet the performance standards contained in Appendix M of the *CEQA Guidelines*. The following discussion provides information demonstrating that the infill project satisfies these standards for the following numbered paragraphs.

1. Does the non-residential infill project include a renewable energy feature? If so, describe below. If not, explain below why it is not feasible to do so.

Pursuant to *CEQA Guidelines* Appendix M, “where a project includes some combination of residential, commercial and retail, office building, transit station, and/or schools, the performance standards in this Section that apply to the predominant use shall govern the entire project.” The proposed project would be mostly residential and would be subject to the residential performance standards in Appendix M. Therefore, this non-residential standard does not apply.

2. If the project site is included on any list compiled pursuant to Section 65962.5 of the Government Code, either provide documentation of remediation or describe the recommendations provided in a preliminary endangerment assessment or comparable document that will be implemented as part of the project.

According to a Phase I Environmental Site Assessment (ESA) prepared by Partner Engineering and Science Inc. in April 2021, there were dry cleaning facilities on and adjacent to the project site in the early 1920s. Additionally, the property was identified as a leaking underground storage tank (LUST) site, CORTESE, HIST CORTESE, and Certified Environmental Reporting System (CERS) site. The building at 2142 Center Street was also identified as having the potential for asbestos containing material (ACM) and lead-based paint (LBP) on site. The Phase I ESA recommended that a subsurface investigation including a geophysical survey be conducted along with soil vapor, and groundwater sampling to determine if the LUST, onsite, or adjacent dry cleaning facilities have had a significant impact on the property. Additionally, the Phase I ESA also stated that an operations and maintenance (O&M) program should be implemented as part of the project to safely manage the potential ACMs and LBPs on site. Required measures for mitigating the existing conditions summarized above have been prepared and are described in the Infill EIR.

3. If the infill project includes residential units located within 500 feet, or such distance that the local agency or local air district has determined is appropriate based on local conditions, of a high volume roadway or other significant source of air pollution, as defined in Appendix M, describe the measures that the project will implement to protect public health. Such measures may include policies and standards identified in the local general plan, specific plans, zoning code or community risk reduction plan, or measures recommended in a health risk assessment, to promote the protection of public health. Identify the policies or standards, or refer to the site-specific analysis, below. (Attach additional sheets if necessary.)

The project would not include residential units located within 500 feet, or a distance the local agency or local air district has determined is appropriate based on local conditions, of a high-volume roadway or other significant source of air pollution. High-volume roadways are freeways, highways, or urban roads with traffic volumes of at least 100,000 vehicles per day, or rural roads with 50,000 vehicles per day. State Route 123 (San Pablo Avenue) is the nearest roadway that meets this description, and it is approximately 1.6 miles west of the project site.

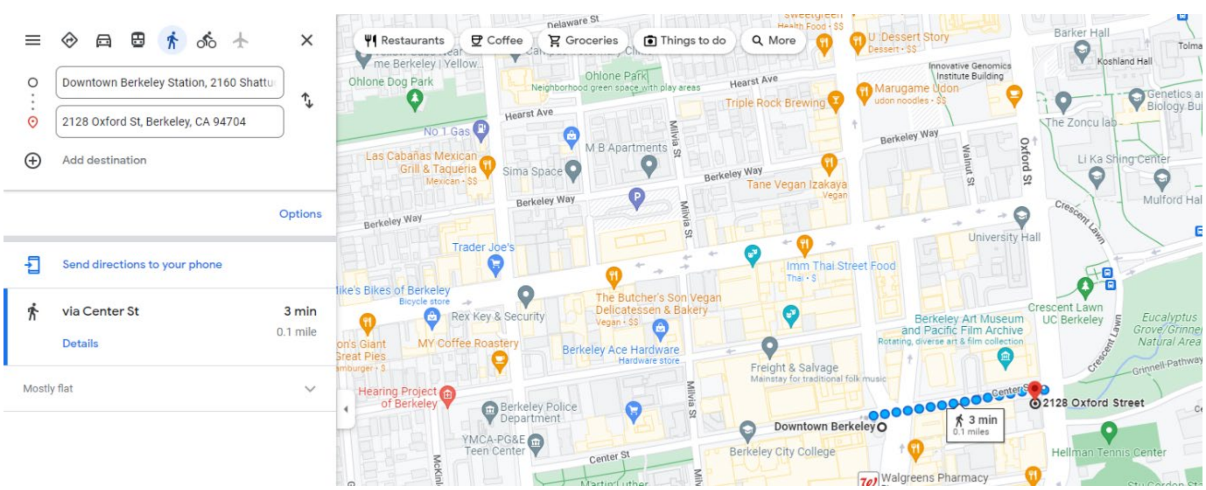
4. For residential projects, the project satisfies which of the following?

☐ Located within a low vehicle travel area, as defined in Appendix M. (Attach VMT map.)

☒ Located within ½ mile of an existing major transit stop or an existing stop along a high quality transit corridor. (Attach map illustrating proximity to transit.)

☐ Consists of 300 or fewer units that are each affordable to low-income households. (Attach evidence of legal commitment to ensure the continued availability and use of the housing units for lower income households, as defined in Section 50079.5 of the Health and Safety Code, for a period of at least 30 years, at monthly housing costs, as determined pursuant to Section 50053 of the Health and Safety Code.)

The project site is located approximately one block west of the main entrance to the Downtown Berkeley BART Station at the southwest corner of Shattuck Avenue and Center Street, illustrated in the map excerpt below. Several high frequency bus lines also converge adjacent to the BART Station.



5. For commercial projects with a single building floor-plate below 50,000 square feet, the project satisfies which of the following?

   [Not Applicable, not a commercial project]

   - ☐ Located within a low vehicle travel area, as defined in Appendix M. (Attach VMT map.)
   - ☐ The project is within one-half mile of 1800 dwelling units. (Attach map illustrating proximity to households.)

6. For office building projects, the project satisfies which of the following?

   [Not Applicable, not an office project]

   - ☐ Located within a low vehicle travel area, as defined in Appendix M. (Attach VMT map.)
   - ☐ Located within ½ mile of an existing major transit stop or within 0.25 mile of a stop along a high quality transit corridor. (Attach map illustrating proximity to transit.)

7. For school projects, the project does all of the following:

   [Not Applicable, not a school project]

   - ☐ The project complies with the requirements in Sections 17213, 17213.1 and 17213.2 of the California Education Code.
   - ☐ The project is an elementary school and is within one mile of 50% of the student population, or is a middle school or high school and is within two miles of 50% of the student population. Alternatively, the school is within ½ mile of an existing major transit stop or an existing stop along a high quality transit corridor. (Attach map and methodology.)
   - ☐ The project provides parking and storage for bicycles and scooters.

8. For small walkable community projects, the project must be a residential project that has a density of at least eight units to the acre or a commercial project with a floor area ratio of at least 0.5, or both.

   [Not Applicable, not small community project]

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Environmental Factors Potentially Affected

This infill project would result in impacts deemed "Significant" as indicated by the following checklist.

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

Determination

Based on this initial evaluation:

☐ I find that the proposed infill project WOULD NOT have any significant effects on the environment that either have not already been analyzed in a prior EIR or that are more significant than previously analyzed, or that uniformly applicable development policies would not substantially mitigate. Pursuant to Public Resources Code Section 21094.5, CEQA does not apply to such effects. A Notice of Determination (Section 15094) will be filed.

☐ I find that the proposed infill project will have effects that either have not been analyzed in a prior EIR, or are more significant than described in the prior EIR, and that no uniformly applicable development policies would substantially mitigate such effects. With respect to those effects that are subject to CEQA, I find that such effects WOULD NOT be significant and a NEGATIVE DECLARATION, or if the project is a Transit Priority Project a SUSTAINABLE COMMUNITIES ENVIRONMENTAL ASSESSMENT, will be prepared

☐ I find that the proposed infill project will have effects that either have not been analyzed in a prior EIR, or are more significant than described in the prior EIR, and that no uniformly applicable development policies would substantially mitigate such effects. I find that although those effects could be significant, there will not be a significant effect in this case because revisions in the infill project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION, or if the project is a Transit Priority Project a SUSTAINABLE COMMUNITIES ENVIRONMENTAL ASSESSMENT, will be prepared.

■ I find that the proposed infill project would have effects that either have not been analyzed in a prior EIR, or are more significant than described in the prior EIR, and that no uniformly applicable development policies would substantially mitigate such effects. I find that those effects WOULD be significant, and an infill ENVIRONMENTAL IMPACT REPORT is required to analyze those effects that are subject to CEQA.

Sharon Gong

Signature	April 29, 2024 Date
Sharon Gong Printed Name	Senior Planner Title

Environmental Checklist

As described below and reflected in the organization and content of the checklist, this Infill Environmental Checklist is based on Appendix N *CEQA Guidelines* Infill Environmental Checklist form. The Appendix N Infill Environmental Checklist form and this Infill Environmental Checklist are intended to document a qualifying infill project's eligibility for streamlining pursuant to *CEQA Guidelines* Section 15183.3 and to assist in making the determinations required by Section 15183.3, including whether the infill project's effects have been addressed in a planning level decision or by uniformly applicable development policies.

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 offsite and onsite, cumulative and project-level, indirect and direct, and construction and operational impacts.
3. For the purposes of this checklist, "prior EIR" means the environmental impact report certified for a planning level decision, as supplemented by any subsequent or supplemental environmental impact reports, negative declarations, or addenda to those documents. "Planning level decision" means the enactment or amendment of a general plan, community plan, specific plan, or zoning code. (Section 15183.3(e).)
4. Once the lead agency has determined that a particular physical impact may occur as a result of an infill project, then the checklist answers must indicate whether that impact has already been analyzed in a prior EIR. If the effect of the infill project is not more significant than what has already been analyzed that effect of the infill project is not subject to CEQA.[2] The brief explanation accompanying this determination should include page and section references to the portions of the prior EIR containing the analysis of that effect. The brief explanation shall also indicate whether the prior EIR included any mitigation measures to substantially lessen that effect and whether those measures have been incorporated into the infill project.
5. If the infill project would cause a significant adverse effect that either is specific to the project or project site and was not analyzed in a prior EIR, or is more significant than what was analyzed in a prior EIR, the lead agency must determine whether uniformly applicable development policies or standards that have been adopted by the lead agency, or city or county, would substantially mitigate that effect. If so, the checklist shall explain how the infill project's implementation of the uniformly applicable development policies will substantially mitigate that effect. That effect of the infill project is not subject to CEQA if the lead agency makes a finding, based upon substantial evidence, that the development policies or standards will substantially mitigate that effect.

[2] "More significant" means an effect will be substantially more severe than described in the prior EIR (CEQA Guidelines Section 15183.3(d)(1)(D).

6. If all effects of an infill project were either analyzed in a prior EIR or are substantially mitigated by uniformly applicable development policies or standards, CEQA does not apply to the project, and the lead agency shall file a Notice of Determination.
7. Effects of an infill project that either have not been analyzed in a prior EIR, or that uniformly applicable development policies or standards do not substantially mitigate, are subject to CEQA. With respect to those effects of the infill project that are subject to CEQA, the checklist shall indicate whether those effects are significant, less than significant with mitigation, or less than significant. If there are one or more "Significant Impact" entries when the determination is made, an infill EIR is required. The infill EIR should be limited to analysis of those effects determined to be significant. (Sections 15128, 15183.3(d).)
8. "Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures will reduce an effect of an infill project that is subject to CEQA from "Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how those measures reduce the effect to a less than significant level. If the effects of an infill project that are subject to CEQA are less than significant with mitigation incorporated, the lead agency may prepare a Mitigated Negative Declaration. If all of the effects of the infill project that are subject to CEQA are less than significant, the lead agency may prepare a Negative Declaration.
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 an infill project's environmental effects in whatever format is selected.
10. The explanation of each issue should identify the following:
    a) The significance criteria or threshold, if any, used to evaluate each question
    b) The mitigation measure identified, if any, to reduce the impact to less than significance

Relationship of the Proposed Project to the Downtown Area Plan EIR Analysis

As required by CEQA, the City prepared a Final Environmental Impact Report (DAP EIR), State Clearinghouse Number 2008102032, which analyzed the environmental impacts of the DAP. The City Council certified the DAP EIR as meeting the requirements of CEQA on March 20, 2012, by adopting Resolution 65647 – N. S. On March 20, 2012, the Berkeley City Council adopted Resolution 65648 – N. S. adopting the 2012 DAP.

Chapter 3, Project Description, of the DAP EIR provides information about the types of development assumed within the plan area and its possible locations. Figure 3.5 (Downtown Area Opportunity Sites) of the DAP EIR identifies the project as within the "Core Area." Figure 3.6 (EIR Building Height Assumptions) shows the project site mostly within the "Outer Core Area" though the western portion of the project site is within the "Inner Core Area." Under "New Buildings" in Chapter 3 of the DAP EIR, the following assumptions regarding private development within the Downtown Area are listed:

- Within the "Outer Core Area," a generally allowed maximum building height of 85 feet is assumed regardless of parcel size.
- Outside of the "Inner Core Area" but within the "Outer Core Area," six buildings of exceptional height on parcels on parcels exceeding 13,000 square feet are assumed: two 120-foot tall buildings are assumed to be on University land. Four non-University 120-foot buildings are

assumed, one at the northwest corner of Shattuck Avenue and University Avenue, one at the Southwest Corner of University Avenue and Milvia Street, one at the southwest corner of Shattuck Avenue and Durant Avenue, and one at the southwest corner of Kittredge Street and Oxford Street. Non-University buildings would include ground floor commercial uses, and upper stories that could be residential and/or office space.

The following checklist of "environmental factors potentially affected" should be viewed in the context of the DAP EIR, which "constitutes and is designated as a 'program environmental impact report' for purposes of CEQA Guidelines Section 15168. New projects (such as private or public development activities) that might occur within the Downtown Area following adoption of the DAP will be subject to subsequent environmental review pursuant to CEQA (City of Berkeley 2012a), pg. 1-5). Such review will determine the following:

- Whether the project is exempt from further review
- If the activity is adequately covered by this EIR, so that no further CEQA review is needed

This report presents the written checklist with the specific portions of the DAP EIR that contain the analysis of the project's potential significant effects, including page and section references. For this reason, this analysis begins with reference to the Project Description in the DAP EIR to demonstrate that the project is generally included in the overall plan area development described therein. Applicable mitigation measures from the DAP EIR have either been incorporated into the project or would be adopted as Conditions of Approval included in the Mitigation Monitoring and Reporting Program, if the project is approved.

The DAP EIR describes the Downtown Area as largely developed in a mix of urban land uses. Implementation of the DAP is expected to replace some existing uses to add new residential units, office space, and commercial services to support those living and working in the Downtown Area. However, implementation of the DAP would not introduce new land uses that would conflict with existing land uses in the Downtown Area. Therefore, the project would be generally consistent with the land uses the DAP EIR analyzed.

CEQA Guidelines Updates

The State of California updated the *CEQA Guidelines* effective December 2018.This particular document involves streamlining from the City of Berkeley DAP EIR, which was certified in 2012 prior to these changes to the *CEQA Guidelines*. The Appendix G checklist questions that form the basis for this analysis are generally similar to those in the Appendix G checklist in the updated *CEQA Guidelines*, but responses to new impact questions in the updated guidelines have been added to this analysis or incorporated into individual environmental impact sections as appropriate. Specifically, impacts related to energy are discussed in Section 6, *Energy*, impacts related to tribal cultural resources are discussed in Section 18, *Tribal Cultural Resources,* and impacts related to wildfire are analyzed in Section 20, *Wildfire*. The Tribal Cultural Resources category is included as required by California Assembly Bill (AB) 52 of 2014.

The updated *CEQA Guidelines* and Senate Bill (SB) 743 changed the criteria for determining what constitutes a significant transportation-related environmental impact based upon quantification of vehicle miles traveled (VMT) instead of level of service, effective on and after July 1, 2020 (*CEQA Guidelines* Section 15064.3(c)). A discussion of VMT is included in the analysis for checklist questions (a) and (b) in Section 17, *Transportation/Traffic.*

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1 Aesthetics

	Significant Impact	Less Than Significant or Less than Significant with Mitigation Incorporated	No Impact	Analyzed in the Prior EIR	Substantially Mitigated by Uniformly Applicable Development Policies
Except as provided in Public Resources Code Section 21099, would the project:					
a. Have a substantial adverse effect on a scenic vista?	☐	☐	■	■	☐
b. Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	■	■	☐
c. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a 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?	☐	☐	■	■	☐
d. Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?	☐	☐	■	■	☐

Pursuant to California state law (SB 743, 2013), aesthetic impacts of a residential, mixed-use, or employment center project on an infill site in a transit priority area (to the extent they are not also historic resource impacts), such as those that could result from implementation of the proposed project, may not be considered significant impacts on the environment. Because the proposed project is a mixed-use project in a transit priority area, aesthetic impacts would be less than significant by statute and a discussion of the project's aesthetic effects is not included in this document. It should also be noted that, pursuant to CEQA Statute Section 21099(d)(2)(B), in this context "aesthetic impacts do not include impacts on historical or cultural resources," potential impacts to historic and cultural resources are included in Section 5 of this Infill Environmental Checklist. **No impact would occur.**

2 Agriculture and Forestry Resources

	Significant Impact	Less Than Significant or Less than Significant with Mitigation Incorporated	No Impact	Analyzed in the Prior EIR	Substantially Mitigated by Uniformly Applicable Development Policies
Would the project:					
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	■	■	☐
b. Conflict with existing zoning for agricultural use or a Williamson Act contract?	☐	☐	■	■	☐
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))?	☐	☐	■	■	☐
d. Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	■	■	☐
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?	☐	☐	■	■	☐

Downtown Area Plan EIR Summary

The DAP EIR discusses agricultural resource impacts in Section 4B, Agricultural Resources, on pages 4-36 and 4-37. As explained in the DAP EIR, no portion of the Downtown Area is in active agricultural use and no parcels in the area have been identified as Prime Farmland, Unique Farmland or Farmland of Statewide Importance. No land within the Downtown Area is currently under a Williamson Act contract or are zoned for agricultural use. The DAP EIR concluded there would be no DAP-related impacts to agricultural resources, and no mitigation measures were required or identified.

Project-Specific Impacts

a – e) The project site and vicinity are located in an urbanized area of Berkeley. There are no agricultural resources, Williamson Act-contracted land, or forest land located on or near the project site (California Department of Conservation [DOC] 2022a). The project site does not different conditions or features specific to the site that would result in project-specific impacts beyond those identified in the DAP EIR. The DOC classifies the site and all surrounding properties as “Urban and Built-Up Land” (DOC 2022a). The project would not convert agricultural land to non-agricultural uses or result in the loss of forest land or conversion of forest land to non-forest use. The site’s urban zoning designation would not change. The project would have **no impact** on agriculture or forestry resources.

Conclusion

Similar to the impact determination in the DAP EIR for the plan area as a whole, the project would have no impact on agriculture or forestry resources because no such resources are located in the plan area or on the project site. Therefore, the project would not result in new specific effects not addressed in the DAP EIR, and no new mitigation measures are warranted. This issue **does not require further study in an EIR.**

3 Air Quality

	Significant Impact	Less Than Significant or Less than Significant with Mitigation Incorporated	No Impact	Analyzed in the Prior EIR	Substantially Mitigated by Uniformly Applicable Development Policies
Would the project:					
a. Conflict with or obstruct implementation of the applicable air quality plan?	☐	■	☐	■	☐
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?	☐	■	☐	■	■
c. Expose sensitive receptors to substantial pollutant concentrations?	☐	■	☐	■	☐
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	■	☐	■	☐

Downtown Area Plan EIR Summary

Air quality impacts are evaluated on pages 4-38 through 4-87 of the DAP EIR. The DAP EIR examined a range of potential impacts related to local and regional air quality, including consistency with the Bay Area 1991 Clean Air Plan (CAP), possible exposure of sensitive receptors to toxic air contaminants (TAC) and odors, and construction-period air quality impacts. Impacts were assessed in the context of adopted planning documents, including the City's 2001 General Plan and 1991 CAP. The DAP EIR identified the following impacts and mitigation measures, which were adopted and incorporated into the DAP:

- **Impact AIR-1: Conflict with CAP Assumptions.** Development anticipated under the Downtown Area Plan would increase population and employment at a greater rate than assumed when preparing the latest update to the CAP. This could lead to greater regional emissions of nonattainment air pollutants (or their precursors) than assumed in the CAP. This would be a significant and unavoidable impact.

- **Impact AIR-2: Possible Exposure of Sensitive Receptors to TACs and Odors.** Development anticipated under the Downtown Area Plan may expose sensitive receptors to TACs or odors through development of new residential units near non-residential uses that may be sources of TACs or odors, or through development of new non-residential development that may be sources of TACs or odors near existing residences or other sensitive receptors. Such exposure would represent a potentially significant impact.
  - **Mitigation AIR-2: Buffer TAC and Odor Emission Sources and Sensitive Land Uses.** Consider potential air pollution and odor impacts from future development that may emit pollution and/or odors when locating (a) air pollution sources, and (b) residential and other pollution-sensitive land uses in the vicinity of air pollution sources (which may include areas where buses idle, diesel generators, parking garage vents, restaurants, and other similar uses). Buffer sensitive receptors from TACs whenever possible, and if buffering is not feasible, apply appropriate mitigation to reduce impacts to a less than significant level, such as air filtration systems or other technologies.

  While the above mitigation can address most conflicts, the DAP is technically inconsistent with the BAAQMD CEQA Guidelines because buffering will not always be feasible; therefore, the impact remains significant and unavoidable.

- **Impact AIR-3: Construction Period Air Quality Impacts.** Construction of development projects under the DAP would result in temporary emissions of dust and diesel exhaust that may result in both nuisance and health impacts. Without appropriate measures to control these emissions, these impacts would be considered significant.
  - **Mitigation AIR-3**: **Implement BAAQMD-Recommended Measures to Control PM_{10} Emissions during Construction**.[3] Measures to reduce diesel particulate matter and PM_{10} from construction are recommended to ensure that short-term health impacts to nearby sensitive receptors are avoided.
    - Dust (PM_{10}) Control Measures
      - Water all active construction areas at least twice daily and more often during windy periods. Active areas adjacent to residences should be kept damp at all times.
      - Cover all hauling trucks or maintain at least two feet of freeboard.
      - Pave, apply water at least twice daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas.
      - Sweep daily (with water sweepers) all paved access roads, parking areas, and staging areas and sweep streets daily (with water sweepers) if visible soil material is deposited onto the adjacent roads.
      - Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (i.e., previously-graded areas that are inactive for 10 days or more).
      - Enclose, cover, water twice daily, or apply (non-toxic soil binders to exposed stockpiles.
      - Limit traffic speeds on any unpaved roads to 15 miles per hour.
      - Replant vegetation in disturbed areas as quickly as possible.
      - Suspend construction activities that cause visible dust plumes to extend beyond the construction site.

[3] PM_{10} is particulate matter measuring no more than 10 microns in diameter.

- Measures to Reduce Diesel Particulate Matter and $PM_{2.5}$[4]
  - Clear signage at all construction sites will be posted indicating that diesel equipment standing idle for more than five minutes shall be turned off. This would include trucks waiting to deliver or receive soil, aggregate, or other bulk materials. Rotating drum concrete trucks could keep their engines running continuously as long as they were onsite or adjacent to the construction site.
  - Opacity is an indicator of exhaust particulate emissions from off-road diesel powered equipment. The project shall ensure that emissions from all construction diesel powered equipment used on the project site do not exceed 40 percent opacity for more than three minutes in any one hour. Any equipment found to exceed 40 percent opacity (or Ringelmann 2.0) shall be repaired immediately.
  - The contractor shall install temporary electrical service whenever possible to avoid the need for independently powered equipment (e.g., compressors).
  - Properly tune and maintain equipment for low emissions.

Implementation of the measures recommended by BAAQMD and listed above would reduce the air quality impacts associated with grading and new construction to a less than significant level.

Previously-adopted DAP EIR Mitigation Measures AIR-2 and AIR-3 would apply to the project. However, the DAP EIR concluded that impacts related to 1991 CAP consistency (Impact AIR-1) and possible exposure of sensitive receptors to odors (Impact AIR-2) would remain significant and unavoidable.

Air Quality Environmental and Regulatory Setting

The project site is located in Berkeley within the San Francisco Bay Area Air Basin (SFBAAB), which is under the jurisdiction of the Bay Area Air Quality Management District (BAAQMD). The SFBAAB's moderate climate steers storm tracks away from the region for much of the year, although storms generally affect the region from November through April. The onshore breezes stimulated by the Pacific Ocean provide for generally very good air quality in Berkeley, but during the ozone smog season (typically May through October), transportation studies indicate that ozone precursor emissions generated in Oakland and Berkeley are often transported to other regions of the SFBAAB and beyond (e.g., the Central Valley). These emissions are conducive to the formation of ozone smog. In the winter, reduced solar energy and cooler temperatures diminish ozone smog formation but increase the likelihood of carbon monoxide formation.

Average annual temperatures in the area are in the mid-50s, ranging from the low-40s on winter mornings to mid-70s during summer afternoons. Daily and seasonal oscillations of temperature are small because of the moderating effects of the nearby ocean. In contrast to the steady temperature regime, rainfall is highly variable and confined almost exclusively to the "rainy" period from November through April. About 95 percent of the average annual rainfall of approximately 30 inches occurs during this period. Precipitation may vary widely from year to year as a shift in the annual storm track of a few hundred miles can mean the difference between a wet year and drought conditions.

Winds at the project site display several characteristic patterns. During the day, especially under fair weather conditions, winds are from the west and northwest as air funnels through the Golden Gate

[4] $PM_{2.5}$ is fine particulate matter measuring no more than 2.5 microns in diameter.

Bridge toward Berkeley. At night, cooling of the land generates winds from the east and southeast. Summer afternoon sea breezes typically range from 20 to 30 miles per hour. Peak annual winds occur during winter storms. South and southeast winds typically also precede weather systems passing through the region.

As required by the federal Clean Air Act passed in 1970, the U.S. Environmental Protection Agency has identified six criteria air pollutants that are pervasive in urban environments and for which state and federal health-based ambient air quality standards have been established. These are called “criteria air pollutants” because the agency has regulated them by developing specific public health- and welfare-based criteria as the basis for setting permissible levels. Ozone, carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter (PM), and lead are the six criteria air pollutants.

The California Health and Safety Code defines toxic air contaminants (TACs) as air pollutants “which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health” (Section 39655[a]). By definition, TACs include substances listed in the federal Clean Air Act as “hazardous air pollutants.” TACs are less pervasive in the urban atmosphere than criteria air pollutants but are linked to short-term (acute) or long-term (chronic and/or carcinogenic) adverse human health effects. There are hundreds of types of TACs with varying degrees of toxicity. Sources of TACs include industrial processes, commercial operations (e.g., gasoline stations and dry cleaners), and motor vehicle exhaust. Unlike regulations concerning criteria air pollutants, no ambient air quality standards are in place for the evaluation of TACs based on the amount of emissions. Instead, emissions of TACs are evaluated based on the degree of health risk that could result from exposure to these pollutants.

Project-Specific Impacts

a) The California Clean Air Act requires air districts to create a clean air plan that describes how the jurisdiction will meet air quality standards. These plans must be updated every three years. The air quality plan most recently adopted by BAAQMD is the 2017 Clean Air Plan (2017 Plan). The 2017 Plan goals and objectives to achieve compliance with the State standard for atmospheric ozone levels over a one-hour period as expeditiously as practicable, and reduce transport of ozone and ozone precursors to neighboring air basins. The 2017 Plan does not include control measures that apply directly to individual development projects. Instead, the control strategy includes stationary-source control measures to be implemented through BAAQMD regulations; mobile-source control measures to be implemented through incentive programs and other activities; and transportation control measures to be implemented through transportation programs in cooperation with the Metropolitan Transportation Commission, local governments, transit agencies, and others. The 2017 Plan also represents BAAQMD’s most recent triennial assessment of the region’s strategy to attain the state one-hour ozone standard.

Under BAAQMD’s methodology, a determination of consistency with the most recently adopted Clean Air Plan should demonstrate that a project protects air quality and health at the regional and local scale and protects the climate. Projects that would not support these goals would not be considered consistent with the 2017 Plan. On an individual project basis, consistency with BAAQMD quantitative thresholds is interpreted to mean that it supports the primary 2017 Plan goals, including reducing greenhouse gas (GHG) emissions as discussed in Section 8, *Greenhouse Gas Emissions*, below. As discussed in Item (b) below, the project would not generate emissions exceeding BAAQMD thresholds. Therefore, the project would not conflict with the goals of the 2017 Plan and impacts would be **less than significant**.

b) A significant air quality impact may occur when a project individually or cumulatively interferes with progress toward the SFBAAB's attainment of the state and federal ozone, state PM_{10}[5], or state and federal $PM_{2.5}$[6] standards by releasing emissions that equal or exceed the established long-term quantitative thresholds for pollutants or that cause an exceedance of a state or federal ambient air quality standard for criteria pollutants.[7] Primary criteria pollutants are emitted directly from a source (e.g., vehicle tailpipe or an exhaust stack of a factory) into the atmosphere. Primary criteria pollutants include reactive organic gases (ROG), nitrogen oxides (NO_x), CO, small particulate matter measuring no more than 10 microns in diameter (PM_{10}), and fine particulate matter measuring no more than 2.5 microns in diameter.

The City of Berkeley has determined that the BAAQMD's significance thresholds in the May 2017 *CEQA Air Quality Guidelines* for projects in the Bay Area are the most appropriate thresholds to determine air quality impacts of the project. The 2017 *CEQA Air Quality Guidelines* include project-level significance thresholds for temporary construction-related average daily air pollutant emissions, long-term operational average daily air pollutant emissions, and maximum annual operational air pollutant emissions, as shown below in Table 4:

Table 4 BAAQMD Air Quality Thresholds of Significance

Pollutant/Precursor	Construction: Average Daily Emissions (lbs/day)	Operation: Average Daily Emissions (lbs/day)	Operation: Maximum Annual Emissions (tpy)
ROG	54	54	10
NO_X	54	54	10
PM_{10}	82 (exhaust)	82	15
$PM_{2.5}$	54 (exhaust)	54	10

lbs/day = pounds per day; tpy = tons per year; ROG = reactive organic gases; NO_X = oxides of nitrogen; PM_{10} = respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less.; $PM_{2.5}$ = fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less.

Source: BAAQMD 2017a, Table 2-2 and Table 2-4.

Air pollutant emissions from project construction and operation were estimated using the California Emissions Estimator Model (CalEEMod) version 2022.1. The following assumptions were included in the CalEEMod estimation of air quality emissions:

- The construction schedule and construction equipment list were provided by the project applicant.
- The project would include an all-electric design. Therefore, to account for the increased electricity usage, it was assumed that the natural gas demand estimated for the project would instead be supplied by electricity.
- The number of trips estimated using CalEEMod are consistent with the Traffic Impact Analysis prepared by Abrams Associates Traffic Engineering, Inc (Appendix D).
- The project would include an emergency generator which was assumed to operate 15 minutes each month and 4 hours per year, with a horsepower of 805 and a load factor of 0.7.

[5] Particulate matter diameters 10 micrometers or smaller.

[6] Particulate matter diameters 2.5 micrometers or smaller.

[7] The SFBAAB is in attainment of all other federal and state ambient air quality standards.

- The following project features were accounted for in CalEEMod consistent with Mitigation Measure AIR-3 of the DAP EIR, with which the project would be required to comply:
  - Water all active construction areas at least twice a day
  - Sweep daily all paved access roads, parking areas, and staging areas
  - Limit traffic speeds on any unpaved roads to 15 miles per hour

Construction Emissions

Project construction would result in temporary construction emissions from the operation of construction vehicles and equipment over unpaved areas, grading, trenching, and disturbance of stockpiled soils have the potential to generate fugitive dust (PM_{10}) through the exposure of soil to wind erosion and dust entrainment. In addition, exhaust emissions associated with heavy-duty construction equipment would potentially degrade regional air quality. Construction emissions are summarized in Table 5.

Table 5 Esimated Project Construction Emissions

	Pollutant				
	ROG	NO_x	CO	PM_{10} (exhaust emissions)	$PM_{2.5}$ (exhaust emissions)
Project related Maximum Daily Emissions[1] (pounds per day)	20	45	61	1	1
Significance Threshold (average pounds per day)	54	54	N/A[2]	82	54
Significant Impact (Exceeds the Threshold)?	**No**	**No**	**N/A**	**No**	**No**

N/A = not applicable

[1] The BAAQMD threshold is expressed in terms of average daily emissions; however, the maximum daily emissions are provided here for a conservative analysis.

[2] BAAQMD does not maintain a threshold for CO, the SFBAAB is in attainment for this pollutant.

Source: Appendix B, CalEEMod worksheet Table 2.1 “Construction Emissions Compared Against Thresholds” emissions. The average daily emissions results are shown for all emissions.

As shown in Table 5, project construction emissions for all criteria pollutants would be below the BAAQMD average daily thresholds of significance. The proposed project would also be required to comply with the following City’s Standard Conditions of Approval related to air quality, which would further reduce construction emissions impacts to a less than significant level. Therefore, construction emissions would be **less than significant**.

Air Quality – Diesel Particulate Matter Controls During Construction. All off-road construction equipment used for projects with construction lasting more than 2 months shall comply with **one** of the following measures:

A. The project applicant shall prepare a health risk assessment that demonstrates the project’s on-site emissions of diesel particulate matter during construction will not exceed health risk screening criteria after a screening-level health risk assessment is conducted in accordance with current guidance from BAAQMD and OEHHA. The health risk assessment shall be submitted to the Public Works Department for review and approval prior to the issuance of building permits.

B. All construction equipment shall be equipped with Tier 2 or higher engines and the most effective Verified Diesel Emission Control Strategies (VDECS) available for the engine type (Tier 4 engines automatically meet this requirement) as certified by the California Air Resources Board (CARB). The equipment shall be properly maintained and tuned in accordance with manufacturer specifications.

In addition, a Construction Emissions Minimization Plan (Emissions Plan) shall be prepared that includes the following:

- An equipment inventory summarizing the type of off-road equipment required for each phase of construction, including the equipment manufacturer, equipment identification number, engine model year, engine certification (tier rating), horsepower, and engine serial number. For all VDECS, the equipment inventory shall also include the technology type, serial number, make, model, manufacturer, CARB verification number level, and installation date.
- A Certification Statement that the Contractor agrees to comply fully with the Emissions Plan and acknowledges that a significant violation of the Emissions Plan shall constitute a material breach of contract. The Emissions Plan shall be submitted to the Public Works Department for review and approval prior to the issuance of building permits.

Operational Emissions

Long-term operational emissions, shown in Table 6 and Table 7, would include emissions from vehicle trips (mobile sources), landscape maintenance equipment, emergency generator (stationary sources), consumer products, and architectural coating associated with on-site development (area sources).

Table 6 Average Daily Operational Emissions (pounds/day)

	Average Daily Emissions					
Sources	ROG	NO_X	CO	PM_{10}	$PM_{2.5}$	SO_2
Mobile	4	3	26	6	2	<1
Area	12	0	0	0	0	<1
Energy[1]	0	0	0	0	0	0
Stationary Sources (Generators)	<1	<1	<1	<1	<1	<1
Total Emissions	**16**	**3**	**26**	**6**	**2**	**<1**
BAAQMD Thresholds	54	54	N/A	82	54	N/A
Threshold Exceeded?	**No**	**No**	**N/A**	**No**	**No**	**N/A**

N/A = not applicable (BAAQMD has not adopted project-level significance thresholds for emissions of CO and SO_2. (BAAQMD 2017))

[1] Energy emissions are 0 pounds per day because natural gas is converted to electricity, so there are no direct on-site emissions from energy consumption.

Source: Appendix B, CalEEMod worksheet Table 2.6 “Operations Emissions by Sector, Mitigated”. The average daily emissions results are shown for all emissions.

Table 7 Maximum Annual Operational Emissions (tons/year)

	Maximum Annual Emissions					
Sources	**ROG**	**NO_X**	**CO**	**PM_{10}**	**$PM_{2.5}$**	**SO_2**
Mobile	1	<1	4	1	<1	<1
Area	2	0	0	0	0	0
Energy[1]	0	0	0	0	0	0
Stationary Sources (Generators)	<1	<1	<1	<1	<1	<1
Total Emissions	**3**	**<1**	**4**	**1**	**<1**	**<1**
BAAQMD Thresholds	10	10	N/A	15	10	N/A
Threshold Exceeded?	**No**	**No**	**N/A**	**No**	**No**	**N/A**

N/A = not applicable (BAAQMD has not adopted project-level significance thresholds for emissions of CO and SO_2. (BAAQMD 2017))

[1] Energy emissions are 0 pounds per day because natural gas is converted to electricity, so there are no direct on-site emissions from energy consumption.

Source: Appendix B, CalEEMod worksheet Table 2.6 "Operations Emissions by Sector, Mitigated".

Table 6 and Table 7 show that emissions would not exceed BAAQMD daily or annual thresholds for criteria pollutants. Consequently, operational air quality impacts would be **less than significant**.

c) Certain population groups are considered more sensitive to air pollution than others. Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill, especially those with cardio-respiratory diseases. Residential uses are also considered more sensitive to air pollution than non-residential uses because residents (including children and the elderly) tend to be at home for extended periods, resulting in sustained exposure to ambient pollutant concentrations. Although the project would not emit substantial TAC quantities, nearby permitted sources and major roadways may pose health risks for proposed residents. For example, permitted sources nearby may include diesel back-up generators, gas stations, dry cleaners, boilers, printers, and auto spray booths.

The DAP EIR examined possible exposure of sensitive receptors to TACs. In compliance with previously-adopted DAP EIR Mitigation Measure AIR-2, this analysis considers the potential for new residents to be exposed to on-site TAC sources. Community risk and hazards screening tools from BAAQMD are applied to provide conservative estimates of TAC exposure. If these screening tools indicate that TAC levels may be excessive, the BAAQMD recommends that further, more refined analysis, including site-specific dispersion modeling, be conducted for more accurate (and usually lower) risk and hazard estimates (BAAQMD 2012). The screening tools provide estimates for $PM_{2.5}$ concentrations, cancer risk, chronic hazard risk, and acute hazard risk from stationary, roadway, and highway sources. The risk and hazard screening analysis process includes the following steps:

1. Identify emissions sources (permitted sources, highways, and major roadways) within 1,000 feet of the project's fence line using BAAQMD screening tools. If there are no sources within 1,000 feet of the project, then there is no significant impact for risk and hazards and no further analysis is needed. If emissions sources exist within 1,000 feet of the project, proceed to Step 2 to conduct initial conservative screening.
2. Conduct initial conservative screening using BAAQMD screening tools if emissions sources are present within 1,000 feet of the project site, comparing each source's estimated cancer risk, $PM_{2.5}$, and hazard value to applicable thresholds. Sum all of the sources' impacts for comparison to applicable cumulative thresholds. If the risk and hazard estimates for the cumulative impacts are below BAAQMD's thresholds of significance, then there is no significant impact for risk and

hazards, and no further analysis is needed. If thresholds are exceeded, then proceed to Step 3 to conduct advanced screening for more refined estimates.

3. Conduct advanced screening for more refined estimates if emissions sources present within 1,000 feet of the project site have risk and hazards above BAAQMD thresholds using the method described in Step 2. To refine estimates, scale highway and roadway risk and $PM_{2.5}$ values to reflect actual traffic and distances from the project using BAAQMD methods from the Modeling Report (BAAQMD 2012). If the refined risk and hazard estimates are below applicable thresholds, then there is no significant impact for risk and hazards and no further analysis is needed. If thresholds are exceeded, then proceed to Step 4 to conduct refined modeling analysis.
4. Conduct refined modeling analysis if emissions sources present within 1,000 feet of the project site have refined risk and hazards estimates above BAAQMD thresholds as determined in Step 3. For highways and major roadways, use local traffic and meteorology data to model risk and hazards using BAAQMD methods from the Modeling Report (BAAQMD 2012). If the risk and hazard estimates with refined modeling are below thresholds, then there is no significant impact for risk and hazards, and no further analysis is needed. If thresholds are exceeded, then risk reduction strategies should be implemented.

Eight permitted sources within 1,000 feet of the project site were identified using BAAQMD's Stationary Source Screening Analysis Tool for Alameda County. Two major roadways (average daily traffic volumes of greater than 10,000 vehicles) exist in the vicinity of the project site. Table 8 lists the permitted sources and major roadways within 1,000 feet of the project site. Cancer risk and $PM_{2.5}$ concentration were adjusted using BAAQMD distance multiplier tools. As shown in Table 8, the BAAQMD screening threshold for $PM_{2.5}$ would be exceeded at the project site.

Table 8 Risk and Hazard Screening Data

Source	Type	Distance to Site (feet)	Cancer Risk (in 1 million)	$PM_{2.5}$ Concentration ($\mu g/m^3$)
Major Roadways[1]				
Oxford Street	Major Roadway	25	10.69	0.210
Shattuck Avenue	Major Roadway	285	1.67	0.029
BAAQMD-Permitted Source ID				
13451	Generator	866	0.936	0.0012
20070	Generator	690	0.102	0.0001
200903	Generator	771	0.228	0.0003
59_125	Generator	507	0.511	0.0006
59_2	Generator	736	0.022	0.0554
59_3	Generator	764	0.024	0.0596
59_4	Generator	718	0.013	0.0327
59_REM	Generator[2]	734[3]	3.813	2.6309
Combined Total (Major Roadways + Permitted Sources)			18.009	3.0198
BAAQMD Cumulative Screening Threshold			100	0.8

Source	Type	Distance to Site (feet)	Cancer Risk (in 1 million)	$PM_{2.5}$ Concentration (µg/m^3)
Cumulative Threshold Exceeded?			**No**	**Yes**

[1] Daily traffic volume for major roadways is from City of Berkeley's Traffic Engineering Average Total Daily Traffic Volume Map (2000).

[2] BAAQMD Stationary Source Screening Data showed this source as no data, but correspondence with BAAQMD shows 59_REM is a conglomerate of 60 sites on UC Berkeley Campus, where 9 sites (or 15 percent) are within 1,000 feet of the project site. See Appendix C for assumptions and calculations.

[3] The average distance for the 9 sites is 734 feet.

Source: BAAQMD's Alameda County Stationary Source Screening Analysis Tool (BAAQMD 2023)

The risk and hazard impacts in the BAAQMD's screening tools are based on reasonable worst-case scenarios to determine whether or not a refined modeling analysis is required. The calculations used in the screening analysis do not include source-specific exhaust information such as stack height, exhaust gas exit velocity, exhaust gas temperature, nor do they account for actual distances from receptors. A more refined analysis using source-specific exhaust parameters, site-specific meteorological data, site-specific building dimensions and locations, and actual location of source and receptors would be expected to result in lower and more accurate values than the conservative values from the screening tools (BAAQMD 2012). Thus, this is a conservative approach to determination of potential impacts related to TACs.

Based on a conservative screening analysis following BAAQMD methodology, as shown in Table 8, on-site sensitive receptors may be exposed to levels of TACs, specifically $PM_{2.5}$, in excess of BAAMQD screening thresholds that could impact human health. [8] Buffering or air filtrations systems required by previously-adopted DAP EIR Mitigation Measure AIR-2 for projects located near TAC sources would therefore be required.

In compliance with previously-adopted DAP EIR, Mitigation Measure AIR-2 would require the inclusion of forced air ventilation with deep pleat filter screens with a Minimum Efficiency Reporting Value (MERV) 13 rating or similar be installed on outside air intake ducts on all residential units. MERV 13 filter screens are capable of removing at least 85 percent of particulate matter, including fine particulate matter. Table 9 shows the health risks after implementation of previously-adopted DAP EIR Mitigation Measure AIR-2; calculations of the risk reduction are provided in Appendix C.

Table 9 Health Risks After Implementation of DAP EIR Mitigation Measure AIR-2

	Cancer Risk (in 1 million)	$PM_{2.5}$ Concentration (µg/m^3)
Oxford Street	3.809	0.04229
Shattuck Avenue	0.595	0.00584
Source 13451	0.333	0.00024
Source 20070	0.040	0.00002
Source 200903	0.081	0.00006
Source 59_125	0.182	0.00012
Source 59_2	0.008	0.01116
Source 59_3	0.008	0.01200

[8] The August 12, 2015 case law *California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal.4th 269 determined that CEQA does not require an agency to consider the effects of existing environmental conditions on a proposed project's future users or residents.

	Cancer Risk (in 1 million)	$PM_{2.5}$ Concentration ($\mu g/m^3$)
Source 59_4	0.005	0.00658
Source 59_REM	1.359	0.52975
Combined Total of All Sources	6.416	0.60800
BAAQMD Cumulative Screening Threshold	100	0.8
Cumulative Threshold Exceeded?	**No**	**No**

Notes: MERV-13 filters have a 50 percent efficiency for particle sizes 0.30-1.0; 85 percent efficiency for particle sizes 1.0-3.0; and a 90 percent efficiency for particle sizes 3.0-10.0 (USEPA 2023). This analysis assumed a filter efficiency of 90 percent for cancer risk and a filter efficiency of 85 percent for $PM_{2.5}$.

See Appendix C for calculations.

As shown in Table 9, with adherence to previously-adopted DAP EIR Mitigation Measure AIR-2, for the $PM_{2.5}$ concentration would be below the screening threshold. Outdoor open space areas, including courtyards, terraces, and balconies that would be constructed as part of the project would expose residents to TACs in excess of these thresholds because the MERV filters would only improve air quality indoors. However, exposure to TACs would be limited outdoors, as residents would only use these outdoor areas intermittently. Additionally, the analysis considers both outdoor and indoor exposure. Furthermore, on-site and nearby sensitive receptors would not be exposed to TAC emissions from the project itself that would significantly impact human health because the project would only involve minor releases of TACs during construction and operation[9]. Impacts from exposure of sensitive receptors to TACs would be within those identified in the DAP EIR and would be **less than significant**.

d) The BAAQMD 2017 *CEQA Air Quality Guidelines* considers the following land uses to have significant potential to generate offensive odors: wastewater treatment plants, landfills, confined animal facilities, composting stations, food manufacturing plants, refineries, and chemical plants. The proposed project does not include and is not located near these types of uses.

The proposed project would include 9,100 square feet of restaurant and retail space on the ground floor, 4,400 square feet of restaurants space on the roof, and would also be located in proximity to off-site restaurants at 2128 Oxford Street and 2132-2154 Center Street which may generate odors from cooking processes and waste disposal. However, restaurants are not listed in the BAAQMD 2017 *CEQA Air Quality Guidelines* as strong odor generators. Therefore, odors from nearby restaurant and food purveyors would not affect substantial numbers of residents. This impact would be **less than significant.**

Conclusion

The project is generally consistent with development envisioned by the DAP and analyzed by the DAP EIR. Although the DAP EIR found impacts related to consistency with BAAQMD's Clean Air Plan to be significant and unavoidable, as discussed in Items (a) and (b) as well as Section 8, *Greenhouse Gas Emissions*, below, the proposed project would be consistent with the goals of the 2017 Plan, and therefore impacts would be less than significant and less severe than the findings of the DAP EIR. This issue **does not require further study in an EIR.**

[9] Monthly testing for the emergency generator would be limited to 15 minutes a month, and annual testing would be completed within 4 hours.

The proposed project would not generate construction or operational emissions exceeding BAAQMD significance thresholds, and impacts would be less than significant. Consistent with previously-adopted DAP EIR Mitigation Measure AIR-2, a TAC analysis was performed for the proposed project, which determined an exceedance of the BAAQMD threshold for cancer risk but not for $PM_{2.5}$. Based on this analysis, implementation of previously-adopted DAP EIR Mitigation Measure AIR-2 would be necessary, and with implementation of this mitigation measure, the exposure of sensitive receptors to TACs would be less than significant. The project would also have a less than significant impact related to odors. Therefore, the project would not result in new specific effects not addressed in the DAP EIR and no new mitigation measures are warranted. These issues **do not require further study in an EIR**.

4 Biological Resources

	Significant Impact	Less Than Significant or Less than Significant with Mitigation Incorporated	No Impact	Analyzed in the Prior EIR	Substantially Mitigated by Uniformly Applicable Development Policies
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?	□	■	□	■	■
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	□	■	□	■	■
c. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	□	■	□	■	■

	Significant Impact	Less Than Significant or Less than Significant with Mitigation Incorporated	No Impact	Analyzed in the Prior EIR	Substantially Mitigated by Uniformly Applicable Development Policies
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	■	☐	■	■
e. Conflict with any local policies or ordinances protecting biological resources, such as 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?	☐	☐	■	■	☐

Downtown Area Plan EIR Summary

The DAP EIR discusses biological resources impacts on pages 4-88 through 4-92. The DAP EIR states "there are no open bodies of water or jurisdictional wetlands in the Downtown Area, and the portion of Strawberry Creek that passes through the area has been culverted for many years, which severely limits its ability to support fish or wildlife…it is unlikely that any portion of the [Downtown Area] provides suitable habitat for special status wildlife species." Additionally, there are no federally protected wetlands, wildlife corridors or nursery sites in the Downtown Area. While Strawberry Creek flows beneath the Downtown Area, the subterranean portion of the creek does not provide riparian habitat. Furthermore, it was found that implementation of the DAP would not conflict with existing ordinances to protect biological resources, nor would it conflict with any Habitat Conservation Plan or Natural Community Conservation Plan. The DAP EIR concluded that DAP-related impacts to biological resources would be less than significant, and no mitigation measures were required or identified. The DAP EIR does acknowledge on page 4-88 that "there are numerous trees in the area which may provide nesting habitat for migratory birds."

Project-Specific Impacts

a – e) The project site and vicinity are in urban downtown Berkeley. The project site does not contain different conditions or features specific to the site that would result in project-specific impacts beyond those identified in the DAP EIR. Virtually no on-site or adjacent vegetation is present other than ornamental street trees. Although the culverted Strawberry Creek is adjacent to the southeast boundary of the project site, riparian habitat is not present. The closest riparian habitat is in the Eucalyptus Grove/Grinnell Natural Area, located approximately 0.1 mile east of the site. No suitable habitat for special status wildlife exists on or adjacent to the site. The project site does not provide a suitable corridor for wildlife movement, as it is completely developed with existing buildings and paved surfaces and is not adjacent to habitat or wildlife movement areas. The project would include the removal of 14 street trees which would be removed in coordination with the City. The project would include the planting of 15 street trees to replace those that will be removed. Because existing street trees affected by the project would be replaced with a greater number of street trees of species acceptable to the City's Street Trees and Urban Forestry Management Program, no conflict with local policies or ordinances protecting biological resources, including trees, would occur. Removal and replanting of street trees would be conducted in compliance with DAP Policies OS-2.3 and OS-2.4.

Additionally, the following standard condition of approval for projects in the City of Berkeley would apply to the proposed project and would avoid disturbance to nesting birds, including those potentially using the street trees to be removed:

> **Avoid Disturbance of Nesting Birds.** Initial site disturbance activities, including vegetation and concrete removal, shall be prohibited during the general avian nesting season (February 1 to August 30), if feasible. If nesting season avoidance is not feasible, the applicant shall retain a qualified biologist to conduct a preconstruction nesting bird survey to determine the presence/absence, location, and activity status of any active nests on or adjacent to the project site. The extent of the survey buffer area surrounding the site shall be established by the qualified biologist to ensure that direct and indirect effects to nesting birds are avoided. To avoid the destruction of active nests and to protect the reproductive success of birds protected by the Migratory Bird Treaty Act and California Fish and Game Code, nesting bird surveys shall be performed not more than 14 days prior to scheduled vegetation and concrete removal. In the event that active nests are discovered, a suitable buffer (typically a minimum buffer of 50 feet for passerines and a minimum buffer of 250 feet for raptors) shall be established around such active nests and no construction shall be allowed inside the buffer areas until a qualified biologist has determined that the nest is no longer active (e.g., the nestlings have fledged and are no longer reliant on the nest). No ground-disturbing activities shall occur within this buffer until the qualified biologist has confirmed that breeding/nesting is completed and the young have fledged the nest. Nesting bird surveys are not required for construction activities occurring between August 31 and January 31.

An increased risk of bird strikes can typically occur in a migratory bird corridor or in areas adjacent to foraging, roosting, or nesting habitat for avian species. If development occurs adjacent to such habitat and there are direct lines of sight between the habitat and proposed buildings, then the reflection of trees in windows may attract birds and such reflections may result in window collisions. Further, exterior lighting can disorient migratory birds. Due to the proposed height of the building compared to the height of nearby trees, tree reflections on windows on lower floors may present a risk of bird strikes. However, the project site is not in an area adjacent to major foraging, roosting, or nesting habitat for avian species. In addition, the proposed project includes design features to reduce risks of bird strikes, as described in the “Design and Architecture” subsection in the Project Description. These measures include:

- Exterior light fixtures would project light downward rather than toward the sky
- Interior plantings would be located away from glass areas that are lit at night
- Window coverings would be part of the furnishings package and provided for all units,
- Opaque elements, including the ground-floor awnings and overhangs at Levels 6 and 7, would create shadows and break up expanses of glass.

These features would reduce reflections in the glass and would reduce night lighting reflections that could disorient birds.[10]

With implementation of the standard conditions of approval related to nesting birds, project impacts to special-status species would be **less than significant**.

f) The City of Berkeley does not have an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plans. Therefore, **no impact** would occur.

Conclusion

As the DAP EIR concluded for the plan area as a whole, the project would have less than significant impacts on biological resources. The project would not result in new specific effects not addressed in the DAP EIR, and no new mitigation measures are required; therefore, this issue **does not require further study in an EIR**.

[10] Through a Senate Bill 330 Preliminary Application, the project vested the provisions of the BMC prior to the effective date of the City’s Bird Safe Building Ordinance, BMC Section 23.304.150, in July 2023.

5 Cultural Resources

	Significant Impact	Less Than Significant or Less than Significant with Mitigation Incorporated	No Impact	Analyzed in the Prior EIR	Substantially Mitigated by Uniformly Applicable Development Policies
Would the project:					
a. Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	■	□	□	■	□
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	■	□	□	■	■
c. Disturb any human remains, including those interred outside of formal cemeteries?	■	□	□	■	■

Downtown Area Plan EIR Summary

The DAP EIR discusses cultural resources impacts on pages 4-93 through 4-124. The DAP EIR identified the following impacts and mitigation measures, which were adopted and incorporated into the DAP:

- **Impact CUL-1: Demolition of Historic Resources.** Despite the substantial protections in place in City policy and the proposed DAP, it is possible that development anticipated under the DAP could result in the demolition of historic resources located in the Downtown Area. Were demolition of historic resources to occur, this would represent a significant and unavoidable impact associated with DAP implementation.

  Demolition of any historic resources in the Downtown Area would represent a significant and unavoidable environmental impact, which could not be mitigated to a level of less than significant. However, should demolition be proposed, a separate, site-specific environmental review would be required, requiring an analysis of alternatives and potential project-specific mitigation measures.
- **Impact CUL-2: Substantial Adverse Changes in Character-Defining Features in Portions of the Downtown Area that may have the Potential for Future Designation as Historic Districts.** Implementation of the DAP may cause substantial adverse changes in the character-defining features of structures in areas in the Downtown Area that may have the potential for future designation as historic districts. Because implementation of the DAP could result in a cumulative impact on the existing character-defining features in those portions of the Downtown Area that

may be formally designated as historic districts at some point in the future, any significant adverse change to those features would represent a potentially significant impact.

- **Mitigation CUL-2: Establish Parameters for Compatible Infill Development in the Downtown Area within Updated Design Guidelines**. Using the Secretary of the Interior's "Standards" as a starting point (in compliance with DAP Policy HD-l-la), the Design Guidelines for future development in the Downtown Area should be updated to ensure that new construction respects the authentic character, significance and integrity of the existing building stock in areas that may have the potential for designation as historic districts. Specific guidelines that could be added for this purpose include, but are not limited to, the following:
  - Consider the difference in character of individual blocks. The scale of buildings change in the potential historic district(s) and new construction should reflect the appropriate scale per block.
  - Priorities for new construction and additions include: build-to-the-street, particularly at corners; construct infill buildings at vacant or underutilized sites along major streets; and modify non-historic buildings so that they contribute visual interest and quality.
  - Construct new buildings, of compatible design with the surrounding neighborhood.
  - Encourage creative and innovative contemporary designs for new buildings in the downtown.
  - Streetscape plays an important role in drawing individuals to a particular area of the city. Use signage, lighting, and paving to improve the pedestrian experience.
  - Build consistently with the street wall, particularly at corner sites. Continue dominant rhythms for structural bays, bay windows, large pilasters, and other repeating vertical elements. Also, continue dominant cornice lines, such as between ground floors and upper stories, and at the top of facades that meet a street.
  - Design new buildings to respond to the existing building context within a block, and provide continuity to the overall streetscape. Frequently, a new building will be inserted on a site between two existing buildings of disparate scale and design.
  - Set back upper floors where taller buildings are permitted, so that dominant roof and cornice lines remain generally consistent in the Downtown, as seen from the street.
  - Explore options for multi-use buildings, combining residential, commercial, and other compatible uses where appropriate.
  - Provide multi-tenant retail space and other active publicly accessible uses at the street level. These should be accessible directly from the sidewalk, rather than through common interior lobbies.
  - Provide easy-to-locate building entrances on all street-facing facades. Where a building extends through an entire block or is located at a comer, connect its entrances with a suitably scaled public lobby. Highlight entrances with signage and lighting to distinguish them from storefronts.
  - Use vertically-proportioned windows. Group such windows in sets where a horizontally proportioned window opening is desired, especially for the expression of structural bays.

As individual development projects are proposed in the Downtown Area, those which may have potential adverse effects on historic resources will be evaluated under the Landmark Preservation

Ordinance. Project compliance with the provisions of the Landmark Preservation Ordinance, conformance with the Secretary of the Interiors Standards (consistent with DAP Policy HD 1-1a), and consistency with updated Design Guidelines intended to protect the character-defining features of those portions of the Downtown Area which may have the potential for designation as historic districts (as called for in Mitigation CUL-2, above) would reduce potential impacts associated with development that might jeopardize existing character defining features in those areas to a less than significant level.

- **Impact CUL-3: Possible Disturbance of Unidentified Subsurface Archaeological Resources.** Although no archaeological resources are currently known to exist in the Downtown Area, ground-disturbing activities associated with new construction and related underground utility installation could result in the destruction or disturbance of unidentified subsurface archaeological resources, which would represent a potentially significant impact.
  - **Mitigation CUL-3: Halt Work/Archaeological Evaluation/Site-Specific Mitigation.** If archaeological resources are uncovered during construction activities, all work within 50 feet of the discovery shall be redirected until a qualified archaeologist can be contacted to evaluate the situation, determine if the deposit qualifies as an archaeological resource, and provide recommendations. If the deposit does not qualify as an archaeological resource, then no further protection or study is necessary. If the deposit does qualify as an archaeological resource, then the impacts to the deposit shall be avoided by project activities. If the deposit cannot be avoided, adverse impacts to the deposit must be mitigated. Mitigation may include, but is not limited to, archaeological data recovery. Upon completion of the archaeologist's assessment, a report should be prepared documenting the methods, findings and recommendations. The report should be submitted to the City, the project proponent and the NWIC.

  Implementation of this mitigation measure would reduce the impact to a level of less than significant.

- **Impact CUL-4** related to paleontological resources is discussed in Section 7, *Geology and Soils.*
- **Impact CUL-5: Possible Disturbance of Unidentified Human Remains.** Ground disturbing activities associated with new construction and related underground utility installation could result in the disturbance of unidentified subsurface human remains, which would represent a potentially significant impact.
  - **Mitigation CUL-5: Halt Work/Coroner's Evaluation/Native American Heritage Consultation/Compliance with Most Likely Descendent Recommendations.** If human remains are encountered during construction activities, all work within 50 feet of the remains should be redirected and the County Coroner notified immediately. At the same time, an archaeologist shall be contacted to assess the situation. If the human remains are of Native American origin, the Coroner must notify the Native American Heritage Commission (NAHC) within 24 hours of this identification. The NAHC will identify a Native American Most Likely Descendant (MLD) to inspect the site and provide recommendations for the proper treatment of the remains and any associated grave goods. The archaeologist shall recover scientifically-valuable information, as appropriate and in accordance with the recommendations of the MLD. Upon completion of the archaeologist's assessment, a report should be prepared documenting methods and results, as well as recommendations regarding the treatment of the human remains and any associated archaeological materials. The report should be submitted to the City, the project proponent and the NWIC.

Implementation of this mitigation measure would reduce the impact to a level of less than significant.

Project-Specific Impacts

a) As discussed in the Project Description, the 2142 Center Street building was evaluated for listing in the National Register of Historic Places (NRHP) and the California Register of Historical Resources (CRHR), and for designation as a City of Berkeley Landmark. It was found eligible for the NRHP, CRHR, and local designation and is a contributor to the historic downtown Shattuck Avenue District.

The proposed project would involve demolition of the existing buildings on the project site, including the 2142 Center Street building. The demolition of this building would have a **potentially significant impact** on historic resources, and this issue will be analyzed further in an EIR.

b, c) The proposed project would involve substantial ground disturbance. It is anticipated that construction activity would involve excavation to a depth of up to 15 feet below ground surface (bgs). The proposed project would have the potential to disturb archaeological resources and human remains. Therefore, impacts would be **potentially significant** and this issue will be analyzed further in an EIR.

Conclusion

Potential impacts to historical resources throughout the Downtown Area were identified in the DAP EIR, which found the DAP's impacts related to alteration or demolition of historic properties would be significant and unavoidable, and that the DAP's impacts related to changes in the character-defining features of certain structures would be potentially significant but could be reduced to a less than significant impact with mitigation. The project would have a direct and significant impact on historical resources. Therefore, the impact on historical resources would be potentially significant and **requires further study in an EIR.**

The proposed project would also have the potential to disturb archaeological resources and human remains and may require mitigation measures beyond those included in the DAP EIR. Therefore, this issue area **requires further study in an EIR**.

6 Energy

	Significant Impact	Less Than Significant or Less than Significant with Mitigation Incorporated	No Impact	Analyzed in the Prior EIR	Substantially Mitigated by Uniformly Applicable Development Policies
Would the project:					
a. Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	■	☐	■	☐
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	■	☐	■	☐

Downtown Area Plan EIR Summary

The DAP EIR did not include a dedicated Energy section because it was published prior to the December 2018 *CEQA Guidelines* update, which expanded and moved Energy from Appendix F into its own Appendix G category by defining the issue area as a new resource category. However, the DAP EIR did include a discussion of potential energy impacts in Significant and Irreversible Changes, on Page 6-25, where it stated:

> Additional energy could be required for construction and ongoing maintenance/operations. Implementation of the Downtown Area Plan would not result in any significant increase in dependence on non-renewable energy resources or in substantial increases in peak or base-period energy use. All new development would be required to incorporate applicable energy conservation features in compliance with California Code of Regulations (CCR) Title 24 (the California Building Standards Code), and would be required to comply with the City of Berkeley's Energy Conservation Ordinance requirements. The City has adopted the Resource Conservation and Global Warming Abatement Plan (which commits the City to a number of strategies intended to reduce energy consumption and greenhouse gas emissions), and local voters passed Measure G (which established a goal of reducing local GHG emissions by 80 percent by 2050). This demonstrates the City's commitment to the reduction of demand for energy from non-renewable sources. Future development under the Downtown Area Plan would be expected to incorporate features that help the City meet this commitment (City of Berkeley 2009a).

Project-Specific Impacts

a) Construction of the proposed project would result in short-term consumption of energy from the use of construction equipment and processes. Energy use during construction would be primarily from fuel consumption to operate heavy equipment, light-duty vehicles, machinery, and generators.

Temporary grid power may also be needed for construction trailers or electric construction equipment. Energy use during construction would be temporary in nature, and construction equipment used would be typical of construction projects in the region. Similar to the manufacturers utilizing energy conservation methods to reduce costs, it is reasonable to assume contractors would avoid wasteful, inefficient, and unnecessary fuel consumption during construction to reduce construction costs. The project would be required to comply with the CARB In-Use Off-Road Diesel-Fueled Fleets Regulation, which imposes limits on idling and restricts the use of older vehicles. This would reduce fuel consumption and lead to the use of fuel-efficient vehicles on the construction site. Construction equipment would be maintained to applicable standards, and construction activity and associated fuel consumption and energy use would be temporary and typical for construction sites. The proposed project would be required to comply with the CALGreen Building Standards Code, which includes specific requirements related to recycling and construction materials, as well as the Berkeley Energy Code (BMC Chapter 19.36) and the Berkeley Green Code (BMC Chapter 19.37), which outlines energy efficiency standards that would apply to construction of the proposed project to minimize wasteful, inefficient, and unnecessary energy consumption.

Operational energy use would include use of transportation fuel. As discussed in the Traffic Impact Analysis (Appendix D), the project would result in a net increase of 979 average daily vehicle trips, a net increase of 88 a.m. peak hour trips, and a net increase of 148 p.m. peak hour vehicle trips.[11] Although the proposed project would result in additional daily vehicle trips, the increase would be due mostly to the introduction of residential uses in downtown Berkeley. It does not reflect the efficiency of transportation energy use. Moreover, the introduction of mixed retail and residential land uses, close to one another, further promotes the DAP's higher-density mixed-use land use pattern that is intended to reduce vehicle trip lengths and subsequent transportation energy use. In addition, the proposed project is within an area with an average VMT per resident at least 15 percent below the respective Bay Area averages and is located within a Transit Priority Area; therefore, the project would have less than significant impacts on VMT and transportation energy.

In addition to transportation energy use, operation of the project would consume electricity for building heating and power, lighting, and water conveyance, among other operational requirements. The proposed project would increase the amount of electricity consumed compared to the existing uses on the site. The project would be all-electric and would not utilize natural gas. Project energy consumed would represent an incremental increase in energy usage compared to existing energy use in Berkeley, and the proposed project would implement energy-efficient components to reduce energy demand.

Additionally, the project would meet Berkeley Green Building and Berkeley Green Code specific requirements for energy efficiency in new development and would incorporate other sustainability features to achieve LEED Gold certification as listed in the "Green Building Features" section in the Project Description. Therefore, construction and operation of the proposed project would not result in potentially significant environmental effects due to the wasteful, inefficient, or unnecessary consumption of energy and this impact would be **less than significant**.

b) The 2009 City of Berkeley's Climate Action Plan sets a year 2020 target to achieve a 33 percent absolute reduction below year 2000 community-wide emissions and identifies actions to achieve the target with the ultimate goal of 80 percent emission reductions by 2050. The Climate Action Plan contains GHG-reduction policies for transportation and land use, building energy use, as well as

[11] The project would generate a total of 104 a.m. and 183 p.m. peak hour trips, but the net total subtracts the trip generation associated with the existing land uses.

waste reduction and recycling. More recently, Berkeley City Council has now also pledged 100% renewable electricity by 2035, resolved to become a “Fossil Fuel Free City,” committed to reaching zero net emissions by 2045, and declared a Climate Emergency.

The project would be all-electric, designed to achieve a LEED Gold certification, and would include energy efficient appliances and lighting as well as water efficient fixtures and irrigation. Additionally, the project would place residences directly in downtown Berkeley in proximity a wide variety of services; adjacent to UC Berkeley, a major education and employment center; and in a highly transit-rich area near the Downtown Berkeley BART station and Alameda-Contra Costa County Transit (AC Transit) bus routes 6, 18, 51B, and 79, reducing necessary reliance on single-occupancy vehicles and VMT. Furthermore, electricity would be supplied by East Bay Community Energy (EBCE), which sources power from renewable sources under their default Renewable 100 program (EBCE 2023). Overall, the project would be consistent with the Climate Action Plan, subsequent climate action resolutions, and the energy efficiency strategies contained therein. Therefore, the project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency and this impact would be **less than significant**.

Conclusion

Although the DAP EIR does not specifically address energy as a separate resource topic, it is discussed in the EIR section on significant and irreversible changes, and the project would not result in a new significant impact in this resource area because of the project’s consistency with the City of Berkeley Climate Action Plan, Prohibition of Natural Gas Infrastructure in New Buildings, and energy-efficient design standards. The project would not result in new specific effects not addressed in the DAP EIR, and no new mitigation measures are required; therefore, these issues **do not require further study in an EIR**.

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7 Geology and Soils

	Significant Impact	Less Than Significant or Less than Significant with Mitigation Incorporated	No Impact	Analyzed in the Prior EIR	Substantially Mitigated by Uniformly Applicable Development Policies
Would the project:					
a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:					
1. 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?	■	□	□	■	□
2. Strong seismic ground shaking?	■	□	□	■	□
3. Seismic-related ground failure, including liquefaction?	■	□	□	■	□
4. Landslides?	■	□	□	■	□
b. Result in substantial soil erosion or the loss of topsoil?	■	□	□	■	□
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	■	□	□	■	□

	Significant Impact	Less Than Significant or Less than Significant with Mitigation Incorporated	No Impact	Analyzed in the Prior EIR	Substantially Mitigated by Uniformly Applicable Development Policies
d. Be located on expansive soil, as defined in Table 1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	■	□	□	■	□
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	□	□	■	■	□
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	□	■	□	■	□

Downtown Area Plan EIR Summary

The DAP EIR discusses impacts related to geology and soils on pages 4-125 through 4-132. The basic geologic setting of the project site has not changed since certification of the DAP EIR. The DAP EIR found all impacts related to geology and soils to be less than significant with required implementation of existing regulations, policies, and standard practices, including the following:

- Current Uniform Building Code and City of Berkeley design requirements and guidelines for buildings constructed in areas of high seismic risk
- Berkeley General Plan Policy S-20, which identifies mitigation for potentially hazardous buildings in the event that development under the DAP results in the retrofitting or replacement of existing soft-story or unreinforced masonry buildings
- Berkeley General Plan policies S-14 and S-15, which require that new development in the Downtown Area be evaluated for susceptibility to liquefaction and landslides, and in those instances where such risks are present, appropriate structural design features be required
- Standard soil erosion control measures during demolition and construction associated with development under the DAP in order to minimize erosion from exposed surfaces and reduce soil erosion impacts
- Appropriate foundation design in accordance with current Uniform Building Code requirements in order to reduce any potential stability hazards

The DAP EIR discusses paleontological resource impacts on pages 4-93 through 4-124. The DAP EIR identified the following impact and mitigation measure:

- **Impact CUL-4: Possible Disturbance of Unidentified Subsurface Paleontological Resources.** Although no paleontological resources are currently known to exist in the Downtown Area, ground-disturbing activities associated with new construction and related underground utility installation could result in the destruction of unidentified subsurface paleontological resources, which would represent a potentially significant impact.
  - **Mitigation CUL-4: Halt Work/Paleontological Evaluation/Site-Specific Mitigation.** Should paleontological resources be encountered during construction or site preparation activities, such works shall be halted in the vicinity of the find. A qualified paleontologist shall be contacted to evaluate the nature of the find and determine if mitigation is necessary. All feasible recommendations of the paleontologist shall be implemented. Mitigation may include, but is not limited to, in-field documentation and recovery of specimen(s), laboratory analysis, the preparation of a report detailing the methods and findings of the investigation, and curation at an appropriate paleontological collection facility.

Implementation of this mitigation measure would reduce the impact to a level of less than significant.

Project-Specific Impacts

a-d) The proposed project is in an area subject to seismic hazards. The project may involve risk of loss, injury, or death involving seismic hazards, could result in soil erosion, and could be located on unstable or expansive soils. These impacts are **potentially significant** will be analyzed further in an EIR.

e) As discussed in the DAP EIR and under Section 19, *Utilities and Service Systems*, of this environmental checklist, the Downtown Area, including the project site, is served by a sanitary sewer system maintained by the City of Berkeley for the collection system, and by EBMUD for interceptor lines. The project site does not contain different conditions or features specific to the site that would result in project-specific impacts beyond those identified in the DAP EIR. The project would have access to these systems, and septic systems would be neither required nor permitted. The project would therefore have **no impact** in this regard.

f) As discussed in the DAP EIR, no paleontological resources are known to exist in the Downtown Area, including the project site. The project site does not contain different conditions or features specific to the site that would result in project-specific impacts beyond those identified in the DAP EIR. Nevertheless, the DAP EIR identified impacts to unrecorded subsurface paleontological resources, as potentially significant but mitigable. Excavation on the project site could uncover previously undisturbed resources, if they are on site. The site is not known to have greater likelihood of containing subsurface paleontological resources than the DAP area as a whole. Previously-adopted DAP EIR Mitigation Measure CUL-4 would apply to the project, and would reduce impacts to **less than significant** levels.

Conclusion

The proposed project could result in site-specific impacts with respect to seismic hazards, soil erosion, or unstable or expansive soils. These issues **require further study in an EIR**.

Because the project would have less than significant impacts on unrecorded subsurface paleontological resources with implementation of previously adopted DAP EIR Mitigation Measure CUL-4, the impact of the project would be generally the same as that identified in the DAP EIR for the plan area as a whole and would not require new mitigation. Further, the proposed project would not involve the use of septic systems. Therefore, these issue areas **do not require further study in an EIR**.

8 Greenhouse Gas Emissions

	Significant Impact	Less Than Significant or Less than Significant with Mitigation Incorporated	No Impact	Analyzed in the Prior EIR	Substantially Mitigated by Uniformly Applicable Development Policies
Would the project:					
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	□	■	□	■	□
b. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	□	■	□	■	□

Downtown Area Plan EIR Summary

The DAP EIR discusses GHG emissions on pages 4-77 through 4-86, stating that "the adoption of the DAP, in itself, will have no impacts related to GHGs. However, individual projects developed in conformance with the DAP will generate GHG impacts from their construction and operation." The DAP EIR then estimates total GHG emissions from buildout of the DAP. The DAP EIR also noted the increase in density associated with the DAP would result in a reduction in GHG emissions over the long term, compared to alternative locations for accommodating future growth because the DAP aims to make Downtown Berkeley walkable with minimal vehicle usage. Page 4-79 of the DAP states that "one of the core concepts underlying the DAP is that, by its nature, it is intended to be a plan for sustainable development. It would allow increased development within a quarter mile of one of the busiest transit nodes in the East Bay." Therefore, the DAP EIR concluded there would be no DAP-related impacts related to GHGs, and no mitigation measures were required or identified.

The DAP EIR notes that "while no significant GHG-related impacts have been identified in relation to adoption and implementation of the DAP, and no mitigation is required, the DAP includes many policies that will further reduce the GHG emissions from individual development projects." DAP policies that would reduce GHG emissions include:

Goal ES-3: Encourage high density, highly livable development to take advantage of Downtown's proximity to regional transit and to improve the availability of diverse walk-to destinations – such as retail, services, culture, and recreation.

Policy ES-3.1: Land Use. Encourage development with high intensities close to transit, and encourage a mix of uses that allows most needs to be met on foot (see policies under Goal LU-1).

Policy ES-3.4: Alternative Modes. Enhance and expand transit service, walking and bicycle use, as an alternative to the use and ownership of private vehicles (see Access goals and policies).

Goal LU-1: Encourage a thriving, livable Downtown that is a focal point for the City and a major destination for the region, with a unique concentration of housing, jobs, and cultural destinations near transit, shops, and amenities.

Goal AC-1: Improve options that increase access to Downtown on foot, by bicycle, and via transit. Make living, working, and visiting Downtown as car-free as possible.

Policy AC-1.1: Street Modifications. Modify Downtown's streets and street network to better serve the needs of pedestrians, bicyclists, and transit (see policies under Goal OS-1). While recognizing that automobiles will be an important transportation mode for the foreseeable future, reduce and avoid negative impacts from the private automobile on pedestrians, transit, and bicycles (see policies under Goals AC-2, AC-4 and AC-5). Development projects that are adjacent to designated street improvements should finance a fair-share of these improvements as condition of project approval.

a) Encourage potential motorists to access Downtown using other modes (as described in multiple policies below).

b) Modify streets to slow automobile traffic to speeds appropriate to the function and character of each street, and emphasize the needs and comfort of pedestrians, transit and bicycles.
   - Modifications should encourage traffic to flow at speeds under 25 miles per hour.
   - Monitor traffic volumes and speeds on residential streets in and near Downtown using established standards, and improve traffic calming and enforcement until General Plan targets are attained.

c) Implement street improvements that benefit pedestrians, bicyclists, and transit. Reallocate parts of public rights-of-way that give unneeded capacity to motor vehicles and can be repurposed to yield pedestrian, bicycle, and/or ecological benefits. Travel lanes should not be eliminated until analysis has determined that safety, transit, and traffic operations can be adequately addressed, however the DAP EIR has indicated that traffic lane reductions appear to be feasible in the following locations:
   - Shattuck Avenue and Shattuck Square between University Avenue and Allston;
   - University Avenue between Shattuck Square and Oxford;
   - Hearst Avenue between Shattuck and Oxford; and − closing Center Street to regular traffic between Shattuck and Oxford.

d) Adopt a Downtown Streets & Open Space Improvement Plan that establishes policies and actions relating to street improvements that can occur throughout the Downtown Area (such as sidewalk bulb-outs, suitable travel lane widths, bicycle parking, street trees, street lighting, furnishings, etc.), as well as major projects (including Center Street Plaza, Center Street Greenway and Civic Center Park, Shattuck Square, University Avenue Gateway, Shattuck Avenue, and Hearst Street). See Policy OS-1.1.

e) Evaluate street network changes from the perspective of the needs, safety and comfort of bicyclists and pedestrians, including changes to lanes and turning movements. Where accommodations for private automobiles and accommodations for pedestrians are in conflict, decisions should reflect the priority of the pedestrian. Accept that improvements may result in slowing down vehicular traffic. Reconfigure automobile traffic on Shattuck Square, so that the west side of Shattuck Square accommodates two-way through traffic, and the east side of Shattuck Square can become a slow street or plaza with a high level of pedestrian amenity. f) Once the design of improvements is conceptually approved, private and public developers adjacent to designed improvements should implement them as part of the development project, whenever feasible and as described in Policies (see policies under Goals LU-2 and OS-3).

Policy AC-1.2: Single-Occupant Vehicles. Discourage the use of single-occupant vehicles (SOVs) by commuters to Downtown and encourage commuting with transit, ridesharing, bicycles, and on foot.

a) Require larger development projects to provide ridesharing parking and support their on-going operations. Strive to serve subareas where ridesharing locations are not convenient by identifying potential ridesharing locations and working with ridesharing providers.

b) Promote ridesharing to and from Downtown by employers and institutions. In public parking garages, continue to discount parking prices for organized ridesharing, and provide preferential parking locations. Encourage private parking garages to make similar accommodations.

c) Strengthen parking policies that discourage all-day SOV parking while encouraging alternative modes (see policies under Goal AC-3).

d) Consistent with the Urban Environmental Accords endorsed by Berkeley, strive to reduce single occupancy vehicles (SOVs) to be no more than 40% of all commute trips by 2020. Monitor peak period trips to the extent feasible, and adjust measures to meet these targets.

Policy AC-1.3: Alternative Modes & Transportation Demand Management (TDM). New development and on-going programs should reduce Downtown car use, support alternative travel modes, and consolidate publicly-accessible parking facilities and Transportation Demand Management (TDM) programs (see requirements under Policy LU-2.1).

a) A fee requirement should be established to support alternative modes (i.e. transit, walking & bicycling) and Transportation Demand Management programs. Parking requirements for new development may be reduced by paying an in lieu fee into a fund to enhance transit, which might be contained within the Streets and Open Space Improvement Plan (SOSIP); in lieu payments for parking should be encouraged.

b) See Policy ED-12.1 – Revenues for Downtown, regarding revenues to reduce Downtown car use, while simultaneously supporting the parking needs of local merchants and cultural/entertainment uses. Consider raising on-going TDM revenues through the creation of a Downtown Transportation Benefits District.

c) Develop a finance strategy to evaluate potential transportation-related revenues and compare their financial capacity with the costs of potential Downtown improvements, maintenance and services. The finance strategy should set near-term priorities for improvements based on public input and other considerations.

d) Require that new buildings and substantial additions support alternative transportation as identified in Policy LU-2.1c. The City should help small businesses and smaller development projects qualify for discounted transit passes, such as by working directly with AC Transit or by encouraging the formation of an association assigned with this mission.

e) Develop a TDM "toolbox" for new development that explains TDM requirements, and encourages other TDM features such as: showers for bike commuters, bicycle sharing kiosks, and plug-in facilities for electric vehicles. f) Encourage all Downtown businesses to reward customers and employees who arrive by transit, by bicycle, or on foot, or who use off-street garages instead of on-street parking, such as with merchant validation programs and other incentives.

Goal AC-4: Promote transit as an efficient choice and as a primary mode of motor-vehicle travel.

Policy AC-4.1: Transit Priority. Promote transit as the primary mode for commuting to and from Downtown, and give transit priority over personal vehicles. Encourage use of transit by area businesses, institutions, and residents. The City strongly supports improved local and regional transit service to and from Downtown.

a) Require that new development provides bus passes and promotes use of alternative modes (see Policies LU-2.1 and AC-1.3).

b) Work collaboratively with Downtown employers, institutions, and organizations (including major employers such as the City of Berkeley, UC Berkeley, Berkeley Unifi ed School District, Berkeley City College, Berkeley Unifi ed School District, Lawrence Berkeley National Laboratory, and Alta Bates Medical Center) to adopt aggressive TDM programs and facilities that reduce automobile use by staff, faculty and students.

c) Require that Downtown businesses provide bus passes to employees and pre-tax commute-by-transit vouchers. Work with businesses and institutions to expand guaranteed-ride-home programs for employees who use transit. Encourage Downtown employers to provide other subsidies for bicycling, walking and public transit use. Encourage Berkeley Unifi ed School District and Peralta Community College to participate in such programs or to establish their own programs to reduce automobile use by faculty and staff.

d) Encourage retail, restaurant, theater, cinema, and cultural uses to promote transit, possibly by providing transit refunds or vouchers. Examine examples of transit validation programs for these uses, and consider implementation of similar programs Downtown. Encourage AC Transit, BART, and other transit providers to increase evening service to Downtown. Work with these providers to improve nighttime conditions near transit stops that affect safety, such as lighting and visual access.

Policy AC-4.2: Attractive Transit. Make transit an efficient and attractive choice by improving speed, reliability, pedestrian safety, and comfort. Improve transit options and give transit priority over personal vehicles.

a) Give consideration to transit-supportive street and facility improvements in the Downtown Area, in collaboration with AC Transit, other transit providers and community stakeholders. Implement “complete streets” concepts that enhance pedestrian and bicycle routes to transit. Other beneficial improvements might include: transit signal priority, queue jump lanes, left turn phasing, improvements to bus shelters, bus curb extensions, bus stop amenities, pre-pay fare vending machines, superior bus stop locations, concrete bus pads, and raised platforms. Address daytime and nighttime conditions that may discourage transit use.

b) Consult with AC Transit about Downtown circulation proposals that could degrade transit service, so that potential impacts can be evaluated and addressed. Street improvements should be designed to avoid an appreciable decline in bus travel times and reliability.

c) Work with AC Transit and shuttle providers to identify suitable bus stops and layover locations. Consider the integration of bus facilities within City, University, and/or private projects.

d) Avoid bus stop and layover locations that interrupt pedestrian movement or block clear views of sidewalks, plazas or storefronts. Give careful consideration to trade-offs between facilitating bus turning movements and other operations versus reductions in on-street parking supply, landscaping, and sidewalks.

e) Engage community stakeholders, especially those representing Downtown interests.

f) Work with AC Transit and shuttle providers to maintain safe, attractive and weather-protected bus stops. Encourage frequent maintenance, graffiti abatement, and the elimination of unsafe conditions. Alert responsible agencies when bus stops may be unsafe or are in poor repair.

g) Support citywide and regional efforts to improve transit service:

- Encourage AC Transit, BART, and other transit providers to improve transit reliability and shorten travel times and headways (i.e., the wait time for buses and trains).
- Encourage BART to improve the frequency of weekend service to and from Downtown, and to consider late night service.
- Encourage AC Transit to implement a pre-pay fare system and other improvements that will shorten boarding times.
- Consider the possibility of a transit fare-free zone in Downtown or a larger area, potentially funded through a local tax measure.

- Consider how enhanced bus service might be extended west on University Avenue and/or north on Shattuck Avenue, and avoid improvements that might preclude such options.
- Work with transit providers to improve access to Downtown from eastern Alameda and Contra Costa Counties, and other locations where large numbers of Downtown-bound trips originate. For example, AC Transit might consider park-and-ride facilities in locations that will encourage people who start their trip by car to transfer to transit before reaching Downtown.
- Support AC Transit and BART in their efforts to receive increased federal and state funding.
- Encourage AC Transit and BART to make transit as affordable as possible.

Policy AC-4.3: Transit Center. Improve access to BART and enhance the Downtown BART Station as a transportation hub for AC Transit and other transit providers.

a) Explore alternatives for creating a Downtown Transit Center to link AC Transit to other modes, including shuttles, taxis, bicycles and bike rentals, arrival by car, and walking. Consider how bus turn-around, boarding platforms, and visitor information facilities might be incorporated. The transit center should speed boarding and transfers, but should not be used for bus layovers. Transit center improvements should result in an inviting, pedestrian-friendly place with negative impacts from buses mitigated to the extent possible.

b) Enhance access to BART on foot and by bike (see Policy AC-4.2). Improve the BART Plaza's function as a transit hub by implementing improvements that make it more pedestrian-friendly (see Policy OS-1.1).

Policy AC-4.4: Transit and Bikes. Encourage bicycle access to Downtown for local and regional transit trips.

a) Increase high-capacity bicycle parking near BART and other major transit stops.

b) Support the expansion of the Downtown Berkeley bicycle station and high-quality bicycle storage facilities in other transit-accessible locations.

c) Encourage transit providers to expand bicycle access on transit vehicles, including increased storage on trains and buses.

Policy AC-4.5: Local Transit & Shuttle Connections. Improve transit and shuttle connections between Downtown, University destinations, and Berkeley neighborhoods, especially connections to: neighborhood commercial areas, facilities for transit-dependent residents, concentrations of potential but poorly-served riders, and areas with concentrations of single occupancy vehicle (SOV) trips.

a) Work with AC Transit, UC Berkeley, LBNL, Alta Bates, and lifeline service to improve shuttle service and consider ways that they can:

- attract users now driving regularly to the UC campus and/or Downtown thereby reducing parking demand;

- connect multiple points Downtown with each other and with other local destinations, including Telegraph retail, north Shattuck retail, and University destinations;
- build upon existing shuttle systems to expand shuttle service sooner;
- undertake an effective public information campaign to advertise new service as it is made available; and
- schedule shuttles on regular routes and/ or make them demand-responsive, depending on the needs of users.

b) Consider how Rapid Bus and other service enhancements can be extended west on University Avenue and/or north on Shattuck Avenue.

c) Consider the possibility of a transit fare-free zone in Downtown or a larger area (such as Telegraph Avenue), potentially funded through a local tax measure.

d) Collaborate with AC Transit and shuttle providers to identify and obtain funds to improve service to areas with high-concentrations of transit-dependent residents, as well as underserved areas where large numbers of commuters drive regularly to the UC campus and/or Downtown.

e) Develop a shuttle funding and operations strategy with the University. Funding sources might include:

- replacement or reassignment of some existing services;
- mitigation funds from new development;
- assessments in lieu of new parking;
- a surcharge on fees for off-street parking; a charge for multiple car ownership; − capital grants for carbon neutral vehicles;
- jobs or work/study program funding for drivers' salaries;
- fares prepaid by institutions/employers; and/or
- a parking benefits district.

f) To the extent feasible, use low-carbon fuels and promote shuttles as a way for people to reduce their carbon footprint and meet Climate Action Plan goals.

Policy AC-4.6: Paratransit. Accommodate taxi service and on-demand transport service providers. a) Incorporate a location for taxis when making improvements near BART. b) Consult with on-demand transport service providers- such as public transit agencies, community groups, hospitals, and businesses, especially those serving Berkeley's disabled community- to see how their needs can be better met

Policy AC-4.7: Events. Give priority to transit during major events so as to reduce traffic congestion, such as during Cal football games, Berkeley High School morning drop-off, cultural events, etc.

a) Work with AC Transit and other transit operators to consider how transit operations, measures, and programs might be refined to reduce acute short-term traffic congestion.

b) Pursue joint marketing campaigns with transit agencies and event sponsors promoting alternative ways to get to city events in Downtown.

Policy AC-4.8: Transit-Supportive Uses. Concentrate housing, jobs, and cultural destinations within Downtown, to be near transit, shops and amenities, while simultaneously enhancing

Goal AC-5: Maintain and enhance safe, attractive, and convenient bicycle circulation within Downtown, to and from surrounding areas, for people of all ages and abilities. Promote bicycling Downtown.

Policy AC-5.1: Bike Network Improvements. Give bicycles priority over personal vehicles on many streets Downtown. Make bicycling safer and more convenient in and through Downtown by making improvements to Berkeley's and Downtown's bicycle network. Provide bikeways on low-speed low-traffic streets and bike lanes where appropriate. Address the needs of bicyclists of all ages and abilities.

a) Adopt a Downtown Streets & Open Space Improvement Plan with specific policies and actions relating to bike network improvements.
b) Consider locations in Downtown where bike-activated traffic lights would improve safety and convenience along streets with higher levels of bicycle use.

Policy AC-5.2: Bicycle Parking. Increase the availability of convenient, secure and attractive short- and long-term bicycle parking throughout Downtown.

a) Increase the availability of secured bicycle parking throughout Downtown, particularly in areas of high use, including bicycle parking options that are sheltered and/or attended.
b) Increase availability of bicycle racks throughout Downtown, especially where parking meter poles are removed.
c) Provide sufficient bicycle parking near transit centers and major destinations (see Policy AC-4.4).
d) Promote the creation of an at-grade attended or automated bicycle-parking service. Work with BART to consider replacing the existing bicycle station with a joint City/BART aboveground facility, perhaps in a storefront on Shattuck Avenue.
e) Require the provision of secure bicycle parking facilities by new development projects (and major renovations), both public and private.

Policy AC-5.3: **Bike Sharing.** Promote convenient "bike sharing" options (i.e., short-term bike rentals) and their use by employees, residents, and visitors – especially near BART.

a) Publicize available bike rentals in Downtown, such as at the Berkeley Bike Station.
b) Identify criteria for the design, program and location of new bike sharing facilities. Solicit proposals from bike share providers for facilities consistent with these criteria. Give special consideration to locations near BART.

Policy AC-5.4: Business & Institutional Support. Make it easier for Downtown employees to commute by bike, especially employees of the City, University, and BUSD.

a) Require new office and retail construction and substantial renovations to provide showers and lockers for employees, so that bicyclists can change into work clothes at their destinations.
b) Study the feasibility of subsidizing the cost of bicycles for Downtown employees. Work with Downtown employers and bicycle merchants to explore the potential for discounts for the purchase of bicycles.
c) If bike sharing is established, consider reducing the cost of bike sharing for Down- town employees and others.
d) Enhance the City's own bicycle program for City employees.

Greenhouse Gas Emissions Environmental and Regulatory Setting

Climate change is the observed increase in the average temperature of the Earth's atmosphere and oceans along with other substantial changes in climate (such as wind patterns, precipitation, and storms) over an extended period of time. Climate change is the result of numerous, cumulative sources of GHG emissions contributing to the "greenhouse effect," a natural occurrence which takes place in Earth's atmosphere and helps regulate the temperature of the planet. The majority of radiation from the sun hits Earth's surface and warms it. The surface, in turn, radiates heat back towards the atmosphere in the form of infrared radiation. Gases and clouds in the atmosphere trap and prevent some of this heat from escaping into space and re-radiates it in all directions.

GHG emissions occur both naturally and as a result of human activities, such as fossil fuel burning, decomposition of landfill wastes, raising livestock, deforestation, and some agricultural practices. GHGs produced by human activities include carbon dioxide (CO_2), methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Different types of GHGs have varying global warming potentials (GWP). The GWP of a GHG is the potential of a gas or aerosol to trap heat in the atmosphere over a specified timescale (generally, 100 years). Because GHGs absorb different amounts of heat, a common reference gas (CO_2) is used to relate the amount of heat absorbed to the amount of the gas emitted, referred to as "carbon dioxide equivalent" (CO_2e), which is the amount of GHG emissions emitted multiplied by its GWP. Carbon dioxide has a 100-year GWP of one. By contrast, methane has a GWP of 30, meaning its global warming effect is 30 times greater than CO_2 on a molecule per molecule basis (Intergovernmental Panel on Climate Change [IPCC] 2021).[12]

The United Nations Intergovernmental Panel on Climate Change (IPCC) expressed that the rise and continued growth of atmospheric CO_2 concentrations is unequivocally due to human activities in the IPCC's Sixth Assessment Report (2021). Human influence has warmed the atmosphere, ocean, and land, which has led the climate to warm at an unprecedented rate in the last 2,000 years. It is estimated that between the period of 1850 through 2019, that a total of 2,390 gigatons of anthropogenic CO_2 was emitted. It is likely that anthropogenic activities have increased the global surface temperature by approximately 1.07 degrees Celsius between the years 2010 through 2019 (IPCC 2021). Furthermore, since the late 1700s, estimated concentrations of CO_2, methane, and

[12] The Intergovernmental Panel on Climate Change's (2021) *Sixth Assessment Report* determined that methane has a GWP of 30. However, the 2017 Climate Change Scoping Plan published by the California Air Resources Board uses a GWP of 25 for methane, consistent with the Intergovernmental Panel on Climate Change's (2007) *Fourth Assessment Report*. Therefore, this analysis utilizes a GWP of 25.

nitrous oxide in the atmosphere have increased by over 43 percent, 156 percent, and 17 percent, respectively, primarily due to human activity (United States Environmental Protection Agency 2022). Emissions resulting from human activities are thereby contributing to an average increase in Earth's temperature. Potential climate change impacts in California may include loss of snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years (State of California 2018).

In response to an increase in GHG concentrations over the past 150 years, California implemented AB 32, the "California Global Warming Solutions Act of 2006." AB 32 codifies the statewide goal of reducing GHG emissions to 1990 levels by 2020 (essentially a 15 percent reduction below 2005 emission levels) and requires the California Air Resources Board (CARB) to prepare a Scoping Plan that outlines the main state strategies for reducing GHGs to meet the 2020 deadline. AB 32 requires CARB to adopt regulations to require reporting and verification of statewide GHG emissions.

SB 97, signed in August 2007, acknowledges climate change is an environmental issue that requires analysis in CEQA documents. In March 2010, the California Resources Agency adopted amendments to the *CEQA Guidelines* for the feasible mitigation of GHG emissions or the effects of GHG emissions. The adopted guidelines give lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHGs and climate change impacts.

After completing a comprehensive review and update process, CARB approved a 1990 statewide GHG level and 2020 limit of 427 million metric tons CO_2e. The Scoping Plan was approved by CARB on December 11, 2008, and includes measures to address GHG emission reduction strategies related to energy efficiency, water use, and recycling and solid waste, among other measures. The Scoping Plan includes a range of GHG reduction actions that may include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, and market-based mechanisms.

On September 8, 2016, the governor signed SB 32 into law, extending AB 32 by requiring the state to further reduce GHG levels to 40 percent below 1990 levels by 2030 (the other provisions of AB 32 remain unchanged). CARB adopted an update to the Scoping Plan in November 2017 to provide a framework for achieving the 2030 target. On September 10, 2018, the governor signed EO B-55-18, which created a new statewide goal to achieve carbon neutrality by 2045. AB 1279, "The California Climate Crisis Act," was passed on September 16, 2022, and declares the State would achieve net zero GHG emissions as soon as possible, but no later than 2045, and to achieve and maintain net negative GHG emissions thereafter. In addition, the bill states that the State would reduce GHG emissions by 85 percent below 1990 levels no later than 2045. CARB prepared the 2022 Scoping Plan Update to assess the progress towards the 2030 target as well as to outline a plan to achieve carbon neutrality no later than 2045. The 2022 Scoping Plan Update focuses on outcomes needed to achieve carbon neutrality by assessing paths for clean technology, energy deployment, natural and working lands, and others, and is designed to meet the State's long-term climate objectives and support a range of economic, environmental, energy security, environmental justice, and public health priorities (CARB 2022).

Climate Action Plan

Adopted in June of 2009, the City of Berkeley's Climate Action Plan sets a 2020 target to achieve a 33 percent absolute reduction below 2000 community-wide emissions and identifies actions to achieve the target, with the ultimate goal of 80 percent emission reductions by 2050 (City of Berkeley 2009b). The Climate Action Plan contains GHG-reduction policies for transportation and land use, building energy use, and waste reduction and recycling. Amplifying the urgency for climate action, the City of Berkeley has now also pledged 100 percent renewable electricity by 2035, resolved to become a "Fossil Fuel Free City," committed to reaching zero net emissions by 2045, and declared a Climate Emergency.

General Plan

The City of Berkeley also addresses GHG emissions in the Environmental Management Element of its General Plan. Policies in the General Plan that would reduce GHG emissions include developing a green building certification program (Policy EM-4), encouraging compliance with green building standards (Policy EM-5), increased waste diversion (Policy EM-7), construction and demolition material recycling (Policy EM-8), support and implementation of local emission reduction programs (Policy EM-19), promotion of energy-efficient design techniques (Policy EM-35), and implementation of energy conservation techniques (Policy EM-36).

Project-Specific Impacts

Thresholds of Significance and Study Methodology

The vast majority of individual projects do not generate sufficient GHG emissions to create a project-specific impact through a direct influence to climate change. Therefore, the issue of climate change typically involves an analysis of whether a project's contribution towards an impact is cumulatively considerable. "Cumulatively considerable" means the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects" (*CEQA Guidelines* Section 15355).

For the purposes of this analysis, a significant impact would occur if the project would generate GHG emissions beyond those anticipated in the DAP EIR, or if the project were inconsistent with adopted GHG reduction plans, policies, or regulations.

The BAAQMD adopted updated thresholds of significance for climate impacts on April 20, 2022 (BAAQMD 2022). Under the updated thresholds, a project must include, at a minimum, the following project design elements, or must be consistent with a local GHG reduction strategy that meets the criteria under *CEQA Guidelines* Section 15183.5(b):

- **Buildings**
  - The project will not include natural gas appliances or natural gas plumbing (in both residential and nonresidential development).
  - The project will not result in any wasteful, inefficient, or unnecessary energy usage as determined by the analysis required under *CEQA Guidelines* Section 21100(b)(3) and Section 15126.2(b).
- **Transportation**
  - Achieve a reduction in project-generated vehicle miles traveled (VMT) below the regional average consistent with the current version of the California Climate Change Scoping Plan (currently 15 percent) or meet a locally adopted Senate Bill 743 VMT target, reflecting the recommendations provided in the Governor's Office of Planning and Research's Technical Advisory on Evaluating Transportation Impacts in CEQA:
    - Residential projects: 15 percent below the existing VMT per capita
    - Office projects: 15 percent below the existing VMT per employee
    - Retail projects: no net increase in existing VMT

- Achieve compliance with off-street electric vehicle requirements in the most recently adopted version of CALGreen Tier 2.

Because the City of Berkeley does not have a qualified CAP, this section analyzes GHG impacts using consistency with the BAAQMD-required project design elements related to buildings and transportation listed above, as well as consistency with State and local adopted GHG reduction plans.

GHG emissions for the proposed project construction and operation were calculated using CalEEMod version 2022.1. Please refer to Section 3, *Air Quality*, for detailed methodology.

a) The proposed project would be consistent with BAAQMD criteria for buildings because it would be an all-electric building that does not include natural gas appliances or natural gas plumbing. As discussed in Section 6, *Energy*, the proposed project would not result in wasteful or unnecessary energy consumption during construction and operation or conflict with existing energy standards and regulations. The project would be consistent with the BAAQMD building thresholds.

The proposed project would also be consistent with BAAQMD criteria for transportation. As discussed in the project's Traffic Impact Analysis (Appendix D), the project is located in a Transit Priority Area (TPA) and is also located within an area with an average VMT per resident and per worker at least 15 percent below the respective Bay Area averages. In addition, the project would comply with the most recently adopted version of CALGreen Tier 2. Therefore, the project would be consistent with the BAAQMD transportation thresholds.

Overall, because the project would be consistent with the BAAQMD design criteria for transportation and building, impacts would be less than significant.

Although BAAQMD does not have numeric thresholds for GHG emissions under the updated guidelines, the project's construction and operational emissions inventories are presented below for informational purposes.

Construction Emissions

Construction of the project would generate temporary GHG emissions, primarily from operation of construction equipment and truck trips. The project would involve the demolition of 35,433 square feet of existing buildings (16 rent controlled units and ground-floor retail commercial space) and construction of a new 26-story mixed-use building with 463 residential units and 15,000 square feet of retail and restaurant space. Construction of the project would include excavation to a maximum depth of approximately 15 feet bgs. Approximately 10,000 cubic yards of soil would be excavated and exported. As shown in Table 10, project construction would generate approximately 5,390 metric tons (MT) of CO_2e.

Table 10 Construction Emissions of Greenhouse Gases

Construction Year	Annual Emissions (MT/year)
2023	402
2024	1,085
2025	1,534
2026	1,639
2027	730
Total	**5,390**

MT = metric tons
Source: Appendix B, Table 2.3 “Construction Emissions by Year, Mitigated”, Annual.

Operational Emissions

GHG emissions would be generated by mobile (transportation) sources as well as through operation of the proposed buildings, which would generate waste and require electricity and water usage. The project would be designed to achieve the LEED Gold certification and would include sustainability features that would reduce the project’s GHG emissions. These include the following:

- Buildings would be all-electric;
- Air source heat pump water heaters would be used in lieu of natural gas;
- Inclusion of a grey water heat recovery heat pump system;
- EV charging spaces consistent with Tier 2 CALGreen standards
- Landscaping would comply with the State’s Model Water Efficient Landscape Ordinance; and
- Diversion of construction and demolition debris (100 percent of concrete, asphalt, and soil/land clearing debris; 65 percent of remaining debris).

Table 11 provides the calculated annual GHG emissions for the project. As shown therein, the proposed project would generate approximately 1,303 MT of CO_2e per year over the course of its operational lifetime, or approximately 1.1 MT of MT of CO_2e per service population (residents + employees). As shown in Table 11, this would be approximately 9.4 percent of the total annual GHG emissions estimated for the DAP.

Table 11 Annual Emissions of Greenhouse Gases

Emission Source	Annual Emissions (MT CO_2e)
Operational	
Mobile	740
Area	0
Energy	381
Water	26
Waste	151
Refrigerants	4
Stationary Sources (Generators)	1
Total	**1,303**

Emission Source	Annual Emissions (MT CO_2e)
Service Population[1]	1,158
MT CO_2e per Service Population	**1.1**
DAP EIR Estimated CO_2e Emissions	13,835[2]
Percentage of Project Emissions to DAP EIR Estimated Emissions	**9.4%**

MT = metric tons
[1] See Section 14, *Population and Housing*, for service population calculations.
[2] Converted from 30.5 million pounds in the DAP EIR to MT.
Source: Appendix B, Table 2.6 "Operations Emissions by Sector, Mitigated", Annual.

b) Continued implementation of State policies to reduce GHG emissions associated with energy use, including the Renewable Portfolio Standard, Title 24 of the California Building Code, and the California Solar Initiative, would reduce the project's anticipated emissions by decreasing energy use, or by providing a "cleaner" (less GHG-intensive) mix of electricity to the project from the regional utility. In addition, the City's General Plan, Community Design Guidelines, and Zoning Regulations include policies that reduce energy use from new buildings and equipment, including design standards that maximize passive ventilation and cooling systems and use of natural lighting within buildings, and energy-efficiency performance standards for proposed buildings taller than 50 feet. By complying with existing City policies and regulations, the project would be generally consistent with these existing requirements.

The City adopted a Climate Action Plan in 2009 that includes the following goals, policies, and implementing actions applicable to the project:

- The Transportation and Land Use Chapter includes policies designed to reduce VMT in Berkeley by making cycling, walking, public transit, and other sustainable mobility modes the mainstream. It also encourages increased vehicle fuel efficiency and the use of low carbon fuels.
- The Waste Reduction and Recycling chapter includes policies that would eliminate solid waste at the point of production and maximize reuse and recycling throughout the community.

The General Plan's Environmental Management Element contains policies and actions expected to reduce GHG emissions. The DAP also includes goals and policies that address GHG impacts of new developments, including the proposed project.

Table 12 summarizes the project's consistency with the applicable implementation measures in the Climate Action Plan, Berkeley General Plan Environmental Management Element, and DAP.

Table 12 Project Consistency with Applicable Climate Action Plan, General Plan, and DAP Goals and Policies

Goals, Policies, and Actions	Project Consistency
City of Berkeley Climate Action Plan	
<u>Sustainable Transportation & Land Use Actions</u> **1. Goal: Increase density along transit corridors** a. Policy: Encourage the development of housing (including affordable housing) retail services, and employment centers in areas of Berkeley best served by transit	**Consistent.** The proposed mixed use project would increase density in a transit-rich location, within 350 feet of the Downtown Berkeley BART Station and several bus stops.

Goals, Policies, and Actions	Project Consistency
2. Goal: Increase and enhance urban green and open space, including local food production, to improve the health and quality of life for residents, protect biodiversity, conserve natural resources, and foster walking and cycling a. Policy: Require new developments in specified areas to contribute to street-level open space on site or in the public realm b. Policy: Promote tree planting, landscaping, and the creation of green and open space that is safe and inviting and that helps to restore natural processes. c. Policy: Increase access to healthy and affordable foods for the community by supporting efforts to build more complete and sustainable local food production and distribution systems.	**Consistent.** The project would include removal of the ground-floor parklet that is on the Oxford Street frontage along the project site boundary and replacement in the same location with a parklet that includes a sidewalk extension. The project would include removal of 14 street trees, which would be replaced by 15 new street trees. The project would also include the installation of ground-floor landscaping and planters on the 25th floor rooftop area. The project also would foster walking and cycling by providing approximately 300 bicycle parking spaces, including a spacious bike room with direct access off the existing alley, and on-street public bike corral, and through its location within walking distance of transit, employment centers, retail/restaurants, schools, and services.
3. Goal: Manage parking more effectively to minimize driving demand and to encourage and support alternatives to driving a. Policy: Design and implement parking strategies to create disincentives for driving – especially for single-occupancy commuting – and, where possible, to build revenue for transportation services.	**Consistent.** The project would reduce driving demand by providing approximately 300 bicycle parking spaces, including a bike room with direct access off the existing alley, and on-street public bike corral, as well as a bike repair facility. The project would provide on-site parking for carshare spaces and would include 36 parking spaces that would serve building employees and proposed retail and restaurant uses only. Residential parking would not be provided. Since the project would be located in a TPA in proximity to transit, future residents would be encouraged to bicycle or walk to transit, services, schools, and jobs, further reducing reliance on single occupancy vehicles.
5. Goal: Accelerate Implementation of the City's Bicycle & Pedestrian Plans a. Policy: Continue to expand and improve Berkeley's bicycle and pedestrian infrastructure	**Consistent.** The project would foster walking and cycling by providing approximately 300 bicycle parking spaces, including a spacious bike room with direct access off the existing alley, and on-street public bike corral. The project would be located 350 feet east of the Downtown Berkeley BART Station and several bus stops, as well as in proximity to standard Class IIA bike lanes on Oxford Street and signage only Class IIIA bike lanes on Milvia Street (City of Berkeley 2017).
<u>**Building Energy Use Strategies**</u> **1. Goal: Make green building business as usual in the new construction & remodel market** a. Policy: Improve local energy and green building standards	**Consistent.** The project would achieve LEED Gold certification and would be required to meet the current CALGreen requirements as well as Berkeley Energy Code and Berkeley Green Code for new development. Sustainability features are described above in Section 2.8.5, *Green Building Features*, of the Project Description.
<u>**Waste Reduction & Recycling**</u> **1. Goal: Increase residential recycling, composting, and source reduction** a. Policy: Target expanded recycling outreach and services to multi-family residential buildings, including apartment buildings, fraternities and sororities, and cooperative housing	**Consistent.** The project would provide access to recycling and composting services as well as standard refuse bins. Pursuant to SB 1383, future employees, residents, and retail/restaurant users would be required to properly sort refuse, recycling, and compost.

Goals, Policies, and Actions	Project Consistency
2. Goal: Increase recycling of construction & demolition (C&D) debris a. Policy: Enhance C&D recycling outreach and assistance to improve enforcement of existing ordinance and convenience of compliance for local builders	**Consistent.** The project would comply with the City of Berkeley's local amendment to CALGreen requiring that 100 percent of concrete, asphalt, and land clearing debris and at least 65 percent of remaining construction and demolition debris is diverted from landfill.
City of Berkeley General Plan Environmental Management Element	
Policy EM-4: Green Building Certification. Develop a green building certification program. **Policy EM-5**: "Green" Buildings. Promote and encourage compliance with "green" building standards. (Also see Urban Design and Preservation Policy UD-33.)	**Consistent**. The project would achieve LEED Gold certification and would be required to meet the current CALGreen requirements for new development. Sustainability features are described above in Section 2.8.5, *Green Building Features*, of the Project Description. The project would also be required to comply with all state and local measures that address water use and conservation that are in effect at the time of development, including the state CALGreen water efficiency standards.
Policy EM-7: Reduced Wastes. Continue to reduce solid and hazardous wastes.	**Consistent.** The project would provide access to recycling and composting services as well as standard refuse bins. Pursuant to SB 1383, future employees, residents, and retail/restaurant users would be required to properly sort refuse, recycling, and compost.
Policy EM-8: Building Reuse and Construction Waste. Encourage rehabilitation and reuse of buildings whenever appropriate and feasible in order to reduce waste, conserve resources and energy, and reduce construction costs. (Also see Urban Design and Preservation Policy UD-6.)	**Consistent.** Project construction would be required to comply with the City of Berkeley's local amendment to CALGreen requiring that 100 percent of concrete, asphalt, and land clearing debris and at least 65 percent of remaining construction and demolition debris is diverted from landfill. Project operation would provide access to recycling and composting services as well as standard refuse bins.
Policy EM-35: Energy-Efficient Design. Promote high-efficiency design and technologies that provide cost-effective methods to conserve energy and use renewable energy sources. (Also see Urban Design and Preservation Policy UD-33.) **Policy EM-36**: Energy Conservation. Continue to implement energy conservation requirements for residential and commercial buildings at the time of sale and at time of major improvements.	**Consistent**. The project would achieve LEED Gold certification and would be required to meet the Prohibition of Natural Gas Infrastructure in New Buildings and current Energy Code and CALGreen requirements for new development. Sustainability features are described above in Section 2.8.5, *Green Building Features*, of the Project Description. Under state law, appliances that are purchased for the project – both pre- and post-occupancy – would be consistent with energy efficiency standards that are in effect at the time of manufacture. In addition, the project would be required to comply with all standards of Title 24 that are in effect at the time of development. The project would also include an all-electric design and would not utilize natural gas.

Goals, Policies, and Actions	Project Consistency
City of Berkeley Downtown Area Plan	
Goal ES-3: Encourage high density, highly livable development to take advantage of Downtown's proximity to regional transit and to improve the availability of diverse walk-to destinations – such as retail, services, culture, and recreation. Policy ES-3.1: Land Use. Encourage development with high intensities close to transit, and encourage a mix of uses that allows most needs to be met on foot (see policies under Goal LU-1).	**Consistent.** The proposed mixed-use development would increase density in a transit-rich location, within 350 feet of the Downtown Berkeley BART Station and several bus stops. The project would support active transportation and encourage "car-lite" development by providing approximately 300 bike parking spaces, including a spacious bike room with direct access off the existing alley, and on-street public bike corral and a bike repair facility. The project site is located within walking distance of employment centers, schools, retail/restaurants, Berkeley's Arts District and services, and would only provide 36 parking spaces to reduce reliance on single-occupancy vehicles.
Goal ES-6: Minimize waste generated Downtown, and strive to make Downtown a "zero waste zone." Policy ES-6.1: Recycling & Reuse. Maximize recycling and reuse opportunities for residents, workers, visitors, businesses, and institutions.	**Consistent.** The project would provide access to recycling and composting services as well as standard refuse bins. Pursuant to SB 1383, future employees, residents, and retail/restaurant users would be required to properly sort refuse, recycling, and compost.
Goal AC-3: Provide parking to meet the needs of Downtown, while discouraging commuter parking and encouraging motorists to park their cars and experience Downtown as a pedestrian. Policy AC-3.2: New Parking. Provide sufficient parking for expected growth by evaluating future parking needs, funding parking facilities, and promoting alternatives to the car. In addition, replace on-street parking lost to street and other improvements within off-street garages. Consolidate parking in shared facilities to the extent possible.	**Consistent.** The project would reduce driving demand because it is located in an area well-served by transit, is located within walking and biking distance to goods and services, and would provide approximately 300 bicycle parking spaces, including a spacious bike room with direct access off the existing alley, and on-street public bike corral, as well as a bike repair facility. The proposed project would provide parking for the proposed commercial uses but would not provide commuter parking.

As shown in Table 12**,** the proposed project would be generally consistent with the City's Climate Action Plan, General Plan, and the DAP.

Project Consistency with 2022 Scoping Plan

The principal State plans and policies for reducing GHG emissions are AB 32, SB 32, and AB 1279. The quantitative goal of AB 32 is to reduce GHG emissions to 1990 levels by 2020; the goal of SB 32 is to reduce GHG emissions to 40 percent below 1990 levels by 2030; and the goal of AB 1279 is to achieve net zero greenhouse gas emissions no later than 2045, and reduce GHG emissions by 85 percent below 1990 levels no later than 2045. The 2022 Scoping Plan expands upon earlier plans to include the AB 1279 targets. The 2022 Scoping Plan's strategies that are applicable to the proposed project include reducing fossil fuel use and vehicle miles traveled; decarbonizing the electricity sector, maximizing recycling and diversion from landfills; and increasing water conservation. The project would be consistent with these goals since the proposed project would be required to comply with the latest Title 24 Green Building Code and Building Efficiency Energy Standards, as well as the recycling and organics waste diversion requirements of SB 1383. The project site is located in a TPA and within 350 feet of the Downtown Berkeley BART Station and is adjacent to UC Berkeley in downtown's services and commercial uses, which would reduce reliance on single-occupancy vehicles and VMT. The project would also include an all-electric design would not utilize natural gas. Additionally, the project would receive electricity from EBCE, which sources power from renewable sources under their default Renewable 100 program (EBCE 2023). Therefore, the project would not conflict with the 2022 Scoping Plan.

Based on the discussion and consistency analysis above, the project would not conflict with California's commitment to GHG reduction under AB 32, SB 32, or EO B-55-18 (as shown in discussion of Impact *(a)*), or other plans, policies, or regulations intended to reduce GHG emissions. Impacts would be **less than significant**.

Conclusion

The project's impacts related to GHG emissions would be no greater than the less than significant impacts identified in the DAP EIR for the plan area as a whole. The project would not result in new specific effects not addressed in the DAP EIR, and no new mitigation measures are required; therefore, these issues **do not require further study in an EIR**.

9 Hazards and Hazardous Materials

	Significant Impact	Less Than Significant or Less than Significant with Mitigation Incorporated	No Impact	Analyzed in the Prior EIR	Substantially Mitigated by Uniformly Applicable Development Policies
Would the project:					
a. Create a significant hazard to the public or the environment through the routine transport, use, or 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?	■	☐	☐	■	☐
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?	■	☐	☐	■	☐
d. Be located on a site that is included on a list of hazardous material 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?	■	☐	☐	■	☐

	Significant Impact	Less Than Significant or Less than Significant with Mitigation Incorporated	No Impact	Analyzed in the Prior EIR	Substantially Mitigated by Uniformly Applicable Development Policies
e. For a project located in 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?	☐	■	☐	■	☐
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	■	☐	■	☐
g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	☐	■	☐	■	☐

Downtown Area Plan EIR Summary

The DAP EIR discusses hazards and hazardous materials impacts on pages 4-133 through 4-140. It addresses the issues of hazardous materials, aviation hazards, emergency response and evacuation, and wildland fire hazards. The DAP EIR discussions of these impact areas are summarized below.

- **Hazardous Materials Use and Transport.** The DAP identifies motor vehicle use and storage and use of materials for periodic cleaning, repair, and maintenance or for landscape maintenance/pest control as potential sources of exposure to hazardous materials. However, it concludes that normal use of hazardous materials at commercial and residential land uses in the Downtown Area would not pose a significant risk to human health or the environment because those using such materials would be responsible for their safe use and would be required to comply with all applicable regulations regarding the disposal of household hazardous waste. According to the DAP EIR, the major sources of existing hazardous materials contamination on sites in the Downtown Area are associated with non-residential activity. These include chemical contamination from businesses such as dry cleaning establishments, gasoline and waste oil contamination from automobile repair and service facilities whose underground storage tanks may have leaked, and fuel oil contamination from underground heating oil storage tanks. It identifies sites with a record of having leaking underground storage tanks and leaking underground fuel tanks, but does not identify sites on the "Cortese" list (the lists of hazardous waste sites complied pursuant to Government Code Section 65962.5). The DAP EIR concludes that development on these sites would require remediation of the site contamination, but that after remediation, impacts associated with development on these sites would be considered less than significant.

The DAP EIR states that medical facilities, dentists, veterinarians, and clinics in the Downtown Area are another potential source of hazardous materials, but they are required to comply with the Medical Waste Management Act, which establishes handling, storing, hauling, treating and disposal requirements for medical waste. The Medical Waste Management Act also requires generators responsible for the production of more than 200 pounds of medical waste per month register with the State. The DAP EIR identifies potential activities of UC Berkeley in the downtown that may involve the routine transport, use, and disposal of hazardous materials, such as chemicals, medical wastes and biohazards, radioactive substances, explosives, toxic gases, nanoparticles, and controlled substances. However, it states that the hazardous materials management team from the University's Office of Environment, Health and Safety has responsibility for monitoring the transport, use, and disposal of all hazardous materials that may be present in University laboratories and research facilities, and has established procedures and regulations to ensure all such materials are handle' safely. The DAP EIR concludes that potential impacts related to hazardous materials transport, such as risk of upset, would be less than significant.

Similarly, the DAP EIR concludes that, although there are schools in the Downtown Area that could be within 0.25 mile of facilities with the potential to release hazardous materials, compliance with existing regulations and standard safety procedures for the handling of hazardous materials at these facilities would be expected to reduce potential impacts to a less than significant level.

- **Aviation Hazards.** The DAP EIR concludes that, because there are no airstrips in the vicinity of the Downtown Area, development under the DAP would not expose those in the Downtown Area to hazards associated with aviation operations.
- **Emergency Response and Evacuation.** The DAP EIR finds that the DAP proposes no changes to the Downtown Area street system that would impede or otherwise negatively affect emergency access, including the emergency access and evacuation routes identified in the Berkeley General Plan. Policy T-28 identifies actions to help maintain emergency access, including not installing diverters or speed humps on streets identified as emergency access and evacuation routes, including all streets in the Downtown Area, except Milvia Street north of University Avenue and Fulton Street south of Bancroft Way. This would help ensure adequate emergency access. Finally, the DAP EIR indicates the Berkeley Fire Department (BFD) and Berkeley Police Department (BPD) would review potential proposed changes to the current emergency access and evacuation routes prior to modification, and finds that, for all these reasons, the DAP would have a less than significant impact on emergency response and evacuation.
- **Wildland Fire Hazards.** The DAP EIR states that no part of the Downtown Area is in an area formally identified as subject to wildland fire hazards, and development under the DAP would therefore not increase exposure to this hazard in a significant way, although such a hazard cannot be completely ruled out. As stated on page 4-135 of the DAP EIR, "in September 1923, a major wildfire that began in the Wildcat Canyon area ultimately destroyed homes within a few blocks of the Downtown Area. An uncontrolled wildfire originating in the Berkeley Hills today

could still pose a threat to people and property in the Downtown Area, given conditions favorable to the rapid spread of such a fire."

Project-Specific Impacts

a-d) According to a Phase I Environmental Site Assessment prepared by Partner Engineering and Science Inc. in April 2021, there were dry cleaning and hat cleaning facilities on and adjacent to the project site in the early 1920s. Additionally, the property was identified as a leaking underground storage tank (LUST) site, CORTESE, HIST CORTESE, and Certified Environmental Reporting System (CERS) site. The building at 2142 Center Street was also identified as having the potential for asbestos containing material (ACM) and lead-based paint (LBP) on site. Therefore, impacts related to hazards and hazardous materials are **potentially significant and will be analyzed further in an EIR**.

e) The project site is not within 2 miles of a public airport. The nearest airport to the project would be Oakland International Airport which is approximately 13 miles south of the project site. Impacts related to Airport noise and safety hazards **would be less than significant and do not require further study in an EIR**.

f) In the vicinity of the project site, the City has designated Oxford Street, Center Street, Shattuck Avenue, and University Avenue, and Addison Street as official emergency access and evacuation routes (City of Berkeley 2011). The project may result in partial street closures during construction activities that could temporarily impede emergency access or evacuation. However, sidewalk or lane closures would need prior approval from the City and would require proper signage and other measures. As stated in the DAP EIR, it is standard City practice for the BFD and BPD to review proposed changes to the current emergency access and evacuation routes prior to modification; these departments would confirm that the proposed improvements would not impede emergency access. **Impacts would be less than significant and do not require further study in an EIR.**

g) As stated in the DAP EIR, no part of the Downtown Area is in an area formally identified as subject to wildland fire hazards. The project site does not contain different conditions or features specific to the site that would result in project-specific impacts beyond those identified in the DAP EIR. The project site is in a completely urbanized area and is not within or near a Fire Hazard Severity Zone (see Section 20, *Wildfire)*. Development of the project would therefore not increase exposure to wildland fire hazards in a significant way. Such hazards cannot be completely ruled out because, historically, wildland fires in the undeveloped hillsides east of the Downtown Area have threatened the area. However, the project would not expose people or structures to a significant risk of loss, injury or death involving wildland fires, and this **impact would be less than significant and does not require further study in an EIR.**

Conclusion

Impacts to hazards and hazardous materials would be significant, and therefore **require further study in an EIR**.

10 Hydrology and Water Quality

	Significant Impact	Less Than Significant or Less than Significant with Mitigation Incorporated	No Impact	Analyzed in the Prior EIR	Substantially Mitigated by Uniformly Applicable Development Policies
Would the project:					
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	■	☐	■	☐
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	■	☐	■	☐
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:					
(i) Result in substantial erosion or siltation on- or off-site;	☐	■	☐	■	☐
(ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	☐	■	☐	■	☐

	Significant Impact	Less Than Significant or Less than Significant with Mitigation Incorporated	No Impact	Analyzed in the Prior EIR	Substantially Mitigated by Uniformly Applicable Development Policies
(iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	■	☐	■	☐
(iv) Impede or redirect flood flows?	☐	■	☐	■	☐
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	■	■	☐
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	■	■	☐

Downtown Area Plan EIR Summary

The DAP EIR discusses hydrology and water quality impacts on pages 4-141 through 4-150. It addresses the following potential impacts: water quality standards; groundwater; alteration of existing drainage patterns that results in erosion or flooding; urban runoff related to storm drainage system capacity and increased pollutants; flood hazards; and inundation by seiche, tsunami, or mudflow. The DAP EIR discussions of these impact areas are summarized below.

- **Water Quality Standards**. Development under the DAP would result in demolition and/or construction activity that could generate pollutants that might adversely affect urban runoff. Operational activities, such as landscape maintenance, could also pollute urban runoff if chemicals used in these activities were to come into contact with rainfall or runoff. However, to prevent significant adverse impacts to water quality, proponents of development projects in the Downtown Area would be required to comply with all City requirements under the NPDES permit. Construction contractors would be responsible to implement and monitor erosion and sedimentation control/drainage plans to ensure contaminants are not released into urban runoff. The DAP EIR determined that, combined, these measures reduced potential adverse impacts to water quality to a level of less than significant.

- **Groundwater**. Located in a dense urban region, the Downtown Area is almost fully paved. Urban runoff is collected and carried in existing storm drain infrastructure, and does not contribute significantly to groundwater recharge. Increased development under the DAP was found not result in a significant increase in impermeable surfaces in the Downtown Area, and would thus not significantly reduce recharge. Also, the groundwater underneath the Downtown Area is not used for human consumption or other uses. Development under the DAP would not deplete groundwater in the area or result in substantial interference with groundwater recharge, and this impact was determined to be less than significant.
- **Alteration of Existing Drainage Patterns Resulting in Erosion or Flooding**. Development under the DAP would not modify the course of an existing stream or river, except for potential realignment of a portion of Strawberry Creek through the proposed Center Street Plaza, which would require site-specific evaluation of drainage-related effects. Outside of this potential realignment, the DAP would not result in alteration of existing drainage patterns that would generate erosion or flooding, and this impact was determined to be less than significant.
- **Urban Runoff in Relation to Storm Drainage System Capacity and Increased Pollutants**. As the Downtown Area is fully developed and highly urbanized, the vast majority of development under the DAP would be redevelopment of already-paved areas, and would not result in a significant increase in stormwater runoff that would be likely to exceed existing storm drainpipe capacity or creek culvert capacity, or increase pollutants in stormwater runoff. This impact was determined to be less than significant.
- **Flood Hazards.** No portion of the Downtown Area is located in a 100-year flood hazard area, and therefore development under the DAP would not result in housing units being placed in a 100-year flood hazard area or structures being placed in a 100-year flood hazard area that could impede or reduce flood flows. Neither is the Downtown Area located in a region subject to inundation in the event of a dam or levee failure. The DAP was determined to have no impact related to flood hazards.
- **Inundation by Seiche, Tsunami, or Mudflow**. The Downtown Area is well above sea level and nearly two miles from the nearest edge of San Francisco Bay. Risk of inundation by seiche, tsunami, or mudflow in the Downtown Area would be remote, and would not be increased as a result of development under the DAP. The DAP was determined to have no impact in this regard.

Project-Specific Impacts

a) Construction activities on the site would have the potential to cause erosion from exposed soil, an accidental release of hazardous materials such as vehicle fuels and lubricant, or temporary siltation from stormwater runoff. Soil disturbance would occur during grading of the proposed project site. However, the DAP EIR indicates that, to prevent significant adverse impacts to water quality, proponents of development projects in the Downtown Area must comply with all requirements of the City's NPDES permit. Furthermore, construction contractors are responsible for implementing and monitoring erosion and sedimentation control/drainage plans to ensure contaminants are not released into urban runoff.

The City would require compliance with provisions for grading and construction at the project site per BMC Section 17.20.050. These include the following items:

1. Any construction contractor performing work in the City shall provide filter materials at catch basins to retain any debris, dirt, or other pollutants generated by such work to prevent said pollutants from flowing into the City's storm drain system.

2. Any applicant for a building or grading permit from the City shall, as a condition of receiving such permit, sign a certification stating that the applicant has read and shall use, to the maximum extent practicable, applicable portions of the state stormwater best management practices manual for construction activity, a copy of which shall be available to the applicant where building and grading permits are obtained.
3. Any applicant for a building or grading permit from the City who is subject to the state NPDES construction general permit shall, as a condition of receiving such permit, provide evidence that the applicant has submitted a notice of intent to the California SWRCB as required by said permit.
4. The City Manager may establish controls on the volume and rate of stormwater runoff from new developments and redevelopments as may be appropriate to minimize the discharge and transport of pollutants into the storm drain system.

Construction of the project would include excavation to a maximum depth of approximately 15 feet. A geotechnical report prepared for the proposed project (Partner Assessment Corporation 2022) observed groundwater depth at the site to be between 28 and 30 feet bgs, based on data from exploratory borings. However, the report indicated historic high groundwater levels at 10 feet below the surface. Therefore, dewatering could be needed if groundwater reached historic high groundwater levels. Dewatering activities would be required to comply with BMC Chapter 17.20 and the Municipal Regional Stormwater NPDES Permit, which limits non-stormwater drainage into the City’s storm drain system. With compliance with BMC requirements, dewatering would not result in a violation of water quality standards or otherwise substantially degrade surface or ground water quality.

As stated in the DAP EIR, to prevent significant adverse impacts to water quality, construction contractors are responsible for implementing and monitoring erosion and sedimentation control/drainage plans to ensure all requirements are met, and that contaminants are not released into urban runoff, consistent with regulatory requirements. With compliance with existing regulations, including BMC Chapter 17.20 receipt of proper discharge permits, the project would not violate water quality standards or otherwise substantially degrade water quality, and this impact would be **less than significant**.

b) The project site is already entirely developed, and the project would not change the amount of impermeable surface on site. Therefore, groundwater recharge currently occurring on the site would not decrease with implementation of the project. Dewatering may be needed during construction if groundwater levels reach the historic high level. Temporary dewatering during construction would not substantially affect groundwater levels; because of the relatively small area of the project site and proposed depth of excavation, near or only slightly below existing groundwater levels, the project would not result in a significant depletion of groundwater supply. Further, the project would be served by municipal water systems rather than on-site wells. Therefore, project construction would not substantially decrease groundwater supplies. Impacts would be **less than significant**.

c.i, c.ii, c.iii, c.iv) The Strawberry Creek culvert is adjacent to the southeastern corner of the project site boundary. The building basement would be approximately 20 feet from the culvert centerline. Based on the engineering plans for the project and the distance from the building basement to the creek culvert, the City’s Public Works Department has confirmed that the proposed project would not place additional loads on the Strawberry Creek Culvert. Further, Because the proposed project would be within 25 feet of the culvert centerline, the proposed project would be subject to BMC

Section 17.08.045, Preservation and Restoration of Natural Watercourses. This BMC Section authorizes administrative review and regulation of development of structures near creek culverts for the purpose of determining appropriate setbacks that promote safety and allow access for maintenance and repair. With compliance with these code requirements, the proposed project would not impact the culvert.

The project site is fully developed. The proposed project would not substantially alter the drainage pattern of the site or area. The proposed project would decrease the impervious surface on the site from 35,468 square feet to 31,544 square feet. Adherence to the San Francisco Bay RWQCB's MS4 General Permit C.3 Requirements for redevelopment would further ensure that the project does not increase runoff relative to existing conditions. The project would not introduce new uses to the project site that would produce an increase in polluted runoff compared to existing uses. No surface parking is proposed that could lead to runoff of automotive fluids into the storm drain system. Additionally, bioretention areas are proposed within landscape areas on the ground floor, and surface planters that would collect runoff are proposed throughout the building and on the amenity deck on floors 25 and 26. Overall, the project would not substantially alter the drainage pattern of the site or area in a manner which would result in substantial erosion or siltation, increase the rate or amount of surface water runoff, or create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff, or impede or redirect flood flows. This impact would be **less than significant**.

d) As stated in the DAP EIR, no portion of the Downtown Area, including the project site, is located within a 100-year flood hazard area or an area subject to inundation in the event of a dam or levee failure. The project site is located at an elevation of approximately 100 feet above sea level and is approximately two miles from the San Francisco Bay. It is also not near a major inland body of water such as a large lake that could produce a seiche. It is not in an area subject to mudflows. Risk of inundation by seiche, tsunami, or inundation at the project site would be remote, and would not be increased as a result of project development. The project would therefore have **no impact** related to these hazards.

e) The project site is not within the jurisdiction of an approved sustainable groundwater management plan or water quality control plan. Therefore, as there are no applicable plans with which the project could conflict, there is **no impact**.

Conclusion

The project site is within the area analyzed in the DAP EIR and the proposed land use is generally consistent with those identified and analyzed in the DAP EIR. Therefore, with compliance with existing regulations, the project's impacts related to water quality and stormwater, runoff would be no greater than that identified in the DAP EIR for the plan area as a whole. The project would not result in new specific effects not addressed in the DAP EIR, and no new mitigation measures would be required; therefore, this issue **does not require further study in an EIR**.

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11 Land Use and Planning

	Significant Impact	Less Than Significant or Less than Significant with Mitigation Incorporated	No Impact	Analyzed in the Prior EIR	Substantially Mitigated by Uniformly Applicable Development Policies
Would the project:					
a. Physically divide an established community?	□	□	■	■	□
b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	□	■	□	■	□

Downtown Area Plan EIR Summary

The DAP EIR discusses land use and planning-related impacts on pages 4-151 through 4-174. The DAP EIR found that impacts in all impact categories for this topic would be less than significant without the need for mitigation. The DAP EIR discussions of these impact areas are summarized below.

- **Physical Division of an Established Community.** Development under the DAP would not include components that would physically divide the existing community. Future development would take place on existing parcels in the Downtown Area. Street modifications anticipated in the Downtown Area under the DAP could be expected to facilitate more efficient circulation and transit operations, enhancing connections between established neighborhoods in Berkeley.
- **Introduction of New Land Uses that Could Conflict with Existing Land Uses.** The Downtown Area is largely already developed with a mix of urban land uses. Implementation of the DAP would be expected to replace some existing uses and buildings to add new residential units, office space, and commercial services to support those living and working in the Downtown Area. These uses would be similar in character, density and intensity to the uses that are currently found in the Downtown Area. Implementation of the DAP did not introduce new uses that would conflict with established uses in the Downtown Area.
- **Conflict with Applicable Land Use Plans, Policies or Regulations.** Implementation of the DAP would not fundamentally conflict with any of the City of Berkeley's land use plans, policies or regulations adopted for the purpose of avoiding or mitigating effects that could result in adverse physical changes in the environment. The DAP was developed to provide specific policy guidance for future development in the Downtown Area, consistent with the land use plans, policies and regulations of the City. Adoption of the DAP made it an amendment to the Berkeley General Plan, which would effectively eliminate any conflict with General Plan Policies, reducing any potential impact to a level of less than significant.

- **Conflict with Habitat Conservation Plan/Natural Community Conservation Plan.** Consistent with the Biological Resources section of the DAP EIR, there are currently no approved Habitat Conservation Plans or Natural Community Conservation Plans applicable to the Downtown Area. Implementation of the DAP would not conflict with any applicable Habitat Conservation Plan or Natural Community Conservation Plan.

Project-Specific Impacts

a) The project would occupy a portion of an existing city block that is fully developed. It would not involve construction of a physical feature (e.g., a highway or rail line) or removal of an existing means of access (e.g., a road or bridge linking different portions of a community) that would physically divide an established community. **No impact** would occur.

b) Consistency with applicable land use policies, including the City's General Plan, Zoning Ordinance, and the DAP, is discussed below.

City of Berkeley General Plan

The project site is designated as "Downtown (DT)" in the Berkeley General Plan. This designation allows for both residential and commercial uses. Therefore, the proposed project would be consistent with the Downtown land use designation. A discussion of project consistency with selected applicable General Plan policies is included in Table 13. As shown in the table, the proposed project would be generally consistent with applicable General Plan policies. Additional discussions of the proposed project's consistency with General Plan policies adopted for the purpose of avoiding or mitigating an environmental effect are included in Section 6, *Energy*, and Section 8, *Greenhouse Gas Emissions,* (see Table 12).

Table 13 General Plan Land Use Policy Consistency Analysis

Policy	Consistency Determination
General Plan	
Policy LU-3 Infill Development. Encourage infill development that is architecturally and environmentally sensitive, embodies principles of sustainable planning and construction, and is compatible with neighboring land uses and architectural design and scale. (Also see Urban Design and Preservation Policies UD-16 through UD-24.) **Policy LU-7 Neighborhood Quality of Life, Action A.** Require that new development be consistent with zoning standards and compatible with the scale, historic character, and surrounding uses in the area. **Policy UD-16 Context.** The design and scale of new or remodeled buildings should respect the built environment in the area, particularly where the character of the built environment is largely defined by an aggregation of historically and architecturally significant buildings. **Policy UD-24 Area Character.** Regulate new construction and alterations to ensure that they are truly compatible with and, where feasible, reinforce the desirable design characteristics of the particular area they are in.	**Consistent.** The project would involve infill mixed-use development and would use high-quality building materials and architectural design as verified through the design review process. The project would be compatible with surrounding land uses, which include residential, commercial, and mixed-use developments. The proposed twenty-six story mixed-use development would be consistent with the C-DMU Zoning District provisions and density bonus law. As discussed in Section 1, *Aesthetics,* because the project is a mixed-use project within a TPA, aesthetic impacts of the project may not be considered significant impacts on the environment. The proposed project would be required to comply with applicable design guidelines and would be reviewed by the City of Berkeley Design Review Committee.

Policy	Consistency Determination
Policy UD-32 Shadows. New buildings should be designed to minimize impacts on solar access and minimize detrimental shadows.	**Consistent**. Shadow studies and visual analysis would be reviewed by the City's Zoning Adjustments Board as part of their consideration of the requested Use Permits for the project. The project would increase shadows adjacent to the site, including on the UC Berkeley campus Crescent to the east. However, the project would not significantly shade areas with solar panels, and the additional shadows on the Crescent, which would be limited to a portion of the Crescent for part of winter afternoons, would not be substantially detrimental. In addition, as discussed in Section 1, *Aesthetics,* because the project is a mixed-use project within a TPA, aesthetic impacts of the project may not be considered significant impacts on the environment.
Policy LU-23 Transit-Oriented Development. Encourage and maintain zoning that allows greater commercial and residential density and reduced residential parking requirements in areas with above-average transit service such as Downtown Berkeley. **Policy H-19 Regional Housing Needs.** Encourage housing production adequate to meet the housing production goals established by ABAG's Regional Housing Needs Determination for Berkeley.	**Consistent.** The project would provide up to 463 units of residential housing in Downtown Berkeley within a TPA, which would be high density housing in above-average transit service area.
Policy EM-5 "Green" Buildings. Promote and encourage compliance with "green" building standards. (Also see Policies EM-8, EM-26, EM-35, EM-36, and UD-6.) **Policy UD-33 Sustainable Design.** Promote environmentally sensitive and sustainable design in new buildings.	**Consistent.** The project would incorporate green building features such as LEED Gold sustainable building design, air source heat pump water heaters, grey water heat recovery heat pump system, and an all-electric building design.

Downtown Area Plan

The project site is within the Core Sub-Area of the DAP. The Core Sub-Area designation allows for multi-family housing, commercial uses, cultural and community uses, educational uses, and public and private open space uses. Consistent with the discussion in the DAP EIR for the plan area as a whole, the project would not introduce new land uses that do not already exist in the Downtown Area and would be consistent with uses allowed in the Core Sub-Area. A discussion of project consistency with selected DAP policies adopted for the purpose of avoiding or mitigated an environmental effect is included in Table 14.

Table 14 Downtown Area Plan Policy Consistency Analysis

Policy	Consistency Determination
Policy LU-1.5: Downtown Intensities & Building Heights. To advance Downtown as a vibrant city center and encourage car-free options near transit, accommodate urban intensities by using building heights that are appropriate and feasible, as indicated in Table LU-1 and "Figure LU-1, Land Use & Building Heights." All new buildings shall deliver significant public benefits, many of which should be in proportion to building height (see Policy LU-2.1). Buildings exceeding a height of 85 feet shall be subject to shadow studies and visual analysis, and buildings exceeding a height of 120 feet shall be subject to wind analysis to avoid detriment to residential areas, public streets and public open spaces, and if necessary require modifications to the project design including setbacks and step-backs to reduce view and shadow impacts (see policies under Goals ES-4, LU-2, and HD-1, as well as footnotes in Table LU-1). Provide appropriate transitions to Residential areas that surround Downtown as described in Policies LU-4.2.	**Consistent.** The project would introduce 463 residential units to the project site, as well as approximately 15,000 square feet of retail and restaurant development. This is consistent with the zoning and land use designation of the site with application of density bonus provisions, as well as with the general character of the surrounding area. Shadow studies and visual analysis have been prepared and would be reviewed by the City's Zoning Adjustments Board as part of their consideration of the requested Use Permits for the project. The project would increase shadows adjacent to the site, including on the UC Berkeley campus Crescent to the east. However, the additional shadows on the Crescent, which would be limited to a portion of the Crescent for part of winter afternoons, would not be substantially detrimental. In addition, as discussed in Section 1, *Aesthetics,* because the project is a mixed-use project within a TPA, aesthetic impacts of the project may not be considered significant impacts on the environment. A wind analysis is required and has been completed as the proposed buildings would be taller than 120 feet in height (Rowan Williams Davies & Irwin Inc. 2022). The report determined that there would be no significant adverse impacts to wind conditions in the pedestrian realm with the proposed project.
Policy LU-3.1: Housing Needs. Accommodate a significant portion of Berkeley's share of regional housing growth as defined by Regional Housing Needs Assessments (RHNA) within the Core Area, Outer Core, Corridor, and Buffer areas, as compared with other appropriate areas in Berkeley.	**Consistent**. The project includes the construction of up to 463 total residential units within the Corridor and Buffer areas. While 16 residential units would be demolished, they would be replaced with affordable units.
Policy LU-4.1: Transit-Oriented Development. Encourage use of transit and help reduce regional greenhouse gas emissions, by allowing buildings of the highest appropriate intensity and height near BART and along the Shattuck and University Avenue transit corridors (see Goal ES-3).	**Consistent.** The project would encourage transit use by locating up to 463 new residential units on a 0.82-acre site one block from the BART station and the Shattuck Avenue transit corridor in Downtown Berkeley.
Policy HD–4.2: Solar, Visual & Wind Impacts. Design and position new buildings to avoid significant adverse solar-, visual- or wind-related impacts on important public open spaces. Also provide for adequate natural light in residential units through appropriate building form (see Policies ES-3.3 and LU-4.2, and Table LU-1). a) Strengthen standards and guidelines to better address potential solar access and wind impacts. b) For buildings exceeding 85 feet, use solar, visual and wind simulations to evaluate and refine design alternatives.	**Consistent.** As discussed in Section 1, *Aesthetics,* because the project is a mixed-use project within a TPA, aesthetic impacts of the project may not be considered significant impacts on the environment. Shadow studies and visual analysis have been prepared and would be reviewed by the City's Zoning Adjustments Board as part of their consideration of the requested Use Permits for the project. The project would increase shadows adjacent to the site, including on the UC Berkeley campus Crescent to the east. However, the additional shadows on the Crescent, which would be limited to a portion of the Crescent for part of winter afternoons, would not be substantially detrimental. A wind analysis is required and has

Policy	Consistency Determination
	been completed as the proposed buildings would be taller than 120 feet in height (Rowan Williams Davies & Irwin Inc. 2022). The report determined that there would be no significant adverse impacts to wind conditions in the pedestrian realm with the proposed project.
Policy AC-2.1: Pedestrian Safety and Amenities. Improve the safety, attractiveness, and convenience of pedestrian routes in downtown, as well as to and from surrounding areas. Encourage a wide range of pedestrian amenities to meet the needs and interests of those who live and work in and near Downtown (see policies under Goals HD-4 and in the Streets and Open Space chapter). a) Adopt a Streets and Open Space Improvement Plan with policies and implementing actions, including provisions for adequate sidewalk width, shortening pedestrian crossing distances at intersections, and new midblock pedestrian crosswalks where justified by high volumes of pedestrians and a long distance between intersections. b) To reduce pedestrian-vehicle conflicts, minimize driveway curb cuts to the extent feasible, and where they must occur: avoid making driveways too wide or creating uneven surfaces where driveways cross sidewalks. c) Maintain sidewalks, crosswalks, plazas, and other pedestrian environments so that they are safe, clean and in good repair. d) Regularly evaluate indicators of pedestrian safety, and adjust implementation priorities to improve pedestrian safety. **Policy AC-3.3: Pedestrian Impacts**. Locate and design new parking in ways that minimize negative impacts upon the pedestrian quality of Downtown (see Policy HD-4.1). a) With new development, discourage parking onsite to increase space available for street-level retail and activity. b) Minimize driveway curb cuts to make Downtown more safe and attractive for pedestrians. Locate, design, and size entrances and exits to parking to minimize impact on the pedestrian realm, such as through traffic management, exit mirrors, and warning lights. c) Consolidate parking to minimize visual and other negative impacts from parking. Enlarge the capacity of existing parking garages as feasible, through management practices and/or physical improvements. d) Discourage use of more than 25 percent of a building's street-level area for parking. Place parking below grade when feasible. When below grade parking is deemed infeasible, above grade parking structures should face streets and public open spaces in ways that support pedestrian safety and activity. Surface parking should be prohibited along streets.	**Consistent**. The project would not alter existing sidewalks and other pedestrian facilities in the vicinity. Additionally, the project would preserve the parklet along Center Street which would preserve the pedestrian amenities in the area and provide convenience to pedestrians along Center Street which experiences heavy foot traffic. The project would not conflict with Goal AC -1 of the DAP which outlines potential traffic lane modifications including the closure of a portion of Center Street in front of the project site to through traffic to create a "slow street" which would only be open to bicycles and pedestrians because the project would not provide vehicle access from Center Street. The project would provide vehicle parking in a garage accessed from Oxford Lane.

Policy	Consistency Determination
Policy AC-3.2: New Parking. Provide sufficient parking for expected growth by evaluating future parking needs, funding parking facilities, and promoting alternatives to the car. In addition, replace on-street parking lost to street and other improvements with off-street garages. Consolidate parking in shared facilities to the extent possible. a) Parking facilities should be planned as part of a Parking/Transportation Demand Management program to address future parking needs, replace on-street parking lost to improvements, and evaluate locations for potential parking garages, and encourage visitors to park once and experience Downtown on foot and/or via low-cost shuttles/transit (see Policy AC-4.5). b) Allow fees to be paid in lieu of onsite parking, and apply revenues toward transit enhancements (see Policy AC-1.3). Encourage developers to pay fees in lieu of onsite parking, especially commercial projects that bring large numbers of new commuters Downtown. c) Consider revisions to parking standards and programs to better accomplish policies of the DAP. Analyze such revisions as part of a consolidated Parking/Transportation Demand Management program and as a way to reduce impediments to the preservation and the adaptive reuse of historic buildings. d) Prohibit new driveways on Shattuck and University Avenues in Downtown except when it can be demonstrated that no other site access options exist or where other alternatives would have greater negative impacts. e) Monitor the amount of onsite parking that new development includes and, if excessive, develops standards for maximum allowable onsite parking. f) Expand electric car and hybrid plug-in location through standards and guidelines, and encourage their connection to local renewable energy sources. g) New development should provide effective parking and Transportation Demand Management measures (see Policy LU- 2.1 and AC-1.3).	**Consistent**. The project includes 264 indoor bicycle storage spaces and 37 outdoor bicycle parking spaces. The project would also include EV spaces. Additionally, the site is in close proximity to BART and multiple AC Transit and UC Berkeley shuttle stops.

The Downtown Design Guidelines specify guidelines for new construction, many of which serve to implement these policies as part of projects are taken through the City's design review and decision-making processes. The Design Review Committee and Zoning Adjustments Board must consider the project's adherence to these policies and the Downtown Design Guidelines in their recommendations and decisions, and ultimately determine consistency with both the Design Guidelines and the DAP. This process continues throughout the discretionary development review process until the building permit process begins. This Infill Environmental Checklist's discussion of consistency with design policies that apply largely to design details necessarily addresses only the broad policy and Design Guideline parameters, recognizing that design details evolve through the review process.

City of Berkeley Zoning Ordinance

The project site is in the Core Sub-Area of the Downtown Mixed Use (C-DMU) Zoning District. The C-DMU District allows up to three buildings (allowed uses include two residential buildings with ground-level commercial and one hotel with conference facilities and accessory commercial uses) that can be a minimum of 120 feet and up to 180 feet tall (BMC Section 23.304.130(E)). There is currently one building that has already been built, the 17-story Residence Inn Berkeley at 2121 Center Street which is in operation, and one planned over 180-foot building at 2190 Shattuck Avenue. The proposed project would be the third tall building. Therefore, the proposed project would be one of three buildings allowed at a height of up to 180 feet. Due to its eligibility for a density bonus (as described further in the Project Description), the project's proposed height of 288 feet would be allowed.

With approval of the use permits described in Section 10, *Description of Project*, the proposed 26-story mixed-use development would be consistent with the C-DMU Zoning District provisions and density bonus law and would therefore be consistent with the BMC for both use and scale in the Downtown Core Area.

The project would be generally consistent with applicable land use plans, policies, and regulations. Therefore, this impact would be **less than significant**.

Conclusion

The project would have no impact regarding division of an established community, as identified in the DAP EIR for the plan area as a whole. In addition, the project would be generally consistent with applicable General Plan and DAP policies. The project would not result in new specific effects not addressed in the DAP EIR, and no new mitigation measures are required; therefore, these issues **do not require further study in an EIR**.

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12 Mineral Resources

	Significant Impact	Less Than Significant or Less than Significant with Mitigation Incorporated	No Impact	Analyzed in the Prior EIR	Substantially Mitigated by Uniformly Applicable Development Policies
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?	☐	☐	■	■	☐
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?	☐	☐	■	■	☐

Downtown Area Plan EIR Summary

The DAP EIR identified no known mineral deposits of local importance or value to the region or residents of the state, or locally-important mineral resource recovery sites, in the Downtown Area. Consequently, the DAP EIR identified no impacts on mineral resources from development anticipated under buildout of the DAP.

Project-Specific Impacts

a, b) Because the project site is located in a highly urbanized area without known mineral resources of value, impacts would remain as identified in the DAP EIR. The project site does not contain different conditions or features specific to the site that would result in project-specific impacts beyond those identified in the DAP EIR. The project would have **no impact** on mineral resources.

Conclusion

As the DAP IER concluded for the plan area as a whole, the project would have no impact on mineral resources because no such resources are located in the plan area or on the project. Therefore, this issue **does not require further study in an EIR**.

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13 Noise and Vibration

	Significant Impact	Less Than Significant or Less than Significant with Mitigation Incorporated	No Impact	Analyzed in the Prior EIR	Substantially Mitigated by Uniformly Applicable Development Policies
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?	■	☐	☐	■	☐
b. 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?	☐	☐	■	■	☐

Downtown Area Plan EIR Summary

The DAP EIR discusses noise and vibration impacts on pages 4-176 through 4-205. The DAP EIR examined a range of potential impacts related to noise and vibration, including exposure of new development to excessive noise levels; exposure of downtown area residents to noise associated with commercial activities and/or mechanical equipment; increased traffic noise; and a cumulative increase in downtown area noise levels, traffic noise, and construction-related noise and vibration. Impacts were assessed in the context of adopted planning documents, including the City's 2002 General Plan. The DAP EIR identified the following impacts and mitigation measures which were adopted and incorporated into the DAP and would be applicable to the project:

- **Impact NOI-1: Exposure to Excessive Noise Levels.** New development under the DAP (particularly residential uses adjacent to principal streets) could be exposed to excessive noise levels. With completion of the development anticipated under the DAP, noise levels along many Downtown Area roadways would exceed those considered compatible with exterior residential land uses (60 dBA L_{dn}), which would result in a potentially significant impact. Where exterior noise levels exceed 70 dBA L_{dn}, such as along University Avenue and Shattuck Avenue, residential units would not be able to meet the 45-dBA L_{dn} interior standard through typical construction methods, which would be a potentially significant impact. Retail units developed under the DAP along most of the area roadways would meet the exterior commercial land use compatibility guideline of 70 dBA L_{dn} established in the Noise Element. However, exterior noise levels at retail units along University Avenue and Shattuck Avenue would exceed 70 dBA L_{dn}, which would be a potentially significant impact.
  - **Mitigation NOI-1. Site-Specific Noise Studies/Site Planning/Noise Control Treatments.** Future residential units proposed under the DAP would be exposed to outdoor noise levels in excess of 60 dBA L_{dn} and indoor noise levels in excess of 45 dBA L_{dn}, which would exceed the City's and state's established land use compatibility thresholds. In areas where residential development would be exposed to an L_{dn} of greater than 60 dBA, site-specific noise studies should be conducted to determine the area of impact and to present appropriate mitigation measures, which may include the following:
    - Utilize site planning to minimize noise in shared residential outdoor activity areas by locating these areas behind the buildings, in courtyards, or orienting the terraces to alleyways rather than streets, whenever possible.
    - The California Building Code and the City of Berkeley require project-specific acoustical analyses to achieve interior noise levels of 45 dBA L_{dn} or lower in residential units exposed to exterior noise levels greater than 60 dBA L_{dn}. Building sound insulation requirements would need to include the provision of forced-air mechanical ventilation in noise environments exceeding 70 dBA L_{dn} so that windows could be kept closed at the occupant's discretion to control noise. Special building construction techniques (e.g., sound-rated windows and building façade treatments) may be required where exterior noise levels exceed 65 dBA L_{dn}. These treatments include, but are not limited to, sound rated windows and doors, sound rated exterior wall assemblies, and acoustical caulking. The specific determination of what treatments are necessary will be conducted on a unit-by-unit basis during project design. Result of the analysis, including the description of the necessary noise control treatments, will be submitted to the City along with the building plans and approved prior to issuance of a building permit. Feasible construction techniques such as these would adequately reduce interior noise levels to 45 dBA L_{dn} or lower.

  Implementation of the above measures would reduce the impact to a level of less than significant.

- **Impact NOI-2: Exposure of Downtown Area Residents to Noise Associated with Commercial Activities and/or Mechanical Equipment.** The proposed development would introduce commercial uses adjacent to residential land uses. Specific tenants for the commercial uses have not been identified, but uses would probably include retail stores, restaurants, or cafes. New commercial development proposed along with (or next to) residential development could result in noise levels exceeding City standards. Typical noise levels generated by loading and unloading would be similar to noise levels generated by truck movements on local roadways. Mechanical equipment would also have the potential to generate noise, and would represent a potentially significant impact.

- **Mitigation NOI-2: Site-Specific Noise Studies/Activities Scheduling.** The following measures should be implemented to reduce noise exposure of Downtown Area residents to noise associated with nearby commercial activities:
  - Noise levels at residential property lines from commercial development should be maintained not in excess of the Berkeley Municipal Code Limits. The approvals of the commercial development should require a noise study demonstrating how the business (including loading docks, refuse areas, and ventilation systems) would meet, and be consistent with, the City's noise standards.
  - Ensure that noise-generating activities, such as maintenance activities and loading and unloading activities are limited to the hours of 7:00 a.m. to 9:00 p.m.

Implementation of the above measures would reduce the impact to a level of less than significant.

- **Impact NOI-3: Increase in Traffic Noise.** Implementation of the DAP would increase traffic noise levels substantially along two street segments (Shattuck Avenue between University Avenue and Allston Way, and Allston Way between Shattuck Avenue and Oxford Street), potentially exposing residences to excessive noise levels. This would represent a significant impact.
  - **Mitigation NOI-3: Site-Specific Noise Analysis/Noise Barriers/Pavement Modifications Traffic Calming/Sound Insulation.** Where anticipated noise levels would exceed City of Berkeley standards for interior noise, methods available to mitigate DAP-related noise level increases would need to be studied on a case-by-case basis as individual development projects are proposed at receivers that would be considered noise impacted along Shattuck Avenue between University Avenue and Allston Way, along Allston Way between Shattuck Avenue and Oxford Street, and along Durant Avenue between Milvia Street and Shattuck Avenue. Since these increases in noise levels are related to the closure of Center Street and the elimination of travel lanes on Shattuck Avenue assumed under the DAP, retaining existing travel lane configurations in the Downtown Area street network would reduce this impact to a level of less than significant. With the proposed DAP street network modifications in place, however, noise reduction methods could include the following:
    - Installing traffic calming measures to slow traffic. Typically, each 5 miles-per-hour reduction in travel speeds equates to 1 dBA of noise reduction.
    - Affected residences could be provided building sound insulation such as sound-rated windows and doors on a case-by-case basis as a method of reducing noise levels in interior spaces.

Given the scope of the DAP and expected noise level increases resulting from DAP-related traffic, it may not be reasonable or feasible to reduce DAP-related traffic noise at all affected receivers. The increase in development density would increase noise levels noticeably at receivers. Measures available to reduce the DAP-related noise level increases would not likely be reasonable or feasible in all areas. Therefore, the impact would be significant and unavoidable.

- **Impact NOI-4: Cumulative Increase in Downtown Area Noise Levels.** Implementation of the DAP would make a "cumulatively considerable" contribution to noise levels along three street segments in the Downtown Area (Shattuck Avenue between University Avenue and Allston Way, Allston Way between Shattuck Avenue and Oxford Street, and Durant Avenue between Milvia Street and Shattuck Avenue) that would be substantially increased as a result of cumulative growth in the area, a significant cumulative impact.
  - **Mitigation NOI-4: Site-Specific Noise Analysis/Noise Barriers/Pavement Modifications Traffic Calming/Sound Insulation.** Where anticipated noise levels would exceed City of Berkeley standards for interior noise, methods available to mitigate DAP-related noise level increases would need to be studied on a case-by-case basis as individual development projects are proposed at receivers that would be considered noise impacted along Shattuck Avenue between University Avenue and Allston Way, along Allston Way between Shattuck Avenue and Oxford Street, and along Durant Avenue between Milvia Street and Shattuck Avenue. Since these increases in noise levels are related to the closure of Center Street and the elimination of travel lanes on Shattuck Avenue assumed under the DAP, retaining existing travel lane configurations in the Downtown Area street network would reduce this impact to a level of less than significant. With the proposed DAP street network modifications in place, however, noise reduction methods could include the following:
    - Installing traffic calming measures to slow traffic. Typically, each 5 miles-per-hour reduction in travel speeds equates to 1 dBA of noise reduction.
    - Affected residences could be provided building sound insulation such as sound-rated windows and doors on a case-by-case basis as a method of reducing noise levels in interior spaces.

  Measures available to reduce cumulative noise level increases would not likely be reasonable or feasible in all areas. Therefore, the impact would be considered significant and unavoidable.

- **Impact NOI-5: Construction Noise.** Businesses and residences throughout the Downtown Area would be intermittently exposed to high levels of noise throughout the planning horizon. Construction would elevate noise levels at adjacent businesses and residences by 15 to 20 dBA or more, a significant impact.
  - **Mitigation NOI-5: Develop Site-Specific Noise-Reduction Programs and Implement Noise Abatement Measures During Construction.** Prior to the issuance of building permits, the applicant shall develop a site-specific noise reduction program prepared by a qualified acoustical consultant to reduce construction noise impacts to the maximum extent feasible, subject to review and approval of the Zoning Officer. The noise reduction program shall include appropriate time limits for construction (7:00 a.m. to 7:00 p.m. on weekdays and between the hours of 9:00 a.m. and 8:00 p.m. on weekends or holidays) as well as technically and economically feasible controls to meet the requirements of the BMC. The noise reduction program should include, but shall not be limited to, the following available controls to reduce construction noise levels as low as practical:
    - Construction equipment should be well maintained and used judiciously to be as quiet as practical.
    - Equip all internal combustion engine-driven equipment with mufflers, which are in good condition and appropriate for the equipment.

   - Utilize “quiet” models of air compressors and other stationary noise sources where technology exists. Select hydraulically or electrically powered equipment and avoid pneumatically powered equipment where feasible.
   - Locate stationary noise-generating equipment as far as possible from sensitive receptors when adjoining construction sites. Construct temporary noise barriers or partial enclosures to acoustically shield such equipment where feasible.
   - Prohibit unnecessary idling of internal combustion engines.
   - If impact pile driving is required, pre-drill foundation pile holes to minimize the number of impacts required to seat the pile.
   - Construct solid plywood fences around construction sites adjacent to operational business, residences or other noise-sensitive land uses where the noise control plan analysis determines that a barrier would be effective at reducing noise.
   - Erect temporary noise control blanket barriers, if necessary, along building facades facing construction sites. This mitigation would only be necessary if conflicts occurred that were irresolvable by proper scheduling. Noise control blanket barriers can be rented and quickly erected.
   - Route construction related traffic along major roadways and away from sensitive receptors where feasible.
   - Businesses, residences or other noise-sensitive land uses within 500 feet of construction sites should be notified of the construction schedule in writing prior to the beginning of construction. Designate a “construction liaison” that would be responsible for responding to any local complaints about construction noise. The liaison would determine the cause of the noise complaints (e.g., starting too early, bad muffler) and institute reasonable measures to correct the problem. Conspicuously post a telephone number for the liaison at the construction site.

  Although the above measures would reduce noise generated by the construction of individual projects, the impact would remain significant and unavoidable as a result of the extended period of time that adjacent receivers would be exposed to construction noise.

- **Impact NOI-6: Construction-Related Vibration.** Residences, businesses, and historic structures in or near the Downtown Area would be exposed to construction-related vibration during the excavation and foundation work of the buildings constructed under the DAP, a significant impact.
  - **Mitigation NOI-6: Avoidance of Pile-Driving/Site-Specific Vibration Studies/Monitoring/Contingency Planning.** The following measures are recommended to reduce vibration from construction activities:
    - Avoid impact pile-driving where possible. Drilled piles causes lower vibration levels where geological conditions permit their use.
    - Avoid using vibratory rollers and tampers near sensitive areas.
    - In areas where project construction is anticipated to include vibration-generating activities, such as pile-driving in close proximity to existing structures, site-specific vibration studies should be conducted to determine the area of impact and to present appropriate mitigation measures that may include the following:

- Identification of sites that would include vibration compaction activities such as pile-driving and that have the potential to generate groundborne vibration, and the sensitivity of nearby structures to groundborne vibration. Vibration limits should be applied to all vibration-sensitive structures located within 200 feet of the project. A qualified structural engineer should conduct this task.
- Development of a vibration monitoring and construction contingency plan to identify structures where monitoring would be conducted, set up a vibration monitoring schedule, define structure-specific vibration limits, and address the need to conduct photo, elevation, and crack surveys to document before and after construction conditions.
- Construction contingencies would be identified for when vibration levels approached the limits.
- At a minimum, vibration monitoring should be conducted during initial demolition activities and during pile-driving activities. Monitoring results may indicate the need for more or less intensive measurements.
- When vibration levels approach limits, suspend construction and implement contingencies to either lower vibration levels or secure the affected structures.
- Conduct post-survey on structure where either monitoring has indicated high levels or complaints of damage has been made. Make appropriate repairs or compensation where damage has occurred as a result of vibration.

It may not be possible to avoid using impact pile-drivers, vibratory rollers, and tampers entirely during the construction of projects in the Downtown Area. Due to the density of development in the area, some of these activities may take place near sensitive structures. In these cases, the mitigation measures listed above would not be sufficient to reduce groundborne vibration to a level of less than significant. Therefore, this impact would be considered significant and unavoidable.

Previously-adopted DAP EIR Mitigation Measures NOI-1, NOI-2, NOI-3, NOI-4, NOI-5, and NOI-6 would apply to the project. The DAP EIR concluded that impacts related to the increase in traffic noise would be significant and unavoidable.

Overview of Noise and Vibration

Noise

Sound is a vibratory disturbance created by a moving or vibrating source, which is capable of being detected by the hearing organs. Noise is defined as sound that is loud, unpleasant, unexpected, or undesired and may therefore be classified as a more specific group of sounds. The effects of noise on people can include general annoyance, interference with speech communication, sleep disturbance, and, in the extreme, hearing impairment (California Department of Transportation [Caltrans] 2013).

HUMAN PERCEPTION OF SOUND

Noise levels are commonly measured in decibels (dB) using the A-weighted sound pressure level (dBA). The A-weighting scale is an adjustment to the actual sound pressure levels so that they are consistent with the human hearing response. Decibels are measured on a logarithmic scale that quantifies sound intensity in a manner similar to the Richter scale used to measure earthquake magnitudes. A doubling of the energy of a noise source, such as doubling of traffic volume, would increase the noise level by 3 dB; dividing the energy in half would result in a 3 dB decrease (Caltrans 2013).

Human perception of noise has no simple correlation with sound energy: the perception of sound is not linear in terms of dBA or in terms of sound energy. Two sources do not "sound twice as loud" as one source. It is widely accepted that the average healthy ear can barely perceive changes of 3 dBA, increase or decrease (i.e., twice the sound energy); that a change of 5 dBA is readily perceptible; and that an increase (or decrease) of 10 dBA sounds twice (half) as loud (Caltrans 2013).

SOUND PROPAGATION AND SHIELDING

Sound changes in both level and frequency spectrum as it travels from the source to the receiver. The most obvious change is the decrease in the noise level as the distance from the source increases. The manner by which noise reduces with distance depends on factors such as the type of sources (e.g., point or line), the path the sound will travel, site conditions, and obstructions.

Sound levels are described as either a "sound power level" or a "sound pressure level," which are two distinct characteristics of sound. Both share the same unit of measurement, the dB. However, sound power (expressed as L_{pw}) is the energy converted into sound by the source. As sound energy travels through the air, it creates a sound wave that exerts pressure on receivers, such as an eardrum or microphone, which is the sound pressure level. Sound measurement instruments only measure sound pressure, and noise level limits are typically expressed as sound pressure levels.

Noise levels from a point source (e.g., construction, industrial machinery, air conditioning units) typically attenuate, or drop off, at a rate of 6 dBA per doubling of distance. Noise from a line source (e.g., roadway, pipeline, railroad) typically attenuates at about 3 dBA per doubling of distance (Caltrans 2013). Noise levels may also be reduced by intervening structures; the amount of attenuation provided by this "shielding" depends on the size of the object and the frequencies of the noise levels. Natural terrain features, such as hills and dense woods, and man-made features, such as buildings and walls, can significantly alter noise levels. Generally, a large structure blocking the line of sight will provide at least a 5-dBA reduction in source noise levels at the receiver (Federal Highway Administration [FHWA] 2011). Structures can substantially reduce exposure to noise as well. The FHWA's guidance indicates that modern building construction generally provides an exterior-to-interior noise level reduction of 10 dBA with open windows and an exterior-to-interior noise level reduction of 20 to 35 dBA with closed windows (FHWA 2011).

DESCRIPTORS

The impact of noise is not a function of loudness alone. The time of day when noise occurs and the duration of the noise are also important factors of project noise impact. Most noise that lasts for more than a few seconds is variable in its intensity. Consequently, a variety of noise descriptors have been developed. The noise descriptors used for this study are the equivalent noise level (L_{eq}), Day-Night Average Level (DNL; may also be symbolized as L_{dn}), and the community noise equivalent level (CNEL; may also be symbolized as L_{den}).

L_{eq} is one of the most frequently used noise metrics; it considers both duration and sound power level. The L_{eq} is defined as the single steady-state A-weighted sound level equal to the average sound energy over a time period. When no time period is specified, a 1-hour period is assumed. The L_{max} is the highest noise level within the sampling period, and the L_{min} is the lowest noise level within the measuring period. Normal conversational levels are in the 60 to 65-dBA L_{eq} range; ambient noise levels greater than 65 dBA L_{eq} can interrupt conversations (Federal Transit Administration [FTA] 2018).

Noise that occurs at night tends to be more disturbing than that occurring during the day. Community noise is usually measured using Day-Night Average Level (DNL or L_{DN}), which is the 24-hour average noise level with a +10 dBA penalty for noise occurring during nighttime hours (10:00 p.m. to 7:00 a.m.). Community noise can also be measured using Community Noise Equivalent Level (CNEL or L_{DEN}), which is the 24-hour average noise level with a +5 dBA penalty for noise occurring from 7:00 p.m. to 10:00 p.m. and a +10 dBA penalty for noise occurring from 10:00 p.m. to 7:00 a.m. (Caltrans 2013).[13] The relationship between the peak-hour L_{eq} value and the L_{DN}/CNEL depends on the distribution of noise during the day, evening, and night; however noise levels described by L_{DN} and CNEL usually differ by 1 dBA or less. Quiet suburban areas typically have CNEL noise levels in the range of 40 to 50 CNEL, while areas near arterial streets are in the 50 to 60+ CNEL range (FTA 2018).

Groundborne Vibration

Groundborne vibration of concern in environmental analysis consists of the oscillatory waves that move from a source through the ground to adjacent buildings or structures and vibration energy may propagate through the buildings or structures. Vibration may be felt, may manifest as an audible low-frequency rumbling noise (referred to as groundborne noise), and may cause windows, items on shelves, and pictures on walls to rattle. Although groundborne vibration is sometimes noticeable in outdoor environments, it is almost never annoying to people who are outdoors.

Typically, ground-borne vibration generated by manmade activities attenuates rapidly as distance from the source of the vibration increases. Vibration amplitudes are usually expressed in peak particle velocity (PPV). The PPV is normally described in inches per second (in/sec). PPV is defined as the maximum instantaneous positive or negative peak of a vibration signal. PPV is often used as it corresponds to the stresses that are experienced by buildings (Caltrans 2020).

High levels of groundborne vibration may cause damage to nearby building or structures; at lower levels, groundborne vibration may cause minor cosmetic (i.e., non-structural damage) such as cracks. These vibration levels are nearly exclusively associated with high impact activities such as blasting, pile-driving, vibratory compaction, demolition, drilling, or excavation.

Table 15 summarizes the vibration damage criteria and human reaction as recommended by Caltrans.

[13] Because DNL and CNEL are typically used to assess human exposure to noise, the use of A-weighted sound pressure level (dBA) is implicit. Therefore, when expressing noise levels in terms of DNL or CNEL, the dBA unit is not included.

Table 15 Criteria for Vibration Damage Potential

Effect on Building	Human Reaction	PPV (in/sec)
Vibration unlikely to cause damage of any type	Threshold of perception: Possibility of intrusion	0.006 to 0.019
Recommended upper level of the vibration to which ruins and ancient monuments should be subjected	Vibrations readily perceptible	0.08
Virtually no risk of “architectural” damage to normal buildings	Level at which continuous vibrations begin to annoy people	0.10
Threshold at which there is a risk of “architectural” damage to normal dwellings such as plastered walls or ceilings	Vibrations annoying to people in buildings	0.20
Vibration at this level would cause “architectural” damage and possibly minor structural damage	Vibrations considered unpleasant by people subjected to continuous vibrations	0.4 to 0.6

in/sec = inches per second; PPV = peak particle velocity

Source: Caltrans 2013

Regulatory Setting

Berkeley Municipal Code

Section 13.40, Community Noise, of the BMC sets the City’s standards for on-site operational noise and construction noise. As shown in Table 16, Section 13.40.050, Exterior Noise Standards, provides the exterior noise limits not to be exceeded for more than 30 minutes in any hour in various zoning districts. If the measured ambient noise level exceeds these limits, the allowable noise exposure standard would be the ambient noise level.

Table 16 City of Berkeley Exterior Noise Limits

Zone	Time Period	L501 Noise Level, dBA
R-1, R-2	7:00 AM – 10:00 PM	55
	10:00 PM – 7:00 AM	45
R-3 and Above	7:00 AM – 10:00 PM	60
	10:00 PM – 7:00 AM	55
Commercial	7:00 AM – 10:00 PM	65
	10:00 PM – 7:00 AM	60
Industry	Anytime	70

[1]L_{50} is the noise level that cannot be exceeded for more than 30 minutes in any hour.

Source: Berkeley, Municipal Code Section 13.40.050

Section 13.40.070 of the BMC sets standards for construction noise. This section prohibits construction activity between the hours of 7:00 PM and 7:00 AM on weekdays, 8:00 PM to 9:00 AM on weekends and holidays such that the resulting noise creates a noise disturbance across a residential or commercial property line. Table 17 lists the City’s maximum sound levels for mobile and stationary equipment that apply to construction activity “where technically and economically feasible” during permitted hours of construction (Section 13.40.070.B of the BMC).

Table 17 Construction Noise Standards

Equipment Type	Day/Times	Residential (R-1, R-2)	Multi-Family Residential (R-3, R-4)	Commercial/ Industrial
Mobile[1]	Weekdays 7:00 AM to 7:00 PM	75 dBA	80 dBA	85 dBA
	Weekends and Holidays 9:00 AM to 8:00 PM	60 dBA	65 dBA	70 dBA
Stationary[2]	Weekdays 7:00 AM to 7:00 PM	60 dBA	65 dBA	70 dBA
	Weekends and Holidays 9:00 AM to 8:00 PM	50 dBA	55 dBA	60 dBA

[1] Section 13.40.070 of the Berkeley Municipal Code defines mobile equipment as "nonscheduled, intermittent, short-term operation (less than 10 days).

[2] Section 13.40.070 of the Berkeley Municipal Code defines stationary equipment as "repetitively scheduled" and for "relatively long term operation (period of 10 days or more).

Source: adapted from Table 13.40-3 and Table 13.40-4 of the City of Berkeley's Construction Noise Standards: http://www.ci.berkeley.ca.us/uploadedFiles/Health_Human_Services/Level_3_-_General/Construction%20Noise%20Standard.pdf

Berkeley Standard Conditions of Approval

The following Standard Conditions of Approval regarding construction and operational noise are relevant to the project.

- **Construction Noise Reduction Program.** The applicant shall develop a site specific noise reduction program prepared by a qualified acoustical consultant to reduce construction noise impacts to the maximum extent feasible, subject to review and approval of the Zoning Officer. The noise reduction program shall include the time limits for construction listed above, as measures needed to ensure that construction complies with BMC Section 13.40.070. The noise reduction program should include, but shall not be limited to, the following available controls to reduce construction noise levels as low as practical:
  - Construction equipment should be well maintained and used judiciously to be as quiet as practical.
  - Equip all internal combustion engine-driven equipment with mufflers, which are in good condition and appropriate for the equipment.
  - Utilize "quiet" models of air compressors and other stationary noise sources where technology exists. Select hydraulically or electrically powered equipment and avoid pneumatically powered equipment where feasible.
  - Locate stationary noise-generating equipment as far as possible from sensitive receptors when adjoining construction sites. Construct temporary noise barriers or partial enclosures to acoustically shield such equipment where feasible.
  - Prohibit unnecessary idling of internal combustion engines.
  - If impact pile driving is required, pre-drill foundation pile holes to minimize the number of impacts required to seat the pile.
  - Construct solid plywood fences around construction sites adjacent to operational business, residences or other noise-sensitive land uses where the noise control plan analysis determines that a barrier would be effective at reducing noise.

  - Erect temporary noise control blanket barriers, if necessary, along building facades facing construction sites. This mitigation would only be necessary if conflicts occurred which were irresolvable by proper scheduling. Noise control blanket barriers can be rented and quickly erected.
  - Route construction related traffic along major roadways and away from sensitive receptors where feasible.

- **Damage Due to Construction Vibration.** The project applicant shall submit screening level analysis prior to, or concurrent with demolition building permit. If a screening level analysis shows that the project has the potential to result in damage to structures, a structural engineer or other appropriate professional shall be retained to prepare a vibration impact assessment (assessment). The assessment shall take into account project specific information such as the composition of the structures, location of the various types of equipment used during each phase of the project, as well as the soil characteristics in the project area, in order to determine whether project construction may cause damage to any of the structures identified as potentially impacted in the screening level analysis. If the assessment finds that the project may cause damage to nearby structures, the structural engineer or other appropriate professional shall recommend design means and methods of construction that to avoid the potential damage, if feasible. The assessment and its recommendations shall be reviewed and approved by the Building and Safety Division and the Zoning Officer. If there are no feasible design means or methods to eliminate the potential for damage, the structural engineer or other appropriate professional shall undertake an existing conditions study (study) of any structures (or, in case of large buildings, of the portions of the structures) that may experience damage. This study shall
  - establish the baseline condition of these structures, including, but not limited to, the location and extent of any visible cracks or spalls; and
  - include written descriptions and photographs.

  The study shall be reviewed and approved by the Building and Safety Division and the Zoning Officer prior to issuance of a grading permit. Upon completion of the project, the structures (or, in case of large buildings, of the portions of the structures) previously inspected will be resurveyed, and any new cracks or other changes shall be compared to pre-construction conditions and a determination shall be made as to whether the proposed project caused the damage. The findings shall be submitted to the Building and Safety Division and the Zoning Officer for review. If it is determined that project construction has resulted in damage to the structure, the damage shall be repaired to the pre-existing condition by the project sponsor, provided that the property owner approves of the repair.

- **Construction Noise Management - Public Notice Required**. At least two weeks prior to initiating any construction activities at the site, the applicant shall provide notice to businesses and residents within 500 feet of the project site. This notice shall at a minimum provide the following: (1) project description, (2) description of construction activities, (3) daily construction schedule (i.e., time of day) and expected duration (number of months), (4) the name and phone number of the Project Liaison for the project that is responsible for responding to any local complaints, (5) commitment to notify neighbors at least four days in advance of authorized extended work hours and the reason for extended hours, and (6) that construction work is about to commence. The liaison would determine the cause of all construction-related complaints (e.g., starting too early, bad muffler, worker parking, etc.) and institute reasonable measures to correct the problem. A copy of such notice and methodology for distributing the notice shall be provided in advance to the City for review and approval.

- **Interior Noise Levels.** Prior to issuance of a building permit, the applicant shall submit a report to the Building and Safety Division and the Zoning Officer by a qualified acoustic engineer certifying that the interior residential portions of the project will achieve interior noise levels of no more than 45 Ldn (Average Day-Night Levels). If the adopted Building Code imposes a more restrictive standard for interior noise levels, the report shall certify compliance with this standard.
- **Construction Phases.** The applicant shall provide the Zoning Officer with a schedule of major construction phases with start dates and expected duration, a description of the activities and anticipated noise levels of each phase, and the name(s) and phone number(s) of the individual(s) directly supervising each phase. The Zoning Officer or his/her designee shall have the authority to require an on-site meeting with these individuals as necessary to ensure compliance with these conditions. The applicant shall notify the Zoning Officer of any changes to this schedule as soon as possible.
- **Project Construction Website.** The applicant shall establish a project construction website with the following information clearly accessible and updated monthly or more frequently as changes warrant:
  - Contact information (i.e. "hotline" phone number, and email address) for the project construction manager
  - Calendar and schedule of daily/weekly/monthly construction activities
  - The final Conditions of Approval, Mitigation Monitoring and Reporting Program, Transportation Construction Plan, Construction Noise Reduction Program, and any other reports or programs related to construction noise, air quality, and traffic.

Project-Specific Impacts

a) The following discusses potential impacts from generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards with respect to noise exposure for new residents, construction noise, and operational noise.

Noise Exposure to New Residents

This section analyzes noise exposure to new residents for informational purposes only because California's Supreme Court found in 2015 that, as an impact of the environment on the project, this analysis is not required for CEQA compliance (C*alifornia Building Industry Association v. Bay Area Air Quality Management District (2015) 62 Cal.4th 269.)*. Noise impacts would occur if new residents of the project were exposed to noise levels that exceed 60 dBA L_{dn}. The project would introduce new residences next to local roadways that generate traffic noise. As described in the DAP EIR, where exterior noise levels exceed 70 dBA L_{dn}, residential units may not meet the 45 dBA L_{dn} interior standard through typical construction methods.

As stated in the DAP EIR, the ambient noise level based on long-term (24-hour) noise measurements along Oxford Street is approximately 68 dBA L_{eq}. Proposed residences on the project site could experience exterior noise levels that exceed the City's normally acceptable level of 60 dBA L_{dn} for new residential land uses. Previously-adopted DAP EIR Mitigation Measures NOI-1 would apply, which would ensure new residents are not exposed to excessive noise levels. DAP EIR Mitigation Measure NOI-1 includes the use of building construction techniques such as sound-rated windows and doors, exterior wall assemblies, and prescribe forced-air mechanical ventilation to enable residents to keep windows closed (thus reducing exposure to outdoor noise) while still having adequate indoor air quality. Additionally, previously-adopted DAP EIR Mitigation Measure NOI-1 requires that specific determinations of the necessary treatments be conducted on a unit-by-unit basis during project design. This includes building sound insulation requirements, such as sound-rate windows and doors, sound-rated exterior wall assemblies, and acoustical caulking. With incorporation of previously-adopted DAP EIR Mitigation Measure NOI-1, the project would not expose new noise-sensitive receptors to noise levels exceeding City standards. This impact would be **less than significant**.

Construction Noise

Construction activity would result in temporary noise in the project site vicinity, exposing nearby receivers to increased noise levels. Project construction noise would be generated by heavy-duty diesel construction equipment used for demolition of existing structures, earthworks, loading, unloading, and placing materials and paving. Typical heavy construction equipment during project grading could include dozers, loaders, graders, and dump trucks. Pile driving is not proposed during construction of the project. As discussed in the project geotechnical report (Partner Assessment Corporation 2022), it is anticipated that the proposed building and floor slabs would be supported by drilled foundations. It is assumed that diesel engines would power all construction equipment. Each phase of construction has a specific equipment mix, depending on the work to be accomplished during that phase. Each phase also has its own noise characteristics; some would have higher continuous noise levels than others, and some have high-impact noise levels. Construction noise would typically be higher during the more equipment-intensive phases of initial construction (i.e., site preparation and grading) and would be lower during the later construction phases (i.e., building construction and paving). Typical, non-pile driving equipment can generate noise levels of up to 85 dBA L_{max} at a distance of 50 feet (FHWA 2006). The nearest sensitive noise receivers in the project vicinity are the commercial-residential mixed approximately 15 feet south of the project site, across Oxford Lane. Construction equipment such as bulldozers, graders, loaders, and excavators would operate as close as 15 feet to adjacent residences; however, over the course of a typical construction day, the equipment would move around the project site. For example, during a typical construction day, the equipment may operate at an average distance of 75 feet north of the residences. However, at times, the closest residences to the south could be exposed to construction noise levels on the order of 85 dBA L_{max}, which would exceed the significance thresholds of 55 dBA for multi-family receptors for daytime weekend construction activities and 65 dBA for multi-family receptors for daytime weekday construction activities.

As described above in the *Regulatory Setting* section, the BMC limits the hours of construction to the less sensitive hours of the day (7:00 a.m. – 7:00 p.m. weekdays, 9:00 a.m. – 8:00 p.m. weekends and holidays). As required by previously-adopted DAP EIR Mitigation Measure NOI-5, construction would not occur during normal sleeping hours for residents, which are the most sensitive time for exposure to noise.

DAP EIR Mitigation Measures NOI-5 would apply to minimize exposure to noise from construction activities. DAP EIR Mitigation Measure NOI-5 would require development of a site-specific noise reduction program to reduce construction noise to the maximum extent feasible, including time limits for construction as required by BMC Section 13.040.070, and technically and economically feasible controls on equipment. In addition, implementation of Berkeley Standard Conditions of Approval listed above under *Regulatory Setting*¸ including *Construction Noise Reduction Program,* *Construction Noise Management - Public Notice Required, Construction Phases,* and *Project Construction Website* would apply to construction activities would reduce construction noise from the levels.

The greatest reductions from measures such as temporary noise barriers would occur at ground-floor and second-story receptors due to feasible height limitations of temporary noise barriers. Mitigation Measure NOI-5 would not be as effective for the multi-story residential uses to the south. Therefore, construction noise could still exceed the significance thresholds of 55 dBA for multi-family receptors for daytime weekend construction activities and 65 dBA for multi-family receptors for daytime weekday construction activities. This project-specific impact is consistent with the DAP EIR's finding that construction in the downtown area would intermittently expose residences and businesses to elevated noise levels throughout the planning horizon of the DAP, and impacts would be **significant and unavoidable, the same as for the DAP implementation as a whole as discussed in the DAP EIR**.

Operational Noise

The noise sources on the project site after completion of construction are anticipated to be those that would be typical of a mixed commercial-residential building, such as vehicles arriving and leaving, landscape maintenance machinery, heating, ventilation, and air conditioning (HVAC) units and noise associated with building residents including conversations, music, and noise from activities and parties in private and common open space areas. Noise sources such as vehicles arriving and leaving, residential activity, and landscape maintenance equipment would be consistent with the existing noise environment and would not exceed applicable noise level limits from BMC. Further, violations of the noise ordinance would be subject to BMC Section 13.40. This code section prohibits noise disturbances such as loud equipment, amplified sound not associated with a permitted event, or yelling and sets forth procedures if violations occur.

Mechanical equipment on the project site and vehicle trips associated with the new buildings could increase noise levels. Mechanical equipment, such as heating, ventilation, and cooling (HVAC) equipment, would not be a substantial source of noise because a metal screen would shield rooftop mechanical equipment. Additionally, rooftop equipment would be elevated at approximately 288 feet, which is well above adjacent three-story residential uses. Proposed rooftop HVAC equipment also would not be louder than existing equipment serving the commercial uses currently on the project site. The basement and first floor would include electrical utility rooms, 4,161 square feet and 1,718 square feet respectively, which would house additional mechanical equipment that would generate noise. However, given that the equipment would be fully enclosed within rooms, these would not generate noise that would exceed noise standards at nearby sensitive receptors.

The proposed mixed-use development would generate vehicle trips that incrementally increase traffic volumes and associated traffic noise on road segments in the downtown area. The project would generate an estimated net increase of 979 daily vehicle trips, 88 a.m. peak hour vehicle trips, and 148 p.m. peak hour vehicle trips (see Appendix D). Modeling of traffic noise indicates that, in general, to create a distinctly perceptible increase in noise (3 dBA) traffic would need to be doubled, which requires an increase in existing traffic of 100 percent or more. The existing daily traffic volumes on Center Street west of Oxford Street and south of Center Street adjacent to the project site are 5,800 and 14,720 daily trips, respectively (Replica 2024). Based on a conservative assumption that all 979 daily project vehicle trips would occur on Center Street and Oxford Street, the project would increase traffic noise on surrounding roadways by up to approximately 0.7 L_{dn}.[14] In the DAP EIR, a substantial noise level increase is considered to be 4 dBA L_{dn} since change in environmental noise levels of 3 dBA L_{dn} or less are usually not noticeable. The estimated increase of a maximum of 0.7 L_{dn} in ambient noise would not exceed this 4 dBA L_{dn} threshold. Therefore, traffic noise impacts resulting from implementation of the project would have a **less than significant** impact from exposing sensitive receptors to increased traffic noise.

b) Project construction would intermittently generate vibration on and adjacent to the project site. Vibration-generating equipment may include bulldozers and loaded trucks to move materials and debris, and vibratory rollers for paving. Pile drivers, which generate strong ground borne vibration, would not be used during construction. Vibration-generating equipment on the project site would be used as close as approximately 15 feet from the nearest residential receivers to the south. Additionally, vibration-generating equipment may be used as close as five feet to the City of Berkeley historic landmark (Ennor's Restaurant Building, constructed in 1923 and designated in 2006) to the west of the project site.

For potential architectural damage, the most important factor is the maximum vibration level. Therefore, it is appropriate to estimate vibration levels at the nearest distance to sensitive receptors that equipment could be used, even though this equipment would typically be located farther from residential receptors and the historic building. This analysis assumes that vibration-generating equipment could be located as close as 15 feet from residential receptors and five feet from the historic building adjacent to construction at the project site. Table 18 estimates vibration levels from equipment at these distances.

Table 18 Typical Vibration Levels for Construction Equipment

Equipment	Reference PPV (Inches/Second) at 25 Feet	PPV at 5 feet (Ennor's Restaurant Building)	PPV at 15 feet (Residential Receptors)
Vibratory Roller	0.210	2.348	0.452
Hoe Ram	0.089	0.995	0.191
Large Bulldozer	0.089	0.995	0.191
Loaded Truck	0.076	0.85	0.164
Jackhammer	0.035	0.391	0.075
Small Bulldozer	0.003	0.034	0.006

Source: FTA 2018

As shown in Table 18, construction activity would generate vibration levels reaching an estimated 2.348 in/sec PPV at a distance of five feet and 0.452 in/sec PPV at 15 feet if vibratory rollers are used to pave asphalt. These maximum vibration levels during the potential use of vibratory rollers could exceed 0.08 in/sec PPV, Caltrans' recommended criterion for historic buildings at Ennor's Restaurant Building and could exceed the 0.5 in/sec PPV threshold at which there is a risk of architectural damage to buildings designed to modern engineering standards.

Previously adopted DAP EIR Mitigation Measures NOI-6 would apply to minimize exposure to vibration from construction activities. DAP EIR Mitigation Measure NOI-6 would require the avoidance of vibratory rollers, and other vibration-generating activities where feasible near sensitive buildings and structures. Additionally, DAP EIR Mitigation Measure NOI-6 would require preparation

[14] Using the formula: 10 X LOG(future traffic volume/existing traffic volume).

of a vibration monitoring plan, which would include stipulations to stop work if vibration is exceeding levels that could damage historic and other nearby structures. This measure would be implemented together with the City's standard condition of approval, *Damage Due to Construction Vibration,* which would require vibration screening and potential preparation of a vibration assessment if screening thresholds are exceeded.

The applicant would be subject to the City's standard condition of approval to notify businesses and residents within 500 feet of the site of impending construction activities, the daily construction schedule and expected duration, and contact information for a liaison responsible for responding to local complaints about construction noise. This requirement would ensure prior notification of construction activities that generate noise and vibration.

With implementation of these DAP EIR measures that require the project applicant to develop a vibration monitoring plan including contingencies to be approved by the City prior to demolition and construction, which prohibits the use of vibratory rollers and other vibration generating equipment near sensitive areas where feasible, and adherence to the Berkeley Community Noise Ordinance and conditions of approval, the project's construction-period vibration impacts would be **less than significant**.

Operation of the proposed mixed-use building would not generate substantial groundborne vibration. Therefore, the project would have a **less than significant** impact related to operational vibration.

c) The project is not located within an airport land use plan, within two miles of a public airport or public use airport, or near a private airstrip. **No impact** would occur.

Conclusion

The DAP EIR identified significant and unavoidable impacts to existing development exposed to noise and vibration from construction activity. Because the project is within the location of development envisioned in the DAP and analyzed in the DAP EIR. With implementation of previously adopted DAP Mitigation Measures NOI-1 through NOI-6 and the City's standard conditions of approval, project-specific noise and vibration impacts would not be more severe than identified in the DAP EIR, the project would not result in new specific effects that were not addressed in the DAP EIR, and no new mitigation are required to reduce impacts from construction noise or vibration. Therefore, this issue **does not require further study in an EIR**.

14 Population and Housing

	Significant Impact	Less Than Significant or Less than Significant with Mitigation Incorporated	No Impact	Analyzed in the Prior EIR	Substantially Mitigated by Uniformly Applicable Development Policies
Would the project:					
a. Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	☐	■	☐	■	☐
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	■	■	☐

Downtown Area Plan EIR Summary

The DAP EIR discusses population and housing impacts on pages 4-206 through 4-218. As stated therein, "2,734 people were living within the Downtown Area at the time of the 2000 Census," and "the 2007 Downtown Area population may now be approximately 3,000." In the Downtown Area, the Alameda County Congestion Management Agency estimated that the population of the ten traffic analysis zones (TAZ) totaled 4,761 in 2000, and projected that the population living in the Downtown TAZs would increase to 5,414 by 2015 and to 6,528 by 2030 under a "Baseline" scenario (without the DAP). The DAP EIR estimated that new residential units developed as a result of the DAP could increase the population of the area by approximately 3,252 new residents, increasing the total Downtown Area population to an estimated 9,780 persons. The DAP EIR explained that population growth in the Downtown Area is not unanticipated, because General Plan Policy H-16 encourages the construction of new medium- and high-density housing on major transit corridors (such as Shattuck Avenue and University Avenue). The DAP EIR concluded that "Implementation of the DAP would not result in substantial population or housing growth beyond that already anticipated under the City's General Plan, and the DAP-related impact would be less than significant," that DAP-related impacts to population and housing were less than significant, and no mitigation measures were required or identified.

Project-Specific Impacts

a) The project would add up to 463 permanent housing units to the project site, which would increase the population in the Downtown Area and in the city at large. Based on the assumption of 2.5 persons per household for multi-family housing (assumption included in the City's 2023-2031 Housing Element EIR, State Clearinghouse # 2022010331, City of Berkeley 2023), the project would increase Berkeley's population by approximately 1,158 people (2.5 x 463 = 1,158).

The estimated population growth of 1,158 persons would not be considered substantial unplanned growth in the context of existing and forecasted population in Berkeley and the region. Plan Bay Area 2050 is the most recent regional long-range plan and regional growth forecast for the Bay Area (ABAG and MTC 2021). Although it does not include projections by city, it does include employment and housing projections for Northwest Alameda County which includes Albany, Berkeley, and Emeryville. The Plan Bay Area 2050 population estimates project 42,000 new housing units in Northwest Alameda County by 2050.

The project would not result in a significant net increase in employment, because it would replace the existing approximately 12,800 square feet of commercial development with approximately 15,000 square feet of retail, for an increase of approximately 2,200 square feet of retail space. Assuming one employee per 250 square feet of commercial space (U.S. Green Building Council 2023), the addition of 2,200 square feet of retail space would generate approximately 9 net new jobs. This would constitute a nominal increase in employees and therefore the proposed project would not adversely affect the jobs to housing ratio in the city and would not induce substantial unplanned population growth. Impacts would be less than significant. Construction activities related to the proposed project could have the potential to increase construction employment within Berkeley. However, construction employment is generally temporary in nature, and can be satisfied with the existing labor force in the region. It is not anticipated that a substantial number of skilled labor or construction workers from outside Berkeley would need to permanently relocate within the City limits to complete construction of the proposed project; therefore, project construction activities would not substantially directly or indirectly increase demand for local housing resources.

In addition, the project would not include infrastructure improvements that would extend roadways or infrastructure into areas that do not currently support residential or other urban uses. Therefore, the project would neither directly nor indirectly increase population growth in Berkeley beyond that planned for in Berkeley, and impacts would be **less than significant**.

b) There are currently 16 residences on the project site, all of which would be replaced with affordable units as part of the proposed 463-unit project. Therefore, the project would not result in displacement of existing housing or people. **No impact** would occur.

Conclusion

Because the project would have a less than significant impact related to population and housing, would be generally consistent with the DAP as analyzed in the DAP EIR, would not result in new specific effects not addressed in the DAP EIR, and would require no new mitigation measures, this issue **does not require further study in an EIR**.

15 Public Services

	Significant Impact	Less Than Significant or Less than Significant with Mitigation Incorporated	No Impact	Analyzed in the Prior EIR	Substantially Mitigated by Uniformly Applicable Development Policies
a. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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?	■	☐	☐	■	☐
2 Police protection?	☐	■	☐	■	☐
3 Schools?	☐	■	☐	■	☐
4 Parks?	☐	■	☐	■	☐
5 Other public facilities?	☐	■	☐	■	☐

Downtown Area Plan EIR Summary

The DAP EIR discusses impacts on public services in Section 4M, on pages 4-219 through 4-233. The DAP EIR impact areas are summarized below.

- **Fire Protection and Emergency Medical Services**. The DAP EIR acknowledges that the DAP would increase population which could result in could result in additional service calls to the [BFD]. However, the DAP EIR concludes that, because the level of development anticipated under the DAP is generally consistent with that anticipated under the Berkeley General Plan, it is not expected that such development would generate a need for new or expanded facilities to support fire protection and emergency response providers. Therefore, impacts were found to be less than significant. It also states that the BFD would continue to be required to exercise its review authority to review new development for such impacts, as required by the City's 2001 General Plan EIR Mitigation Measure SVC-6a and Mitigation Measure SVC-6b.

- **Police Protection**. The DAP EIR states that the potential population increase resulting from the DAP could result in additional service calls to the BPD. However, the DAP EIR concludes that, because the level of development anticipated under the DAP is generally consistent with that anticipated under the Berkeley General Plan, "it is not expected that such development would generate a need for new or expanded police facilities, and the impact would be less than significant." It also states that the BPD would continue to review individual development projects to determine whether or not significant adverse effects to police response times could result. It also states that the City's 2001 General Plan EIR Mitigation Measure SVC-4 requires the City to annually review police staffing development trends and crime trends to determine whether additional police staffing is needed.
- **Schools.** The DAP EIR concludes that "the level of development anticipated under the DAP is not expected to result in demand for school services that would exceed the existing or planned capacity of the District, and the District would not anticipate the need to develop new facilities or expand existing facilities to accommodate an increased number of school-age residents who might be living in the Downtown Area following development under the DAP." it also states that "project developers in the Downtown Area would be required to pay all applicable school impact fees to the Berkeley Unified School District [BUSD], which (under California law) would effectively reduce school-related impacts that might be associated with such development to a level of less than significant." It also states that the City's 2001 General Plan EIR Mitigation Measure SVC-5 requires the City and BUSD to continue to work together to evaluate the impacts of new development on BUSD facilities.
- **Parks.** The DAP EIR states that, although the population increase potentially resulting from the DAP could potentially "place additional pressure on the only City park in the area: Martin Luther King Jr. Memorial Park at the Civic Center," residents in the Downtown Area would continue to have access to public open space on the campus of U.C. Berkeley, which could relieve pressure on this park. It concluded that DAP-related impacts due to possible physical deterioration of existing parks would therefore be less than significant.
- **Library Services**. The DAP EIR states that, although the population increase potentially resulting from the DAP could place additional demands on the Berkeley Central Library, this increase would result in the ratio of items in this library's collection to Berkeley residents dropping only slightly, from 3.12 items per Berkeley resident to 3.03 items per Berkeley resident. The DAP EIR determined that no new library facilities, and no expansion of existing library facilities, would be needed to serve the new residents of the Downtown Area, and this impact would be less than significant.
- **Health and Human Services.** The DAP concludes that, although the potential population increase of 3,252 new residents in the Downtown Area "could place additional demands on providers of health and human services in Berkeley," that "the additional population in the Downtown Area would not be likely to require new health/human services facilities or expansion of existing health/human services facilities, and the DAP-related impact would be less than significant."

Project-Specific Impacts

a) The proposed project would add housing and associated population to the Downtown Area. The potential for the project to result in impacts to public services is analyzed below for the following public services associated with new or physically altered facilities: fire protection and emergency medical services; police protection; schools; parks; and other services.

Fire Protection and Emergency Medical Services

The proposed project is generally consistent with the DAP and would not result in substantial population or housing growth beyond that already anticipated under the DAP EIR. BFD Station No. 5 is located on Shattuck Avenue approximately 0.8 miles south of the project site. The BFD Administration building is located approximately 0.4 miles west of the project site. The BFD also would review the building permit for the project for conformance with the California Fire Code and annually reviews staffing and facilities to respond to trends in call volumes and types of service demands to assess department needs.

According to Steven Riggs, Deputy Fire Marshal of the BFD, the community's latest evaluation and rating in 2022 by the Insurance Services Organization (ISO, Inc.) examined (among other issues) fire water availability throughout the City. ISO found that in some cases existing fire water flows available within the geographic area covered by the DAP are deficient according to ISO's standards. This is the case at Shattuck Avenue, Allston Way, and Durant Avenue. While improvements in the DAP water supply system were made relatively recently by EBMUD in order to accommodate the recent construction of another high-rise building, it should not be assumed that these improved water supply conditions apply to all areas covered by the DAP. Initial estimates indicate that the proposed project may require up to 3000 gallons per minute of fire water flow in order to comply with Berkeley Fire Code requirements. The exact value required is likely to fall somewhere below that value, and would be based on detailed design and performance specifications for the proposed building's fixed fire protection systems. While EBMUD infrastructure in the area was recently upgraded to serve a new high-rise building to the west of the project site, the water supply network at the project site may vary substantially from the supply to the west. The available fire water supply would be required to be evaluated during the building design and approval stage of the project. Because the building would not be allowed to be constructed unless the ultimate fire water flow criteria are met, this would be **potentially significant,** and this issue will be analyzed further in an EIR (Steven Riggs 2023).

Police Protection

The DAP EIR concludes that, because the level of development anticipated under the DAP is generally consistent with that anticipated under the Berkeley General Plan, "it is not expected that such development would generate a need for new or expanded police facilities, and the impact would be less than significant." The proposed project is generally consistent with the DAP and would not result in substantial population or housing growth beyond that already anticipated under the DAP EIR. In addition, the BPS annually reviews staffing, facilities, and crime trends to assess department needs. For these reasons, Project impacts related to police protection services would be **less than significant**.

Schools

As stated in the DAP EIR, the BUSD has not established student generation rates to estimate the number of students that might be anticipated with new development. However, because the amount of development under the project would not be substantially greater than that envisioned under the DAP EIR, the findings of the DAP EIR in relation to school services, as discussed above, would apply to the project. Consequently, the project would not result in demand for school services that would exceed the existing or planned capacity of the district and would not require new facilities or expand existing facilities to accommodate an increased number of school-age residents who might be living in the Downtown Area following development of the project. Lastly, the City's 2001 General Plan EIR Mitigation Measure SVC-5, which requires the City and the BUSD to continue to work together to evaluate the impacts of new development on BUSD facilities, would continue to apply. As of June 2017, BUSD has implemented school facility fees for developments, which would apply to the proposed project (BUSD 2017). For these reasons, project impacts related to school facilities would be **less than significant**.

Parks

Please see the discussion below in Section 16, *Recreation*.

Other Services

The Berkeley Central Library is located at Kittredge Street and Shattuck Avenue, approximately 0.3 miles south of the project site. New residents at the project site may use this and other libraries in Berkeley and surrounding areas, resulting in increased use of these facilities. However, the DAP EIR concluded that no new facilities or expansion of existing facilities would be required to serve residents of the Downtown Area due to the population increase resulting from development under the DAP. Because the project is generally consistent with the DAP and would not result in substantial population or housing growth beyond that already anticipated under the DAP EIR, impacts to library facilities and services would be generally the same as those identified in the DAP EIR and would be **less than significant**.

There are multiple medical and health facilities near the project site. The Alta Bates Summit Medical Center, although scheduled to close by 2030, is located along Ashby Avenue and is approximately 1.6 miles south of the project site, The LifeLong Ashby Health Center is located approximately 1.4 miles south of the project, and the Berkeley Women's Health Center is located approximately 0.8 miles south of the project site. New residents at the project site may use these medical facilities in Berkeley. The DAP EIR concluded that the additional population in the Downtown Area would not be likely to require new health/human services facilities or expansion of existing health/human services facilities, and this impact would be less than significant. Because the project is generally consistent with the DAP and would not result in substantial population or housing growth beyond that already anticipated under the DAP EIR, impacts to health and human services would be generally the same as those identified in the DAP EIR and would be **less than significant**.

Conclusion

As the DAP EIR concluded for the plan area as a whole, the project would have a less than significant impact on police services, schools, and other services. The project would not result in new specific effects to police services, schools, and other services that were not addressed in the DAP EIR, and would not require new mitigation; therefore, these issues **do not require further study in an EIR**. However, potentially significant impacts related to fire protection services may occur and this issue **will be studied in an EIR.**

16 Recreation

	Significant Impact	Less Than Significant or Less than Significant with Mitigation Incorporated	No Impact	Analyzed in the Prior EIR	Substantially Mitigated by Uniformly Applicable Development Policies
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	■	☐	■	☐
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	■	☐	■	☐

Downtown Area Plan EIR Summary

The DAP EIR discusses recreational resources impacts on pages 4-234 through 4-237. As stated therein, public recreational facilities in the Downtown Area are limited. The DAP EIR states that "The major open space in the Downtown Area is the approximately three-acre Martin Luther King Jr. Memorial Park in the Civic Center area, which provides limited recreational opportunities on a large lawn, but supports a number of outdoor events. The playing fields/track at the Berkeley High School are also used by the public when not in use for physical education classes, team practices, and school sporting events. The YMCA also provides its members and guests with indoor recreation and fitness facilities." The DAP EIR concluded that there would be no DAP-related impacts to recreational resources, and no mitigation measures were required or identified.

Project-Specific Impacts

a) Residents of the project site would use local parks in the vicinity of the project. The nearest recreational space to the project is the Eucalyptus Grove/ Grinnell Natural Area which is a nature preserve on the UC Berkeley campus. There are several parks that are near the project site as well including Martin Luther King Jr Civic Center Park (0.3 miles), Claremont Canyon Regional Preserve (2.6 miles), and Tilden Park (2.8 miles). This regional park includes over 200 acres of open space, hiking and equestrian trails, and recreational facilities. In addition, the UC Berkeley campus is located one block east of the site. Although the project would incrementally increase use of community and regional parks and recreation facilities, the increase in use would be generally within that anticipated by the DAP EIR and is not expected to result in substantial physical deterioration of these facilities. Further, the project would include on-site open space to serve new residents in the form of an outdoor amenity deck equipped with an open lawn and mounded garden spaces as well as an open roof deck with lounge furnishings and free-standing planters. Private open space in the form of tenant terraces would also be included in the proposed project.

According to the City of Berkeley's DAP, Center Street has more foot traffic than any other street in the East Bay (City of Berkeley 2012). The DAP includes Policy AC-1.1 which calls for modifications of the street network to better serve the needs of pedestrians, bicycles, and transit. Policy AC-1.1 lists potential traffic lane modifications including the closure of a portion of Center Street in front of the project site to through traffic to create a "slow street" which would only be open to bicycles, pedestrians, and emergency vehicles and allow for an expanded public plaza. This would increase bike, pedestrian, and transit access to the area. Because the project would not provide vehicle access from Center Street, the project would be consistent with future plans to close the portion of Center Street adjacent to the project site. The project is required to contribute to the project's SOSIP fee, which would fund future plans for the Center Street closure.

The proposed project would replace and expand the parklet that is on the Oxford Street frontage. The project would provide 36,729 square feet of open space and would pay in-lieu fees for the remaining 2,071 square feet that are required but not provided by the project. In-lieu fees can be used to fund park improvements at other parks in Berkeley. This would further ensure that the project's impacts on local parks and recreational facilities would be **less than significant**.

b) The project would involve the redevelopment of the existing project site to include residential and ground floor commercial uses. As explained under Checklist Question (a), the project does not require the construction or expansion of public recreational facilities. Therefore, development of the project would not result in additional environmental effects beyond those described in this document. This impact would be **less than significant**.

Conclusion

As the DAP EIR concluded for the plan area as a whole, the project would have a less than significant impact on recreational resources., The project would not result in new specific effects that were not addressed in the DAP EIR, and would not require new mitigation measures; therefore, this issue **does not require further study in an EIR**.

17 Transportation/Traffic

	Significant Impact	Less Than Significant or Less than Significant with Mitigation Incorporated	No Impact	Analyzed in the Prior EIR	Substantially Mitigated by Uniformly Applicable Development Policies
Would the project:					
a. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	■	☐	■	■
b. Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	■	☐	☐	☐
c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?	☐	■	☐	■	☐
d. Result in inadequate emergency access?	☐	■	☐	■	☐

Downtown Area Plan EIR Summary

The DAP EIR discusses transportation/traffic impacts on pages 4-238 through 4-325. The DAP EIR analysis for year 2030 buildout of the Plan assumed that the Downtown Area would accommodate up to 3,100 new residential units and up to 1,000,000 square feet of non-residential floor space. The DAP EIR examined a range of potential impacts related to transportation and traffic, including unacceptable level of service (LOS) at the following intersections:

- Martin Luther King Jr. Way/Hearst Avenue
- Martin Luther King Jr. Way/Allston Way
- Milvia Street/University Avenue
- Milvia Street/Center Street
- Shattuck Avenue/Center Street
- Shattuck Avenue/Allston Way
- Shattuck Avenue/Bancroft Way
- Shattuck Avenue/Durant Avenue

- Oxford Street/Hearst Avenue
- Oxford Street/University Avenue
- Oxford Street/Allston Way

The DAP EIR also identified impacts associated with increased a.m. peak hour congestion along Ashby Avenue eastbound between Adeline Street and Telegraph Avenue, DAP-related reduction of emergency access along Center Street, and increased traffic along Milvia Street adversely affecting bicycle boulevard operations. Impacts were assessed in the context of adopted planning documents and were based on the IBI Group's Berkeley DAP – Program Environmental Impact Report Traffic Impact Analysis (2014). The DAP EIR identified mitigation measures related to intersections and other traffic impacts, including the following within 0.25 mile of the project site:

- **Mitigation TRA-4: Modify Lane Configuration at Milvia Street/Center Street Intersection.** One left tum lane should be added to Milvia Street in the northbound and southbound directions, changing the lane configuration to one through-right and one left tum lane. This mitigation measure would result in change of LOS to C, with delay of 24.0s in the PM peak hour. The implementation of this mitigation measure requires the removal of on-street parking spaces in the northbound and southbound directions to accommodate the left tum, and the re-striping of Milvia Street on both sides of Center Street. This measure is not anticipated to cause significant impacts to pedestrian traffic. Milvia Street would remain a Bicycle Boulevard and sufficient traffic lane width would be provided for bicycles and vehicles to make through movements at this intersection. This improvement would result in the loss of about eight on-street parking spaces, but is not anticipated to generate significant impact with regard to parking.
- **Mitigation TRA-5: Modify Lane Configuration at Shattuck Avenue/Center Street.** The significant impact at this intersection can only be mitigated by restoring Shattuck Avenue to provide two traffic lanes in the northbound direction. The proposed mitigation measure would add one lane to Shattuck Avenue in the northbound direction, changing lane configuration to one left turn lane and two through lanes. This mitigation measure would result in change of LOS to D, with delay of 42.6s in the p.m. peak hour. The implementation of this mitigation measure would require the removal of the parking spaces in the northbound direction of Shattuck Avenue, the reconfiguration of the southeast sidewalk, and the re-striping of Shattuck Avenue in the block south of Center Street. This improvement would result in the loss of about eight on-street parking spaces, but is not anticipated to generate significant impact with regard to parking.
- **Mitigation TRA-6: Modify Lane Configurations at Shattuck Avenue/Allston Way Intersection.** The existing number of lanes (three) in the northbound and southbound directions should be maintained, changing lane configurations to one left tum lane, one through lane and one right tum lane. One right tum lane should be added to the westbound direction, changing the existing lane to a through-left only. This mitigation measure would change the forecast LOS to D, with delay of 37.6s in the p.m. peak hour. The proposed mitigation measure would maintain the single through lane concept of the Shattuck Boulevard plan, but would widen the street cross section by providing a right tum lane in the northbound and southbound directions. On Allston Way, the implementation of the proposed mitigation measure requires the removal of on-street parking to accommodate the new lane configuration. This measure is not anticipated to cause significant impacts to pedestrian traffic. The anticipated loss of six on-street parking spaces on Alston Way and none spaces on Shattuck Avenue is not expected to generate significant impacts.

- **Mitigation TRA-10: Modify Lane Configurations at Oxford Street/University Avenue Intersection.** The existing eastbound lane configuration should be maintained. This mitigation measure will result in change of LOS to D in the AM peak hour, with delay of 40.2s. Proposed Lane reduction on University could be maintained west of the intersection. The implementation of this mitigation measure requires the maintenance of the eastbound lane configuration. This measure is not anticipated to cause significant impacts to pedestrian traffic**.**
- **Mitigation TRA-11: Modify Lane Configurations at Oxford Street/Allston Way Intersection and Alter Signal Cycle Timing.** One lane should be added in the southbound direction, changing the lane configuration to two through and one right tum lane. One lane should be added to the northbound direction, changing the configuration to one left tum and two through lanes. One lane should be added in the eastbound direction, changing the configuration to one left tum lane and one right tum lane. Cycle length should be increased to 25s and to provide a protected left tum signal phase in the northbound direction. This mitigation measure would result in change of LOS to C in the Pm peak hour, with delay of 33.6s. On Oxford Street, the implementation of this mitigation measure would require the removal of 5 of the parking spaces in the southbound direction and the re-striping of the segment in the block north of Allston Way. In the northbound direction there is the need to use the median space, as well as re-stripe the roadway. On Allston Way, the addition of the extra lane would require the loss of 4 on-street parking spaces on the south side of the street, as well as restriping. This measure is not anticipated to cause significant impacts to pedestrian traffic. The loss of on-street parking spaces on Oxford Street and Allston Way is not anticipated to generate significant impacts. Modify Lane Configurations at Shattuck Avenue/Durant Avenue Intersection.
- **Mitigation TRA-13: Incorporate Emergency Access Lane in Design for Center Street Pedestrian Corridor.** In order to maintain adequate emergency access to buildings located along Center Street between Shattuck Avenue and Oxford Street, the design of the proposed Center Street pedestrian corridor shall be required to incorporate a clear area, a minimum of 20 feet in width, where permanent and temporary structures, landscaping, and other physical features are prohibited. This area shall be designated as an emergency access lane, and must be accessible from both Shattuck Avenue and Oxford Street.
- **Mitigation Measure TRA-14A:** Install Class 2 Bike Lanes on Milvia Street between University Avenue and Allston Way. This mitigation measure may result in the loss of on-street parking stalls along Milvia Street in order to accommodate the bike lanes. Up to 35 on-street parking stalls could be impacted by this mitigation measure. As noted in the parking demand discussion, sufficient public parking capacity is anticipated in the Year 2030 With Project condition, so the loss of these parking stalls would not be anticipated to cause a significant impact. This mitigation measure would also not preclude the implementation of the traffic mitigation measures at the University Avenue/Milvia Street intersection and the Center Street/Milvia Street intersection.
- **Mitigation Measure TRA-14B: Install Traffic Calming Devices.** Traffic calming devices should be installed on Milvia Street either between University Avenue and Allston Way or immediately north and south of this segment to discourage vehicle traffic from traveling on this section of the roadway. Traffic calming devices could include speed humps, turn restrictions/prohibitions, or other measures determined by the City of Berkeley.

The DAP EIR concluded that, with implementation of required mitigation measures, impacts related to transportation/traffic would be reduced to a level of less than significant.

Regulatory Setting

Senate Bill 743 and Vehicle Miles Traveled

Senate Bill (SB) 743 was signed into law by Governor Brown in 2013 and directed the State Office of Planning and Research (OPR) to establish new criteria for determining the significance of transportation impacts under the California Environmental Quality Act (CEQA). SB 743 requires the new criteria to "promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses." It also states that alternative measures of transportation impacts may include "vehicle miles traveled, vehicle miles traveled per capita, automobile trip generation rates, or automobile trips generated."

In January 2018, OPR transmitted its proposed *CEQA Guidelines* implementing SB 743 to the California Natural Resources Agency for adoption, and in January 2019 the Natural Resources Agency finalized SB 743 updates to the *CEQA Guidelines*. SB 743 changed the way that public agencies evaluate the transportation impacts of projects under CEQA, recognizing that roadway congestion, while an inconvenience to drivers, is not itself an environmental impact (Public Resource Code Section 21099(b)(2)). In addition to new exemptions for projects consistent with specific plans, the *CEQA Guidelines* replaced congestion-based metrics, such as auto delay and level of service (LOS), with VMT as the basis for determining significant impacts, unless the Guidelines provide specific exceptions.

The DAP EIR examined mostly program-level transportation impacts using the level of service (LOS) methodology and found that all such impacts from the program were less than significant or less than significant with mitigation incorporated. Given the adoption of SB 743, the City has the discretion to determine if the current project requires additional LOS analysis. The City has adopted VMT Criteria and Thresholds that include analysis of vehicle miles traveled (VMT) to determine whether a project has transportation-related environmental impacts (City of Berkeley 2020a). Accordingly, this analysis is based on VMT thresholds in the updated *CEQA Guidelines* and the City's local regulations. This analysis also evaluates the proposed project's impacts related to the remaining *CEQA Guidelines* thresholds that were also analyzed in the DAP EIR.

Project-Specific Impacts

a) Impacts related to conflicts with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities are analyzed in this section. This analysis is based on a Traffic Impact Analysis prepared by Abrams Associates in 2023 and included in Appendix D.

Transit

The Downtown Berkeley BART station is located less than five hundred feet from the project site. This station is located on the Richmond-Fremont Line which connects to other destinations in the Bay Area at the MacArthur Station. There is also direct service to Downtown San Francisco as well as continuing service to Milbrae. There is also extensive bus transit service provided by Alameda-Contra Costa County Transit (AC Transit) at the BART Station. In addition to local bus routes 6, 18, 51B, and 79, the following special lines operate less than a block from the project:

- 800: (All Nighter) Richmond BART to Market St. and Van Ness Ave, S.F., via Macdonald Ave, San Pablo Ave, University Ave, Telegraph Ave and downtown Oakland. Returns via Market St. and West Oakland BART.

- 851: (All Nighter) Downtown Berkeley to Fruitvale BART via Southside Berkeley (UC campus), College Ave., Broadway, downtown Oakland, Webster St., Santa Clara Ave., Broadway, and Fruitvale Ave.
- F: (Transbay) UC Campus to Transbay Temporary Terminal, San Francisco via Shattuck Ave, Adeline St and 40th St.

The proposed project would not interfere with existing bus routes and would not remove or relocate any existing bus stops. The proposed project also would not conflict with transit plans or goals of the City of Berkeley. Based on Institute for Transportation Engineer's data and data from MTC's Bay Area Travel Survey for projects within 0.5-mile of a BART station, during the peak commute hours the project would be forecast to generate approximately 114 transit trips; this incremental increase in trips would be accommodated by existing transit capacity. Based on the analysis of intersection operations and roadway segment speeds the project is not forecast to cause a degradation of the level of service (or a substantial increase in delay) on any roadway segments currently being utilized by bus transit in the area (Abrams Associates 2023; Appendix D). Therefore, impacts related to transit services would be **less than significant**.

Pedestrian and Bicycle Facilities

Bicycle paths, lanes and routes are typical examples of bicycle transportation facilities, which are defined by Caltrans as being in one of the following four classes:

- Class I – Provides a completely separated facility designed for the exclusive use of bicyclists and pedestrians with crossing points minimized.
- Class II – Provides a restricted right-of-way designated lane for the exclusive or semi-exclusive use of bicycles with through travel by motor vehicles or pedestrians prohibited, but with vehicle parking and cross-flows by pedestrians and motorists permitted.
- Class III – Provides a right-of-way designated by signs or permanent markings and shared with pedestrians and motorists.
- Class IV – Provides an adjacent bike lane or bikeway that is physically separated from motor vehicle traffic.

In the vicinity of the project Center Street, Oxford Street, and Bancroft Way are Class II bike routes with bike lanes. There are also existing sidewalks and crosswalks along the route from the project site to the west towards the Downtown Berkeley BART station and east to the U.C. Berkeley campus.

Based on Institute for Transportation Engineer's data and data from MTC's Bay Area Travel Survey for projects within 1/2 mile of a BART station, during the peak commute hours the project would be forecast to generate approximately 40 bicycle trips and 232 pedestrian trips.

The project would add pedestrians and bicyclists who will utilize sidewalks and bicycle facilities in the area. Based on the forecasted added bicycle and pedestrian trips associated with the project, in relation to the existing conditions, the proposed project would not cause substantial changes to the pedestrian or bicycle traffic in the area and would not substantially impact or require changes to the design of any existing bicycle or pedestrian facilities.

With respect to planned pedestrian and bicycle facilities in the project area, the City's 2020 Pedestrian Plan (City of Berkeley 2020b) has identified the nearby segment of University Avenue from San Pablo Avenue to Oxford Street as a priority street segment for improvements due to the high number of pedestrian accidents. At the study intersection of University Avenue at Oxford Street proposed improvements in the Pedestrian Plan include median refuges for pedestrians, curb extensions, and widening of the sidewalk at the existing bus stops. The City's Bicycle Plan (City of Berkeley 2017) identifies a protected intersection at University Avenue and Oxford Street. Protected intersections typically require the use of bicycle signals to isolate bicycle movements from conflicting vehicle movements. Bicycle signal phases can be added to the traffic signals to isolate bicycle movements from conflicting vehicle movements. The Bicycle Plan also specifies that University Avenue, Oxford Street, Shattuck Avenue, should be studied for potential cycletracks (bike lanes physically separated from motor traffic) and Addison Street should be studied for a potential bicycle boulevard. The proposed project would not involve changes to Oxford Street which would conflict with these proposed improvements.

As stated in the project description, the proposed project includes payment a proportionate share of the construction costs to install RRFBs at crosswalks on Oxford Street at Allston Way. This would increase pedestrian and bicyclist safety at an intersection where, according to the project Traffic Impact Analysis, U turns are anticipated to increase. The RRFB would be designed to meet City standards and requirements. A signal light is planned to be installed at this intersection as one of the City's capital improvement projects. The RRFB's would be an interim safety improvement that would be removed once the traffic signal is installed. It is assumed the future traffic signal would include a protected left turn phase to further improve safety with the high volume of U-turns.

The DAP includes Policy AC-1.1, which calls for modifications of the street network to better serve the needs of pedestrians, bicycles, and transit. Policy AC-1.1 outlines potential traffic lane modifications including the closure of a portion of Center Street in front of the project site to through traffic to create a "slow street" which would only be open to bicycles, pedestrians, and emergency vehicles and allow for an expanded public plaza. This would increase bike, pedestrian, and transit access to the area. Because the project would not provide vehicle access from Center Street, the project would be consistent with future plans to close the portion of Center Street adjacent to the project site and proposes to use the project's Streets and Open Space Improvement Program (SOSIP) fee toward this effort. The proposed project would be subject to the following City Standard Condition of Approval related to the SOSIP:

> **Streets and Open Space Improvement Plan**: Impact Fee. As required by BMC Section 23E.68.075, the project shall pay an impact fee to implement the Streets and Open Space Improvement Plan (SOSIP) per the fee schedule adopted by the Council by resolution. The City shall deposit this payment into the Downtown Streets and Open Space Improvement Fund (SOSIF), or its equivalent, to pay for the design and construction of the SOSIP Major Projects. "Gross Floor Area" shall be as defined in BMC Section 23F.04.010.
>
> At the City's discretion, the City Manager or her designee may reduce the required SOSIP Impact Fee, on a $1 to $1 ratio, as a credit for constructing all or a portion of a Major SOSIP Improvement Project beyond the frontage improvements already required by this Permit. The first half of this fee shall be paid prior to issuance of a building permit, and the second half shall be paid prior to issuance of a certificate of occupancy.

Overall, the proposed project would not substantially impact existing bicycle or pedestrian facilities, would not conflict with the City's Pedestrian Plan or Bicycle Plan and would be consistent with planned improvements on Center Street in accordance with DAP Policy AC-1.1. Therefore, impacts related to bicycle and pedestrian facilities would be **less than significant**.

Roadway

Given the adoption of SB 743, the City has the discretion to determine if the current project does not require additional environmental analysis. The City has adopted VMT Criteria and Thresholds (City of Berkeley 2020a) that include analysis of VMT to determine whether a project has transportation-related environmental impacts. Accordingly, this analysis is based on VMT thresholds in the updated *CEQA Guidelines* and the City's local regulations. Since the current project is generally consistent with the DAP as analyzed in the DAP EIR, none of the provisions in *CEQA Guidelines* Section 15152(d) or 15162 require preparation of additional environmental analysis related to roadway impacts. Therefore, the project would have a **less than significant** impact with respect to roadways.

b) The proposed project is within an area with an average VMT per resident at least 15 percent below the respective Bay Area averages and it is located within a Transit Priority Area (ABAG/MTC 2021b). As such, pursuant to *CEQA Guidelines* Section 15064.3(b)(1) and the City's VMT Criteria and Thresholds (City of Berkeley 2020a), the project would be presumed to have a less than significant impact. The City's VMT Criteria and Thresholds specify that this presumption might not be appropriate if the project:

- Has a floor area ratio (FAR) of less than 0.75.
- Includes more than 200,000 square feet of office or commercial space.
- Includes more parking supply than the project's estimated demand
- Is inconsistent with the City's General Plan, an applicable Specific Plan, or an applicable Sustainable Communities Strategy (as determined by the City, with input from the MTC).
- Replaces affordable residential units with market-rate residential units.
- Has project-specific or location-specific information that indicates that the project will generate significant levels of VMT

None of the factors above would apply to the project. The proposed project would:

- Involve a FAR over 0.75.
- Include 13,500 square feet of retail and restaurant space, which is less than 200,000 square feet of office or commercial space.
- Includes fewer parking spaces (36) than would typically be provided to meet the demand for 486 residential units and 15,000 square feet of retail and restaurant space.
- Be consistent with the City's General Plan and DAP (see Section 11, *Land Use and Planning*).
- Replace 16 vacant rent- controlled residential units with 41 below market rate units; therefore would not replace affordable rental units with market-rate residential units.
- Result in less than significant VMT impacts.

The project is located less than 500 feet from the Downtown Berkeley BART station and is located near bus stops for numerous bus lines at the intersection of Shattuck Avenue and Center Street. Therefore, the project would have a **less than significant** impact on VMT (Abrams Associates 2023; Appendix D).

c) The DAP EIR determined that the roadway network changes proposed as part of the DAP did not include hazardous design features, and that the DAP would not incorporate design features that could increase traffic hazards. The project would not include modifications to the existing on- or offsite transportation network that would result in potential transportation hazards not anticipated in the DAP EIR.

The proposed project would include a 36-space parking garage located at-grade with access from a driveway on Oxford Lane and would include mechanical lifts in a pit that extends into the basement. Oxford Lane currently provides access to parking for the existing tenants on the project site. The parking area includes approximately 57 parking spaces. Oxford Lane also provides access to the back of several other commercial and residential properties. Oxford Lane is approximately 10 feet wide and serves two-way traffic but no problems with safety or traffic operations have been documented or observed. The proposed project would reduce vehicles on Oxford Lane due to the reduction in parking, as the existing parking lot has 57 parking spaces and the proposed project would provide 36 parking spaces. Overall, the proposed project would not result in hazardous design conditions with respect to Oxford Lane.

Based on a review of the proposed site plan included in the Traffic Impact Analysis (Abrams Associates 2023; Appendix D), at the internal garage circulation would not cause safety or operational problems. The project site design would be required to conform to City design standards. Pursuant to City of Berkeley guidelines, the project would be required to maintain minimum five foot by five-foot sight distance triangle at the garage entrance/exit and would also be required to provide visual and/or audio warning devices that alert pedestrians when vehicles are exiting the driveway. The project plans would be reviewed and approved by City Transportation staff to confirm compliance. With compliance with City design standards, the proposed project would not result in significant safety hazards to pedestrians or bicyclists. The Traffic Impact Anaysis also analyzed construction impacts associated with the proposed project. Construction of the project would likely require temporary closures of sidewalks and/or vehicle lanes adjacent to the site. However, prior to issuance of grading and building permits, the project applicant would be required to submit and have approved a Traffic Control Plan. The City requires permission to close sidewalks and an acceptable traffic control plan for closures to be permitted. In general, the pedestrian and bicycle operations in the area would not be expected to change significantly during construction beyond the addition of truck traffic to the area. The Traffic Control Plan would indicate how parking for construction workers would be provided during construction and ensure a safe flow of traffic in the project area during construction.

Overall, the project site is required to conform to City design standards and would not create hazardous conditions for pedestrians or bicyclists. The project does not involve the construction or alteration of roadways. Additionally, the project would be primarily residential and would not involve equipment that would be incompatible with surrounding uses. Impacts would be **less than significant.**

d) Sufficient emergency access is determined by factors such as number of access points, roadway width, and proximity to fire stations. The proposed project would be subject to approval of the fire department. Lane widths adjacent to the project would meet the minimum width that can accommodate an emergency vehicle; therefore, the width of the roadways would be adequate (Abrams Associates 2023; Appendix D). The project does not include on-site roadways or surface parking. The project would not involve permanent physical changes to public streets that could impede emergency access. Overall, the proposed project would have a **less than significant impact** related to emergency access.

Conclusion

The estimated VMT for the project would be below thresholds of significance, and project-specific impacts related to traffic hazards, emergency access, pedestrian and bicycle circulation, and transit capacity would not exceed or differ from those identified in the DAP EIR. The project would not result in new specific effects that were not addressed in the DAP EIR, and no new mitigation measures would be required; therefore, this issue **does not require further study in an EIR**.

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18 Tribal Cultural Resources

	Significant Impact	Less Than Significant or Less than Significant with Mitigation Incorporated	No Impact	Analyzed in the Prior EIR	Substantially Mitigated by Uniformly Applicable Development Policies
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in a Public Resources Code Section 21074 as either a site, feature, place, or 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:					
a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or	■	□	□	□	□
b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	■	□	□	□	□

Downtown Area Plan EIR Summary

The DAP EIR did not address the issue of "tribal cultural resources" because its publication in 2009 preceded the passage of California AB 52 of 2014, which expanded CEQA by defining this issue area as a new resource category.

AB 52 was enacted on July 1, 2015, and establishes that "a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment" (PRC Section 21084.2). It further states that the lead agency shall establish measures to avoid impacts that would alter the significant characteristics of a tribal cultural resource, when feasible (PRC Section 21084.3).

PRC Section 21074 (a)(1)(A) and (B) defines tribal cultural resources as "sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe" and meets either of the following criteria:

1. 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).
2. 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 PRC Section 5024.1. In applying these criteria, the lead agency shall consider the significance of the resource to a California Native American tribe.

AB 52 also establishes a formal consultation process for California tribes regarding tribal cultural resources. The consultation process must be completed before a CEQA document can be certified. Under AB 52, lead agencies are required to "begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project." Native American tribes to be included in the process are those that have requested notice of projects proposed within the jurisdiction of the lead agency.

Project-Specific Impacts

a, b) According to Appendix G of the *CEQA Guidelines*, the project would have a significant impact on tribal cultural resources if it would cause a substantial adverse change in the significance of a tribal cultural resource that meets the criteria listed in PRC Section 21074. The proposed project would have a **potentially significant impact** on tribal cultural resources, and this issue will be analyzed further in an EIR.

Conclusion

The DAP EIR does not address the issue of tribal cultural resources and the proposed project could result in new specific effects that were not addressed in the DAP EIR. Therefore, impacts to tribal cultural resources could be potentially significant and **require further study in an EIR.**

19 Utilities and Service Systems

	Significant Impact	Less Than Significant or Less than Significant with Mitigation Incorporated	No Impact	Analyzed in the Prior EIR	Substantially Mitigated by Uniformly Applicable Development Policies
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?	□	■	□	■	□
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	□	■	□	■	□
c. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	□	■	□	■	□
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?	□	■	□	■	□

	Significant Impact	Less Than Significant or Less than Significant with Mitigation Incorporated	No Impact	Analyzed in the Prior EIR	Substantially Mitigated by Uniformly Applicable Development Policies
e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	■	☐	■	☐

Downtown Area Plan EIR Summary

The DAP EIR discusses impacts on utilities and service systems in Section 4P, Utilities and Service Systems, on pages 4-326 through 4-349. This discussion addresses the issues of water supply, wastewater, stormwater runoff, streets and sidewalks, gas/electricity/telecommunications, and solid waste and recycling. The DAP EIR discussions of these impact areas are summarized below.

- **Water Supply**. According to the DAP EIR, development anticipated in the Downtown Area under the DAP would generate demand for 0.76 million gallons per day (MGD) of water, including 0.42 MGD for residential uses and 0.34 MGD for non-residential uses. The DAP EIR found that projections in EBMUD's 2005 Urban Water Management Plan (UWMP) had assumed such an increase in water demand. Furthermore, the application of City ordinances to conserve water used in landscaping and to install low-flow plumbing fixtures would limit future increases in water demand in the Downtown Area. Therefore, the DAP EIR identified impacts on water supply as less than significant.
- **Wastewater.** Wastewater generated in Berkeley flows to a plant operated by EBMUD, which the DAP EIR identified as providing secondary treatment for up to 168 MGD. With an average dry-weather flow of 80 MGD, the EBMUD treatment plant had an available capacity of 88 MGD. Thus, the DAP EIR found that the plant would be able to accommodate increased wastewater flow from Downtown Area. However, it also found that individual development projects proposed under the DAP could exceed the capacity of the existing local sanitary sewer conveyance system. In the absence of a completed System Evaluation & Capacity Assurance Plan to ascertain the capacity of sewer lines and needed capital improvements, the DAP EIR found a potentially significant impact from improvements to sewer lines. The following mitigation measure requires site-specific analysis of sewer lines for individual projects.
  - **Mitigation UTIL-1:** Site-Specific Analysis of Project-Related Effects on the Sanitary Sewer Conveyance System/Project-Related Contribution to Necessary Capacity Expansion. As individual development projects are proposed in the Downtown Area, each project will be subject to site-specific analysis by the City of Berkeley to determine whether the development proposed would exceed the capacity of the sanitary sewer conveyance system that directly serves the project. In the event that existing sanitary sewer modeling demonstrates that sanitary sewer conveyance system capacity would be exceeded by the project, then the project proponents and the City shall enter into negotiations to determine the financial contribution required from the project proponents to enable the City to expand sanitary sewer conveyance capacity as necessary to accommodate the project as proposed.

- **Stormwater Runoff**. As discussed in the DAP EIR, the Downtown Area is almost entirely impermeable with little diversion or slowing of runoff before it enters drainpipes and Strawberry Creek. Given the already developed nature of the Downtown Area, the DAP EIR found that implementation of the DAP would not result in a significant increase in impervious surface area. Furthermore, compliance with the City's NPDES permit and Stormwater Ordinance (BMC Chapter 17.20) were determined to reduce impacts to a less than significant level. Adherence to measures in the San Francisco Bay RWQCB's MS4 General Permit also would reduce stormwater runoff flow from the project site relative to existing conditions.
- **Streets and Sidewalks**. During construction of developments anticipated under the DAP, the movement of heavy trucks and construction equipment would have the potential to damage streets and sidewalks. However, the City requires pre- and post-construction surveys of street conditions as standard conditions of approval. Damage to sidewalks during construction would be required to be repaired or replaced at the property owner's expense. Therefore, the DAP EIR identified physical impacts on streets and sidewalks as less than significant.
- **Gas/Electricity/Telecommunications**. The DAP EIR found that implementation of the DAP would not result in a significant increase in dependence on non-renewable energy resources or in substantial increases in peak or base-period energy use. Required compliance with Title 24 of the California Energy Code and with the City's Energy Conservation Ordinance would reduce energy use. In addition, the City's commitment to reducing GHG emissions would reduce energy demand from non-renewable sources. Impacts were found to be less than significant.
- **Solid Waste and Recycling**. The DAP EIR identified impacts on the capacity of landfills as less than significant. The Vasco Road Landfill was determined to have enough capacity to accommodate solid waste generated from the Downtown Area through 2024, with or without implementation of the DAP. Impacts related to regulatory compliance were found to be less than significant, based on compliance with the City's Solid Waste Management Plan, which requires compliance with statutes and regulations related to solid waste in the Downtown Area.

Project-Specific Impacts

a – c) The project would include utility connections in accordance with requirements of the applicable utility providers for water, wastewater, stormwater drainage, power, and telecommunications services. The project site does not contain unique conditions or features that would result in project-specific impacts beyond those identified in the DAP EIR. These utilities would connect to existing infrastructure in the vicinity of the site. PG&E would provide electricity, EBMUD would provide water and wastewater service, and the City of Berkeley would provide storm water and wastewater services.

Water Supply

The DAP EIR demonstrates that anticipated water demand in this area has been accounted for in EBMUD's water demand projections and that development occurring under the DAP would not require changes to those projections. Because the project would be generally consistent with the DAP and would not result in substantial population or housing growth beyond that already anticipated under the DAP EIR, it is not anticipated that EBMUD would need new or expanded entitlements to serve the project.

In the 2020 UWMP, EBMUD updated its Drought Management Program Guidelines to incorporate new measures such as a staged system of drought rates, new ordinances and penalties, and a super saver recognition program. With implementation of the updated Drought Management Program, EBMUD predicts that available supply would meet demand during both a one-year and two-year drought through the year 2050. However, EBMUD's 2020 UWMP found that, in the event of a three-year drought, the utility's water supply would be insufficient to meet demand in future years and would require supplementation beyond that already identified (EBMUD 2020). Due to future potential water scarcity, future users of the project site (and all EBMUD customers) should plan for shortages and both voluntary and mandatory water use reductions in times of drought. EBMUD imposes a system capacity charge on new developments to fund system maintenance and the development of new water sources. The project applicant would be required to pay this fee and undertake measures to conserve water.

The project would reduce water use relative to standard building practices by attaining a LEED Gold rating or equivalent including the use of low-flow water fixtures, and the planting of low and very low water use plants. These water conservation measures would reduce the project's burden on municipal water supply compared to standard fixtures and building programs. The DAP EIR acknowledged that increasing development would increase the demand on water supply resources; however, the City requires water conservation measures and best management practices to reduce water use. Through the project's water-efficient measures described above, the City's existing water entitlements would be sufficient to serve the project consistent with the DAP EIR, and the construction of new water treatment facilities or the expansion of existing facilities would not be required. Consistent with the DAP EIR's analysis for development in the Downtown Area, water supply impacts would be **less than significant**.

Wastewater

The City's sanitary sewer lines feed into the wastewater treatment plant operated by EBMUD, which provides secondary treatment for a maximum flow of 168 MGD, primary treatment for up to 320 MGD, and plant capacity for a short-term hydraulic peak of 415 MGD. On average, the EBMUD wastewater treatment plant treats 50 MGD of wastewater (EBMUD 2019). Therefore, on an average day the EBMUD wastewater treatment plant has a remaining secondary treatment capacity of 118 MGD and could accommodate development associated with the DAP, including construction and operation of the project. The proposed project is generally consistent with the DAP, and therefore would be within impacts considered in the DAP EIR. The proposed project includes water conservation to achieve a LEED Gold rating or equivalent. Previously-adopted DAP EIR Mitigation Measure UTIL-1 requires a site-specific analysis of new projects' wastewater generation and capacity requirements to ensure improvements are made to the existing sanitary sewer system as needed to serve the project. If the sewer capacity analysis shows that project wastewater would exceed the sewer system capacity, the applicant would be required to increase the capacity by upsizing the sewer pipes. Therefore, the project would have a **less than significant impact with mitigation**, consistent with the DAP EIR.

Stormwater Runoff

As discussed in Section 10, *Hydrology and Water Quality*, the project would involve infill development on a site that consists entirely of hardscape. The project would not substantially change the amount of impervious surface on site; therefore, the amount of runoff from the project site would be similar to the amount of runoff under existing conditions. Therefore, the project would not require the construction of new or expanded on-site facilities for stormwater drainage. Consistent with the DAP EIR's analysis, the project would have a **less than significant** impact related to stormwater runoff.

Streets and Sidewalks

As discussed in the DAP EIR, although construction could result in physical damage to streets and sidewalks, the City would require pre- and post-construction surveys of street conditions and repair or replacement of damage to sidewalks at the property owner's expense. The proposed project would involve improvements to the sidewalk, curb and gutter along Center Street and Oxford Street frontages. These improvements must be reviewed and approved by the City's Public Works Department. Therefore, consistent with the DAP EIR's analysis, the project would have **less than significant** physical impacts on streets and sidewalks.

Electricity/Telecommunications

As the project is generally consistent with the DAP and would not result in substantial population or housing growth beyond that already anticipated under the DAP EIR, service by and consumption of these utilities would be generally within that considered in the DAP EIR. It should also be noted that the City's General Plan, Community Design Guidelines, and Zoning Regulations include policies that reduce energy use from buildings and equipment, including incorporating renewable energy, energy- and water-efficient technologies, use of recycled materials, waste reduction, reuse and recycling of construction and demolition scraps, high-efficiency lighting, and design standards that maximize passive ventilation and cooling systems and use of natural lighting inside buildings. The project would be conditioned to comply with these existing requirements and would include energy efficient lighting and appliances as well as an all-electric design. As discussed in Section 6, *Energy,* consistent with the DAP EIR's analysis, the project's impacts related to energy use would be **less than significant**. Additionally, the project site is currently served by existing telecommunications companies such as AT&T and Xfinity and would not require the construction of additional telecommunications infrastructure. Telecommunications impacts would be **less than significant.**

d, e) The City of Berkeley would provide solid waste services to the project site. The DAP EIR determined that the Vasco Road Landfill would have sufficient remaining capacity to accommodate solid waste generated from the Downtown Area through 2024. However, since the adoption of the DAP EIR, instead of the Vasco Road Landfill, the City collects and hauls most of the city's trash to the Altamont Landfill. In 2019, 70,387 tons of trash out of the total 91,579 tons of trash generated in Berkeley was sent to the Altamont Landfill (CalRecycle 2023a). According to CalRecycle, the Altamont Landfill is expected to remain open through 2070, and has a remaining capacity of 65,400,000 cubic yards (CalRecycle 2023b). Diversion of solid waste from the project site into the recycling stream would substantially reduce the project's impact on landfill capacity. The 2016 CalGreen would require the diversion of at least 65 percent of solid waste from construction and demolition for high-rise residential projects. The project must comply with the City of Berkeley's local amendment to CalGreen requiring that 100 percent of concrete, asphalt, and land clearing debris and at least 65 percent of remaining construction and demolition debris is diverted from landfill (BMC 19.37). The project also must reduce landfill disposal of organic waste in compliance with SB 1383, which was approved in September 2016 and went into effect January 1, 2022 (BMC 12.35). This law sets targets of a 50 percent reduction in statewide disposal of organic waste from the 2014 level by 2020 and 75 percent by 2025. The project also must comply with SB 1383's target to recover for human consumption at least 20 percent of disposed edible food by 2025. Therefore, the project would not result in greater impacts on landfill capacity or regulatory compliance related to solid waste than anticipated in the DAP EIR. Consistent with the DAP EIR's analysis, impacts would be **less than significant**.

Conclusion

As the DAP EIR concluded for the plan area as a whole, the project would have less than significant impacts related to utilities and service systems. The project would not result in new specific effects that were not addressed in the DAP EIR, and no new mitigation measures would be required; therefore, this issue **does not require further study in an EIR**.

20 Wildfire

	Significant Impact	Less Than Significant or Less than Significant with Mitigation Incorporated	No Impact	Analyzed in the Prior EIR	Substantially Mitigated by Uniformly Applicable Development Policies
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?	☐	■	☐	☐	☐
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?	☐	■	☐	☐	☐
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?	☐	■	☐	☐	☐
d. Expose people or structures to significant risks, including downslopes or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	■	☐	☐	☐

Downtown Area Plan EIR Summary

The DAP EIR did not address the issue of wildfire separately from the discussion in the Hazards and Hazardous Materials because its publication preceded the December 2018 *CEQA Guidelines* update, which expanded CEQA by defining this issue area as a stand-alone resource category. This issue is, therefore, discussed below.

Regulatory Setting

In California, State and local agencies share responsibility for wildfire prevention and suppression and federal agencies take part as well. Federal agencies are responsible for federal lands in Federal Responsibility Areas (FRA). The State of California has determined that some non-federal lands in unincorporated areas with watershed value are of statewide interest and have classified those lands as State Responsibility Areas (SRA). The California Department of Forestry and Fire Protection (CAL FIRE) manages SRAs. All incorporated areas and unincorporated lands not in FRAs or SRAs are classified as Local Responsibility Areas (LRA).

While nearly all of California is subject to some degree of wildfire hazard, there are specific features that make certain areas more hazardous. CAL FIRE is required by law to map areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors (Public Resources Code 4201-4204, California Government Code 51175-89). As described above, the primary factors that increase an area's susceptibility to fire hazards include slope, vegetation type and condition, and atmospheric conditions. CAL FIRE maps fire hazards based on zones, referred to as Fire Hazard Severity Zones (FHSZ). There are three levels of severity: 1) moderate FHSZs; 2) high FHSZs; and 3) Very High Fire Hazard Severity Zones (VHFHSZ). Only the VHFHSZs are mapped for LRAs. Each of the zones influence how people construct buildings and protect property to reduce risk associated with wildland fires. However, none of the fire zones specifically prohibit development or construction. To reduce fire risk under State regulations, development within VHFHSZs must comply with specific building and vegetation management requirements intended to reduce property damage and loss of life in those areas.

CAL FIRE develops initial boundaries for VHFHSZs throughout California, but the final boundaries of a VHFHSZ are adopted by each jurisdiction. The City of Berkeley has established and adjusted fire zones in Berkeley. Currently, the Berkeley Fire Department currently has divided the city into Fire Zones 1, 2, and 3, designated in order of ascending fire risk. Fire Zone 3 is the Panoramic Hill area; Fire Zone 2 covers the remainder of the city's eastern hills; Fire Zone 1, covers the rest of the City west of the hills. Fire Zones 2 and 3 currently include about 8,300 properties. These zones have the strictest fire prevention standards in the City for issues such as building materials for new structures. The City also enforces vegetation management measures in these areas.

The VHFHSZ formally adopted by the City is larger than originally proposed by CAL FIRE, and includes City of Berkeley Fire Zones 2 and 3, as well as approximately 36 individual parcels located near or adjacent to the VHFHSZ. Much of the Berkeley Hills in the eastern portion of Berkeley lies in a VHFHSZ. Berkeley is also within an LRA and the areas adjacent to the east of Berkeley are within an SRA. The Wildfire Urban Interface area in Berkeley is the same as the VHFHSZ.

Project-Specific Impacts

a – d) As stated in the DAP EIR no part of the Downtown Area is in an area formally identified as subject to wildland fire hazards. However, according to Steven Riggs, Deputy Fire Marshal of the BFD, the northeast corner of the Downtown Area is less than 150 feet from the locally designated

VHFHSZ (Hearst Street immediately east of Oxford Street). The proposed project would be located approximately 1,400 feet from a LRA VHFHSZ. The proposed project is not located in or near a SRA.

The project itself is not located within a VHFHSZ, and so the provisions of CBC or BBC Chapter 7A and fire code vegetation management requirements associated with wildfire zones, would not directly apply. However, the proposed project would be located within an area that could conceivably receive ember-cast from a significant wildfire. Better technical understanding of how wildfires spread to structures has been developed since the certification of the DAP EIR. Ember-cast ahead of an approaching wildfire often results in the ignition of structures well ahead of the fire and outside of VHFHSZ. The proposed project would incorporate outdoor amenity areas on upper stories that could be expected to receive ember-cast in the event of a local wildfire. Ember-cast induced fire spread is difficult to manage on the ground level, but substantially more difficult to manage on higher stories (Steven Riggs 2023).

Nonetheless, the proposed project would be required to comply with State and local fire regulations. The California Fire Code included in Title 24, part 9, Chapter 7 addresses fire-resistant-rated construction. Part 2, Chapter 7A addresses materials and construction methods for exterior wildfire exposure; Chapter 8 addresses fire related Interior finishes; Chapter 9 addresses fire protection systems; and Chapter 10 addresses fire related means of egress, including fire apparatus access road width requirements. With compliance with State and local regulations, the proposed project would be designed to be fire resistant in the event of a nearby wildfire.

Overall, the proposed project is not within a VHFHSZ or SRA, is an urban infill site, and would not generate substantial amounts of traffic (see Section 17, Transportation) and would comply with Fire Code regulations related to ingress and egress. Therefore, the proposed project would not substantially impair an adopted emergency response plan or emergency evacuation plan. The proposed project is also not located in a VHFHSZ or SRA or within a Wildfire Urban Interface and would not exacerbate the risk of starting a wildfire thereby exposing project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. The proposed project would also not require the installation or maintenance of infrastructure that would exacerbate fire risk. The project site is in an area that is generally flat and not near slopes or flood areas and would not expose people or structures to significant risks, including downslopes or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. With compliance with existing regulations, the proposed project would result in **less than significant** impacts regarding wildfire.

Conclusion

The DAP EIR does not specifically address wildfire as a separate CEQA resource topic. However, the proposed project is located in an urbanized area and is not in a VHFHSZ or a State Responsibility Area. The project site is located approximately 1,400 feet from a VHFHSZ in a LRA and with compliance with standard wildfire safety precautions and other engineering controls required by the Fire Code, the project would not result in a new significant impact. Therefore, no new mitigation measures are required, and this issue **does not require further study in an EIR.**

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21 Mandatory Findings of Significance

	Significant Impact	Less Than Significant or Less than Significant with Mitigation Incorporated	No Impact	Analyzed in the Prior EIR	Substantially Mitigated by Uniformly Applicable Development Policies
Does the project:					
a. Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	■	□	□	■	□
b. 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)?	■	□	□	■	□
c. Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	■	□	□	■	□

a) As discussed in this environmental checklist under Section 4, *Biological Resources*, the project does not have the potential to 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, or reduce the number or restrict the range of a rare or endangered plant or animal.

As discussed in Section 5, *Cultural Resources*, and Section 18, *Tribal Cultural Resources,* the project would potentially result in significant impacts to historical resources, archaeological resources, human remains, and tribal cultural resources. Therefore, this impact is **potentially significant** and will be addressed in an EIR.

b) Cumulative impacts have been addressed in the individual resource sections above or are themselves cumulative in nature: Air Quality, Greenhouse Gases, and Utilities and Service Systems and would be less than significant or less than significant with implementation of previously adopted DAP EIR mitigation measures. Other resource areas were determined to have no impact and therefore would not contribute to cumulative impacts, such as Mineral Resources and Agricultural Resources. As such, cumulative impacts in these issue areas would also be less than significant (not cumulatively considerable).

As described in Section 17, *Transportation*, the project's VMT per resident would result in less than significant impacts. Based on technical guidance from the Governor's Office of Planning and Research, if a project has a less than significant impact on VMT using an efficiency-based threshold (e.g., VMT per resident), this implies that the project would not contribute to a cumulative VMT impact (OPR 2018).

As described in Section 4, *Cultural Resources*, Section 7, *Geology and Soils,* Section 9, *Hazards and Hazardous Materials,* Section 15, *Public Services,* and Section 18, *Tribal Cultural Resources,* impacts related to historical resources, geology and soils, hazards and hazardous materials, fire protection services, and tribal cultural resources are potentially significant and will be analyzed further in an EIR. Therefore, cumulative impacts related to these issue areas are also **potentially significant** and will be discussed further in an EIR.

c) Effects to human beings are generally associated with air quality, noise, traffic safety, geology/soils and hazards/hazardous materials. As discussed throughout this environmental checklist, but particularly in Section 3, *Air Quality*; Section 8, *Greenhouse Gas Emissions*; Section 13, *Noise*; and Section 15, *Public Services*; with implementation of previously adopted DAP EIR mitigation measures and applicable development standards and regulations, the project would not have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly, except for the issue area of fire protection services, hazards and hazardous materials, and noise. Construction noise impacts, as discussed in Section 13, *Noise and Vibration*, would be significant and unavoidable. This impact would be **significant**, consistent with the conclusions in the DAP EIR**.** Further, impacts related to geology and soils, fire protection services, and hazards and hazardous materials are **potentially significant** and will be analyzed further in an EIR.

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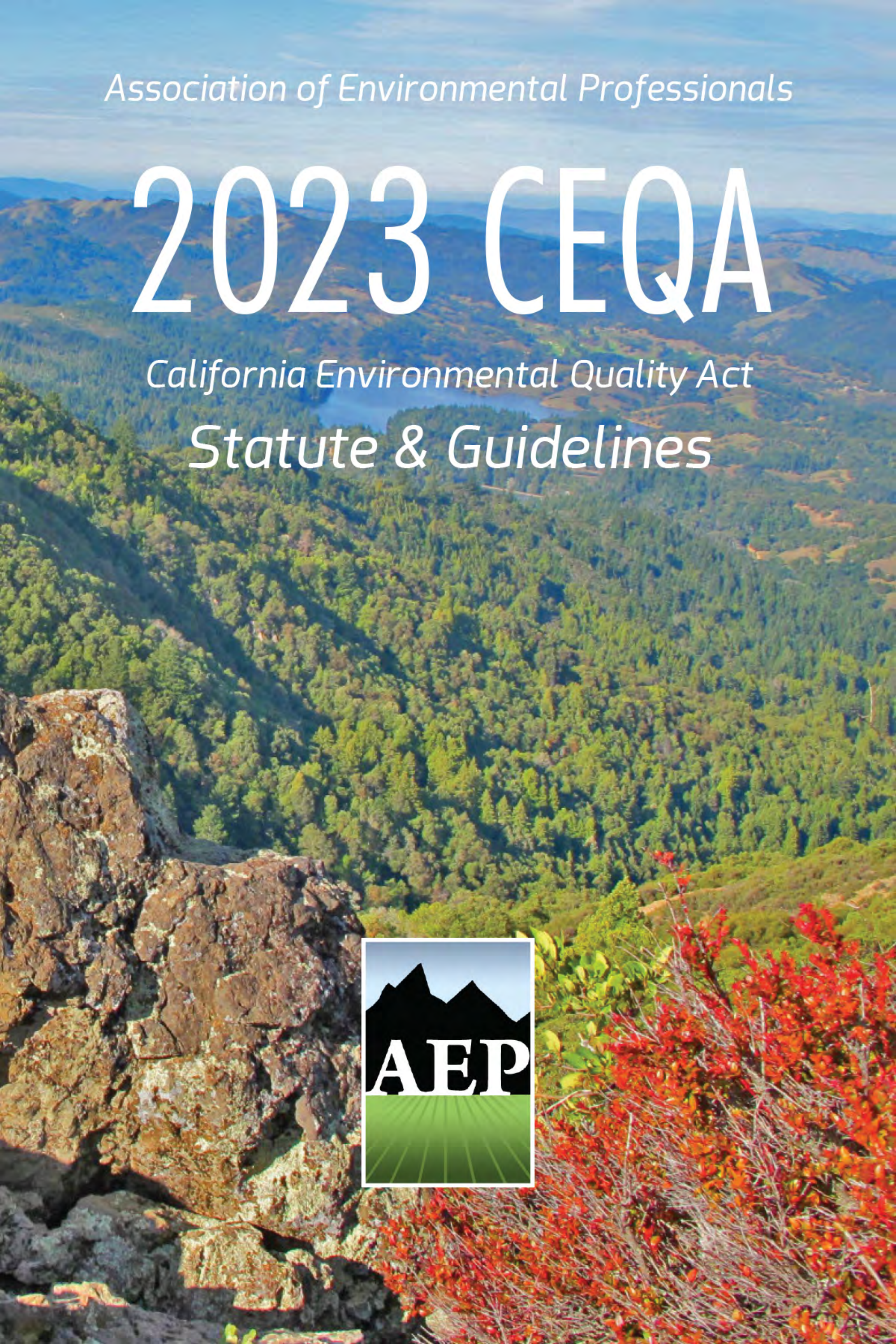
Appendix A

Section 15183.3 of the CEQA Guidelines



Association of Environmental Professionals

2023 CEQA

California Environmental Quality Act

Statute & Guidelines

AEP

2023
California Environmental Quality Act (CEQA)
Statute and Guidelines

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(i) Where the prior EIR relied upon by the lead agency was prepared for a general plan or community plan that meets the requirements of this section, any rezoning action consistent with the general plan or community plan shall be treated as a project subject to this section.

(1) "Community plan" is defined as a part of the general plan of a city or county which applies to a defined geographic portion of the total area included in the general plan, includes or references each of the mandatory elements specified in Section 65302 of the Government Code, and contains specific development policies and implementation measures which will apply those policies to each involved parcel.

(2) For purposes of this section, "consistent" means that the density of the proposed project is the same or less than the standard expressed for the involved parcel in the general plan, community plan or zoning action for which an EIR has been certified, and that the project complies with the density-related standards contained in that plan or zoning. Where the zoning ordinance refers to the general plan or community plan for its density standard, the project shall be consistent with the applicable plan.

(j) This section does not affect any requirement to analyze potentially significant offsite or cumulative impacts if those impacts were not adequately discussed in the prior EIR. If a significant offsite or cumulative impact was adequately discussed in the prior EIR, then this section may be used as a basis for excluding further analysis of that offsite or cumulative impact.

Note: Authority cited: Sections 21083 and 21083.05, Public Resources Code; Reference: Section 21083.3, 21083.05, Public Resources Code.

15183.3 STREAMLINING FOR INFILL PROJECTS

(a) Purpose. The purpose of this section is to streamline the environmental review process for eligible infill projects by limiting the topics subject to review at the project level where the effects of infill development have been addressed in a planning level decision or by uniformly applicable development policies.

(b) Eligibility. To be eligible for the streamlining procedures prescribed in this section, an infill project must:

(1) Be located in an urban area on a site that either has been previously developed or that adjoins existing qualified urban uses on at least seventy-five percent of the site's perimeter. For the purpose of this subdivision "adjoin" means the infill project is immediately adjacent to qualified urban uses, or is only separated from such uses by an improved public right-of-way;

(2) Satisfy the performance standards provided in Appendix M; and

(3) Be consistent with the general use designation, density, building intensity, and applicable policies specified for the project area in either a sustainable communities strategy or an alternative planning strategy, except as provided in subdivisions (b)(3)(A) or (b)(3)(B) below.

(A) Only where an infill project is proposed within the boundaries of a metropolitan planning organization for which a sustainable communities strategy or an alternative planning strategy will be, but is not yet, in effect, a residential infill project must have a density of at least 20 units per acre, and a retail or commercial infill project must have a floor area ratio of at least 0.75.

(B) Where an infill project is proposed outside of the boundaries of a metropolitan planning organization, the infill project must meet the definition of a small walkable community project in subdivision (f)(5), below.

(c) Streamlined Review. CEQA does not apply to the effects of an eligible infill project under two circumstances. First, if an effect was addressed as a significant effect in a prior EIR for a planning level decision, then, with some exceptions, that effect need not be analyzed again for an individual infill project even when that effect was not reduced to a less than significant level in the prior EIR. Second, an effect need not be analyzed, even if it was not analyzed in a prior EIR or is more significant than previously analyzed, if the lead agency makes a finding that uniformly applicable development policies or standards, adopted by the lead agency or a city or county, apply to the infill project and would substantially mitigate that effect. Depending on the effects addressed in the prior EIR and the availability of uniformly applicable development policies or standards that apply to the eligible infill project, streamlining under this section will range from a complete exemption to an obligation to prepare a narrowed, project-specific environmental document. A prior EIR will be most helpful in dealing with later infill projects if it deals with the effects of infill development as specifically and comprehensively as possible. With a good and detailed analysis of such development, the effects of many infill projects could be found to have been addressed in the prior EIR, and no further environmental documents would be required.

(d) Procedure. Following preliminary review of an infill project pursuant to Section 15060, the lead agency must examine an eligible infill project in light of the prior EIR to determine whether the infill project will cause any effects that require additional review under CEQA. Determinations pursuant to this section are questions of fact to be resolved by the lead agency. Such determinations must be supported with enough relevant information and reasonable inferences from this information to support a conclusion, even though other conclusions might also be reached. (See Section 15384.)

(1) Evaluation of the lnfill Project. A lead agency should prepare a written checklist or similar device to document the infill project's eligibility for streamlining and to assist in making the determinations required by this section. The sample written checklist provided in Appendix N may be used for this purpose. A written checklist prepared pursuant to this section should do all of the following:

(A) Document whether the infill project satisfies the applicable performance standards in Appendix M.

(B) Explain whether the effects of the infill project were analyzed in a prior EIR. The written checklist should cite the specific portions of the prior EIR, including page and section references, containing the analysis of the infill project's significant effects. The written checklist should also indicate whether the infill project incorporates all applicable mitigation measures from the prior EIR.

(C) Explain whether the infill project will cause new specific effects. For the purposes of this section, a new specific effect is an effect that was not addressed in the prior EIR and that is specific to the infill project or the infill project site. A new specific effect may result if, for example, the prior EIR stated that sufficient site-specific information was not available to analyze the significance of that effect. Substantial changes in circumstances following certification of a prior EIR may also result in a new specific effect.

(D) Explain whether substantial new information shows that the adverse environmental effects of the infill project are more significant than described in the prior EIR. For the purpose of this section, "more significant" means an effect will be substantially more severe than described in the prior EIR. More significant effects include those that result from changes in circumstances or changes in the development assumptions underlying the prior EIR's analysis. An effect is also more significant if substantial new information shows that: (1) mitigation measures that were previously rejected as infeasible are in fact feasible, and such measures are not included in the project; (2) feasible mitigation measures considerably different than those previously analyzed could substantially reduce a significant effect described in the prior EIR, but such measures are not included in the project; or (3) an applicable mitigation measure was adopted in connection with a planning level decision, but the lead agency determines that it is not feasible for the infill project to implement that measure.

(E) If the infill project will cause new specific effects or more significant effects, the written checklist should indicate whether uniformly applicable development policies or standards will substantially mitigate those effects. For the purpose of this section, "substantially mitigate" means that the policy or standard will substantially lessen the effect, but not necessarily below the level of significance. The written checklist should specifically identify the uniformly applicable development policy or standard and explain how it will substantially mitigate the effects of the infill project. The explanation in the written checklist may be used to support the finding required in subdivision (d)(2)(D) below.

(2) Environmental Document. After examining the effects of the infill project in light of the analysis in any prior EIR and uniformly applicable development policies or standards, the lead agency shall determine what type of environmental document shall be prepared for the infill project.

(A) No Further Review. No additional environmental review is required if the infill project would not cause any new specific effects or more significant effects, or if uniformly applicable development policies or standards would substantially mitigate such effects. Where the lead agency determines that no additional environmental review of the effects of the infill project is required, the lead agency shall file a Notice of Determination as provided in Section 15094. Where the lead agency finds that uniformly applicable development policies substantially mitigate a significant effect of an infill project, the lead agency shall make the finding described in subdivision (d)(2)(D).

(B) Negative Declaration, Mitigated Negative Declaration or Sustainable Communities Environmental Assessment. If the infill project would result in new specific effects or more significant effects, and uniformly applicable development policies or standards would not substantially mitigate such effects, those effects shall be subject to CEQA. If a new specific effect is less than significant, the lead agency may prepare a negative declaration. If new specific effects or more significant effects can be mitigated to a less than significant level through project changes agreed to prior to circulation of the written checklist, the lead agency may prepare a mitigated negative declaration. In these circumstances, the lead agency shall follow the procedure set forth in Sections 15072 to 15075. Alternatively, if the infill project is a transit priority project, the lead agency may follow the procedures in Section 21155.2 of the Public Resources Code. In either instance, the written checklist should clearly state which effects are new or more significant, and are subject to CEQA, and which effects have been previously analyzed and are not subject to further environmental review. Where the lead agency finds that uniformly applicable development policies or standards substantially mitigate a significant effect of an infill project, the lead agency shall make the finding described in subdivision (d)(2)(D).

(C) Infill EIR. If the infill project would result in new specific effects or more significant effects, and uniformly applicable development policies or standards would not substantially mitigate such effects, those effects are subject to CEQA. With respect to those effects that are subject to CEQA, the lead agency shall prepare an infill EIR if the written checklist shows that the effects of the infill project would be potentially significant. In this circumstance, the lead agency shall prepare an infill EIR as provided in subdivision (e) and, except as otherwise provided in this section, shall follow the procedures in Article 7. Where the lead agency finds that uniformly applicable development policies or standards substantially mitigate a significant effect of an infill project, the lead agency shall make the finding described in subdivision (d)(2)(D).

(D) Findings. Any findings or statement of overriding considerations required by Sections 15091 or 15093 shall be limited to those effects analyzed in an infill EIR. Findings for such effects should incorporate by reference any such findings made in connection with a planning level decision. Where uniformly applicable development policies or standards substantially mitigate the significant effects of an infill project, the lead agency shall also make a written finding, supported with substantial evidence, providing a brief explanation of the rationale for the finding.

(e) Infill EIR Contents. An infill EIR shall analyze only those significant effects that uniformly applicable development policies or standards do not substantially mitigate, and that are either new specific effects or are more significant than a prior EIR analyzed. All other effects of the infill project should be described in the written checklist as provided in subdivision (d)(1), and that written checklist should be circulated for public review along with the infill EIR. The written checklist should clearly set forth those effects that are new specific effects, and are subject to CEQA, and those effects which have been previously analyzed and are not subject to further environmental review. The analysis of alternatives in an infill EIR need not address alternative locations, densities, or building intensities. An infill EIR need not analyze growth inducing impacts. Except as provided in this subdivision, an infill EIR shall contain all elements described in Article 9.

(f) Terminology. The following definitions apply to this section:

(1) “lnfill project” includes the whole of an action consisting of residential, commercial, retail, transit station, school, or public office building uses, or any combination of such uses that meet the eligibility requirements set forth in subdivision (b). For retail and commercial projects, no more than one half of the project area may be used for parking. “Transit station” means a rail or light-rail station, ferry terminal, bus hub, bus transfer station, or bus stop, and includes all streetscape improvements constructed in the public right-of-way within one-quarter mile of such facility to improve multi-modal access to the facility, such as pedestrian and bicycle safety improvements and traffic-calming design changes that support pedestrian and bicycle access.

(2) “Planning level decision” means the enactment or amendment of a general plan or any general plan element, community plan, specific plan, or zoning code.

(3) “Prior EIR” means the environmental impact report certified for a planning level decision, as supplemented by any subsequent or supplemental environmental impact reports, negative declarations, or addenda to those documents.

(4) “Qualified urban use” is defined in Public Resources Code Section 21072.

(5) “Small walkable community project” means a project that is all of the following:

(A) In an incorporated city that is not within the boundary of metropolitan planning organization;

(B) Within an area of approximately one-quarter mile diameter of contiguous land that includes a residential area adjacent to a retail downtown area and that is designated by the city for infill development consisting of residential and commercial uses. A city may designate such an area within its general plan, zoning code, or by any legislative act creating such a designation, and may make such designation concurrently with project approval; and

(C) Either a residential project that has a density of at least eight units to the acre or a commercial project with a floor area ratio of at least 0.5, or both.

(6) The terms "sustainable communities strategy" and "alternative planning strategy" refer to a strategy for which the State Air Resources Board, pursuant to subparagraph (H) of paragraph (2) of subdivision (b) of Section 65080 of the Government Code, has accepted a metropolitan planning organization's determination that the sustainable communities strategy or the alternative planning strategy would, if implemented, achieve its greenhouse gas emission reduction targets.

(7) "Uniformly applicable development policies or standards" are policies or standards adopted or enacted by a city or county, or by a lead agency, that reduce one or more adverse environmental effects. Examples of uniformly applicable development policies or standards include, but are not limited to:

(A) Regulations governing construction activities, including noise regulations, dust control, provisions for discovery of archeological and paleontological resources, stormwater runoff treatment and containment, protection against the release of hazardous materials, recycling of construction and demolition waste, temporary street closure and traffic rerouting, and similar regulations.

(B) Requirements in locally adopted building, grading and stormwater codes.

(C) Design guidelines.

(D) Requirements for protecting residents from sources of air pollution including high volume roadways and stationary sources.

(E) Impact fee programs to provide public improvements, police, fire, parks and other open space, libraries and other public services and infrastructure, including transit, bicycle and pedestrian infrastructure and traffic calming devices.

(F) Traffic impact fees.

(G) Requirements for reducing greenhouse gas emissions, as set forth in adopted land use plans, policies, or regulations.

(H) Ordinances addressing protection of urban trees and historic resources.

(8) "Urban area" is defined in Public Resources Code Section 21094.5(e)(5).

Note: Authority cited: Sections 21083, 21094.5.5, Public Resources Code. Reference: Sections 21094.5 and 21094.5.5, Public Resources Code.

15183.5. TIERING AND STREAMLINING THE ANALYSIS OF GREENHOUSE GAS EMISSIONS

(a) Lead agencies may analyze and mitigate the significant effects of greenhouse gas emissions at a programmatic level, such as in a general plan, a long range development plan, or a separate plan to reduce greenhouse gas emissions. Later project-specific environmental documents may tier from and/or incorporate by reference that existing programmatic review. Project-specific environmental documents may rely on an EIR containing a programmatic analysis of greenhouse gas emissions as provided in section 15152 (tiering), 15167 (staged EIRs) 15168 (program EIRs), 15175–15179.5 (Master EIRs), 15182 (EIRs Prepared for Specific Plans), and 15183 (EIRs Prepared for General Plans, Community Plans, or Zoning).

(b) Plans for the Reduction of Greenhouse Gas Emissions. Public agencies may choose to analyze and mitigate significant greenhouse gas emissions in a plan for the reduction of greenhouse gas emissions or similar document. A plan to reduce greenhouse gas emissions may be used in a cumulative impacts analysis as set forth below. Pursuant to sections 15064(h)(3) and 15130(d),

APPENDIX M: PERFORMANCE STANDARDS FOR INFILL PROJECTS ELIGIBLE FOR STREAMLINED REVIEW

I. Introduction

Section 15183.3 provides a streamlined review process for infill projects that satisfy specified performance standards. This appendix contains those performance standards. The lead agency's determination that the project satisfies the performance standards shall be supported with substantial evidence, which should be documented on the lnfill Checklist in Appendix N. Section II defines terms used in this Appendix. Performance standards that apply to all project types are set forth in Section Ill. Section IV contains performance standards that apply to particular project types (i.e., residential, commercial/retail, office building, transit stations, and schools).

II. Definitions

The following definitions apply to the terms used in this Appendix.

"High-quality transit corridor" means an existing corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours. For the purposes of this Appendix, an "existing stop along a high-quality transit corridor" may include a planned and funded stop that is included in an adopted regional transportation improvement program.
Unless more specifically defined by an air district, city or county, "high-volume roadway" means freeways, highways, urban roads with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day.

"Low vehicle travel area" means a traffic analysis zone that exhibits a below average existing level of travel as determined using a regional travel demand model. For residential projects, travel refers to either home-based or household vehicle miles traveled per capita. For commercial and retail projects, travel refers to non-work attraction trip length; however, where such data are not available, commercial projects reference either home-based or household vehicle miles traveled per capita. For office projects, travel refers to commute attraction vehicle miles traveled per employee; however, where such data are not available, office projects reference either home-based or household vehicle miles traveled per capita.

"Major Transit Stop" means a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with frequencies of service intervals of 15 minutes or less during the morning and afternoon peak commute periods. For the purposes of this Appendix, an "existing major transit stop" may include a planned and funded stop that is included in an adopted regional transportation improvement program.

"Office building" generally refers to centers for governmental or professional services; however, the lead agency shall have discretion in determining whether a project is "commercial" or "office building" for the purposes of this Appendix based on local zoning codes.

"Significant sources of air pollution" include airports, marine ports, rail yards and distribution centers that receive more than 100 heavy-duty truck visits per day, as well as stationary sources that are designated major by the Clean Air Act.

A "Traffic Analysis Zone" is an analytical unit used by a travel demand model to estimate vehicle travel within a region.

Ill. Performance Standards Related to Project Design

To be eligible for streamlining pursuant to Section 15183.3, a project must implement all of the following:

Renewable Energy. All non-residential projects shall include onsite renewable power generation, such as solar photovoltaic, solar thermal and wind power generation, or clean backup power supplies, where feasible. Residential projects are also encouraged to include such onsite renewable power generation.

Soil and Water Remediation. If the project site is included on any list compiled pursuant to Section 65962.5 of the Government Code, the project shall document how it has remediated the site, if remediation is completed. Alternatively, the project shall implement the recommendations provided in a preliminary endangerment assessment or comparable document that identifies remediation appropriate for the site.

Residential Units Near High-Volume Roadways and Stationary Sources. If a project includes residential units located within 500 feet, or other distance determined to be appropriate by the local agency or air district based on local conditions, of a high volume roadway or other significant sources of air pollution, the project shall comply with any policies and standards identified in the local general plan, specific plan, zoning code or community risk reduction plan for the protection of public health from such sources of air pollution. If the local government has not adopted such plans or policies, the project shall include measures, such as enhanced air filtration and project design, that the lead agency finds, based on substantial evidence, will promote the protection of public health from sources of air pollution. Those measure may include, among others, the recommendations of the California Air Resources Board, air districts, and the California Air Pollution Control Officers Association.

IV. Additional Performance Standards by Project Type

In addition to the project features described above in Section Ill, specific eligibility requirements are provided below by project type.

Several of the performance standards below refer to "low vehicle travel areas". Such areas can be illustrated on maps based on data developed by the regional Metropolitan Planning Organization (MPO) using its regional travel demand model.

Several of the performance standards below refer to distance to transit. Distance should be calculated so that at least 75 percent of the surface area of the project site is within the specified distance.

A. Residential

To be eligible for streamlining pursuant to Section 15183.3, a project must satisfy one of the following: ·

Projects achieving below average regional per capita vehicle miles traveled (VMT). A residential project is eligible if it is located in a "low vehicle travel area" within the region.

Projects located within ½ mile of an Existing Major Transit Stop or High Quality Transit Corridor. A residential project is eligible if it is located within ½ mile of an existing major transit stop or an existing stop along a high quality transit corridor.

Low-Income Housing. A residential or mixed-use project consisting of 300 or fewer residential units all of which are affordable to low income households is eligible if the developer of the development project provides sufficient legal commitments to the lead agency to ensure the continued availability and use of the housing units for lower income households, as defined in Section 50079.5 of the Health and Safety Code, for a period of at least 30 years, at monthly housing costs, as determined pursuant to Section 50053 of the Health and Safety Code.

B. Commercial/Retail

To be eligible for streamlining pursuant to Section 15183.3, a project must satisfy one of the following:

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

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

C. Office Building

To be eligible for streamlining pursuant to Section 15183.3, a project must satisfy one of the following:

Regional Location. Office buildings, both commercial and public, are eligible if they. locate in a low vehicle travel area.

Proximity to a Major Transit Stop. Office buildings, both commercial and public, within ½ mile of an existing major transit stop, or ¼ mile of an existing stop along a high quality transit corridor, are eligible.

D. Transit

Transit stations, as defined in Section 15183.3(e)(1), are eligible.

E. Schools

Elementary schools within one mile of fifty percent of the projected student population are eligible. Middle schools and high schools within two miles of fifty percent of the projected student population are eligible. Alternatively, any school within ½ mile of an existing major transit stop or an existing stop along a high quality transit corridor is eligible.

Additionally, in order to be eligible, all schools shall provide parking and storage for bicycles and scooters and shall comply with the requirements in Sections 17213, 17213.1 and 17213.2 of the California Education Code.

F. Small Walkable Community Projects

Small walkable community projects, as defined in Section 15183.3, subdivision (e)(6), that implement the project features described in Section Ill above are eligible.

G. Mixed-Use Projects

Where a project includes some combination of residential, commercial and retail, office building, transit station, and/or schools, the performance standards in this Section that apply to the predominant use shall govern the entire project.

Authority: Public Resources Code 21083, 21094.5.5
Reference: Public Resources Code Sections 21094.5 and 21094.5.5

APPENDIX N: INFILL ENVIRONMENTAL CHECKLIST FORM

Appendix N: Infill Environmental Checklist Form

NOTE: This sample form is intended to assist lead agencies in assessing infill projects according to the procedures provided in Section 21094.5 of the Public Resources Code. Lead agencies may customize this form as appropriate, provided that the content satisfies the requirements in Section 15183.3 of the CEQA Guidelines.

1. Project title: ______________________________
2. Lead agency name and address:
____
____
3. Contact person and phone number: ______________________________
4. Project location: ______________________________
5. Project sponsor's name and address:
____
____
6. General plan designation: ______________ 7. Zoning: ______________
8. Prior Environmental Document(s) Analyzing the Effects of the Infill Project (including State Clearinghouse Number if assigned): ______________________________
____
9. Location of Prior Environmental Document(s) Analyzing the Effects of the Infill Project:
____
10. Description of project: (Describe the whole action involved, including but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheets if necessary.)
____
____
11. Surrounding land uses and setting: Briefly describe the project's surroundings, including any prior uses of the project site, or, if vacant, describe the urban uses that exist on at least 75% of the project's perimeter:
____
____
12. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement.)
____
____

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? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?
____
____
____

Note: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code section 21080.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code section 21082.3(c) contains provisions specific to confidentiality.

SATISFACTION OF APPENDIX M PERFORMANCE STANDARDS

Provide the information demonstrating that the infill project satisfies the performance standards in Appendix M below. For **mixed-use projects**, the predominant use will determine which performance standards apply to the entire project.

1. Does the non-residential infill project include a renewable energy feature? If so, describe below. If not, explain below why it is not feasible to do so.

____

2. If the project site is included on any list compiled pursuant to Section 65962.5 of the Government Code, either provide documentation of remediation or describe the recommendations provided in a preliminary endangerment assessment or comparable document that will be implemented as part of the project.

____

3. If the infill project includes residential units located within 500 feet, or such distance that the local agency or local air district has determined is appropriate based on local conditions, a high volume roadway or other significant source of air pollution, as defined in Appendix M, describe the measures that the project will implement to protect public health. Such measures may include policies and standards identified in the local general plan, specific plans, zoning code or community risk reduction plan, or measures recommended in a health risk assessment, to promote the protection of public health. Identify the policies or standards, or refer to the site specific analysis, below. (Attach additional sheets if necessary.)

____

4. For residential projects, the project satisfies which of the following?

☐ Located within a low vehicle travel area, as defined in Appendix M. (Attach VMT map.)

☐ Located within ½ mile of an existing major transit stop or an existing stop along a high quality transit corridor. (Attach map illustrating proximity to transit.)

☐ Consists of 300 or fewer units that are each affordable to low income households. (Attach evidence of legal commitment to ensure the continued availability and use of the housing units for lower income households, as defined in Section 50079.5 of the Health and Safety Code, for a period of at least 30 years, at monthly housing costs, as determined pursuant to Section 50053 of the Health and Safety Code.)

5. For commercial projects with a single building floor-plate below 50,000 square feet, the project satisfies which of the following?

☐ Located within a low vehicle travel area, as defined in Appendix M. (Attach VMT map.)

☐ The project is within one-half mile of 1800 dwelling units. (Attach map illustrating proximity to households.)

6. For office building projects, the project satisfies which of the following?

☐ Located within a low vehicle travel area, as defined in Appendix M. (Attach VMT map.)

☐ Located within ½ mile of an existing major transit stop or within ¼ of a stop along a high quality transit corridor. (Attach map illustrating proximity to transit.)

7. For school projects, the project does all of the following:

☐ The project complies with the requirements in Sections 17213, 17213.1 and 17213.2 of the California Education Code.

☐ The project is an elementary school and is within one mile of 50% of the student population, or is a middle school or high school and is within two miles of 50% of the student population. Alternatively, the school is within ½ mile of an existing major transit stop or an existing stop along a high quality transit corridor. (Attach map and methodology.)

☐ The project provides parking and storage for bicycles and scooters

8. For small walkable community projects, the project must be a residential project that has a density of at least eight units to the acre or a commercial project with a floor area ratio of at least 0.5, or both.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The infill project could potentially result in one or more of the following environmental effects.

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

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation:

☐ I find that the proposed infill project WOULD NOT have any significant effects on the environment that either have not already been analyzed in a prior EIR or that are more significant than previously analyzed, or that uniformly applicable development policies would not substantially mitigate. Pursuant to Public Resources Code Section 21094.5, CEQA does not apply to such effects. A Notice of Determination (Section 15094) will be filed.

☐ I find that the proposed infill project will have effects that either have not been analyzed in a prior EIR, or are more significant than described in the prior EIR, and that no uniformly applicable development policies would substantially mitigate such effects. With respect to those effects that are subject to CEQA, I find that such effects WOULD NOT be significant and a NEGATIVE DECLARATION, or if the project is a Transit Priority Project a SUSTAINABLE COMMUNITIES ENVIRONMENTAL ASSESSMENT, will be prepared.

☐ I find that the proposed infill project will have effects that either have not been analyzed in a prior EIR, or are more significant than described in the prior EIR, and that no uniformly applicable development policies would substantially mitigate such effects. I find that although those effects could be significant, there will not be a significant effect in this case because revisions in the infill project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION, or if the project is a Transit Priority Project a SUSTAINABLE COMMUNITIES ENVIRONMENTAL ASSESSMENT, will be prepared.

☐ I find that the proposed infill project would have effects that either have not been analyzed in a prior EIR, or are more significant than described in the prior EIR, and that no uniformly applicable development policies would substantially mitigate such effects. I find that those effects WOULD be significant, and an infill ENVIRONMENTAL IMPACT REPORT is required to analyze those effects that are subject to CEQA.

______________________________ ____________________

______________________________ ____________________

Signature Date

EVALUATION OF THE ENVIRONMENTAL IMPACTS OF INFILL PROJECTS:

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) For the purposes of this checklist, "prior EIR" means the environmental impact report certified for a planning level decision, as supplemented by any subsequent or supplemental environmental impact reports, negative declarations, or addenda to those documents. "Planning level decision" means the enactment or amendment of a general plan, community plan, specific plan, or zoning code. (Section 15183.3(e).)

4) Once the lead agency has determined that a particular physical impact may occur as a result of an infill project, then the checklist answers must indicate whether that impact has already been analyzed in a prior EIR. If the effect of the infill project is not more significant than what has already been analyzed, that effect of the infill project is not subject to CEQA. The brief explanation accompanying this determination should include page and section references to the portions of the prior EIR containing the analysis of that effect. The brief explanation shall also indicate whether the prior EIR included any mitigation measures to substantially lessen that effect and whether those measures have been incorporated into the infill project.

5) If the infill project would cause a significant adverse effect that either is specific to the project or project site and was not analyzed in a prior EIR, or is more significant than what was analyzed in a prior EIR, the lead agency must determine whether uniformly applicable development policies or standards that have been adopted by the lead agency, or city or county, would substantially mitigate that effect. If so, the checklist shall explain how the infill project's implementation of the uniformly applicable development policies will substantially mitigate that effect. That effect of the infill project is not subject to CEQA if the lead agency makes a finding, based upon substantial evidence, that the development policies or standards will substantially mitigate that effect.

6) If all effects of an infill project were either analyzed in a prior EIR or are substantially mitigated by uniformly applicable development policies or standards, CEQA does not apply to the project, and the lead agency shall file a Notice of Determination.

7) Effects of an infill project that either have not been analyzed in a prior EIR, or that uniformly applicable development policiesor standards do not substantially mitigate, are subject to CEQA. With respect to those effects of the infill project that are subject to CEQA, the checklist shall indicate whether those effects are significant, less than significant with mitigation, or less than significant. If there are one or more "Significant Impact" entries when the determination is made, an infill EIR is required. The infill EIR should be limited to analysis of those effects determined to be significant. (Sections 15128, 15183.3(d).)

8) "Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures will reduce an effect of an infill project that is subject to CEQA from "Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how those measures reduce the effect to a less than significant level. If the effects of an infill project that are subject to CEQA are less than significant with mitigation incorporated, the lead agency may prepare a Mitigated Negative Declaration. If all of the effects of the infill project that are subject to CEQA are less than significant, the lead agency may prepare a Negative Declaration.

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 an infill 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.

Issues:

	Significant Impact	*Less Than Significant or Less than Significant with Mitigation Incorporated*	*No Impact*	Analyzed in the Prior EIR	Substantially Mitigated by Uniformly Applicable Development Policies
<u>I. AESTHETICS.</u> Except as provided in Public Resources Code Section 21099, would the project:					
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☐	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☐	☐
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☐	☐	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	☐	☐

	Significant Impact	*Less Than Significant or Less than Significant with Mitigation Incorporated*	*No Impact*	Analyzed in the Prior EIR	Substantially Mitigated by Uniformly Applicable Development Policies
II. AGRICULTURE AND FORESTRY RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information 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?	☐	☐	☐	☐	☐
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☐	☐
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))?	☐	☐	☐	☐	☐
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☐	☐
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?	☐	☐	☐	☐	☐
III. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:					
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☐	☐

	Significant Impact	*Less Than Significant or Less than Significant with Mitigation Incorporated*	*No Impact*	Analyzed in the Prior EIR	Substantially Mitigated by Uniformly Applicable Development Policies
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?	☐	☐	☐	☐	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☐	☐	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☐	☐	☐
<u>IV. BIOLOGICAL RESOURCES.</u> 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?	☐	☐	☐	☐	☐
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 US Fish and Wildlife Service?	☐	☐	☐	☐	☐
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☐	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as 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?	☐	☐	☐	☐	☐
<u>V. CULTURAL RESOURCES.</u> Would the project:					
a) Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?	☐	☐	☐	☐	☐

	Significant Impact	*Less Than Significant or Less than Significant with Mitigation Incorporated*	*No Impact*	Analyzed in the Prior EIR	Substantially Mitigated by Uniformly Applicable Development Policies
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	☐	☐	☐	☐	☐
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☐	☐	☐
<u>VI. ENERGY.</u> Would the project:					
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☐	☐	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	☐	☐
<u>VII. GEOLOGY AND SOILS.</u> 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.	☐	☐	☐	☐	☐
ii) Strong seismic ground shaking?	☐	☐	☐	☐	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☐	☐
iv) Landslides?	☐	☐	☐	☐	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☐	☐	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☐	☐	☐
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?	☐	☐	☐	☐	☐

	Significant Impact	*Less Than Significant or Less than Significant with Mitigation Incorporated*	*No Impact*	Analyzed in the Prior EIR	Substantially Mitigated by Uniformly Applicable Development Policies
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☐	☐
f) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?	☐	☐	☐	☐	☐
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?	☐	☐	☐	☐	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	☐	☐
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?	☐	☐	☐	☐	☐
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?	☐	☐	☐	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☐	☐
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?	☐	☐	☐	☐	☐
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?	☐	☐	☐	☐	☐
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☐	☐

	Significant Impact	*Less Than Significant or Less than Significant with Mitigation Incorporated*	*No Impact*	Analyzed in the Prior EIR	Substantially Mitigated by Uniformly Applicable Development Policies
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☐	☐	☐
<u>X. HYDROLOGY AND WATER QUALITY.</u> Would the project:					
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☐	☐	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☐	☐	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:	☐	☐	☐	☐	☐
(i) result in substantial erosion or siltation on- or off-site;	☐	☐	☐	☐	☐
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	☐	☐	☐
(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☐	☐	☐
(iv) impede or redirect flood flows?	☐	☐	☐	☐	☐
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☐	☐
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	☐	☐
<u>XI. LAND USE AND PLANNING.</u> Would the project:					
a) Physically divide an established community?	☐	☐	☐	☐	☐
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☐	☐

	Significant Impact	*Less Than Significant or Less than Significant with Mitigation Incorporated*	*No Impact*	Analyzed in the Prior EIR	Substantially Mitigated by Uniformly Applicable Development Policies
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?	☐	☐	☐	☐	☐
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?	☐	☐	☐	☐	☐
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?	☐	☐	☐	☐	☐
b) 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?	☐	☐	☐	☐	☐
XIV. POPULATION AND HOUSING. Would the project:					
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☐	☐
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☐	☐
XV. PUBLIC SERVICES.					
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	☐	☐	☐	☐	☐
Fire protection?	☐	☐	☐	☐	☐

	Significant Impact	*Less Than Significant or Less than Significant with Mitigation Incorporated*	*No Impact*	Analyzed in the Prior EIR	Substantially Mitigated by Uniformly Applicable Development Policies
Police protection?	☐	☐	☐	☐	☐
Schools?	☐	☐	☐	☐	☐
Parks?	☐	☐	☐	☐	☐
Other public facilities?	☐	☐	☐	☐	☐
XVI. RECREATION.					
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☐	☐
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☐	☐
XVII. TRANSPORTATION. Would the project:					
a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle and pedestrian facilities?	☐	☐	☐	☐	☐
b) Would the project conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?	☐	☐	☐	☐	☐
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☐	☐
d) Result in inadequate 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:	☐	☐	☐	☐	☐
(i) Listed or eligible for listing in the California Register of Historical Resources, or in the local register of historical resources as defined in Public Resources Code Section 5020.1(k), or	☐	☐	☐	☐	☐

	Significant Impact	*Less Than Significant or Less than Significant with Mitigation Incorporated*	*No Impact*	Analyzed in the Prior EIR	Substantially Mitigated by Uniformly Applicable Development Policies
(ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☐	☐	☐	☐
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?	☐	☐	☐	☐	☐
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☐	☐	☐
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☐	☐
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?	☐	☐	☐	☐	☐
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☐	☐	☐
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?	☐	☐	☐	☐	☐
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?	☐	☐	☐	☐	☐

	Significant Impact	*Less Than Significant or Less than Significant with Mitigation Incorporated*	*No Impact*	Analyzed in the Prior EIR	Substantially Mitigated by Uniformly Applicable Development Policies
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?	☐	☐	☐	☐	☐
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?	☐	☐	☐	☐	☐
XXI. MANDATORY FINDINGS OF SIGNIFICANCE.					
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of 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)?	☐	☐	☐	☐	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	☐	☐

Authority: Public Resources Code 21083, 21094.5.5

Reference: Public Resources Code Sections 21094.5 and 21094.5.5

Appendix B

Air Quality and Greenhouse Gas Emissions Model Results

2128 Oxford Center Mixed-Use Project 11.14.23 Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	2128 Oxford Center Mixed-Use Project 11.14.23
Construction Start Date	9/4/2023
Operational Year	2027
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.90
Precipitation (days)	44.2
Location	2128 Oxford St, Berkeley, CA 94704, USA
County	Alameda
City	Berkeley
Air District	Bay Area AQMD
Air Basin	San Francisco Bay Area
TAZ	1529
EDFZ	1
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.20

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

Apartments High Rise	463	Dwelling Unit	7.47	444,480	12,466	0.00	1,158	Landscape area reflects exterior amenities
High Turnover (Sit Down Restaurant)	15.0	1000sqft	0.34	15,000	0.00	0.00	—	—
Enclosed Parking with Elevator	7.27	1000sqft	0.17	7,268	0.00	0.00	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-10-A	Water Exposed Surfaces
Construction	C-11	Limit Vehicle Speeds on Unpaved Roads
Construction	C-12	Sweep Paved Roads

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	7.38	19.5	44.1	61.0	0.10	1.46	3.82	5.21	1.35	0.91	2.19	—	12,214	12,214	0.41	0.40	16.7	12,359
Mit.	7.38	19.5	44.1	61.0	0.10	1.46	3.82	5.21	1.35	0.91	2.19	—	12,214	12,214	0.41	0.40	16.7	12,359
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	7.31	19.4	44.5	59.4	0.10	1.46	3.82	5.21	1.35	0.91	2.19	—	11,965	11,965	0.44	0.41	0.43	12,098

Mit.	7.31	19.4	44.5	59.4	0.10	1.46	3.82	5.21	1.35	0.91	2.19	—	11,965	11,965	0.44	0.41	0.43	12,098
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	6.16	16.4	36.3	47.8	0.08	1.19	3.14	4.29	1.10	0.75	1.81	—	9,782	9,782	0.35	0.34	6.10	9,897
Mit.	6.16	16.4	36.3	47.8	0.08	1.19	3.14	4.29	1.10	0.75	1.81	—	9,782	9,782	0.35	0.34	6.10	9,897
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.12	3.00	6.62	8.73	0.02	0.22	0.57	0.78	0.20	0.14	0.33	—	1,619	1,619	0.06	0.06	1.01	1,639
Mit.	1.12	3.00	6.62	8.73	0.02	0.22	0.57	0.78	0.20	0.14	0.33	—	1,619	1,619	0.06	0.06	1.01	1,639
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	3.44	2.88	19.7	29.5	0.08	1.05	0.72	1.77	0.97	0.14	1.11	—	8,658	8,658	0.35	0.12	2.05	8,705
2024	7.38	6.17	41.9	56.2	0.09	1.46	3.21	4.67	1.35	0.77	2.11	—	10,958	10,958	0.38	0.38	16.7	11,097
2025	7.08	6.00	41.1	55.1	0.09	1.39	3.21	4.60	1.28	0.77	2.05	—	10,878	10,878	0.37	0.37	15.6	11,013
2026	7.23	19.4	42.2	58.1	0.10	1.35	3.77	5.12	1.24	0.90	2.14	—	11,651	11,651	0.39	0.39	16.5	11,795
2027	7.34	19.5	44.1	61.0	0.10	1.39	3.82	5.21	1.28	0.91	2.19	—	12,214	12,214	0.41	0.40	15.2	12,359
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2023	3.44	2.88	19.7	29.3	0.08	1.05	0.72	1.77	0.97	0.14	1.11	—	8,635	8,635	0.35	0.12	0.05	8,680
2024	7.24	6.12	42.2	54.5	0.09	1.46	3.21	4.67	1.35	0.77	2.11	—	10,739	10,739	0.40	0.39	0.43	10,865
2025	7.04	5.95	41.5	53.6	0.09	1.39	3.21	4.60	1.28	0.77	2.05	—	10,664	10,664	0.40	0.38	0.40	10,787
2026	7.19	19.3	42.5	56.3	0.10	1.35	3.77	5.12	1.24	0.90	2.14	—	11,400	11,400	0.41	0.40	0.43	11,531
2027	7.31	19.4	44.5	59.4	0.10	1.39	3.82	5.21	1.28	0.91	2.19	—	11,965	11,965	0.44	0.41	0.39	12,098
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.96	0.80	5.50	8.17	0.02	0.29	0.20	0.49	0.27	0.04	0.31	—	2,414	2,414	0.10	0.03	0.25	2,426
2024	3.98	3.36	23.7	30.8	0.06	0.84	1.63	2.47	0.78	0.39	1.17	—	6,474	6,474	0.24	0.24	3.84	6,555
2025	6.02	5.10	35.5	45.6	0.08	1.19	2.67	3.86	1.10	0.64	1.73	—	9,156	9,156	0.33	0.32	5.78	9,266
2026	6.16	16.4	36.3	47.8	0.08	1.15	3.14	4.29	1.06	0.75	1.81	—	9,782	9,782	0.35	0.34	6.10	9,897
2027	2.67	7.23	16.1	21.3	0.04	0.50	1.37	1.87	0.46	0.33	0.79	—	4,359	4,359	0.16	0.15	2.43	4,409
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.18	0.15	1.00	1.49	< 0.005	0.05	0.04	0.09	0.05	0.01	0.06	—	400	400	0.02	0.01	0.04	402
2024	0.73	0.61	4.32	5.62	0.01	0.15	0.30	0.45	0.14	0.07	0.21	—	1,072	1,072	0.04	0.04	0.64	1,085
2025	1.10	0.93	6.47	8.32	0.01	0.22	0.49	0.70	0.20	0.12	0.32	—	1,516	1,516	0.06	0.05	0.96	1,534
2026	1.12	3.00	6.62	8.73	0.02	0.21	0.57	0.78	0.19	0.14	0.33	—	1,619	1,619	0.06	0.06	1.01	1,639
2027	0.49	1.32	2.94	3.89	0.01	0.09	0.25	0.34	0.08	0.06	0.14	—	722	722	0.03	0.02	0.40	730

2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	3.44	2.88	19.7	29.5	0.08	1.05	0.72	1.77	0.97	0.14	1.11	—	8,658	8,658	0.35	0.12	2.05	8,705
2024	7.38	6.17	41.9	56.2	0.09	1.46	3.21	4.67	1.35	0.77	2.11	—	10,958	10,958	0.38	0.38	16.7	11,097
2025	7.08	6.00	41.1	55.1	0.09	1.39	3.21	4.60	1.28	0.77	2.05	—	10,878	10,878	0.37	0.37	15.6	11,013

2026	7.23	19.4	42.2	58.1	0.10	1.35	3.77	5.12	1.24	0.90	2.14	—	11,651	11,651	0.39	0.39	16.5	11,795
2027	7.34	19.5	44.1	61.0	0.10	1.39	3.82	5.21	1.28	0.91	2.19	—	12,214	12,214	0.41	0.40	15.2	12,359
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	3.44	2.88	19.7	29.3	0.08	1.05	0.72	1.77	0.97	0.14	1.11	—	8,635	8,635	0.35	0.12	0.05	8,680
2024	7.24	6.12	42.2	54.5	0.09	1.46	3.21	4.67	1.35	0.77	2.11	—	10,739	10,739	0.40	0.39	0.43	10,865
2025	7.04	5.95	41.5	53.6	0.09	1.39	3.21	4.60	1.28	0.77	2.05	—	10,664	10,664	0.40	0.38	0.40	10,787
2026	7.19	19.3	42.5	56.3	0.10	1.35	3.77	5.12	1.24	0.90	2.14	—	11,400	11,400	0.41	0.40	0.43	11,531
2027	7.31	19.4	44.5	59.4	0.10	1.39	3.82	5.21	1.28	0.91	2.19	—	11,965	11,965	0.44	0.41	0.39	12,098
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.96	0.80	5.50	8.17	0.02	0.29	0.20	0.49	0.27	0.04	0.31	—	2,414	2,414	0.10	0.03	0.25	2,426
2024	3.98	3.36	23.7	30.8	0.06	0.84	1.63	2.47	0.78	0.39	1.17	—	6,474	6,474	0.24	0.24	3.84	6,555
2025	6.02	5.10	35.5	45.6	0.08	1.19	2.67	3.86	1.10	0.64	1.73	—	9,156	9,156	0.33	0.32	5.78	9,266
2026	6.16	16.4	36.3	47.8	0.08	1.15	3.14	4.29	1.06	0.75	1.81	—	9,782	9,782	0.35	0.34	6.10	9,897
2027	2.67	7.23	16.1	21.3	0.04	0.50	1.37	1.87	0.46	0.33	0.79	—	4,359	4,359	0.16	0.15	2.43	4,409
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.18	0.15	1.00	1.49	< 0.005	0.05	0.04	0.09	0.05	0.01	0.06	—	400	400	0.02	0.01	0.04	402
2024	0.73	0.61	4.32	5.62	0.01	0.15	0.30	0.45	0.14	0.07	0.21	—	1,072	1,072	0.04	0.04	0.64	1,085
2025	1.10	0.93	6.47	8.32	0.01	0.22	0.49	0.70	0.20	0.12	0.32	—	1,516	1,516	0.06	0.05	0.96	1,534
2026	1.12	3.00	6.62	8.73	0.02	0.21	0.57	0.78	0.19	0.14	0.33	—	1,619	1,619	0.06	0.06	1.01	1,639
2027	0.49	1.32	2.94	3.89	0.01	0.09	0.25	0.34	0.08	0.06	0.14	—	722	722	0.03	0.02	0.40	730

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.98	15.2	2.61	25.7	0.06	0.04	5.89	5.93	0.04	1.49	1.53	305	8,899	9,204	26.8	0.44	47.4	10,053
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.85	15.0	3.05	25.3	0.06	0.04	5.89	5.93	0.04	1.49	1.53	305	8,535	8,841	26.8	0.47	27.2	9,679
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.57	14.8	2.37	19.2	0.04	0.03	3.98	4.01	0.03	1.01	1.04	305	6,747	7,052	26.8	0.39	32.9	7,871
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.65	2.70	0.43	3.51	0.01	0.01	0.73	0.73	0.01	0.18	0.19	50.6	1,117	1,168	4.43	0.06	5.44	1,303

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	3.98	3.72	2.61	25.7	0.06	0.04	5.89	5.93	0.04	1.49	1.53	—	6,544	6,544	0.29	0.30	20.8	6,660
Area	0.00	11.5	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	2,277	2,277	0.37	0.04	—	2,300
Water	—	—	—	—	—	—	—	—	—	—	—	45.6	77.4	123	0.17	0.10	—	157
Waste	—	—	—	—	—	—	—	—	—	—	—	260	0.00	260	26.0	0.00	—	909
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	26.6	26.6
Stationary	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.19	0.19	< 0.005	< 0.005	—	0.20
Total	3.98	15.2	2.61	25.7	0.06	0.04	5.89	5.93	0.04	1.49	1.53	305	8,899	9,204	26.8	0.44	47.4	10,053

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	3.85	3.57	3.05	25.3	0.06	0.04	5.89	5.93	0.04	1.49	1.53	—	6,180	6,180	0.33	0.32	0.54	6,286
Area	0.00	11.5	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	2,277	2,277	0.37	0.04	—	2,300
Water	—	—	—	—	—	—	—	—	—	—	—	45.6	77.4	123	0.17	0.10	—	157
Waste	—	—	—	—	—	—	—	—	—	—	—	260	0.00	260	26.0	0.00	—	909
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	26.6	26.6
Stationary	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.19	0.19	< 0.005	< 0.005	—	0.20
Total	3.85	15.0	3.05	25.3	0.06	0.04	5.89	5.93	0.04	1.49	1.53	305	8,535	8,841	26.8	0.47	27.2	9,679
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	3.55	3.34	2.31	19.2	0.04	0.03	3.98	4.01	0.03	1.01	1.04	—	4,385	4,385	0.28	0.24	6.23	4,471
Area	0.00	11.5	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	2,277	2,277	0.37	0.04	—	2,300
Water	—	—	—	—	—	—	—	—	—	—	—	45.6	77.4	123	0.17	0.10	—	157
Waste	—	—	—	—	—	—	—	—	—	—	—	260	0.00	260	26.0	0.00	—	909
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	26.6	26.6
Stationary	0.02	0.01	0.06	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.10	7.10	< 0.005	< 0.005	—	7.13
Total	3.57	14.8	2.37	19.2	0.04	0.03	3.98	4.01	0.03	1.01	1.04	305	6,747	7,052	26.8	0.39	32.9	7,871
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.65	0.61	0.42	3.51	0.01	0.01	0.73	0.73	0.01	0.18	0.19	—	726	726	0.05	0.04	1.03	740
Area	0.00	2.09	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	377	377	0.06	0.01	—	381
Water	—	—	—	—	—	—	—	—	—	—	—	7.54	12.8	20.4	0.03	0.02	—	26.0
Waste	—	—	—	—	—	—	—	—	—	—	—	43.0	0.00	43.0	4.30	0.00	—	151

Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.41	4.41
Stationary	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.18	1.18	< 0.005	< 0.005	—	1.18
Total	0.65	2.70	0.43	3.51	0.01	0.01	0.73	0.73	0.01	0.18	0.19	50.6	1,117	1,168	4.43	0.06	5.44	1,303

2.6. Operations Emissions by Sector, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	3.98	3.72	2.61	25.7	0.06	0.04	5.89	5.93	0.04	1.49	1.53	—	6,544	6,544	0.29	0.30	20.8	6,660
Area	0.00	11.5	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	2,277	2,277	0.37	0.04	—	2,300
Water	—	—	—	—	—	—	—	—	—	—	—	45.6	77.4	123	0.17	0.10	—	157
Waste	—	—	—	—	—	—	—	—	—	—	—	260	0.00	260	26.0	0.00	—	909
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	26.6	26.6
Stationary	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.19	0.19	< 0.005	< 0.005	—	0.20
Total	3.98	15.2	2.61	25.7	0.06	0.04	5.89	5.93	0.04	1.49	1.53	305	8,899	9,204	26.8	0.44	47.4	10,053
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	3.85	3.57	3.05	25.3	0.06	0.04	5.89	5.93	0.04	1.49	1.53	—	6,180	6,180	0.33	0.32	0.54	6,286
Area	0.00	11.5	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	2,277	2,277	0.37	0.04	—	2,300
Water	—	—	—	—	—	—	—	—	—	—	—	45.6	77.4	123	0.17	0.10	—	157
Waste	—	—	—	—	—	—	—	—	—	—	—	260	0.00	260	26.0	0.00	—	909
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	26.6	26.6

Stationar	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.19	0.19	< 0.005	< 0.005	—	0.20
Total	3.85	15.0	3.05	25.3	0.06	0.04	5.89	5.93	0.04	1.49	1.53	305	8,535	8,841	26.8	0.47	27.2	9,679
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	3.55	3.34	2.31	19.2	0.04	0.03	3.98	4.01	0.03	1.01	1.04	—	4,385	4,385	0.28	0.24	6.23	4,471
Area	0.00	11.5	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	2,277	2,277	0.37	0.04	—	2,300
Water	—	—	—	—	—	—	—	—	—	—	—	45.6	77.4	123	0.17	0.10	—	157
Waste	—	—	—	—	—	—	—	—	—	—	—	260	0.00	260	26.0	0.00	—	909
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	26.6	26.6
Stationar y	0.02	0.01	0.06	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.10	7.10	< 0.005	< 0.005	—	7.13
Total	3.57	14.8	2.37	19.2	0.04	0.03	3.98	4.01	0.03	1.01	1.04	305	6,747	7,052	26.8	0.39	32.9	7,871
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.65	0.61	0.42	3.51	0.01	0.01	0.73	0.73	0.01	0.18	0.19	—	726	726	0.05	0.04	1.03	740
Area	0.00	2.09	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	377	377	0.06	0.01	—	381
Water	—	—	—	—	—	—	—	—	—	—	—	7.54	12.8	20.4	0.03	0.02	—	26.0
Waste	—	—	—	—	—	—	—	—	—	—	—	43.0	0.00	43.0	4.30	0.00	—	151
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.41	4.41
Stationar y	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.18	1.18	< 0.005	< 0.005	—	1.18
Total	0.65	2.70	0.43	3.51	0.01	0.01	0.73	0.73	0.01	0.18	0.19	50.6	1,117	1,168	4.43	0.06	5.44	1,303

3. Construction Emissions Details

3.1. Demolition (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.28	2.74	19.2	27.8	0.08	1.05	—	1.05	0.96	—	0.96	—	8,058	8,058	0.33	0.07	—	8,086
Demolition	—	—	—	—	—	—	0.35	0.35	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.28	2.74	19.2	27.8	0.08	1.05	—	1.05	0.96	—	0.96	—	8,058	8,058	0.33	0.07	—	8,086
Demolition	—	—	—	—	—	—	0.35	0.35	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.92	0.77	5.37	7.76	0.02	0.29	—	0.29	0.27	—	0.27	—	2,252	2,252	0.09	0.02	—	2,260
Demolition	—	—	—	—	—	—	0.10	0.10	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.14	0.98	1.42	< 0.005	0.05	—	0.05	0.05	—	0.05	—	373	373	0.02	< 0.005	—	374
Demolition	—	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.14	0.13	0.10	1.56	0.00	0.00	0.29	0.29	0.00	0.07	0.07	—	315	315	0.01	0.01	1.43	320
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.02	0.01	0.36	0.14	< 0.005	0.01	0.07	0.08	0.01	0.02	0.03	—	284	284	0.02	0.04	0.62	298
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.14	0.13	0.13	1.38	0.00	0.00	0.29	0.29	0.00	0.07	0.07	—	292	292	0.01	0.01	0.04	296
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.02	0.01	0.37	0.14	< 0.005	0.01	0.07	0.08	0.01	0.02	0.03	—	284	284	0.02	0.04	0.02	298
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.03	0.37	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	82.2	82.2	< 0.005	< 0.005	0.17	83.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.10	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	79.4	79.4	< 0.005	0.01	0.07	83.3
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	13.6	13.6	< 0.005	< 0.005	0.03	13.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	13.2	13.2	< 0.005	< 0.005	0.01	13.8

3.2. Demolition (2023) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.28	2.74	19.2	27.8	0.08	1.05	—	1.05	0.96	—	0.96	—	8,058	8,058	0.33	0.07	—	8,086
Demolition	—	—	—	—	—	—	0.35	0.35	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.28	2.74	19.2	27.8	0.08	1.05	—	1.05	0.96	—	0.96	—	8,058	8,058	0.33	0.07	—	8,086
Demolition	—	—	—	—	—	—	0.35	0.35	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.92	0.77	5.37	7.76	0.02	0.29	—	0.29	0.27	—	0.27	—	2,252	2,252	0.09	0.02	—	2,260
Demolition	—	—	—	—	—	—	0.10	0.10	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.14	0.98	1.42	< 0.005	0.05	—	0.05	0.05	—	0.05	—	373	373	0.02	< 0.005	—	374
Demolition	—	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.14	0.13	0.10	1.56	0.00	0.00	0.29	0.29	0.00	0.07	0.07	—	315	315	0.01	0.01	1.43	320
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.02	0.01	0.36	0.14	< 0.005	0.01	0.07	0.08	0.01	0.02	0.03	—	284	284	0.02	0.04	0.62	298
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.14	0.13	0.13	1.38	0.00	0.00	0.29	0.29	0.00	0.07	0.07	—	292	292	0.01	0.01	0.04	296
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.02	0.01	0.37	0.14	< 0.005	0.01	0.07	0.08	0.01	0.02	0.03	—	284	284	0.02	0.04	0.02	298
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.03	0.37	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	82.2	82.2	< 0.005	< 0.005	0.17	83.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.10	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	79.4	79.4	< 0.005	0.01	0.07	83.3
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	13.6	13.6	< 0.005	< 0.005	0.03	13.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	13.2	13.2	< 0.005	< 0.005	0.01	13.8

3.3. Demolition (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.13	2.62	18.0	27.7	0.08	0.94	—	0.94	0.86	—	0.86	—	8,057	8,057	0.33	0.07	—	8,085
Demolition	—	—	—	—	—	—	0.35	0.35	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.08	0.13	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	37.8	37.8	< 0.005	< 0.005	—	38.0
Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.27	6.27	< 0.005	< 0.005	—	6.29
Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.12	0.11	1.28	0.00	0.00	0.29	0.29	0.00	0.07	0.07	—	287	287	0.01	0.01	0.03	291
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.02	0.01	0.36	0.14	< 0.005	0.01	0.07	0.08	0.01	0.02	0.03	—	280	280	0.01	0.04	0.02	294
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.36	1.36	< 0.005	< 0.005	< 0.005	1.38
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.32	1.32	< 0.005	< 0.005	< 0.005	1.38
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.22	0.22	< 0.005	< 0.005	< 0.005	0.23
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.22	0.22	< 0.005	< 0.005	< 0.005	0.23

3.4. Demolition (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.13	2.62	18.0	27.7	0.08	0.94	—	0.94	0.86	—	0.86	—	8,057	8,057	0.33	0.07	—	8,085
Demolition	—	—	—	—	—	—	0.35	0.35	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.08	0.13	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	37.8	37.8	< 0.005	< 0.005	—	38.0

Demolitio	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.27	6.27	< 0.005	< 0.005	—	6.29
Demolitio n	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.12	0.11	1.28	0.00	0.00	0.29	0.29	0.00	0.07	0.07	—	287	287	0.01	0.01	0.03	291
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.02	0.01	0.36	0.14	< 0.005	0.01	0.07	0.08	0.01	0.02	0.03	—	280	280	0.01	0.04	0.02	294
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.36	1.36	< 0.005	< 0.005	< 0.005	1.38
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.32	1.32	< 0.005	< 0.005	< 0.005	1.38
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.22	0.22	< 0.005	< 0.005	< 0.005	0.23
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.22	0.22	< 0.005	< 0.005	< 0.005	0.23

3.5. Site Preparation (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.78	1.49	11.8	15.0	0.04	0.51	—	0.51	0.47	—	0.47	—	4,154	4,154	0.17	0.03	—	4,169
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.26	0.22	1.71	2.18	0.01	0.07	—	0.07	0.07	—	0.07	—	603	603	0.02	< 0.005	—	605
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.31	0.40	< 0.005	0.01	—	0.01	0.01	—	0.01	—	99.9	99.9	< 0.005	< 0.005	—	100

Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.06	0.64	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	143	143	< 0.005	0.01	0.02	145
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	21.0	21.0	< 0.005	< 0.005	0.04	21.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.47	3.47	< 0.005	< 0.005	0.01	3.52
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.6. Site Preparation (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.78	1.49	11.8	15.0	0.04	0.51	—	0.51	0.47	—	0.47	—	4,154	4,154	0.17	0.03	—	4,169
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.26	0.22	1.71	2.18	0.01	0.07	—	0.07	0.07	—	0.07	—	603	603	0.02	< 0.005	—	605
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.31	0.40	< 0.005	0.01	—	0.01	0.01	—	0.01	—	99.9	99.9	< 0.005	< 0.005	—	100
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.06	0.64	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	143	143	< 0.005	0.01	0.02	145
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	21.0	21.0	< 0.005	< 0.005	0.04	21.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.47	3.47	< 0.005	< 0.005	0.01	3.52
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Grading (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.63	0.53	3.97	7.68	0.01	0.20	—	0.20	0.18	—	0.18	—	1,271	1,271	0.05	0.01	—	1,275

Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.63	0.53	3.97	7.68	0.01	0.20	—	0.20	0.18	—	0.18	—	1,271	1,271	0.05	0.01	—	1,275
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	0.85	1.64	< 0.005	0.04	—	0.04	0.04	—	0.04	—	272	272	0.01	< 0.005	—	273
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.15	0.30	< 0.005	0.01	—	0.01	0.01	—	0.01	—	45.0	45.0	< 0.005	< 0.005	—	45.1
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.31	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	66.2	66.2	< 0.005	< 0.005	0.28	67.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.09	0.03	1.40	0.56	0.01	0.02	0.30	0.32	0.02	0.08	0.10	—	1,144	1,144	0.06	0.18	2.53	1,202
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.27	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	61.4	61.4	< 0.005	< 0.005	0.01	62.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.08	0.02	1.48	0.56	0.01	0.02	0.30	0.32	0.02	0.08	0.10	—	1,145	1,145	0.06	0.18	0.07	1,200
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	13.2	13.2	< 0.005	< 0.005	0.03	13.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.02	0.01	0.31	0.12	< 0.005	< 0.005	0.06	0.07	< 0.005	0.02	0.02	—	245	245	0.01	0.04	0.23	257
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.19	2.19	< 0.005	< 0.005	< 0.005	2.22
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.06	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	40.5	40.5	< 0.005	0.01	0.04	42.5

3.8. Grading (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.63	0.53	3.97	7.68	0.01	0.20	—	0.20	0.18	—	0.18	—	1,271	1,271	0.05	0.01	—	1,275
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.63	0.53	3.97	7.68	0.01	0.20	—	0.20	0.18	—	0.18	—	1,271	1,271	0.05	0.01	—	1,275
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	0.85	1.64	< 0.005	0.04	—	0.04	0.04	—	0.04	—	272	272	0.01	< 0.005	—	273
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.15	0.30	< 0.005	0.01	—	0.01	0.01	—	0.01	—	45.0	45.0	< 0.005	< 0.005	—	45.1
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.31	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	66.2	66.2	< 0.005	< 0.005	0.28	67.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.09	0.03	1.40	0.56	0.01	0.02	0.30	0.32	0.02	0.08	0.10	—	1,144	1,144	0.06	0.18	2.53	1,202
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.27	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	61.4	61.4	< 0.005	< 0.005	0.01	62.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.08	0.02	1.48	0.56	0.01	0.02	0.30	0.32	0.02	0.08	0.10	—	1,145	1,145	0.06	0.18	0.07	1,200
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	13.2	13.2	< 0.005	< 0.005	0.03	13.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.02	0.01	0.31	0.12	< 0.005	< 0.005	0.06	0.07	< 0.005	0.02	0.02	—	245	245	0.01	0.04	0.23	257
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.19	2.19	< 0.005	< 0.005	< 0.005	2.22
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.06	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	40.5	40.5	< 0.005	0.01	0.04	42.5

3.9. Building Construction (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	5.92	4.90	39.2	41.2	0.08	1.44	—	1.44	1.33	—	1.33	—	6,493	6,493	0.26	0.05	—	6,515
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	5.92	4.90	39.2	41.2	0.08	1.44	—	1.44	1.33	—	1.33	—	6,493	6,493	0.26	0.05	—	6,515
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.90	2.41	19.3	20.2	0.04	0.71	—	0.71	0.65	—	0.65	—	3,187	3,187	0.13	0.03	—	3,197
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.53	0.44	3.51	3.69	0.01	0.13	—	0.13	0.12	—	0.12	—	528	528	0.02	< 0.005	—	529
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.35	1.23	0.85	14.2	0.00	0.00	2.83	2.83	0.00	0.66	0.66	—	3,027	3,027	0.06	0.11	12.9	3,075
Vendor	0.11	0.04	1.81	0.79	0.01	0.02	0.37	0.39	0.02	0.10	0.12	—	1,438	1,438	0.06	0.22	3.83	1,508
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.21	1.17	1.08	12.5	0.00	0.00	2.83	2.83	0.00	0.66	0.66	—	2,808	2,808	0.08	0.12	0.33	2,845
Vendor	0.11	0.04	1.90	0.82	0.01	0.02	0.37	0.39	0.02	0.10	0.12	—	1,439	1,439	0.06	0.22	0.10	1,505
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.58	0.57	0.52	5.95	0.00	0.00	1.35	1.35	0.00	0.32	0.32	—	1,387	1,387	0.03	0.06	2.73	1,408
Vendor	0.06	0.02	0.92	0.39	< 0.005	0.01	0.18	0.19	0.01	0.05	0.06	—	706	706	0.03	0.11	0.81	739
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.09	1.09	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	230	230	0.01	0.01	0.45	233
Vendor	0.01	< 0.005	0.17	0.07	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	117	117	< 0.005	0.02	0.13	122
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.10. Building Construction (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	5.92	4.90	39.2	41.2	0.08	1.44	—	1.44	1.33	—	1.33	—	6,493	6,493	0.26	0.05	—	6,515
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	5.92	4.90	39.2	41.2	0.08	1.44	—	1.44	1.33	—	1.33	—	6,493	6,493	0.26	0.05	—	6,515
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.90	2.41	19.3	20.2	0.04	0.71	—	0.71	0.65	—	0.65	—	3,187	3,187	0.13	0.03	—	3,197
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.53	0.44	3.51	3.69	0.01	0.13	—	0.13	0.12	—	0.12	—	528	528	0.02	< 0.005	—	529
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.35	1.23	0.85	14.2	0.00	0.00	2.83	2.83	0.00	0.66	0.66	—	3,027	3,027	0.06	0.11	12.9	3,075
Vendor	0.11	0.04	1.81	0.79	0.01	0.02	0.37	0.39	0.02	0.10	0.12	—	1,438	1,438	0.06	0.22	3.83	1,508
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.21	1.17	1.08	12.5	0.00	0.00	2.83	2.83	0.00	0.66	0.66	—	2,808	2,808	0.08	0.12	0.33	2,845
Vendor	0.11	0.04	1.90	0.82	0.01	0.02	0.37	0.39	0.02	0.10	0.12	—	1,439	1,439	0.06	0.22	0.10	1,505
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.58	0.57	0.52	5.95	0.00	0.00	1.35	1.35	0.00	0.32	0.32	—	1,387	1,387	0.03	0.06	2.73	1,408
Vendor	0.06	0.02	0.92	0.39	< 0.005	0.01	0.18	0.19	0.01	0.05	0.06	—	706	706	0.03	0.11	0.81	739

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.09	1.09	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	230	230	0.01	0.01	0.45	233
Vendor	0.01	< 0.005	0.17	0.07	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	117	117	< 0.005	0.02	0.13	122
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	5.78	4.79	38.6	41.1	0.08	1.37	—	1.37	1.26	—	1.26	—	6,494	6,494	0.26	0.05	—	6,517
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	5.78	4.79	38.6	41.1	0.08	1.37	—	1.37	1.26	—	1.26	—	6,494	6,494	0.26	0.05	—	6,517
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.96	4.10	33.1	35.3	0.07	1.17	—	1.17	1.08	—	1.08	—	5,567	5,567	0.23	0.05	—	5,586
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.90	0.75	6.04	6.43	0.01	0.21	—	0.21	0.20	—	0.20	—	922	922	0.04	0.01	—	925
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.19	1.17	0.75	13.2	0.00	0.00	2.83	2.83	0.00	0.66	0.66	—	2,968	2,968	0.05	0.11	11.8	3,014
Vendor	0.11	0.04	1.73	0.76	0.01	0.02	0.37	0.39	0.02	0.10	0.12	—	1,415	1,415	0.06	0.21	3.80	1,482
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.16	1.12	1.07	11.7	0.00	0.00	2.83	2.83	0.00	0.66	0.66	—	2,753	2,753	0.08	0.12	0.31	2,790
Vendor	0.10	0.04	1.83	0.78	0.01	0.02	0.37	0.39	0.02	0.10	0.12	—	1,417	1,417	0.06	0.21	0.10	1,480
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.98	0.95	0.82	9.67	0.00	0.00	2.36	2.36	0.00	0.55	0.55	—	2,376	2,376	0.06	0.10	4.37	2,412
Vendor	0.09	0.04	1.54	0.66	0.01	0.02	0.31	0.33	0.02	0.09	0.10	—	1,214	1,214	0.05	0.18	1.41	1,269
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.18	0.17	0.15	1.77	0.00	0.00	0.43	0.43	0.00	0.10	0.10	—	393	393	0.01	0.02	0.72	399
Vendor	0.02	0.01	0.28	0.12	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	201	201	0.01	0.03	0.23	210
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.12. Building Construction (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	5.78	4.79	38.6	41.1	0.08	1.37	—	1.37	1.26	—	1.26	—	6,494	6,494	0.26	0.05	—	6,517
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	5.78	4.79	38.6	41.1	0.08	1.37	—	1.37	1.26	—	1.26	—	6,494	6,494	0.26	0.05	—	6,517
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.96	4.10	33.1	35.3	0.07	1.17	—	1.17	1.08	—	1.08	—	5,567	5,567	0.23	0.05	—	5,586
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.90	0.75	6.04	6.43	0.01	0.21	—	0.21	0.20	—	0.20	—	922	922	0.04	0.01	—	925
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.19	1.17	0.75	13.2	0.00	0.00	2.83	2.83	0.00	0.66	0.66	—	2,968	2,968	0.05	0.11	11.8	3,014
Vendor	0.11	0.04	1.73	0.76	0.01	0.02	0.37	0.39	0.02	0.10	0.12	—	1,415	1,415	0.06	0.21	3.80	1,482
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.16	1.12	1.07	11.7	0.00	0.00	2.83	2.83	0.00	0.66	0.66	—	2,753	2,753	0.08	0.12	0.31	2,790
Vendor	0.10	0.04	1.83	0.78	0.01	0.02	0.37	0.39	0.02	0.10	0.12	—	1,417	1,417	0.06	0.21	0.10	1,480
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.98	0.95	0.82	9.67	0.00	0.00	2.36	2.36	0.00	0.55	0.55	—	2,376	2,376	0.06	0.10	4.37	2,412
Vendor	0.09	0.04	1.54	0.66	0.01	0.02	0.31	0.33	0.02	0.09	0.10	—	1,214	1,214	0.05	0.18	1.41	1,269
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.18	0.17	0.15	1.77	0.00	0.00	0.43	0.43	0.00	0.10	0.10	—	393	393	0.01	0.02	0.72	399
Vendor	0.02	0.01	0.28	0.12	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	201	201	0.01	0.03	0.23	210
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Building Construction (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	5.63	4.66	38.0	40.9	0.08	1.30	—	1.30	1.19	—	1.19	—	6,492	6,492	0.26	0.05	—	6,514
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	5.63	4.66	38.0	40.9	0.08	1.30	—	1.30	1.19	—	1.19	—	6,492	6,492	0.26	0.05	—	6,514
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.82	3.99	32.6	35.1	0.07	1.11	—	1.11	1.02	—	1.02	—	5,565	5,565	0.23	0.05	—	5,584
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.88	0.73	5.95	6.40	0.01	0.20	—	0.20	0.19	—	0.19	—	921	921	0.04	0.01	—	924
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.14	1.03	0.73	12.4	0.00	0.00	2.83	2.83	0.00	0.66	0.66	—	2,911	2,911	0.05	0.11	10.7	2,957
Vendor	0.10	0.04	1.66	0.74	0.01	0.02	0.37	0.39	0.02	0.10	0.12	—	1,391	1,391	0.06	0.21	3.65	1,458
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.11	0.99	0.96	10.9	0.00	0.00	2.83	2.83	0.00	0.66	0.66	—	2,701	2,701	0.07	0.12	0.28	2,738
Vendor	0.10	0.04	1.76	0.75	0.01	0.02	0.37	0.39	0.02	0.10	0.12	—	1,393	1,393	0.06	0.21	0.09	1,456
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.94	0.84	0.73	9.05	0.00	0.00	2.36	2.36	0.00	0.55	0.55	—	2,331	2,331	0.05	0.10	3.97	2,364
Vendor	0.09	0.04	1.48	0.63	0.01	0.02	0.31	0.33	0.02	0.09	0.10	—	1,193	1,193	0.05	0.18	1.35	1,248

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.17	0.15	0.13	1.65	0.00	0.00	0.43	0.43	0.00	0.10	0.10	—	386	386	0.01	0.02	0.66	391
Vendor	0.02	0.01	0.27	0.12	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	198	198	0.01	0.03	0.22	207
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.14. Building Construction (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	5.63	4.66	38.0	40.9	0.08	1.30	—	1.30	1.19	—	1.19	—	6,492	6,492	0.26	0.05	—	6,514
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	5.63	4.66	38.0	40.9	0.08	1.30	—	1.30	1.19	—	1.19	—	6,492	6,492	0.26	0.05	—	6,514
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.82	3.99	32.6	35.1	0.07	1.11	—	1.11	1.02	—	1.02	—	5,565	5,565	0.23	0.05	—	5,584
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.88	0.73	5.95	6.40	0.01	0.20	—	0.20	0.19	—	0.19	—	921	921	0.04	0.01	—	924
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.14	1.03	0.73	12.4	0.00	0.00	2.83	2.83	0.00	0.66	0.66	—	2,911	2,911	0.05	0.11	10.7	2,957
Vendor	0.10	0.04	1.66	0.74	0.01	0.02	0.37	0.39	0.02	0.10	0.12	—	1,391	1,391	0.06	0.21	3.65	1,458
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.11	0.99	0.96	10.9	0.00	0.00	2.83	2.83	0.00	0.66	0.66	—	2,701	2,701	0.07	0.12	0.28	2,738
Vendor	0.10	0.04	1.76	0.75	0.01	0.02	0.37	0.39	0.02	0.10	0.12	—	1,393	1,393	0.06	0.21	0.09	1,456
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.94	0.84	0.73	9.05	0.00	0.00	2.36	2.36	0.00	0.55	0.55	—	2,331	2,331	0.05	0.10	3.97	2,364
Vendor	0.09	0.04	1.48	0.63	0.01	0.02	0.31	0.33	0.02	0.09	0.10	—	1,193	1,193	0.05	0.18	1.35	1,248
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.17	0.15	0.13	1.65	0.00	0.00	0.43	0.43	0.00	0.10	0.10	—	386	386	0.01	0.02	0.66	391
Vendor	0.02	0.01	0.27	0.12	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	198	198	0.01	0.03	0.22	207
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.15. Building Construction (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	5.51	4.56	37.7	40.7	0.08	1.24	—	1.24	1.14	—	1.14	—	6,490	6,490	0.26	0.05	—	6,512
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	5.51	4.56	37.7	40.7	0.08	1.24	—	1.24	1.14	—	1.14	—	6,490	6,490	0.26	0.05	—	6,512
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.04	1.69	14.0	15.1	0.03	0.46	—	0.46	0.42	—	0.42	—	2,408	2,408	0.10	0.02	—	2,416
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.37	0.31	2.55	2.76	0.01	0.08	—	0.08	0.08	—	0.08	—	399	399	0.02	< 0.005	—	400
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.09	0.98	0.64	11.6	0.00	0.00	2.83	2.83	0.00	0.66	0.66	—	2,858	2,858	0.05	0.11	9.68	2,902
Vendor	0.10	0.04	1.60	0.71	0.01	0.02	0.37	0.39	0.02	0.10	0.12	—	1,364	1,364	0.06	0.21	3.41	1,430
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.07	0.95	0.86	10.2	0.00	0.00	2.83	2.83	0.00	0.66	0.66	—	2,651	2,651	0.07	0.12	0.25	2,689
Vendor	0.10	0.04	1.69	0.73	0.01	0.02	0.37	0.39	0.02	0.10	0.12	—	1,365	1,365	0.06	0.21	0.09	1,428
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.39	0.35	0.28	3.69	0.00	0.00	1.02	1.02	0.00	0.24	0.24	—	990	990	0.02	0.04	1.55	1,005
Vendor	0.04	0.02	0.62	0.27	< 0.005	0.01	0.14	0.14	0.01	0.04	0.04	—	506	506	0.02	0.08	0.55	530
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.05	0.67	0.00	0.00	0.19	0.19	0.00	0.04	0.04	—	164	164	< 0.005	0.01	0.26	166
Vendor	0.01	< 0.005	0.11	0.05	< 0.005	< 0.005	0.02	0.03	< 0.005	0.01	0.01	—	83.8	83.8	< 0.005	0.01	0.09	87.8
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.16. Building Construction (2027) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	5.51	4.56	37.7	40.7	0.08	1.24	—	1.24	1.14	—	1.14	—	6,490	6,490	0.26	0.05	—	6,512
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	5.51	4.56	37.7	40.7	0.08	1.24	—	1.24	1.14	—	1.14	—	6,490	6,490	0.26	0.05	—	6,512
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.04	1.69	14.0	15.1	0.03	0.46	—	0.46	0.42	—	0.42	—	2,408	2,408	0.10	0.02	—	2,416
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.37	0.31	2.55	2.76	0.01	0.08	—	0.08	0.08	—	0.08	—	399	399	0.02	< 0.005	—	400
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.09	0.98	0.64	11.6	0.00	0.00	2.83	2.83	0.00	0.66	0.66	—	2,858	2,858	0.05	0.11	9.68	2,902
Vendor	0.10	0.04	1.60	0.71	0.01	0.02	0.37	0.39	0.02	0.10	0.12	—	1,364	1,364	0.06	0.21	3.41	1,430
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.07	0.95	0.86	10.2	0.00	0.00	2.83	2.83	0.00	0.66	0.66	—	2,651	2,651	0.07	0.12	0.25	2,689
Vendor	0.10	0.04	1.69	0.73	0.01	0.02	0.37	0.39	0.02	0.10	0.12	—	1,365	1,365	0.06	0.21	0.09	1,428
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.39	0.35	0.28	3.69	0.00	0.00	1.02	1.02	0.00	0.24	0.24	—	990	990	0.02	0.04	1.55	1,005
Vendor	0.04	0.02	0.62	0.27	< 0.005	0.01	0.14	0.14	0.01	0.04	0.04	—	506	506	0.02	0.08	0.55	530

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.05	0.67	0.00	0.00	0.19	0.19	0.00	0.04	0.04	—	164	164	< 0.005	0.01	0.26	166
Vendor	0.01	< 0.005	0.11	0.05	< 0.005	< 0.005	0.02	0.03	< 0.005	0.01	0.01	—	83.8	83.8	< 0.005	0.01	0.09	87.8
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.17. Paving (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.28	0.23	2.56	3.97	0.01	0.10	—	0.10	0.10	—	0.10	—	615	615	0.02	< 0.005	—	617
Paving	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.28	0.23	2.56	3.97	0.01	0.10	—	0.10	0.10	—	0.10	—	615	615	0.02	< 0.005	—	617
Paving	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.59	0.91	< 0.005	0.02	—	0.02	0.02	—	0.02	—	142	142	0.01	< 0.005	—	142
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.11	0.17	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	23.4	23.4	< 0.005	< 0.005	—	23.5
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.01	0.17	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	41.7	41.7	< 0.005	< 0.005	0.14	42.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.01	0.15	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	38.7	38.7	< 0.005	< 0.005	< 0.005	39.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.96	8.96	< 0.005	< 0.005	0.01	9.09
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.48	1.48	< 0.005	< 0.005	< 0.005	1.51
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.18. Paving (2027) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.28	0.23	2.56	3.97	0.01	0.10	—	0.10	0.10	—	0.10	—	615	615	0.02	< 0.005	—	617
Paving	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.28	0.23	2.56	3.97	0.01	0.10	—	0.10	0.10	—	0.10	—	615	615	0.02	< 0.005	—	617
Paving	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.59	0.91	< 0.005	0.02	—	0.02	0.02	—	0.02	—	142	142	0.01	< 0.005	—	142
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.11	0.17	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	23.4	23.4	< 0.005	< 0.005	—	23.5
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.01	0.17	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	41.7	41.7	< 0.005	< 0.005	0.14	42.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.01	0.15	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	38.7	38.7	< 0.005	< 0.005	< 0.005	39.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.96	8.96	< 0.005	< 0.005	0.01	9.09
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.48	1.48	< 0.005	< 0.005	< 0.005	1.51
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.19. Architectural Coating (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.11	1.57	1.54	< 0.005	0.03	—	0.03	0.03	—	0.03	—	274	274	0.01	< 0.005	—	275
Architectural Coatings	—	13.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.11	1.57	1.54	< 0.005	0.03	—	0.03	0.03	—	0.03	—	274	274	0.01	< 0.005	—	275
Architectural Coatings	—	13.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	1.33	1.30	< 0.005	0.03	—	0.03	0.02	—	0.02	—	232	232	0.01	< 0.005	—	233
Architectural Coatings	—	11.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.24	0.24	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	38.4	38.4	< 0.005	< 0.005	—	38.6
Architectural Coatings	—	2.06	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.23	0.21	0.15	2.48	0.00	0.00	0.57	0.57	0.00	0.13	0.13	—	582	582	0.01	0.02	2.14	591
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.22	0.20	0.19	2.18	0.00	0.00	0.57	0.57	0.00	0.13	0.13	—	540	540	0.01	0.02	0.06	548
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.19	0.17	0.14	1.79	0.00	0.00	0.47	0.47	0.00	0.11	0.11	—	461	461	0.01	0.02	0.78	468
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.33	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	76.3	76.3	< 0.005	< 0.005	0.13	77.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.20. Architectural Coating (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.11	1.57	1.54	< 0.005	0.03	—	0.03	0.03	—	0.03	—	274	274	0.01	< 0.005	—	275
Architectural Coatings	—	13.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.11	1.57	1.54	< 0.005	0.03	—	0.03	0.03	—	0.03	—	274	274	0.01	< 0.005	—	275
Architectural Coatings	—	13.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	1.33	1.30	< 0.005	0.03	—	0.03	0.02	—	0.02	—	232	232	0.01	< 0.005	—	233
Architectural Coatings	—	11.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.24	0.24	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	38.4	38.4	< 0.005	< 0.005	—	38.6
Architectural Coatings	—	2.06	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.23	0.21	0.15	2.48	0.00	0.00	0.57	0.57	0.00	0.13	0.13	—	582	582	0.01	0.02	2.14	591
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.22	0.20	0.19	2.18	0.00	0.00	0.57	0.57	0.00	0.13	0.13	—	540	540	0.01	0.02	0.06	548
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.19	0.17	0.14	1.79	0.00	0.00	0.47	0.47	0.00	0.11	0.11	—	461	461	0.01	0.02	0.78	468
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.33	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	76.3	76.3	< 0.005	< 0.005	0.13	77.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.21. Architectural Coating (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.10	1.52	1.53	< 0.005	0.03	—	0.03	0.02	—	0.02	—	274	274	0.01	< 0.005	—	275
Architectural Coatings	—	13.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.10	1.52	1.53	< 0.005	0.03	—	0.03	0.02	—	0.02	—	274	274	0.01	< 0.005	—	275
Architectural Coatings	—	13.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.57	0.57	< 0.005	0.01	—	0.01	0.01	—	0.01	—	103	103	< 0.005	< 0.005	—	103
Architectural Coatings	—	5.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.10	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	17.1	17.1	< 0.005	< 0.005	—	17.1
Architectural Coatings	—	0.91	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.22	0.20	0.13	2.31	0.00	0.00	0.57	0.57	0.00	0.13	0.13	—	572	572	0.01	0.02	1.94	580
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.21	0.19	0.17	2.05	0.00	0.00	0.57	0.57	0.00	0.13	0.13	—	530	530	0.01	0.02	0.05	538
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.06	0.75	0.00	0.00	0.21	0.21	0.00	0.05	0.05	—	201	201	< 0.005	0.01	0.31	203
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.14	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	33.2	33.2	< 0.005	< 0.005	0.05	33.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.22. Architectural Coating (2027) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.10	1.52	1.53	< 0.005	0.03	—	0.03	0.02	—	0.02	—	274	274	0.01	< 0.005	—	275
Architectural Coatings	—	13.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.10	1.52	1.53	< 0.005	0.03	—	0.03	0.02	—	0.02	—	274	274	0.01	< 0.005	—	275
Architectural Coatings	—	13.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.57	0.57	< 0.005	0.01	—	0.01	0.01	—	0.01	—	103	103	< 0.005	< 0.005	—	103
Architectural Coatings	—	5.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.10	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	17.1	17.1	< 0.005	< 0.005	—	17.1
Architectural Coatings	—	0.91	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.22	0.20	0.13	2.31	0.00	0.00	0.57	0.57	0.00	0.13	0.13	—	572	572	0.01	0.02	1.94	580
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.21	0.19	0.17	2.05	0.00	0.00	0.57	0.57	0.00	0.13	0.13	—	530	530	0.01	0.02	0.05	538
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.06	0.75	0.00	0.00	0.21	0.21	0.00	0.05	0.05	—	201	201	< 0.005	0.01	0.31	203
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.14	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	33.2	33.2	< 0.005	< 0.005	0.05	33.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	1.92	1.82	1.00	9.24	0.02	0.01	1.80	1.81	0.01	0.46	0.47	—	2,050	2,050	0.12	0.11	6.35	2,091
High Turnover (Sit Down Restaurant)	2.07	1.90	1.61	16.4	0.04	0.03	4.08	4.11	0.03	1.04	1.06	—	4,494	4,494	0.17	0.19	14.4	4,569
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	3.98	3.72	2.61	25.7	0.06	0.04	5.89	5.93	0.04	1.49	1.53	—	6,544	6,544	0.29	0.30	20.8	6,660
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	1.85	1.74	1.17	9.80	0.02	0.01	1.80	1.81	0.01	0.46	0.47	—	1,940	1,940	0.15	0.12	0.16	1,979
High Turnover (Sit Down Restaurant)	2.00	1.83	1.88	15.5	0.04	0.03	4.08	4.11	0.03	1.04	1.06	—	4,241	4,241	0.19	0.20	0.37	4,306
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	3.85	3.57	3.05	25.3	0.06	0.04	5.89	5.93	0.04	1.49	1.53	—	6,180	6,180	0.33	0.32	0.54	6,286
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Apartments High Rise	0.33	0.31	0.20	1.67	< 0.005	< 0.005	0.32	0.32	< 0.005	0.08	0.08	—	323	323	0.02	0.02	0.45	329
High Turnover (Sit Down Restaurant)	0.32	0.30	0.22	1.84	< 0.005	< 0.005	0.41	0.41	< 0.005	0.10	0.11	—	403	403	0.02	0.02	0.58	411
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.65	0.61	0.42	3.51	0.01	0.01	0.73	0.73	0.01	0.18	0.19	—	726	726	0.05	0.04	1.03	740

4.1.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	1.92	1.82	1.00	9.24	0.02	0.01	1.80	1.81	0.01	0.46	0.47	—	2,050	2,050	0.12	0.11	6.35	2,091
High Turnover (Sit Down Restaurant)	2.07	1.90	1.61	16.4	0.04	0.03	4.08	4.11	0.03	1.04	1.06	—	4,494	4,494	0.17	0.19	14.4	4,569
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	3.98	3.72	2.61	25.7	0.06	0.04	5.89	5.93	0.04	1.49	1.53	—	6,544	6,544	0.29	0.30	20.8	6,660
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Apartme High Rise	1.85	1.74	1.17	9.80	0.02	0.01	1.80	1.81	0.01	0.46	0.47	—	1,940	1,940	0.15	0.12	0.16	1,979
High Turnover (Sit Down Restaurant)	2.00	1.83	1.88	15.5	0.04	0.03	4.08	4.11	0.03	1.04	1.06	—	4,241	4,241	0.19	0.20	0.37	4,306
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	3.85	3.57	3.05	25.3	0.06	0.04	5.89	5.93	0.04	1.49	1.53	—	6,180	6,180	0.33	0.32	0.54	6,286
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	0.33	0.31	0.20	1.67	< 0.005	< 0.005	0.32	0.32	< 0.005	0.08	0.08	—	323	323	0.02	0.02	0.45	329
High Turnover (Sit Down Restaurant)	0.32	0.30	0.22	1.84	< 0.005	< 0.005	0.41	0.41	< 0.005	0.10	0.11	—	403	403	0.02	0.02	0.58	411
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.65	0.61	0.42	3.51	0.01	0.01	0.73	0.73	0.01	0.18	0.19	—	726	726	0.05	0.04	1.03	740

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Apartme High Rise	—	—	—	—	—	—	—	—	—	—	—	—	1,550	1,550	0.25	0.03	—	1,566
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	712	712	0.12	0.01	—	719
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	—	15.0	15.0	< 0.005	< 0.005	—	15.1
Total	—	—	—	—	—	—	—	—	—	—	—	—	2,277	2,277	0.37	0.04	—	2,300
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	—	1,550	1,550	0.25	0.03	—	1,566
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	712	712	0.12	0.01	—	719
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	—	15.0	15.0	< 0.005	< 0.005	—	15.1
Total	—	—	—	—	—	—	—	—	—	—	—	—	2,277	2,277	0.37	0.04	—	2,300
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	—	257	257	0.04	0.01	—	259
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	118	118	0.02	< 0.005	—	119

Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	—	2.48	2.48	< 0.005	< 0.005	—	2.51
Total	—	—	—	—	—	—	—	—	—	—	—	—	377	377	0.06	0.01	—	381

4.2.2. Electricity Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	—	1,550	1,550	0.25	0.03	—	1,566
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	712	712	0.12	0.01	—	719
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	—	15.0	15.0	< 0.005	< 0.005	—	15.1
Total	—	—	—	—	—	—	—	—	—	—	—	—	2,277	2,277	0.37	0.04	—	2,300
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	—	1,550	1,550	0.25	0.03	—	1,566
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	712	712	0.12	0.01	—	719

Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	—	15.0	15.0	< 0.005	< 0.005	—	15.1
Total	—	—	—	—	—	—	—	—	—	—	—	—	2,277	2,277	0.37	0.04	—	2,300
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	—	257	257	0.04	0.01	—	259
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	118	118	0.02	< 0.005	—	119
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	—	2.48	2.48	< 0.005	< 0.005	—	2.51
Total	—	—	—	—	—	—	—	—	—	—	—	—	377	377	0.06	0.01	—	381

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.2.4. Natural Gas Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Apartments High Rise	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	—	9.83	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	1.63	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.00	11.5	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00

Consum Products	—	9.83	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	1.63	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.00	11.5	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	—	1.79	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.00	2.09	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00

4.3.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	—	9.83	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	1.63	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.00	11.5	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	—	9.83	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	1.63	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.00	11.5	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	—	1.79	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.00	2.09	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	36.8	62.5	99.3	0.14	0.08	—	127

High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	8.76	14.8	23.6	0.03	0.02	—	30.2
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	45.6	77.4	123	0.17	0.10	—	157
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	36.8	62.5	99.3	0.14	0.08	—	127
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	8.76	14.8	23.6	0.03	0.02	—	30.2
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	45.6	77.4	123	0.17	0.10	—	157
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	6.09	10.4	16.4	0.02	0.01	—	21.0
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	1.45	2.46	3.91	0.01	< 0.005	—	5.00
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Total	—	—	—	—	—	—	—	—	—	—	—	7.54	12.8	20.4	0.03	0.02	—	26.0

4.4.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	36.8	62.5	99.3	0.14	0.08	—	127
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	8.76	14.8	23.6	0.03	0.02	—	30.2
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	45.6	77.4	123	0.17	0.10	—	157
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	36.8	62.5	99.3	0.14	0.08	—	127
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	8.76	14.8	23.6	0.03	0.02	—	30.2
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Total	—	—	—	—	—	—	—	—	—	—	—	45.6	77.4	123	0.17	0.10	—	157
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	6.09	10.4	16.4	0.02	0.01	—	21.0
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	1.45	2.46	3.91	0.01	< 0.005	—	5.00
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	7.54	12.8	20.4	0.03	0.02	—	26.0

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	164	0.00	164	16.4	0.00	—	573
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	96.2	0.00	96.2	9.61	0.00	—	337
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Total	—	—	—	—	—	—	—	—	—	—	—	260	0.00	260	26.0	0.00	—	909
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	164	0.00	164	16.4	0.00	—	573
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	96.2	0.00	96.2	9.61	0.00	—	337
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	260	0.00	260	26.0	0.00	—	909
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	27.1	0.00	27.1	2.71	0.00	—	94.8
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	15.9	0.00	15.9	1.59	0.00	—	55.7
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	43.0	0.00	43.0	4.30	0.00	—	151

4.5.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	164	0.00	164	16.4	0.00	—	573
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	96.2	0.00	96.2	9.61	0.00	—	337
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	260	0.00	260	26.0	0.00	—	909
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	164	0.00	164	16.4	0.00	—	573
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	96.2	0.00	96.2	9.61	0.00	—	337
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	260	0.00	260	26.0	0.00	—	909
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	27.1	0.00	27.1	2.71	0.00	—	94.8

High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	15.9	0.00	15.9	1.59	0.00	—	55.7
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	43.0	0.00	43.0	4.30	0.00	—	151

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.18	3.18
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	23.4	23.4
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	26.6	26.6
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.18	3.18

High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	23.4	23.4
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	26.6	26.6
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.53	0.53
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.88	3.88
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.41	4.41

4.6.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.18	3.18
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	23.4	23.4
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	26.6	26.6
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Apartments	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.18	3.18
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	23.4	23.4
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	26.6	26.6
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.53	0.53
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.88	3.88
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.41	4.41

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.19	0.19	< 0.005	< 0.005	—	0.20

Total	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.19	0.19	< 0.005	< 0.005	—	0.20
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.19	0.19	< 0.005	< 0.005	—	0.20
Total	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.19	0.19	< 0.005	< 0.005	—	0.20
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.18	1.18	< 0.005	< 0.005	—	1.18
Total	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.18	1.18	< 0.005	< 0.005	—	1.18

4.8.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.19	0.19	< 0.005	< 0.005	—	0.20
Total	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.19	0.19	< 0.005	< 0.005	—	0.20
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Emergency Generator	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.19	0.19	< 0.005	< 0.005	—	0.20
Total	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.19	0.19	< 0.005	< 0.005	—	0.20
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.18	1.18	< 0.005	< 0.005	—	1.18
Total	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.18	1.18	< 0.005	< 0.005	—	1.18

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Sequest	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	9/4/2023	1/2/2024	6.00	104	—
Site Preparation	Site Preparation	1/3/2024	3/4/2024	6.00	53.0	—
Grading	Grading	3/5/2024	6/3/2024	6.00	78.0	—
Building Construction	Building Construction	6/6/2024	6/7/2027	6.00	940	—
Paving	Paving	3/8/2027	6/12/2027	6.00	84.0	—
Architectural Coating	Architectural Coating	1/5/2026	6/9/2027	6.00	447	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Aerial Lifts	Diesel	Average	4.00	8.00	367	0.40
Demolition	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	36.0	0.38
Demolition	Concrete/Industrial Saws	Diesel	Average	2.00	8.00	33.0	0.73
Demolition	Crawler Tractors	Diesel	Average	2.00	8.00	87.0	0.43
Demolition	Dumpers/Tenders	Diesel	Average	2.00	8.00	16.0	0.38
Demolition	Rubber Tired Loaders	Diesel	Average	2.00	8.00	150	0.36
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	367	0.40
Site Preparation	Bore/Drill Rigs	Diesel	Average	1.00	8.00	84.0	0.37
Site Preparation	Dumpers/Tenders	Diesel	Average	1.00	8.00	16.0	0.38
Site Preparation	Rubber Tired Loaders	Diesel	Average	2.00	8.00	150	0.36

Site Preparation	Pumps	Diesel	Average	1.00	8.00	11.0	0.74
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	148	0.41
Grading	Bore/Drill Rigs	Diesel	Average	1.00	8.00	36.0	0.38
Building Construction	Aerial Lifts	Diesel	Average	10.0	8.00	82.0	0.20
Building Construction	Concrete/Industrial Saws	Diesel	Average	4.00	8.00	14.0	0.74
Building Construction	Plate Compactors	Diesel	Average	2.00	8.00	367	0.29
Building Construction	Air Compressors	Diesel	Average	2.00	8.00	46.0	0.45
Building Construction	Cranes	Diesel	Average	1.00	7.00	84.0	0.37
Building Construction	Dumpers/Tenders	Diesel	Average	2.00	8.00	16.0	0.38
Building Construction	Generator Sets	Diesel	Average	2.00	8.00	14.0	0.74
Building Construction	Pumps	Diesel	Average	1.00	8.00	11.0	0.74
Building Construction	Signal Boards	Diesel	Average	4.00	8.00	6.00	0.82
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Building Construction	Welders	Diesel	Average	4.00	8.00	46.0	0.45
Paving	Paving Equipment	Diesel	Average	1.00	8.00	81.0	0.42
Paving	Rollers	Diesel	Average	1.00	8.00	89.0	0.36
Architectural Coating	Pressure Washers	Diesel	Average	2.00	6.00	37.0	0.48

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Aerial Lifts	Diesel	Average	4.00	8.00	367	0.40
Demolition	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	36.0	0.38
Demolition	Concrete/Industrial Saws	Diesel	Average	2.00	8.00	33.0	0.73
Demolition	Crawler Tractors	Diesel	Average	2.00	8.00	87.0	0.43

Demolition	Dumpers/Tenders	Diesel	Average	2.00	8.00	16.0	0.38
Demolition	Rubber Tired Loaders	Diesel	Average	2.00	8.00	150	0.36
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	367	0.40
Site Preparation	Bore/Drill Rigs	Diesel	Average	1.00	8.00	84.0	0.37
Site Preparation	Dumpers/Tenders	Diesel	Average	1.00	8.00	16.0	0.38
Site Preparation	Rubber Tired Loaders	Diesel	Average	2.00	8.00	150	0.36
Site Preparation	Pumps	Diesel	Average	1.00	8.00	11.0	0.74
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	148	0.41
Grading	Bore/Drill Rigs	Diesel	Average	1.00	8.00	36.0	0.38
Building Construction	Aerial Lifts	Diesel	Average	10.0	8.00	82.0	0.20
Building Construction	Concrete/Industrial Saws	Diesel	Average	4.00	8.00	14.0	0.74
Building Construction	Plate Compactors	Diesel	Average	2.00	8.00	367	0.29
Building Construction	Air Compressors	Diesel	Average	2.00	8.00	46.0	0.45
Building Construction	Cranes	Diesel	Average	1.00	7.00	84.0	0.37
Building Construction	Dumpers/Tenders	Diesel	Average	2.00	8.00	16.0	0.38
Building Construction	Generator Sets	Diesel	Average	2.00	8.00	14.0	0.74
Building Construction	Pumps	Diesel	Average	1.00	8.00	11.0	0.74
Building Construction	Signal Boards	Diesel	Average	4.00	8.00	6.00	0.82
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Building Construction	Welders	Diesel	Average	4.00	8.00	46.0	0.45
Paving	Paving Equipment	Diesel	Average	1.00	8.00	81.0	0.42
Paving	Rollers	Diesel	Average	1.00	8.00	89.0	0.36
Architectural Coating	Pressure Washers	Diesel	Average	2.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	35.0	11.7	LDA,LDT1,LDT2
Demolition	Vendor	—	8.40	HHDT,MHDT
Demolition	Hauling	3.92	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	11.7	LDA,LDT1,LDT2
Site Preparation	Vendor	—	8.40	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	7.50	11.7	LDA,LDT1,LDT2
Grading	Vendor	—	8.40	HHDT,MHDT
Grading	Hauling	16.0	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	343	11.7	LDA,LDT1,LDT2
Building Construction	Vendor	53.1	8.40	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	5.00	11.7	LDA,LDT1,LDT2
Paving	Vendor	—	8.40	HHDT,MHDT

Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	68.5	11.7	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	8.40	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	35.0	11.7	LDA,LDT1,LDT2
Demolition	Vendor	—	8.40	HHDT,MHDT
Demolition	Hauling	3.92	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	11.7	LDA,LDT1,LDT2
Site Preparation	Vendor	—	8.40	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	7.50	11.7	LDA,LDT1,LDT2
Grading	Vendor	—	8.40	HHDT,MHDT
Grading	Hauling	16.0	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	343	11.7	LDA,LDT1,LDT2

Building Construction	Vendor	53.1	8.40	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	5.00	11.7	LDA,LDT1,LDT2
Paving	Vendor	—	8.40	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	68.5	11.7	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	8.40	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	942,840	314,280	20,631	6,792	507

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (Building Square Footage)	Acres Paved (acres)

Demolition	0.00	0.00	0.00	35,433	—
Site Preparation	—	—	0.00	0.00	—
Grading	0.00	10,000	0.00	0.00	—
Paving	0.00	0.00	0.00	0.00	0.17

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Apartments High Rise	—	0%
High Turnover (Sit Down Restaurant)	0.00	0%
Enclosed Parking with Elevator	0.17	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2023	0.00	204	0.03	< 0.005
2024	0.00	204	0.03	< 0.005
2025	0.00	204	0.03	< 0.005
2026	0.00	204	0.03	< 0.005
2027	0.00	204	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year

Apartments High Rise	641	641	641	234,058	2,551	2,551	2,551	931,190
High Turnover (Sit Down Restaurant)	581	581	581	212,101	2,229	5,785	5,785	1,184,482
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Apartments High Rise	641	641	641	234,058	2,551	2,551	2,551	931,190
High Turnover (Sit Down Restaurant)	581	581	581	212,101	2,229	5,785	5,785	1,184,482
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Apartments High Rise	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	238
Conventional Wood Stoves	0
Catalytic Wood Stoves	0

Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.1.2. Mitigated

Hearth Type	Unmitigated (number)
Apartments High Rise	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	238
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
942840	314,280	20,631	6,792	507

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Apartments High Rise	2,774,143	204	0.0330	0.0040	0.00
High Turnover (Sit Down Restaurant)	1,273,803	204	0.0330	0.0040	0.00
Enclosed Parking with Elevator	26,829	204	0.0330	0.0040	0.00

5.11.2. Mitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Apartments High Rise	2,774,143	204	0.0330	0.0040	0.00
High Turnover (Sit Down Restaurant)	1,273,803	204	0.0330	0.0040	0.00
Enclosed Parking with Elevator	26,829	204	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)

Apartments High Rise	17,222,762	75,540
High Turnover (Sit Down Restaurant)	4,097,705	0.00
Enclosed Parking with Elevator	0.00	0.00

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Apartments High Rise	17,222,762	75,540
High Turnover (Sit Down Restaurant)	4,097,705	0.00
Enclosed Parking with Elevator	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments High Rise	304	—
High Turnover (Sit Down Restaurant)	178	—
Enclosed Parking with Elevator	0.00	—

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments High Rise	304	—
High Turnover (Sit Down Restaurant)	178	—
Enclosed Parking with Elevator	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Apartments High Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments High Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
High Turnover (Sit Down Restaurant)	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
High Turnover (Sit Down Restaurant)	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
High Turnover (Sit Down Restaurant)	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Apartments High Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments High Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
High Turnover (Sit Down Restaurant)	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
High Turnover (Sit Down Restaurant)	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
High Turnover (Sit Down Restaurant)	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.15.2. Mitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor
Emergency Generator	Diesel	1.00	< 0.005	4.00	805	0.70

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type
—	—

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	7.10	annual days of extreme heat
Extreme Precipitation	7.50	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth

Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A

Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	3.12
AQ-PM	40.2
AQ-DPM	61.6
Drinking Water	4.21
Lead Risk Housing	17.6
Pesticides	0.00
Toxic Releases	58.5
Traffic	12.3

Effect Indicators	—
CleanUp Sites	25.9
Groundwater	80.3
Haz Waste Facilities/Generators	95.9
Impaired Water Bodies	0.00
Solid Waste	0.00
Sensitive Population	—
Asthma	5.50
Cardio-vascular	29.6
Low Birth Weights	90.2
Socioeconomic Factor Indicators	—
Education	29.7
Housing	99.4
Linguistic	42.8
Poverty	91.5
Unemployment	33.6

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	12.61388426
Employed	4.042089054
Median HI	2.335429231
Education	—
Bachelor's or higher	94.63621199
High school enrollment	100

Preschool enrollment	95.7141024
Transportation	—
Auto Access	0.346464776
Active commuting	99.67919928
Social	—
2-parent households	0.230976517
Voting	21.98126524
Neighborhood	—
Alcohol availability	21.44232003
Park access	81.35506224
Retail density	99.80751957
Supermarket access	94.25125112
Tree canopy	34.80046195
Housing	—
Homeownership	0.757089696
Housing habitability	30.50173232
Low-inc homeowner severe housing cost burden	99.12742205
Low-inc renter severe housing cost burden	17.1435904
Uncrowded housing	46.38778391
Health Outcomes	—
Insured adults	87.86090081
Arthritis	99.0
Asthma ER Admissions	93.2
High Blood Pressure	99.1
Cancer (excluding skin)	98.9
Asthma	37.3
Coronary Heart Disease	98.5

Chronic Obstructive Pulmonary Disease	93.7
Diagnosed Diabetes	98.4
Life Expectancy at Birth	31.7
Cognitively Disabled	62.4
Physically Disabled	68.4
Heart Attack ER Admissions	90.9
Mental Health Not Good	47.3
Chronic Kidney Disease	99.0
Obesity	92.5
Pedestrian Injuries	90.9
Physical Health Not Good	89.8
Stroke	97.8
Health Risk Behaviors	—
Binge Drinking	35.4
Current Smoker	58.7
No Leisure Time for Physical Activity	70.6
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	97.0
Elderly	95.0
English Speaking	28.9
Foreign-born	67.8
Outdoor Workers	87.9
Climate Change Adaptive Capacity	—
Impervious Surface Cover	2.6
Traffic Density	52.1

Traffic Access	87.4
Other Indices	—
Hardship	47.8
Other Decision Support	—
2016 Voting	30.1

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	36.0
Healthy Places Index Score for Project Location (b)	31.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	Architectural coating occurs simultaneously as building construction. 6 day work week per applicant data request form.

Construction: Off-Road Equipment	Per applicant provided data request
Construction: Architectural Coatings	BAAQMD Regulation 8 Rule 3, Nonflat coating
Operations: Vehicle Data	Per Transportation Impact Study prepared by Abrams Associates Traffic Engineering
Operations: Hearths	Berkeley ban wood fireplaces pursuant to BMC Chapter 19.28 and natural gas ban pursuant to BMC Section 12.80.040
Operations: Architectural Coatings	BAAQMD Regulation 8 Rule 3, Nonflat coating
Operations: Energy Use	BMC Section 12.80.040 prohibition of natural gas infrastructure in newly constructed buildings
Operations: Water and Waste Water	EBMUD wastewater treatment plant 100% aerobic
Land Use	Population based on 2.5 pph

Appendix C

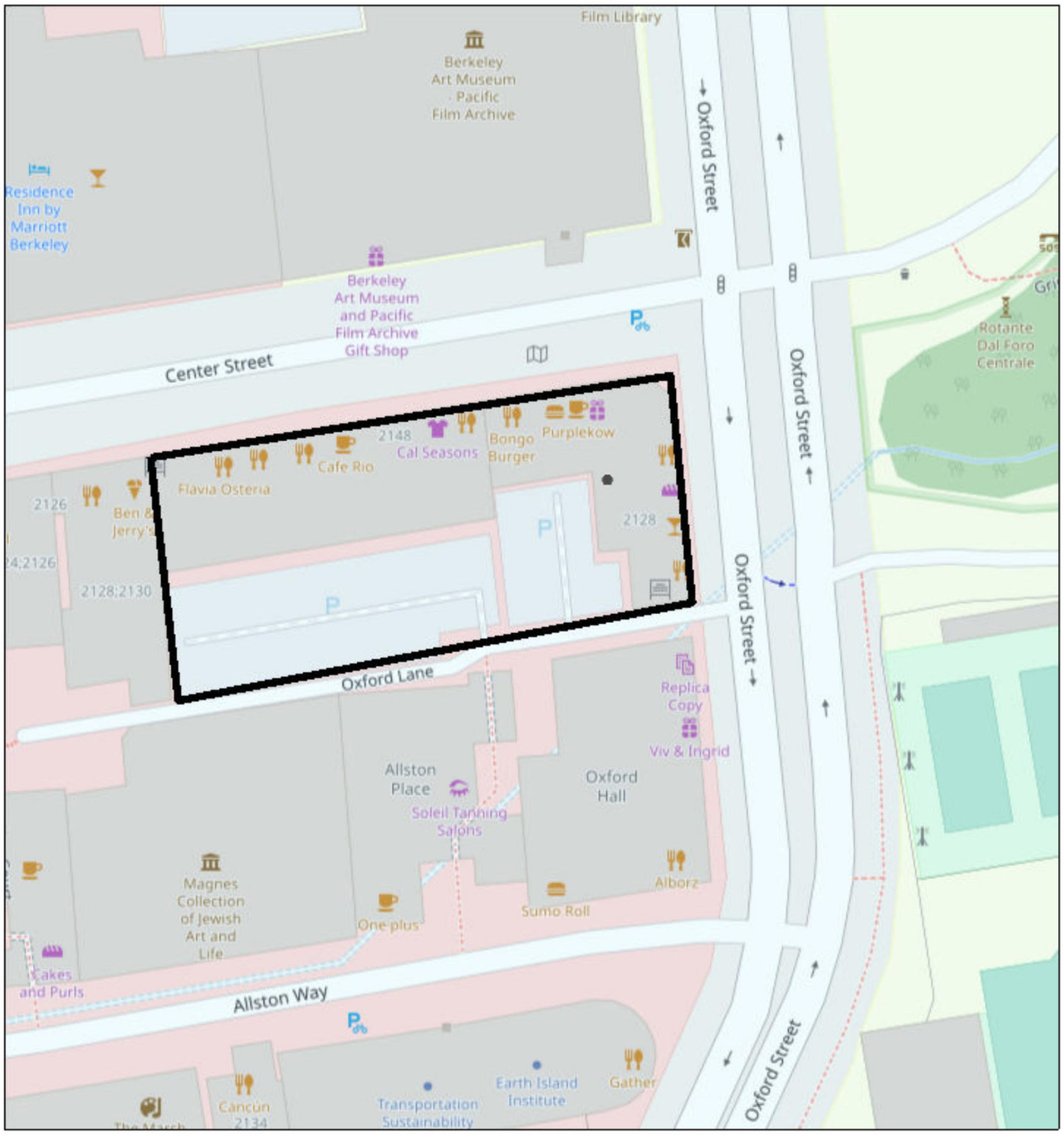
Health Risk Screening Calculations

2128 Oxford Street Screening

Area of Interest (AOI) Information

Area : 3,973,740.81 ft²

Mar 9 2023 14:35:47 Pacific Standard Time



1:1,128

0 0.01 0.01 0.03 mi

0 0.01 0.02 0.04 km

Summary

Name	Count	Area(ft²)	Length(ft)
Permitted Stationary Sources	10	N/A	N/A

Permitted Stationary Sources

#	FacID	FacName	Address	City	Street
1	13451	Pacific Bell	2116 Bancroft Way	Berkeley	CA
2	20070	BERKELEY CENTRAL	2055 Center Street	Berkeley	CA
3	21118	City of Berkeley Fire Station #2	2029 Berkeley Way	Berkeley	CA
4	17864	Peralta Community College District	2050 Center Street	Berkeley	CA
5	200903	Center Street Parking Garage	2025 CENTER ST	BERKELEY	CA
6	59_125	University of California Berkeley	Berkeley Campus	Berkeley	CA
7	59_2	University of California Berkeley	Berkeley Campus	Berkeley	CA
8	59_3	University of California Berkeley	Berkeley Campus	Berkeley	CA
9	59_4	University of California Berkeley	Berkeley Campus	Berkeley	CA
10	59_REM	University of California Berkeley	Berkeley Campus	Berkeley	CA

#	Zip	County	Latitude	Longitude	Details
1	94,704.00	Alameda	37.87	-122.27	Generator
2	94,704.00	Alameda	37.87	-122.27	Generator
3	94,705.00	Alameda	37.87	-122.27	Generator
4	94,704.00	Alameda	37.87	-122.27	Generator
5	94,704.00	Alameda	37.87	-122.27	Generator
6	94,720.00	Alameda	37.87	-122.26	Generator
7	94,720.00	Alameda	37.87	-122.26	Generator
8	94,720.00	Alameda	37.87	-122.26	Generator
9	94,720.00	Alameda	37.87	-122.26	Generator
10	94,720.00	Alameda	37.87	-122.27	*No Data*

#	NAICS	Sector	Sub_Sector	Industry	ChronicHI
1	517,110.00	Information	Telecommunications	Wired Telecommunications Carriers	0.0289433
2	236,116.00	Construction	Construction of Buildings	New Multifamily Housing Construction (except Operative Builders)	0.0003386
3	922,160.00	Public Administration	Justice, Public Order, and Safety Activities	Fire Protection	0.0062601
4	611,210.00	Educational Services	Educational Services	Junior Colleges	0.0002428
5	531,120.00	Real Estate and Rental and Leasing	Real Estate	Lessors of Nonresidential Buildings (except Miniwarehouses)	0.0008720
6	611,310.00	Educational Services	Educational Services	Colleges, Universities, and Professional Schools	0.0065981
7	611,310.00	Educational Services	Educational Services	Colleges, Universities, and Professional Schools	0.0023832
8	611,310.00	Educational Services	Educational Services	Colleges, Universities, and Professional Schools	0.0025643
9	611,310.00	Educational Services	Educational Services	Colleges, Universities, and Professional Schools	0.0012322
10	611,310.00	Educational Services	Educational Services	Colleges, Universities, and Professional Schools	0.9232653

#	PM2_5	Cancer Risk {expression/expr0}	Chronic Hazard Index {expression/expr1}	PM2.5 {expression/expr2}	Count
1	0.0238543	18.706	0.029	0.024	1
2	0.0015864	1.26	0	0.002	1
3	0.0051594	4.046	0.006	0.005	1
4	0.0011377	0.904	0	0.001	1
5	0.0040853	3.245	0.001	0.004	1
6	0.0053413	4.259	0.007	0.005	1
7	0.7907571	0.318	0.002	0.791	1
8	0.8508641	0.343	0.003	0.851	1
9	0.4088506	0.165	0.001	0.409	1
10	125.2815493	181.555	0.923	125.282	1

NOTE: A larger buffer than 1000 feet may be warranted depending on proximity to significant sources.

CEQA Assumptions:
1. Facility ID 21118 and Facility ID 17864 were not included in the analysis because Google Earth shows they are outside of the 1,000-foot boundary of the project site.
2a. 59_REM is a conglomerate of 60 sources on UC Berkeley Campus, 9 sites (15%) are within 1,000 feet of the project site. We assumed 30% of the total risk are associated with those sources as a conservative assumption.
2b. The average distance of the 9 59_REM sources to the site is 734 feet.
2c. 30% of Cancer Risk for 59_REM is 54.468
2d. 30% of PM2.5 for 59_REM is 37.58445

Facility#	FacilityNan	Renewal#	Renewed	Device#	FacilityDeviceName	ComponentCategoryType	ComponentType	ComponentSubType	#CMUs	Pollutant_I	PollutantN	lb/day	tpy
59	University	183031	6/25/2022	S2	Boiler No.2 (Bldg N of Evans Field 1st Fl)	Combustion	Boiler/Heater	Space Heat	0	NULL	NULL	NULL	NULL
59	University	183031	6/25/2022	S2	Boiler No.2 (Bldg N of Evans Field 1st Fl)	Combustion	Boiler/Heater	Space Heat	1	41	Benzene	0.000458	8.36E-05
59	University	183031	6/25/2022	S2	Boiler No.2 (Bldg N of Evans Field 1st Fl)	Combustion	Boiler/Heater	Space Heat	1	124	Formaldeh	0.016363	0.002986
59	University	183031	6/25/2022	S2	Boiler No.2 (Bldg N of Evans Field 1st Fl)	Combustion	Boiler/Heater	Space Heat	1	293	Toluene	0.000742	0.000135
59	University	183031	6/25/2022	S2	Boiler No.2 (Bldg N of Evans Field 1st Fl)	Combustion	Boiler/Heater	Space Heat	1	990	Organics (p	0.353443	0.064503
59	University	183031	6/25/2022	S2	Boiler No.2 (Bldg N of Evans Field 1st Fl)	Combustion	Boiler/Heater	Space Heat	1	1990	Particulate	0.654525	0.119451
59	University	183031	6/25/2022	S2	Boiler No.2 (Bldg N of Evans Field 1st Fl)	Combustion	Boiler/Heater	Space Heat	1	2030	Nitrous Oxi	0.050398	0.009198
59	University	183031	6/25/2022	S2	Boiler No.2 (Bldg N of Evans Field 1st Fl)	Combustion	Boiler/Heater	Space Heat	1	2990	Nitrogen O	7.636122	1.393592
59	University	183031	6/25/2022	S2	Boiler No.2 (Bldg N of Evans Field 1st Fl)	Combustion	Boiler/Heater	Space Heat	1	3990	Sulfur Diox	0.123977	0.022626
59	University	183031	6/25/2022	S2	Boiler No.2 (Bldg N of Evans Field 1st Fl)	Combustion	Boiler/Heater	Space Heat	1	4990	Carbon Mo	8.726999	1.592677
59	University	183031	6/25/2022	S2	Boiler No.2 (Bldg N of Evans Field 1st Fl)	Combustion	Boiler/Heater	Space Heat	1	6960	Carbon Dio	26721.24	4876.626
59	University	183031	6/25/2022	S2	Boiler No.2 (Bldg N of Evans Field 1st Fl)	Combustion	Boiler/Heater	Space Heat	1	6970	Methane ((	0.414532	0.075652
59	University	183031	6/25/2022	S3	Boiler No. 3 (Bldg N of Evans Field 1st Fl)	Combustion	Boiler/Heater	Space Heat	0	NULL	NULL	NULL	NULL
59	University	183031	6/25/2022	S3	Boiler No. 3 (Bldg N of Evans Field 1st Fl)	Combustion	Boiler/Heater	Space Heat	1	41	Benzene	0.000439	8.01E-05
59	University	183031	6/25/2022	S3	Boiler No. 3 (Bldg N of Evans Field 1st Fl)	Combustion	Boiler/Heater	Space Heat	1	124	Formaldeh	0.015675	0.002861
59	University	183031	6/25/2022	S3	Boiler No. 3 (Bldg N of Evans Field 1st Fl)	Combustion	Boiler/Heater	Space Heat	1	293	Toluene	0.000711	0.00013
59	University	183031	6/25/2022	S3	Boiler No. 3 (Bldg N of Evans Field 1st Fl)	Combustion	Boiler/Heater	Space Heat	1	990	Organics (p	0.338572	0.061789
59	University	183031	6/25/2022	S3	Boiler No. 3 (Bldg N of Evans Field 1st Fl)	Combustion	Boiler/Heater	Space Heat	1	1990	Particulate	0.626985	0.114425
59	University	183031	6/25/2022	S3	Boiler No. 3 (Bldg N of Evans Field 1st Fl)	Combustion	Boiler/Heater	Space Heat	1	2030	Nitrous Oxi	0.048278	0.008811
59	University	183031	6/25/2022	S3	Boiler No. 3 (Bldg N of Evans Field 1st Fl)	Combustion	Boiler/Heater	Space Heat	1	2990	Nitrogen O	7.314831	1.334957
59	University	183031	6/25/2022	S3	Boiler No. 3 (Bldg N of Evans Field 1st Fl)	Combustion	Boiler/Heater	Space Heat	1	3990	Sulfur Diox	0.118761	0.021674
59	University	183031	6/25/2022	S3	Boiler No. 3 (Bldg N of Evans Field 1st Fl)	Combustion	Boiler/Heater	Space Heat	1	4990	Carbon Mo	8.359806	1.525665
59	University	183031	6/25/2022	S3	Boiler No. 3 (Bldg N of Evans Field 1st Fl)	Combustion	Boiler/Heater	Space Heat	1	6960	Carbon Dio	25596.93	4671.44
59	University	183031	6/25/2022	S3	Boiler No. 3 (Bldg N of Evans Field 1st Fl)	Combustion	Boiler/Heater	Space Heat	1	6970	Methane ((	0.397091	0.072469
59	University	183031	6/25/2022	S4	Boiler No. 4 (Bldg N of Evans Field 1st Fl)	Combustion	Boiler/Heater	Space Heat	0	NULL	NULL	NULL	NULL
59	University	183031	6/25/2022	S4	Boiler No. 4 (Bldg N of Evans Field 1st Fl)	Combustion	Boiler/Heater	Space Heat	1	41	Benzene	0.000374	6.83E-05
59	University	183031	6/25/2022	S4	Boiler No. 4 (Bldg N of Evans Field 1st Fl)	Combustion	Boiler/Heater	Space Heat	1	124	Formaldeh	0.013358	0.002438
59	University	183031	6/25/2022	S4	Boiler No. 4 (Bldg N of Evans Field 1st Fl)	Combustion	Boiler/Heater	Space Heat	1	293	Toluene	0.000606	0.000111
59	University	183031	6/25/2022	S4	Boiler No. 4 (Bldg N of Evans Field 1st Fl)	Combustion	Boiler/Heater	Space Heat	1	990	Organics (p	0.288528	0.052656
59	University	183031	6/25/2022	S4	Boiler No. 4 (Bldg N of Evans Field 1st Fl)	Combustion	Boiler/Heater	Space Heat	1	1990	Particulate	0.534312	0.097512
59	University	183031	6/25/2022	S4	Boiler No. 4 (Bldg N of Evans Field 1st Fl)	Combustion	Boiler/Heater	Space Heat	1	2030	Nitrous Oxi	0.041142	0.007508
59	University	183031	6/25/2022	S4	Boiler No. 4 (Bldg N of Evans Field 1st Fl)	Combustion	Boiler/Heater	Space Heat	1	2990	Nitrogen O	6.233637	1.137639
59	University	183031	6/25/2022	S4	Boiler No. 4 (Bldg N of Evans Field 1st Fl)	Combustion	Boiler/Heater	Space Heat	1	3990	Sulfur Diox	0.101207	0.01847
59	University	183031	6/25/2022	S4	Boiler No. 4 (Bldg N of Evans Field 1st Fl)	Combustion	Boiler/Heater	Space Heat	1	4990	Carbon Mo	7.124156	1.300158
59	University	183031	6/25/2022	S4	Boiler No. 4 (Bldg N of Evans Field 1st Fl)	Combustion	Boiler/Heater	Space Heat	1	6960	Carbon Dio	21813.49	3980.962
59	University	183031	6/25/2022	S4	Boiler No. 4 (Bldg N of Evans Field 1st Fl)	Combustion	Boiler/Heater	Space Heat	1	6970	Methane ((	0.338397	0.061758
59	University	183031	6/25/2022	S62	Standby Diesel Generator (Crossroads) (Central Dini	Combustion	Internal Combustion Engine	Emergency Standby	1	41	Benzene	4.55E-05	8.31E-06
59	University	183031	6/25/2022	S62	Standby Diesel Generator (Crossroads) (Central Dini	Combustion	Internal Combustion Engine	Emergency Standby	1	124	Formaldeh	3.77E-06	6.88E-07
59	University	183031	6/25/2022	S62	Standby Diesel Generator (Crossroads) (Central Dini	Combustion	Internal Combustion Engine	Emergency Standby	1	990	Organics (p	0.002199	0.000401
59	University	183031	6/25/2022	S62	Standby Diesel Generator (Crossroads) (Central Dini	Combustion	Internal Combustion Engine	Emergency Standby	1	1030	Arsenic (all	3.97E-08	7.24E-09
59	University	183031	6/25/2022	S62	Standby Diesel Generator (Crossroads) (Central Dini	Combustion	Internal Combustion Engine	Emergency Standby	1	1040	Beryllium (	2.33E-08	4.24E-09
59	University	183031	6/25/2022	S62	Standby Diesel Generator (Crossroads) (Central Dini	Combustion	Internal Combustion Engine	Emergency Standby	1	1070	Cadmium	9.92E-08	1.81E-08
59	University	183031	6/25/2022	S62	Standby Diesel Generator (Crossroads) (Central Dini	Combustion	Internal Combustion Engine	Emergency Standby	1	1095	Chromium	2.05E-09	3.74E-10
59	University	183031	6/25/2022	S62	Standby Diesel Generator (Crossroads) (Central Dini	Combustion	Internal Combustion Engine	Emergency Standby	1	1140	Lead (all) p	8.41E-08	1.54E-08
59	University	183031	6/25/2022	S62	Standby Diesel Generator (Crossroads) (Central Dini	Combustion	Internal Combustion Engine	Emergency Standby	1	1160	Manganese	1.32E-07	2.41E-08
59	University	183031	6/25/2022	S62	Standby Diesel Generator (Crossroads) (Central Dini	Combustion	Internal Combustion Engine	Emergency Standby	1	1180	Nickel pollu	1.60E-06	2.93E-07
59	University	183031	6/25/2022	S62	Standby Diesel Generator (Crossroads) (Central Dini	Combustion	Internal Combustion Engine	Emergency Standby	1	1190	Mercury (a	2.80E-08	5.12E-09
59	University	183031	6/25/2022	S62	Standby Diesel Generator (Crossroads) (Central Dini	Combustion	Internal Combustion Engine	Emergency Standby	1	1350	Diesel Engi	0.00019	3.47E-05
59	University	183031	6/25/2022	S62	Standby Diesel Generator (Crossroads) (Central Dini	Combustion	Internal Combustion Engine	Emergency Standby	1	1840	PAHs (non-	2.09E-07	3.82E-08
59	University	183031	6/25/2022	S62	Standby Diesel Generator (Crossroads) (Central Dini	Combustion	Internal Combustion Engine	Emergency Standby	1	2030	Nitrous Oxi	1.22E-05	2.23E-06
59	University	183031	6/25/2022	S62	Standby Diesel Generator (Crossroads) (Central Dini	Combustion	Internal Combustion Engine	Emergency Standby	1	2990	Nitrogen O	0.021883	0.003994
59	University	183031	6/25/2022	S62	Standby Diesel Generator (Crossroads) (Central Dini	Combustion	Internal Combustion Engine	Emergency Standby	1	3990	Sulfur Diox	1.49E-05	2.71E-06
59	University	183031	6/25/2022	S62	Standby Diesel Generator (Crossroads) (Central Dini	Combustion	Internal Combustion Engine	Emergency Standby	1	4990	Carbon Mo	0.001333	0.000243
59	University	183031	6/25/2022	S62	Standby Diesel Generator (Crossroads) (Central Dini	Combustion	Internal Combustion Engine	Emergency Standby	1	6960	Carbon Dio	1.525501	0.278404
59	University	183031	6/25/2022	S62	Standby Diesel Generator (Crossroads) (Central Dini	Combustion	Internal Combustion Engine	Emergency Standby	1	6970	Methane ((	6.10E-05	1.11E-05
59	University	183031	6/25/2022	S63	Standby Diesel Generator (Baker Hall) (Barker Hall, C	Combustion	Internal Combustion Engine	Emergency Standby	1	41	Benzene	0.00037	6.76E-05
59	University	183031	6/25/2022	S63	Standby Diesel Generator (Baker Hall) (Barker Hall, C	Combustion	Internal Combustion Engine	Emergency Standby	1	124	Formaldeh	3.07E-05	5.59E-06
59	University	183031	6/25/2022	S63	Standby Diesel Generator (Baker Hall) (Barker Hall, C	Combustion	Internal Combustion Engine	Emergency Standby	1	990	Organics (p	0.017892	0.003265
59	University	183031	6/25/2022	S63	Standby Diesel Generator (Baker Hall) (Barker Hall, C	Combustion	Internal Combustion Engine	Emergency Standby	1	1030	Arsenic (all	3.23E-07	5.89E-08
59	University	183031	6/25/2022	S63	Standby Diesel Generator (Baker Hall) (Barker Hall, C	Combustion	Internal Combustion Engine	Emergency Standby	1	1040	Beryllium (	1.89E-07	3.45E-08
59	University	183031	6/25/2022	S63	Standby Diesel Generator (Baker Hall) (Barker Hall, C	Combustion	Internal Combustion Engine	Emergency Standby	1	1070	Cadmium	8.07E-07	1.47E-07
59	University	183031	6/25/2022	S63	Standby Diesel Generator (Baker Hall) (Barker Hall, C	Combustion	Internal Combustion Engine	Emergency Standby	1	1095	Chromium	1.67E-08	3.05E-09
59	University	183031	6/25/2022	S63	Standby Diesel Generator (Baker Hall) (Barker Hall, C	Combustion	Internal Combustion Engine	Emergency Standby	1	1140	Lead (all) p	6.84E-07	1.25E-07
59	University	183031	6/25/2022	S63	Standby Diesel Generator (Baker Hall) (Barker Hall, C	Combustion	Internal Combustion Engine	Emergency Standby	1	1160	Manganese	1.07E-06	1.96E-07
59	University	183031	6/25/2022	S63	Standby Diesel Generator (Baker Hall) (Barker Hall, C	Combustion	Internal Combustion Engine	Emergency Standby	1	1180	Nickel pollu	1.31E-05	2.38E-06
59	University	183031	6/25/2022	S63	Standby Diesel Generator (Baker Hall) (Barker Hall, C	Combustion	Internal Combustion Engine	Emergency Standby	1	1190	Mercury (a	2.28E-07	4.16E-08
59	University	183031	6/25/2022	S63	Standby Diesel Generator (Baker Hall) (Barker Hall, C	Combustion	Internal Combustion Engine	Emergency Standby	1	1350	Diesel Engi	0.001196	0.000218
59	University	183031	6/25/2022	S63	Standby Diesel Generator (Baker Hall) (Barker Hall, C	Combustion	Internal Combustion Engine	Emergency Standby	1	1840	PAHs (non-	1.70E-06	3.11E-07
59	University	183031	6/25/2022	S63	Standby Diesel Generator (Baker Hall) (Barker Hall, C	Combustion	Internal Combustion Engine	Emergency Standby	1	2030	Nitrous Oxi	9.92E-05	1.81E-05
59	University	183031	6/25/2022	S63	Standby Diesel Generator (Baker Hall) (Barker Hall, C	Combustion	Internal Combustion Engine	Emergency Standby	1	2990	Nitrogen O	0.167995	0.030659
59	University	183031	6/25/2022	S63	Standby Diesel Generator (Baker Hall) (Barker Hall, C	Combustion	Internal Combustion Engine	Emergency Standby	1	3990	Sulfur Diox	0.000121	2.21E-05
59	University	183031	6/25/2022	S63	Standby Diesel Generator (Baker Hall) (Barker Hall, C	Combustion	Internal Combustion Engine	Emergency Standby	1	4990	Carbon Mo	0.015743	0.002873
59	University	183031	6/25/2022	S63	Standby Diesel Generator (Baker Hall) (Barker Hall, C	Combustion	Internal Combustion Engine	Emergency Standby	1	6960	Carbon Dio	12.40936	2.264708
59	University	183031	6/25/2022	S63	Standby Diesel Generator (Baker Hall) (Barker Hall, C	Combustion	Internal Combustion Engine	Emergency Standby	1	6970	Methane ((	0.000496	9.06E-05
59	University	183031	6/25/2022	S64	Emergency Diesel Generator Engine (Birge Hall, 5 ft	Combustion	Internal Combustion Engine	Emergency Standby	1	41	Benzene	9.69E-05	1.77E-05
59	University	183031	6/25/2022	S64	Emergency Diesel Generator Engine (Birge Hall, 5 ft	Combustion	Internal Combustion Engine	Emergency Standby	1	124	Formaldeh	8.02E-06	1.46E-06
59	University	183031	6/25/2022	S64	Emergency Diesel Generator Engine (Birge Hall, 5 ft	Combustion	Internal Combustion Engine	Emergency Standby	1	990	Organics (p	0.004679	0.000854
59	University	183031	6/25/2022	S64	Emergency Diesel Generator Engine (Birge Hall, 5 ft	Combustion	Internal Combustion Engine	Emergency Standby	1	1030	Arsenic (all	8.44E-08	1.54E-08
59	University	183031	6/25/2022	S64	Emergency Diesel Generator Engine (Birge Hall, 5 ft	Combustion	Internal Combustion Engine	Emergency Standby	1	1040	Beryllium (	4.95E-08	9.03E-09
59	University	183031	6/25/2022	S64	Emergency Diesel Generator Engine (Birge Hall, 5 ft	Combustion	Internal Combustion Engine	Emergency Standby	1	1070	Cadmium	2.11E-07	3.85E-08
59	University	183031	6/25/2022	S64	Emergency Diesel Generator Engine (Birge Hall, 5 ft	Combustion	Internal Combustion Engine	Emergency Standby	1	1095	Chromium	4.36E-09	7.97E-10
59	University	183031	6/25/2022	S64	Emergency Diesel Generator Engine (Birge Hall, 5 ft	Combustion	Internal Combustion Engine	Emergency Standby	1	1140	Lead (all) p	1.79E-07	3.27E-08
59	University	183031	6/25/2022	S64	Emergency Diesel Generator Engine (Birge Hall, 5 ft	Combustion	Internal Combustion Engine	Emergency Standby	1	1160	Manganese	2.81E-07	5.12E-08
59	University	183031	6/25/2022	S64	Emergency Diesel Generator Engine (Birge Hall, 5 ft	Combustion	Internal Combustion Engine	Emergency Standby	1	1180	Nickel pollu	3.41E-06	6.23E-07
59	University	183031	6/25/2022	S64	Emergency Diesel Generator Engine (Birge Hall, 5 ft	Combustion	Internal Combustion Engine	Emergency Standby	1	1190	Mercury (a	5.96E-08	1.09E-08
59	University	183031	6/25/2022	S64	Emergency Diesel Generator Engine (Birge Hall, 5 ft	Combustion	Internal Combustion Engine	Emergency Standby	1	1350	Diesel Engi	0.000636	0.000116
59	University	183031	6/25/2022	S64	Emergency Diesel Generator Engine (Birge Hall, 5 ft	Combustion	Internal Combustion Engine	Emergency Standby	1	1840	PAHs (non-	4.45E-07	8.12E-08
59	University	183031	6/25/2022	S64	Emergency Diesel Generator Engine (Birge Hall, 5 ft	Combustion	Internal Combustion Engine	Emergency Standby	1	2030	Nitrous Oxi	2.60E-05	4.74E-06
59	University	183031	6/25/2022	S64	Emergency Diesel Generator Engine (Birge Hall, 5 ft	Combustion	Internal Combustion Engine	Emergency Standby	1	2990	Nitrogen O	0.036952	0.006744
59	University	183031	6/25/2022	S64	Emergency Diesel Generator Engine (Birge Hall, 5 ft	Combustion	Internal Combustion Engine	Emergency Standby	1	3990	Sulfur Diox	3.16E-05	5.77E-06
59	University	183031	6/25/2022	S64	Emergency Diesel Generator Engine (Birge Hall, 5 ft	Combustion	Internal Combustion Engine	Emergency Standby	1	4990	Carbon Mo	0.002546	0.000465
59	University	183031	6/25/2022	S64	Emergency Diesel Generator Engine (Birge Hall, 5 ft	Combustion	Internal Combustion Engine	Emergency Standby	1	6960	Carbon Dio	3.245355	0.592277
59	University	183031	6/25/2022	S64	Emergency Diesel Generator Engine (Birge Hall, 5 ft	Combustion	Internal Combustion Engine	Emergency Standby	1	6970	Methane ((	0.00013	2.37E-05
59	University	183031	6/25/2022	S65	Standby Diesel Generator- Res 3 (IDA-Sproul Hall, Da	Combustion	Internal Combustion Engine	Emergency Standby	1	41	Benzene	7.01E-05	1.28E-05
59	University	183031	6/25/2022	S65	Standby Diesel Generator- Res 3 (IDA-Sproul Hall, Da	Combustion	Internal Combustion Engine	Emergency Standby	1	124	Formaldeh	5.80E-06	1.06E-06
59	University	183031	6/25/2022	S65	Standby Diesel Generator- Res 3 (IDA-Sproul Hall, Da	Combustion	Internal Combustion Engine	Emergency Standby	1	990	Organics (p	0.003384	0.000618
59	University	183031	6/25/2022	S65	Standby Diesel Generator- Res 3 (IDA-Sproul Hall, Da	Combustion	Internal Combustion Engine	Emergency Standby	1	1030	Arsenic (all	6.10E-08	1.11E-08
59	University	183031	6/25/2022	S65	Standby Diesel Generator- Res 3 (IDA-Sproul Hall, Da	Combustion	Internal Combustion Engine	Emergency Standby	1	1040	Beryllium (	3.58E-08	6.53E-09
59	University	183031	6/25/2022	S65	Standby Diesel Generator- Res 3 (IDA-Sproul Hall, Da	Combustion	Internal Combustion Engine	Emergency Standby	1	1070	Cadmium	1.53E-07	2.78E-08
59	University	183031	6/25/2022	S65	Standby Diesel Generator- Res 3 (IDA-Sproul Hall, Da	Combustion	Internal Combustion Engine	Emergency Standby	1	1095	Chromium	3.16E-09	5.76E-10
59	University	183031	6/25/2022	S65	Standby Diesel Generator- Res 3 (IDA-Sproul Hall, Da	Combustion	Internal Combustion Engine	Emergency Standby	1	1140	Lead (all) p	1.29E-07	2.36E-08
59	University	183031	6/25/2022	S65	Standby Diesel Generator- Res 3 (IDA-Sproul Hall, Da	Combustion	Internal Combustion Engine	Emergency Standby	1	1160	Manganese	2.03E-07	3.71E-08
59	University	183031	6/25/2022	S65	Standby Diesel Generator- Res 3 (IDA-Sproul Hall, Da	Combustion	Internal Combustion Engine	Emergency Standby	1	1180	Nickel pollu	2.47E-06	4.50E-07
59	University	183031	6/25/2022	S65	Standby Diesel Generator- Res 3 (IDA-Sproul Hall, Da	Combustion	Internal Combustion Engine	Emergency Standby	1	1190	Mercury (a	4.31E-08	7.87E-09
59	University	183031	6/25/2022	S65	Standby Diesel Generator- Res 3 (IDA-Sproul Hall, Da	Combustion	Internal Combustion Engine	Emergency Standby	1	1350	Diesel Engi	0.00061	0.000111
59	University	183031	6/25/2022	S65	Standby Diesel Generator- Res 3 (IDA-Sproul Hall, Da	Combustion	Internal Combustion Engine	Emergency Standby	1	1840	PAHs (non-	3.22E-07	5.88E-08

59	University (	183031	6/25/2022	S65	Standby Diesel Generator- Res 3 (IDA-Sproul Hall, Da	Combustion	Internal Combustion Engine	Emergency Standby	1	2030	Nitrous Oxi	1.88E-05	3.43E-06
59	University (	183031	6/25/2022	S65	Standby Diesel Generator- Res 3 (IDA-Sproul Hall, Da	Combustion	Internal Combustion Engine	Emergency Standby	1	2990	Nitrogen O	0.026933	0.004915
59	University (	183031	6/25/2022	S65	Standby Diesel Generator- Res 3 (IDA-Sproul Hall, Da	Combustion	Internal Combustion Engine	Emergency Standby	1	3990	Sulfur Diox	2.29E-05	4.18E-06
59	University (	183031	6/25/2022	S65	Standby Diesel Generator- Res 3 (IDA-Sproul Hall, Da	Combustion	Internal Combustion Engine	Emergency Standby	1	4990	Carbon Mo	0.002157	0.000394
59	University (	183031	6/25/2022	S65	Standby Diesel Generator- Res 3 (IDA-Sproul Hall, Da	Combustion	Internal Combustion Engine	Emergency Standby	1	6960	Carbon Dio	2.346924	0.428314
59	University (	183031	6/25/2022	S65	Standby Diesel Generator- Res 3 (IDA-Sproul Hall, Da	Combustion	Internal Combustion Engine	Emergency Standby	1	6970	Methane ((	9.39E-05	1.71E-05
59	University (	183031	6/25/2022	S100	Facility-wide Painting Operations	Surface Coating	Surface Coating Operation		1	99	Dimethyl fo	0.019496	0.003558
59	University (	183031	6/25/2022	S100	Facility-wide Painting Operations	Surface Coating	Surface Coating Operation		1	131	Glycols	0.0723	0.013195
59	University (	183031	6/25/2022	S100	Facility-wide Painting Operations	Solvent	Other Solvent Usage		1	184	Mineral spi	0.00669	0.001221
59	University (	183031	6/25/2022	S100	Facility-wide Painting Operations	Surface Coating	Surface Coating Operation		2	201	Organic liq	0.086218	0.015735
59	University (	183031	6/25/2022	S100	Facility-wide Painting Operations	Surface Coating	Surface Coating Operation		1	312	n-methylpy	0.09158	0.016713
59	University (	183031	6/25/2022	S100	Facility-wide Painting Operations	Solvent	Other Solvent Usage		1	455	Acetone	0	0
59	University (	183031	6/25/2022	S100	Facility-wide Painting Operations	Surface Coating	Surface Coating Operation		1	547	n-methyl-2	0.036392	0.006642
59	University (	183031	6/25/2022	S100	Facility-wide Painting Operations	Solvent	Other Solvent Usage		1	786	Lacquer thi	0.005476	0.000999
59	University (	183031	6/25/2022	S105	Emergency Diesel Generator (Haas Pavilion) (Hass Pa	Combustion	Internal Combustion Engine	Emergency Standby	1	41	Benzene	5.76E-05	1.05E-05
59	University (	183031	6/25/2022	S105	Emergency Diesel Generator (Haas Pavilion) (Hass Pa	Combustion	Internal Combustion Engine	Emergency Standby	1	124	Formaldeh	4.77E-06	8.70E-07
59	University (	183031	6/25/2022	S105	Emergency Diesel Generator (Haas Pavilion) (Hass Pa	Combustion	Internal Combustion Engine	Emergency Standby	1	990	Organics (p	0.002783	0.000508
59	University (	183031	6/25/2022	S105	Emergency Diesel Generator (Haas Pavilion) (Hass Pa	Combustion	Internal Combustion Engine	Emergency Standby	1	1030	Arsenic (all	5.02E-08	9.16E-09
59	University (	183031	6/25/2022	S105	Emergency Diesel Generator (Haas Pavilion) (Hass Pa	Combustion	Internal Combustion Engine	Emergency Standby	1	1040	Beryllium (	2.94E-08	5.37E-09
59	University (	183031	6/25/2022	S105	Emergency Diesel Generator (Haas Pavilion) (Hass Pa	Combustion	Internal Combustion Engine	Emergency Standby	1	1070	Cadmium	1.25E-07	2.29E-08
59	University (	183031	6/25/2022	S105	Emergency Diesel Generator (Haas Pavilion) (Hass Pa	Combustion	Internal Combustion Engine	Emergency Standby	1	1095	Chromium	2.60E-09	4.74E-10
59	University (	183031	6/25/2022	S105	Emergency Diesel Generator (Haas Pavilion) (Hass Pa	Combustion	Internal Combustion Engine	Emergency Standby	1	1140	Lead (all) p	1.06E-07	1.94E-08
59	University (	183031	6/25/2022	S105	Emergency Diesel Generator (Haas Pavilion) (Hass Pa	Combustion	Internal Combustion Engine	Emergency Standby	1	1160	Manganese	1.67E-07	3.05E-08
59	University (	183031	6/25/2022	S105	Emergency Diesel Generator (Haas Pavilion) (Hass Pa	Combustion	Internal Combustion Engine	Emergency Standby	1	1180	Nickel pollu	2.03E-06	3.70E-07
59	University (	183031	6/25/2022	S105	Emergency Diesel Generator (Haas Pavilion) (Hass Pa	Combustion	Internal Combustion Engine	Emergency Standby	1	1190	Mercury (a	3.55E-08	6.47E-09
59	University (	183031	6/25/2022	S105	Emergency Diesel Generator (Haas Pavilion) (Hass Pa	Combustion	Internal Combustion Engine	Emergency Standby	1	1350	Diesel Engi	0.000554	0.000101
59	University (	183031	6/25/2022	S105	Emergency Diesel Generator (Haas Pavilion) (Hass Pa	Combustion	Internal Combustion Engine	Emergency Standby	1	1840	PAHs (non-	2.65E-07	4.83E-08
59	University (	183031	6/25/2022	S105	Emergency Diesel Generator (Haas Pavilion) (Hass Pa	Combustion	Internal Combustion Engine	Emergency Standby	1	2030	Nitrous Oxi	1.54E-05	2.82E-06
59	University (	183031	6/25/2022	S105	Emergency Diesel Generator (Haas Pavilion) (Hass Pa	Combustion	Internal Combustion Engine	Emergency Standby	1	2990	Nitrogen O	0.040578	0.007406
59	University (	183031	6/25/2022	S105	Emergency Diesel Generator (Haas Pavilion) (Hass Pa	Combustion	Internal Combustion Engine	Emergency Standby	1	3990	Sulfur Diox	1.88E-05	3.43E-06
59	University (	183031	6/25/2022	S105	Emergency Diesel Generator (Haas Pavilion) (Hass Pa	Combustion	Internal Combustion Engine	Emergency Standby	1	4990	Carbon Mo	0.008825	0.001611
59	University (	183031	6/25/2022	S105	Emergency Diesel Generator (Haas Pavilion) (Hass Pa	Combustion	Internal Combustion Engine	Emergency Standby	1	6960	Carbon Dio	1.9301	0.352243
59	University (	183031	6/25/2022	S105	Emergency Diesel Generator (Haas Pavilion) (Hass Pa	Combustion	Internal Combustion Engine	Emergency Standby	1	6970	Methane ((	7.72E-05	1.41E-05
59	University (	183031	6/25/2022	S106	Emergency Diesel Generator (Valley Of Life Sciences	Combustion	Internal Combustion Engine	Emergency Standby	1	41	Benzene	9.52E-05	1.74E-05
59	University (	183031	6/25/2022	S106	Emergency Diesel Generator (Valley Of Life Sciences	Combustion	Internal Combustion Engine	Emergency Standby	1	124	Formaldeh	7.88E-06	1.44E-06
59	University (	183031	6/25/2022	S106	Emergency Diesel Generator (Valley Of Life Sciences	Combustion	Internal Combustion Engine	Emergency Standby	1	990	Organics (p	0.0046	0.000839
59	University (	183031	6/25/2022	S106	Emergency Diesel Generator (Valley Of Life Sciences	Combustion	Internal Combustion Engine	Emergency Standby	1	1030	Arsenic (all	8.29E-08	1.51E-08
59	University (	183031	6/25/2022	S106	Emergency Diesel Generator (Valley Of Life Sciences	Combustion	Internal Combustion Engine	Emergency Standby	1	1040	Beryllium (	4.86E-08	8.87E-09
59	University (	183031	6/25/2022	S106	Emergency Diesel Generator (Valley Of Life Sciences	Combustion	Internal Combustion Engine	Emergency Standby	1	1070	Cadmium	2.07E-07	3.78E-08
59	University (	183031	6/25/2022	S106	Emergency Diesel Generator (Valley Of Life Sciences	Combustion	Internal Combustion Engine	Emergency Standby	1	1095	Chromium	4.29E-09	7.83E-10
59	University (	183031	6/25/2022	S106	Emergency Diesel Generator (Valley Of Life Sciences	Combustion	Internal Combustion Engine	Emergency Standby	1	1140	Lead (all) p	1.76E-07	3.21E-08
59	University (	183031	6/25/2022	S106	Emergency Diesel Generator (Valley Of Life Sciences	Combustion	Internal Combustion Engine	Emergency Standby	1	1160	Manganese	2.76E-07	5.04E-08
59	University (	183031	6/25/2022	S106	Emergency Diesel Generator (Valley Of Life Sciences	Combustion	Internal Combustion Engine	Emergency Standby	1	1180	Nickel pollu	3.36E-06	6.12E-07
59	University (	183031	6/25/2022	S106	Emergency Diesel Generator (Valley Of Life Sciences	Combustion	Internal Combustion Engine	Emergency Standby	1	1190	Mercury (a	5.86E-08	1.07E-08
59	University (	183031	6/25/2022	S106	Emergency Diesel Generator (Valley Of Life Sciences	Combustion	Internal Combustion Engine	Emergency Standby	1	1350	Diesel Engi	0.000915	0.000167
59	University (	183031	6/25/2022	S106	Emergency Diesel Generator (Valley Of Life Sciences	Combustion	Internal Combustion Engine	Emergency Standby	1	1840	PAHs (non-	4.38E-07	7.99E-08
59	University (	183031	6/25/2022	S106	Emergency Diesel Generator (Valley Of Life Sciences	Combustion	Internal Combustion Engine	Emergency Standby	1	2030	Nitrous Oxi	2.55E-05	4.66E-06
59	University (	183031	6/25/2022	S106	Emergency Diesel Generator (Valley Of Life Sciences	Combustion	Internal Combustion Engine	Emergency Standby	1	2990	Nitrogen O	0.067073	0.012241
59	University (	183031	6/25/2022	S106	Emergency Diesel Generator (Valley Of Life Sciences	Combustion	Internal Combustion Engine	Emergency Standby	1	3990	Sulfur Diox	3.11E-05	5.68E-06
59	University (	183031	6/25/2022	S106	Emergency Diesel Generator (Valley Of Life Sciences	Combustion	Internal Combustion Engine	Emergency Standby	1	4990	Carbon Mo	0.014587	0.002662
59	University (	183031	6/25/2022	S106	Emergency Diesel Generator (Valley Of Life Sciences	Combustion	Internal Combustion Engine	Emergency Standby	1	6960	Carbon Dio	3.19035	0.582239
59	University (	183031	6/25/2022	S106	Emergency Diesel Generator (Valley Of Life Sciences	Combustion	Internal Combustion Engine	Emergency Standby	1	6970	Methane ((	0.000128	2.33E-05
59	University (	183031	6/25/2022	S107	Emergency Diesel Generator (Koshland) (Koshland H	Combustion	Internal Combustion Engine	Emergency Standby	1	41	Benzene	0.000854	0.000156
59	University (	183031	6/25/2022	S107	Emergency Diesel Generator (Koshland) (Koshland H	Combustion	Internal Combustion Engine	Emergency Standby	1	124	Formaldeh	7.07E-05	1.29E-05
59	University (	183031	6/25/2022	S107	Emergency Diesel Generator (Koshland) (Koshland H	Combustion	Internal Combustion Engine	Emergency Standby	1	990	Organics (p	0.041265	0.007531
59	University (	183031	6/25/2022	S107	Emergency Diesel Generator (Koshland) (Koshland H	Combustion	Internal Combustion Engine	Emergency Standby	1	1030	Arsenic (all	7.44E-07	1.36E-07
59	University (	183031	6/25/2022	S107	Emergency Diesel Generator (Koshland) (Koshland H	Combustion	Internal Combustion Engine	Emergency Standby	1	1040	Beryllium (	4.36E-07	7.96E-08
59	University (	183031	6/25/2022	S107	Emergency Diesel Generator (Koshland) (Koshland H	Combustion	Internal Combustion Engine	Emergency Standby	1	1070	Cadmium	1.86E-06	3.40E-07
59	University (	183031	6/25/2022	S107	Emergency Diesel Generator (Koshland) (Koshland H	Combustion	Internal Combustion Engine	Emergency Standby	1	1095	Chromium	3.85E-08	7.02E-09
59	University (	183031	6/25/2022	S107	Emergency Diesel Generator (Koshland) (Koshland H	Combustion	Internal Combustion Engine	Emergency Standby	1	1140	Lead (all) p	1.58E-06	2.88E-07
59	University (	183031	6/25/2022	S107	Emergency Diesel Generator (Koshland) (Koshland H	Combustion	Internal Combustion Engine	Emergency Standby	1	1160	Manganese	2.48E-06	4.52E-07
59	University (	183031	6/25/2022	S107	Emergency Diesel Generator (Koshland) (Koshland H	Combustion	Internal Combustion Engine	Emergency Standby	1	1180	Nickel pollu	3.01E-05	5.49E-06
59	University (	183031	6/25/2022	S107	Emergency Diesel Generator (Koshland) (Koshland H	Combustion	Internal Combustion Engine	Emergency Standby	1	1190	Mercury (a	5.26E-07	9.60E-08
59	University (	183031	6/25/2022	S107	Emergency Diesel Generator (Koshland) (Koshland H	Combustion	Internal Combustion Engine	Emergency Standby	1	1350	Diesel Engi	0.008211	0.001498
59	University (	183031	6/25/2022	S107	Emergency Diesel Generator (Koshland) (Koshland H	Combustion	Internal Combustion Engine	Emergency Standby	1	1840	PAHs (non-	3.93E-06	7.16E-07
59	University (	183031	6/25/2022	S107	Emergency Diesel Generator (Koshland) (Koshland H	Combustion	Internal Combustion Engine	Emergency Standby	1	2030	Nitrous Oxi	0.000229	4.18E-05
59	University (	183031	6/25/2022	S107	Emergency Diesel Generator (Koshland) (Koshland H	Combustion	Internal Combustion Engine	Emergency Standby	1	2990	Nitrogen O	0.601708	0.109812
59	University (	183031	6/25/2022	S107	Emergency Diesel Generator (Koshland) (Koshland H	Combustion	Internal Combustion Engine	Emergency Standby	1	3990	Sulfur Diox	0.000279	5.09E-05
59	University (	183031	6/25/2022	S107	Emergency Diesel Generator (Koshland) (Koshland H	Combustion	Internal Combustion Engine	Emergency Standby	1	4990	Carbon Mo	0.130862	0.023882
59	University (	183031	6/25/2022	S107	Emergency Diesel Generator (Koshland) (Koshland H	Combustion	Internal Combustion Engine	Emergency Standby	1	6960	Carbon Dio	28.62025	5.223196
59	University (	183031	6/25/2022	S107	Emergency Diesel Generator (Koshland) (Koshland H	Combustion	Internal Combustion Engine	Emergency Standby	1	6970	Methane ((	0.001144	0.000209
59	University (	183031	6/25/2022	S108	Emergency Diesel Generator (Valley Life Sciences Ad	Combustion	Internal Combustion Engine	Emergency Standby	1	41	Benzene	0.000929	0.00017
59	University (	183031	6/25/2022	S108	Emergency Diesel Generator (Valley Life Sciences Ad	Combustion	Internal Combustion Engine	Emergency Standby	1	124	Formaldeh	7.69E-05	1.40E-05
59	University (	183031	6/25/2022	S108	Emergency Diesel Generator (Valley Life Sciences Ad	Combustion	Internal Combustion Engine	Emergency Standby	1	990	Organics (p	0.044875	0.00819
59	University (	183031	6/25/2022	S108	Emergency Diesel Generator (Valley Life Sciences Ad	Combustion	Internal Combustion Engine	Emergency Standby	1	1030	Arsenic (all	8.09E-07	1.48E-07
59	University (	183031	6/25/2022	S108	Emergency Diesel Generator (Valley Life Sciences Ad	Combustion	Internal Combustion Engine	Emergency Standby	1	1040	Beryllium (	4.74E-07	8.66E-08
59	University (	183031	6/25/2022	S108	Emergency Diesel Generator (Valley Life Sciences Ad	Combustion	Internal Combustion Engine	Emergency Standby	1	1070	Cadmium	2.02E-06	3.69E-07
59	University (	183031	6/25/2022	S108	Emergency Diesel Generator (Valley Life Sciences Ad	Combustion	Internal Combustion Engine	Emergency Standby	1	1095	Chromium	4.19E-08	7.64E-09
59	University (	183031	6/25/2022	S108	Emergency Diesel Generator (Valley Life Sciences Ad	Combustion	Internal Combustion Engine	Emergency Standby	1	1140	Lead (all) p	1.72E-06	3.13E-07
59	University (	183031	6/25/2022	S108	Emergency Diesel Generator (Valley Life Sciences Ad	Combustion	Internal Combustion Engine	Emergency Standby	1	1160	Manganese	2.69E-06	4.91E-07
59	University (	183031	6/25/2022	S108	Emergency Diesel Generator (Valley Life Sciences Ad	Combustion	Internal Combustion Engine	Emergency Standby	1	1180	Nickel pollu	3.27E-05	5.97E-06
59	University (	183031	6/25/2022	S108	Emergency Diesel Generator (Valley Life Sciences Ad	Combustion	Internal Combustion Engine	Emergency Standby	1	1190	Mercury (a	5.72E-07	1.04E-07
59	University (	183031	6/25/2022	S108	Emergency Diesel Generator (Valley Life Sciences Ad	Combustion	Internal Combustion Engine	Emergency Standby	1	1350	Diesel Engi	0.008929	0.00163
59	University (	183031	6/25/2022	S108	Emergency Diesel Generator (Valley Life Sciences Ad	Combustion	Internal Combustion Engine	Emergency Standby	1	1840	PAHs (non-	4.27E-06	7.79E-07
59	University (	183031	6/25/2022	S108	Emergency Diesel Generator (Valley Life Sciences Ad	Combustion	Internal Combustion Engine	Emergency Standby	1	2030	Nitrous Oxi	0.000249	4.54E-05
59	University (	183031	6/25/2022	S108	Emergency Diesel Generator (Valley Life Sciences Ad	Combustion	Internal Combustion Engine	Emergency Standby	1	2990	Nitrogen O	0.654351	0.119419
59	University (	183031	6/25/2022	S108	Emergency Diesel Generator (Valley Life Sciences Ad	Combustion	Internal Combustion Engine	Emergency Standby	1	3990	Sulfur Diox	0.000303	5.54E-05
59	University (	183031	6/25/2022	S108	Emergency Diesel Generator (Valley Life Sciences Ad	Combustion	Internal Combustion Engine	Emergency Standby	1	4990	Carbon Mo	0.142311	0.025972
59	University (	183031	6/25/2022	S108	Emergency Diesel Generator (Valley Life Sciences Ad	Combustion	Internal Combustion Engine	Emergency Standby	1	6960	Carbon Dio	31.12424	5.680174
59	University (	183031	6/25/2022	S108	Emergency Diesel Generator (Valley Life Sciences Ad	Combustion	Internal Combustion Engine	Emergency Standby	1	6970	Methane ((	0.001245	0.000227
59	University (	183031	6/25/2022	S109	Emergency Diesel Generator (Tan) (Tan Kah Kee Hall	Combustion	Internal Combustion Engine	Emergency Standby	1	41	Benzene	0.000792	0.000145
59	University (	183031	6/25/2022	S109	Emergency Diesel Generator (Tan) (Tan Kah Kee Hall	Combustion	Internal Combustion Engine	Emergency Standby	1	124	Formaldeh	6.56E-05	1.20E-05
59	University (	183031	6/25/2022	S109	Emergency Diesel Generator (Tan) (Tan Kah Kee Hall	Combustion	Internal Combustion Engine	Emergency Standby	1	990	Organics (p	0.035212	0.006426
59	University (	183031	6/25/2022	S109	Emergency Diesel Generator (Tan) (Tan Kah Kee Hall	Combustion	Internal Combustion Engine	Emergency Standby	1	1030	Arsenic (all	6.90E-07	1.26E-07
59	University (	183031	6/25/2022	S109	Emergency Diesel Generator (Tan) (Tan Kah Kee Hall	Combustion	Internal Combustion Engine	Emergency Standby	1	1040	Beryllium (	4.04E-07	7.38E-08
59	University (	183031	6/25/2022	S109	Emergency Diesel Generator (Tan) (Tan Kah Kee Hall	Combustion	Internal Combustion Engine	Emergency Standby	1	1070	Cadmium	1.73E-06	3.15E-07
59	University (	183031	6/25/2022	S109	Emergency Diesel Generator (Tan) (Tan Kah Kee Hall	Combustion	Internal Combustion Engine	Emergency Standby	1	1095	Chromium	3.57E-08	6.51E-09
59	University (	183031	6/25/2022	S109	Emergency Diesel Generator (Tan) (Tan Kah Kee Hall	Combustion	Internal Combustion Engine	Emergency Standby	1	1140	Lead (all) p	1.46E-06	2.67E-07
59	University (	183031	6/25/2022	S109	Emergency Diesel Generator (Tan) (Tan Kah Kee Hall	Combustion	Internal Combustion Engine	Emergency Standby	1	1160	Manganese	2.30E-06	4.19E-07
59	University (	183031	6/25/2022	S109	Emergency Diesel Generator (Tan) (Tan Kah Kee Hall	Combustion	Internal Combustion Engine	Emergency Standby	1	1180	Nickel pollu	2.79E-05	5.09E-06
59	University (	183031	6/25/2022	S109	Emergency Diesel Generator (Tan) (Tan Kah Kee Hall	Combustion	Internal Combustion Engine	Emergency Standby	1	1190	Mercury (a	4.88E-07	8.90E-08
59	University (	183031	6/25/2022	S109	Emergency Diesel Generator (Tan) (Tan Kah Kee Hall	Combustion	Internal Combustion Engine	Emergency Standby	1	1350	Diesel Engi	0.00541	0.000987
59	University (	183031	6/25/2022	S109	Emergency Diesel Generator (Tan) (Tan Kah Kee Hall	Combustion	Internal Combustion Engine	Emergency Standby	1	1840	PAHs (non-	3.64E-06	6.64E-07
59	University (	183031	6/25/2022	S109	Emergency Diesel Generator (Tan) (Tan Kah Kee Hall	Combustion	Internal Combustion Engine	Emergency Standby	1	2030	Nitrous Oxi	0.000212	3.87E-05
59	University (	183031	6/25/2022	S109	Emergency Diesel Generator (Tan) (Tan Kah Kee Hall	Combustion	Internal Combustion Engine	Emergency Standby	1	2990	Nitrogen O	0.248882	0.045421
59	University (	183031	6/25/2022	S109	Emergency Diesel Generator (Tan) (Tan Kah Kee Hall	Combustion	Internal Combustion Engine	Emergency Standby	1	3990	Sulfur Diox	0.000259	4.72E-05
59	University (	183031	6/25/2022	S109	Emergency Diesel Generator (Tan) (Tan Kah Kee Hall	Combustion	Internal Combustion Engine	Emergency Standby	1	4990	Carbon Mo	0.306594	0.055953

59	University	183031	6/25/2022	S109	Emergency Diesel Generator (Tan) (Tan Kah Kee Hall	Combustion	Internal Combustion Engine	Emergency Standby	1	6960	Carbon Dio	26.53979	4.843512
59	University	183031	6/25/2022	S109	Emergency Diesel Generator (Tan) (Tan Kah Kee Hall	Combustion	Internal Combustion Engine	Emergency Standby	1	6970	Methane (	0.001061	0.000194
59	University	183031	6/25/2022	S110	Emergency Diesel Generator (Northwest Animal Fac	Combustion	Internal Combustion Engine	Emergency Standby	1	41	Benzene	0.000219	3.99E-05
59	University	183031	6/25/2022	S110	Emergency Diesel Generator (Northwest Animal Fac	Combustion	Internal Combustion Engine	Emergency Standby	1	124	Formaldeh	1.81E-05	3.30E-06
59	University	183031	6/25/2022	S110	Emergency Diesel Generator (Northwest Animal Fac	Combustion	Internal Combustion Engine	Emergency Standby	1	990	Organics (p	0.009718	0.001774
59	University	183031	6/25/2022	S110	Emergency Diesel Generator (Northwest Animal Fac	Combustion	Internal Combustion Engine	Emergency Standby	1	1030	Arsenic (all	1.90E-07	3.48E-08
59	University	183031	6/25/2022	S110	Emergency Diesel Generator (Northwest Animal Fac	Combustion	Internal Combustion Engine	Emergency Standby	1	1040	Beryllium (	1.12E-07	2.04E-08
59	University	183031	6/25/2022	S110	Emergency Diesel Generator (Northwest Animal Fac	Combustion	Internal Combustion Engine	Emergency Standby	1	1070	Cadmium	4.76E-07	8.69E-08
59	University	183031	6/25/2022	S110	Emergency Diesel Generator (Northwest Animal Fac	Combustion	Internal Combustion Engine	Emergency Standby	1	1095	Chromium	9.85E-09	1.80E-09
59	University	183031	6/25/2022	S110	Emergency Diesel Generator (Northwest Animal Fac	Combustion	Internal Combustion Engine	Emergency Standby	1	1140	Lead (all) p	4.04E-07	7.37E-08
59	University	183031	6/25/2022	S110	Emergency Diesel Generator (Northwest Animal Fac	Combustion	Internal Combustion Engine	Emergency Standby	1	1160	Manganese	6.34E-07	1.16E-07
59	University	183031	6/25/2022	S110	Emergency Diesel Generator (Northwest Animal Fac	Combustion	Internal Combustion Engine	Emergency Standby	1	1180	Nickel pollu	7.70E-06	1.41E-06
59	University	183031	6/25/2022	S110	Emergency Diesel Generator (Northwest Animal Fac	Combustion	Internal Combustion Engine	Emergency Standby	1	1190	Mercury (a	1.35E-07	2.46E-08
59	University	183031	6/25/2022	S110	Emergency Diesel Generator (Northwest Animal Fac	Combustion	Internal Combustion Engine	Emergency Standby	1	1350	Diesel Engi	0.001493	0.000273
59	University	183031	6/25/2022	S110	Emergency Diesel Generator (Northwest Animal Fac	Combustion	Internal Combustion Engine	Emergency Standby	1	1840	PAHs (non-	1.00E-06	1.83E-07
59	University	183031	6/25/2022	S110	Emergency Diesel Generator (Northwest Animal Fac	Combustion	Internal Combustion Engine	Emergency Standby	1	2030	Nitrous Oxi	5.86E-05	1.07E-05
59	University	183031	6/25/2022	S110	Emergency Diesel Generator (Northwest Animal Fac	Combustion	Internal Combustion Engine	Emergency Standby	1	2990	Nitrogen O	0.068691	0.012536
59	University	183031	6/25/2022	S110	Emergency Diesel Generator (Northwest Animal Fac	Combustion	Internal Combustion Engine	Emergency Standby	1	3990	Sulfur Diox	7.14E-05	1.30E-05
59	University	183031	6/25/2022	S110	Emergency Diesel Generator (Northwest Animal Fac	Combustion	Internal Combustion Engine	Emergency Standby	1	4990	Carbon Mo	0.08462	0.015443
59	University	183031	6/25/2022	S110	Emergency Diesel Generator (Northwest Animal Fac	Combustion	Internal Combustion Engine	Emergency Standby	1	6960	Carbon Dio	7.32497	1.336807
59	University	183031	6/25/2022	S110	Emergency Diesel Generator (Northwest Animal Fac	Combustion	Internal Combustion Engine	Emergency Standby	1	6970	Methane (	0.000293	5.35E-05
59	University	183031	6/25/2022	S111	Emergency Diesel Generator (Doe-Moffit Stacks)	Combustion	Internal Combustion Engine	Emergency Standby	1	41	Benzene	0.000618	0.000113
59	University	183031	6/25/2022	S111	Emergency Diesel Generator (Doe-Moffit Stacks)	Combustion	Internal Combustion Engine	Emergency Standby	1	124	Formaldeh	5.11E-05	9.33E-06
59	University	183031	6/25/2022	S111	Emergency Diesel Generator (Doe-Moffit Stacks)	Combustion	Internal Combustion Engine	Emergency Standby	1	990	Organics (p	0.02985	0.005448
59	University	183031	6/25/2022	S111	Emergency Diesel Generator (Doe-Moffit Stacks)	Combustion	Internal Combustion Engine	Emergency Standby	1	1030	Arsenic (all	5.38E-07	9.82E-08
59	University	183031	6/25/2022	S111	Emergency Diesel Generator (Doe-Moffit Stacks)	Combustion	Internal Combustion Engine	Emergency Standby	1	1040	Beryllium (	3.16E-07	5.76E-08
59	University	183031	6/25/2022	S111	Emergency Diesel Generator (Doe-Moffit Stacks)	Combustion	Internal Combustion Engine	Emergency Standby	1	1070	Cadmium	1.35E-06	2.46E-07
59	University	183031	6/25/2022	S111	Emergency Diesel Generator (Doe-Moffit Stacks)	Combustion	Internal Combustion Engine	Emergency Standby	1	1095	Chromium	2.78E-08	5.08E-09
59	University	183031	6/25/2022	S111	Emergency Diesel Generator (Doe-Moffit Stacks)	Combustion	Internal Combustion Engine	Emergency Standby	1	1140	Lead (all) p	1.14E-06	2.08E-07
59	University	183031	6/25/2022	S111	Emergency Diesel Generator (Doe-Moffit Stacks)	Combustion	Internal Combustion Engine	Emergency Standby	1	1160	Manganese	1.79E-06	3.27E-07
59	University	183031	6/25/2022	S111	Emergency Diesel Generator (Doe-Moffit Stacks)	Combustion	Internal Combustion Engine	Emergency Standby	1	1180	Nickel pollu	2.18E-05	3.97E-06
59	University	183031	6/25/2022	S111	Emergency Diesel Generator (Doe-Moffit Stacks)	Combustion	Internal Combustion Engine	Emergency Standby	1	1190	Mercury (a	3.81E-07	6.94E-08
59	University	183031	6/25/2022	S111	Emergency Diesel Generator (Doe-Moffit Stacks)	Combustion	Internal Combustion Engine	Emergency Standby	1	1350	Diesel Engi	0.00594	0.001084
59	University	183031	6/25/2022	S111	Emergency Diesel Generator (Doe-Moffit Stacks)	Combustion	Internal Combustion Engine	Emergency Standby	1	1840	PAHs (non-	2.84E-06	5.18E-07
59	University	183031	6/25/2022	S111	Emergency Diesel Generator (Doe-Moffit Stacks)	Combustion	Internal Combustion Engine	Emergency Standby	1	2030	Nitrous Oxi	0.000166	3.02E-05
59	University	183031	6/25/2022	S111	Emergency Diesel Generator (Doe-Moffit Stacks)	Combustion	Internal Combustion Engine	Emergency Standby	1	2990	Nitrogen O	0.435258	0.079435
59	University	183031	6/25/2022	S111	Emergency Diesel Generator (Doe-Moffit Stacks)	Combustion	Internal Combustion Engine	Emergency Standby	1	3990	Sulfur Diox	0.000202	3.68E-05
59	University	183031	6/25/2022	S111	Emergency Diesel Generator (Doe-Moffit Stacks)	Combustion	Internal Combustion Engine	Emergency Standby	1	4990	Carbon Mo	0.094662	0.017276
59	University	183031	6/25/2022	S111	Emergency Diesel Generator (Doe-Moffit Stacks)	Combustion	Internal Combustion Engine	Emergency Standby	1	6960	Carbon Dio	20.70304	3.778305
59	University	183031	6/25/2022	S111	Emergency Diesel Generator (Doe-Moffit Stacks)	Combustion	Internal Combustion Engine	Emergency Standby	1	6970	Methane (	0.000828	0.000151
59	University	183031	6/25/2022	S112	Emergency Diesel Generator (Res 1-1) (Res 1-1)	Combustion	Internal Combustion Engine	Emergency Standby	1	41	Benzene	0.000133	2.43E-05
59	University	183031	6/25/2022	S112	Emergency Diesel Generator (Res 1-1) (Res 1-1)	Combustion	Internal Combustion Engine	Emergency Standby	1	124	Formaldeh	1.10E-05	2.01E-06
59	University	183031	6/25/2022	S112	Emergency Diesel Generator (Res 1-1) (Res 1-1)	Combustion	Internal Combustion Engine	Emergency Standby	1	990	Organics (p	0.00644	0.001175
59	University	183031	6/25/2022	S112	Emergency Diesel Generator (Res 1-1) (Res 1-1)	Combustion	Internal Combustion Engine	Emergency Standby	1	1030	Arsenic (all	1.16E-07	2.12E-08
59	University	183031	6/25/2022	S112	Emergency Diesel Generator (Res 1-1) (Res 1-1)	Combustion	Internal Combustion Engine	Emergency Standby	1	1040	Beryllium (	6.81E-08	1.24E-08
59	University	183031	6/25/2022	S112	Emergency Diesel Generator (Res 1-1) (Res 1-1)	Combustion	Internal Combustion Engine	Emergency Standby	1	1070	Cadmium	2.90E-07	5.30E-08
59	University	183031	6/25/2022	S112	Emergency Diesel Generator (Res 1-1) (Res 1-1)	Combustion	Internal Combustion Engine	Emergency Standby	1	1095	Chromium	6.01E-09	1.10E-09
59	University	183031	6/25/2022	S112	Emergency Diesel Generator (Res 1-1) (Res 1-1)	Combustion	Internal Combustion Engine	Emergency Standby	1	1140	Lead (all) p	2.46E-07	4.49E-08
59	University	183031	6/25/2022	S112	Emergency Diesel Generator (Res 1-1) (Res 1-1)	Combustion	Internal Combustion Engine	Emergency Standby	1	1160	Manganese	3.86E-07	7.05E-08
59	University	183031	6/25/2022	S112	Emergency Diesel Generator (Res 1-1) (Res 1-1)	Combustion	Internal Combustion Engine	Emergency Standby	1	1180	Nickel pollu	4.70E-06	8.57E-07
59	University	183031	6/25/2022	S112	Emergency Diesel Generator (Res 1-1) (Res 1-1)	Combustion	Internal Combustion Engine	Emergency Standby	1	1190	Mercury (a	8.21E-08	1.50E-08
59	University	183031	6/25/2022	S112	Emergency Diesel Generator (Res 1-1) (Res 1-1)	Combustion	Internal Combustion Engine	Emergency Standby	1	1350	Diesel Engi	0.001281	0.000234
59	University	183031	6/25/2022	S112	Emergency Diesel Generator (Res 1-1) (Res 1-1)	Combustion	Internal Combustion Engine	Emergency Standby	1	1840	PAHs (non-	6.13E-07	1.12E-07
59	University	183031	6/25/2022	S112	Emergency Diesel Generator (Res 1-1) (Res 1-1)	Combustion	Internal Combustion Engine	Emergency Standby	1	2030	Nitrous Oxi	3.57E-05	6.52E-06
59	University	183031	6/25/2022	S112	Emergency Diesel Generator (Res 1-1) (Res 1-1)	Combustion	Internal Combustion Engine	Emergency Standby	1	2990	Nitrogen O	0.093903	0.017137
59	University	183031	6/25/2022	S112	Emergency Diesel Generator (Res 1-1) (Res 1-1)	Combustion	Internal Combustion Engine	Emergency Standby	1	3990	Sulfur Diox	4.35E-05	7.95E-06
59	University	183031	6/25/2022	S112	Emergency Diesel Generator (Res 1-1) (Res 1-1)	Combustion	Internal Combustion Engine	Emergency Standby	1	4990	Carbon Mo	0.020422	0.003727
59	University	183031	6/25/2022	S112	Emergency Diesel Generator (Res 1-1) (Res 1-1)	Combustion	Internal Combustion Engine	Emergency Standby	1	6960	Carbon Dio	4.46649	0.815134
59	University	183031	6/25/2022	S112	Emergency Diesel Generator (Res 1-1) (Res 1-1)	Combustion	Internal Combustion Engine	Emergency Standby	1	6970	Methane (	0.000179	3.26E-05
59	University	183031	6/25/2022	S113	Emergency Diesel Generator (Res 1-2) (Res 1-2)	Combustion	Internal Combustion Engine	Emergency Standby	1	41	Benzene	0.000191	3.49E-05
59	University	183031	6/25/2022	S113	Emergency Diesel Generator (Res 1-2) (Res 1-2)	Combustion	Internal Combustion Engine	Emergency Standby	1	124	Formaldeh	1.58E-05	2.89E-06
59	University	183031	6/25/2022	S113	Emergency Diesel Generator (Res 1-2) (Res 1-2)	Combustion	Internal Combustion Engine	Emergency Standby	1	990	Organics (p	0.00923	0.001684
59	University	183031	6/25/2022	S113	Emergency Diesel Generator (Res 1-2) (Res 1-2)	Combustion	Internal Combustion Engine	Emergency Standby	1	1030	Arsenic (all	1.66E-07	3.04E-08
59	University	183031	6/25/2022	S113	Emergency Diesel Generator (Res 1-2) (Res 1-2)	Combustion	Internal Combustion Engine	Emergency Standby	1	1040	Beryllium (	9.76E-08	1.78E-08
59	University	183031	6/25/2022	S113	Emergency Diesel Generator (Res 1-2) (Res 1-2)	Combustion	Internal Combustion Engine	Emergency Standby	1	1070	Cadmium	4.16E-07	7.59E-08
59	University	183031	6/25/2022	S113	Emergency Diesel Generator (Res 1-2) (Res 1-2)	Combustion	Internal Combustion Engine	Emergency Standby	1	1095	Chromium	8.61E-09	1.57E-09
59	University	183031	6/25/2022	S113	Emergency Diesel Generator (Res 1-2) (Res 1-2)	Combustion	Internal Combustion Engine	Emergency Standby	1	1140	Lead (all) p	3.53E-07	6.44E-08
59	University	183031	6/25/2022	S113	Emergency Diesel Generator (Res 1-2) (Res 1-2)	Combustion	Internal Combustion Engine	Emergency Standby	1	1160	Manganese	5.54E-07	1.01E-07
59	University	183031	6/25/2022	S113	Emergency Diesel Generator (Res 1-2) (Res 1-2)	Combustion	Internal Combustion Engine	Emergency Standby	1	1180	Nickel pollu	6.73E-06	1.23E-06
59	University	183031	6/25/2022	S113	Emergency Diesel Generator (Res 1-2) (Res 1-2)	Combustion	Internal Combustion Engine	Emergency Standby	1	1190	Mercury (a	1.18E-07	2.15E-08
59	University	183031	6/25/2022	S113	Emergency Diesel Generator (Res 1-2) (Res 1-2)	Combustion	Internal Combustion Engine	Emergency Standby	1	1350	Diesel Engi	0.001837	0.000335
59	University	183031	6/25/2022	S113	Emergency Diesel Generator (Res 1-2) (Res 1-2)	Combustion	Internal Combustion Engine	Emergency Standby	1	1840	PAHs (non-	8.78E-07	1.60E-07
59	University	183031	6/25/2022	S113	Emergency Diesel Generator (Res 1-2) (Res 1-2)	Combustion	Internal Combustion Engine	Emergency Standby	1	2030	Nitrous Oxi	5.12E-05	9.34E-06
59	University	183031	6/25/2022	S113	Emergency Diesel Generator (Res 1-2) (Res 1-2)	Combustion	Internal Combustion Engine	Emergency Standby	1	2990	Nitrogen O	0.134584	0.024562
59	University	183031	6/25/2022	S113	Emergency Diesel Generator (Res 1-2) (Res 1-2)	Combustion	Internal Combustion Engine	Emergency Standby	1	3990	Sulfur Diox	6.24E-05	1.14E-05
59	University	183031	6/25/2022	S113	Emergency Diesel Generator (Res 1-2) (Res 1-2)	Combustion	Internal Combustion Engine	Emergency Standby	1	4990	Carbon Mo	0.02927	0.005342
59	University	183031	6/25/2022	S113	Emergency Diesel Generator (Res 1-2) (Res 1-2)	Combustion	Internal Combustion Engine	Emergency Standby	1	6960	Carbon Dio	6.40148	1.16827
59	University	183031	6/25/2022	S113	Emergency Diesel Generator (Res 1-2) (Res 1-2)	Combustion	Internal Combustion Engine	Emergency Standby	1	6970	Methane (	0.000256	4.67E-05
59	University	183031	6/25/2022	S114	Emergency Diesel Generator (Res 2-1) (Res 2-1)	Combustion	Internal Combustion Engine	Emergency Standby	1	41	Benzene	7.56E-05	1.38E-05
59	University	183031	6/25/2022	S114	Emergency Diesel Generator (Res 2-1) (Res 2-1)	Combustion	Internal Combustion Engine	Emergency Standby	1	124	Formaldeh	6.25E-06	1.14E-06
59	University	183031	6/25/2022	S114	Emergency Diesel Generator (Res 2-1) (Res 2-1)	Combustion	Internal Combustion Engine	Emergency Standby	1	990	Organics (p	0.003649	0.000666
59	University	183031	6/25/2022	S114	Emergency Diesel Generator (Res 2-1) (Res 2-1)	Combustion	Internal Combustion Engine	Emergency Standby	1	1030	Arsenic (all	6.58E-08	1.20E-08
59	University	183031	6/25/2022	S114	Emergency Diesel Generator (Res 2-1) (Res 2-1)	Combustion	Internal Combustion Engine	Emergency Standby	1	1040	Beryllium (	3.86E-08	7.04E-09
59	University	183031	6/25/2022	S114	Emergency Diesel Generator (Res 2-1) (Res 2-1)	Combustion	Internal Combustion Engine	Emergency Standby	1	1070	Cadmium	1.65E-07	3.00E-08
59	University	183031	6/25/2022	S114	Emergency Diesel Generator (Res 2-1) (Res 2-1)	Combustion	Internal Combustion Engine	Emergency Standby	1	1095	Chromium	3.40E-09	6.21E-10
59	University	183031	6/25/2022	S114	Emergency Diesel Generator (Res 2-1) (Res 2-1)	Combustion	Internal Combustion Engine	Emergency Standby	1	1140	Lead (all) p	1.40E-07	2.55E-08
59	University	183031	6/25/2022	S114	Emergency Diesel Generator (Res 2-1) (Res 2-1)	Combustion	Internal Combustion Engine	Emergency Standby	1	1160	Manganese	2.19E-07	4.00E-08
59	University	183031	6/25/2022	S114	Emergency Diesel Generator (Res 2-1) (Res 2-1)	Combustion	Internal Combustion Engine	Emergency Standby	1	1180	Nickel pollu	2.66E-06	4.86E-07
59	University	183031	6/25/2022	S114	Emergency Diesel Generator (Res 2-1) (Res 2-1)	Combustion	Internal Combustion Engine	Emergency Standby	1	1190	Mercury (a	4.65E-08	8.49E-09
59	University	183031	6/25/2022	S114	Emergency Diesel Generator (Res 2-1) (Res 2-1)	Combustion	Internal Combustion Engine	Emergency Standby	1	1350	Diesel Engi	0.000726	0.000133
59	University	183031	6/25/2022	S114	Emergency Diesel Generator (Res 2-1) (Res 2-1)	Combustion	Internal Combustion Engine	Emergency Standby	1	1840	PAHs (non-	3.47E-07	6.34E-08
59	University	183031	6/25/2022	S114	Emergency Diesel Generator (Res 2-1) (Res 2-1)	Combustion	Internal Combustion Engine	Emergency Standby	1	2030	Nitrous Oxi	2.02E-05	3.69E-06
59	University	183031	6/25/2022	S114	Emergency Diesel Generator (Res 2-1) (Res 2-1)	Combustion	Internal Combustion Engine	Emergency Standby	1	2990	Nitrogen O	0.053209	0.009711
59	University	183031	6/25/2022	S114	Emergency Diesel Generator (Res 2-1) (Res 2-1)	Combustion	Internal Combustion Engine	Emergency Standby	1	3990	Sulfur Diox	2.47E-05	4.50E-06
59	University	183031	6/25/2022	S114	Emergency Diesel Generator (Res 2-1) (Res 2-1)	Combustion	Internal Combustion Engine	Emergency Standby	1	4990	Carbon Mo	0.011572	0.002112
59	University	183031	6/25/2022	S114	Emergency Diesel Generator (Res 2-1) (Res 2-1)	Combustion	Internal Combustion Engine	Emergency Standby	1	6960	Carbon Dio	2.530889	0.461887
59	University	183031	6/25/2022	S114	Emergency Diesel Generator (Res 2-1) (Res 2-1)	Combustion	Internal Combustion Engine	Emergency Standby	1	6970	Methane (	0.000101	1.85E-05
59	University	183031	6/25/2022	S115	Emergency Diesel Generator (Res 2-2) (Res2-2 2-2)	Combustion	Internal Combustion Engine	Emergency Standby	1	41	Benzene	7.56E-05	1.38E-05
59	University	183031	6/25/2022	S115	Emergency Diesel Generator (Res 2-2) (Res2-2 2-2)	Combustion	Internal Combustion Engine	Emergency Standby	1	124	Formaldeh	6.25E-06	1.14E-06
59	University	183031	6/25/2022	S115	Emergency Diesel Generator (Res 2-2) (Res2-2 2-2)	Combustion	Internal Combustion Engine	Emergency Standby	1	990	Organics (p	0.003649	0.000666
59	University	183031	6/25/2022	S115	Emergency Diesel Generator (Res 2-2) (Res2-2 2-2)	Combustion	Internal Combustion Engine	Emergency Standby	1	1030	Arsenic (all	6.58E-08	1.20E-08
59	University	183031	6/25/2022	S115	Emergency Diesel Generator (Res 2-2) (Res2-2 2-2)	Combustion	Internal Combustion Engine	Emergency Standby	1	1040	Beryllium (	3.86E-08	7.04E-09
59	University	183031	6/25/2022	S115	Emergency Diesel Generator (Res 2-2) (Res2-2 2-2)	Combustion	Internal Combustion Engine	Emergency Standby	1	1070	Cadmium	1.65E-07	3.00E-08
59	University	183031	6/25/2022	S115	Emergency Diesel Generator (Res 2-2) (Res2-2 2-2)	Combustion	Internal Combustion Engine	Emergency Standby	1	1095	Chromium	3.40E-09	6.21E-10
59	University	183031	6/25/2022	S115	Emergency Diesel Generator (Res 2-2) (Res2-2 2-2)	Combustion	Internal Combustion Engine	Emergency Standby	1	1140	Lead (all) p	1.40E-07	2.55E-08
59	University	183031	6/25/2022	S115	Emergency Diesel Generator (Res 2-2) (Res2-2 2-2)	Combustion	Internal Combustion Engine	Emergency Standby	1	1160	Manganese	2.19E-07	4.00E-08
59	University	183031	6/25/2022	S115	Emergency Diesel Generator (Res 2-2) (Res2-2 2-2)	Combustion	Internal Combustion Engine	Emergency Standby	1	1180	Nickel pollu	2.66E-06	4.86E-07

59	University	183031	6/25/2022	S115	Emergency Diesel Generator (Res 2-2) (Res2-2 2-2)	Combustion	Internal Combustion Engine	Emergency Standby	1	1190	Mercury (a	4.65E-08	8.49E-09
59	University	183031	6/25/2022	S115	Emergency Diesel Generator (Res 2-2) (Res2-2 2-2)	Combustion	Internal Combustion Engine	Emergency Standby	1	1350	Diesel Engi	0.000726	0.000133
59	University	183031	6/25/2022	S115	Emergency Diesel Generator (Res 2-2) (Res2-2 2-2)	Combustion	Internal Combustion Engine	Emergency Standby	1	1840	PAHs (non-	3.47E-07	6.34E-08
59	University	183031	6/25/2022	S115	Emergency Diesel Generator (Res 2-2) (Res2-2 2-2)	Combustion	Internal Combustion Engine	Emergency Standby	1	2030	Nitrous Oxi	2.02E-05	3.69E-06
59	University	183031	6/25/2022	S115	Emergency Diesel Generator (Res 2-2) (Res2-2 2-2)	Combustion	Internal Combustion Engine	Emergency Standby	1	2990	Nitrogen O	0.053209	0.009711
59	University	183031	6/25/2022	S115	Emergency Diesel Generator (Res 2-2) (Res2-2 2-2)	Combustion	Internal Combustion Engine	Emergency Standby	1	3990	Sulfur Diox	2.47E-05	4.50E-06
59	University	183031	6/25/2022	S115	Emergency Diesel Generator (Res 2-2) (Res2-2 2-2)	Combustion	Internal Combustion Engine	Emergency Standby	1	4990	Carbon Mo	0.011572	0.002112
59	University	183031	6/25/2022	S115	Emergency Diesel Generator (Res 2-2) (Res2-2 2-2)	Combustion	Internal Combustion Engine	Emergency Standby	1	6960	Carbon Dio	2.530889	0.461887
59	University	183031	6/25/2022	S115	Emergency Diesel Generator (Res 2-2) (Res2-2 2-2)	Combustion	Internal Combustion Engine	Emergency Standby	1	6970	Methane ((	0.000101	1.85E-05
59	University	183031	6/25/2022	S116	Emergency Diesel Generator (Tang Center) (Tang Ce	Combustion	Internal Combustion Engine	Emergency Standby	1	41	Benzene	0.000182	3.33E-05
59	University	183031	6/25/2022	S116	Emergency Diesel Generator (Tang Center) (Tang Ce	Combustion	Internal Combustion Engine	Emergency Standby	1	124	Formaldeh	1.51E-05	2.75E-06
59	University	183031	6/25/2022	S116	Emergency Diesel Generator (Tang Center) (Tang Ce	Combustion	Internal Combustion Engine	Emergency Standby	1	990	Organics (p	0.008801	0.001606
59	University	183031	6/25/2022	S116	Emergency Diesel Generator (Tang Center) (Tang Ce	Combustion	Internal Combustion Engine	Emergency Standby	1	1030	Arsenic (all	1.59E-07	2.90E-08
59	University	183031	6/25/2022	S116	Emergency Diesel Generator (Tang Center) (Tang Ce	Combustion	Internal Combustion Engine	Emergency Standby	1	1040	Beryllium (	9.30E-08	1.70E-08
59	University	183031	6/25/2022	S116	Emergency Diesel Generator (Tang Center) (Tang Ce	Combustion	Internal Combustion Engine	Emergency Standby	1	1070	Cadmium	3.97E-07	7.24E-08
59	University	183031	6/25/2022	S116	Emergency Diesel Generator (Tang Center) (Tang Ce	Combustion	Internal Combustion Engine	Emergency Standby	1	1095	Chromium	8.21E-09	1.50E-09
59	University	183031	6/25/2022	S116	Emergency Diesel Generator (Tang Center) (Tang Ce	Combustion	Internal Combustion Engine	Emergency Standby	1	1140	Lead (all) p	3.37E-07	6.14E-08
59	University	183031	6/25/2022	S116	Emergency Diesel Generator (Tang Center) (Tang Ce	Combustion	Internal Combustion Engine	Emergency Standby	1	1160	Manganese	5.28E-07	9.64E-08
59	University	183031	6/25/2022	S116	Emergency Diesel Generator (Tang Center) (Tang Ce	Combustion	Internal Combustion Engine	Emergency Standby	1	1180	Nickel pollu	6.42E-06	1.17E-06
59	University	183031	6/25/2022	S116	Emergency Diesel Generator (Tang Center) (Tang Ce	Combustion	Internal Combustion Engine	Emergency Standby	1	1190	Mercury (a	1.12E-07	2.05E-08
59	University	183031	6/25/2022	S116	Emergency Diesel Generator (Tang Center) (Tang Ce	Combustion	Internal Combustion Engine	Emergency Standby	1	1350	Diesel Engi	0.001751	0.00032
59	University	183031	6/25/2022	S116	Emergency Diesel Generator (Tang Center) (Tang Ce	Combustion	Internal Combustion Engine	Emergency Standby	1	1840	PAHs (non-	8.37E-07	1.53E-07
59	University	183031	6/25/2022	S116	Emergency Diesel Generator (Tang Center) (Tang Ce	Combustion	Internal Combustion Engine	Emergency Standby	1	2030	Nitrous Oxi	4.88E-05	8.91E-06
59	University	183031	6/25/2022	S116	Emergency Diesel Generator (Tang Center) (Tang Ce	Combustion	Internal Combustion Engine	Emergency Standby	1	2990	Nitrogen O	0.128326	0.02342
59	University	183031	6/25/2022	S116	Emergency Diesel Generator (Tang Center) (Tang Ce	Combustion	Internal Combustion Engine	Emergency Standby	1	3990	Sulfur Diox	5.95E-05	1.09E-05
59	University	183031	6/25/2022	S116	Emergency Diesel Generator (Tang Center) (Tang Ce	Combustion	Internal Combustion Engine	Emergency Standby	1	4990	Carbon Mo	0.027909	0.005093
59	University	183031	6/25/2022	S116	Emergency Diesel Generator (Tang Center) (Tang Ce	Combustion	Internal Combustion Engine	Emergency Standby	1	6960	Carbon Dio	6.103835	1.11395
59	University	183031	6/25/2022	S116	Emergency Diesel Generator (Tang Center) (Tang Ce	Combustion	Internal Combustion Engine	Emergency Standby	1	6970	Methane ((	0.000244	4.45E-05
59	University	183031	6/25/2022	S117	Emergency Diesel Genertaor (Minor Addition) (Mino	Combustion	Internal Combustion Engine	Emergency Standby	1	41	Benzene	0.000436	7.95E-05
59	University	183031	6/25/2022	S117	Emergency Diesel Genertaor (Minor Addition) (Mino	Combustion	Internal Combustion Engine	Emergency Standby	1	124	Formaldeh	3.60E-05	6.58E-06
59	University	183031	6/25/2022	S117	Emergency Diesel Genertaor (Minor Addition) (Mino	Combustion	Internal Combustion Engine	Emergency Standby	1	990	Organics (p	0.021036	0.003839
59	University	183031	6/25/2022	S117	Emergency Diesel Genertaor (Minor Addition) (Mino	Combustion	Internal Combustion Engine	Emergency Standby	1	1030	Arsenic (all	3.79E-07	6.92E-08
59	University	183031	6/25/2022	S117	Emergency Diesel Genertaor (Minor Addition) (Mino	Combustion	Internal Combustion Engine	Emergency Standby	1	1040	Beryllium (	2.22E-07	4.06E-08
59	University	183031	6/25/2022	S117	Emergency Diesel Genertaor (Minor Addition) (Mino	Combustion	Internal Combustion Engine	Emergency Standby	1	1070	Cadmium	9.48E-07	1.73E-07
59	University	183031	6/25/2022	S117	Emergency Diesel Genertaor (Minor Addition) (Mino	Combustion	Internal Combustion Engine	Emergency Standby	1	1095	Chromium	1.96E-08	3.58E-09
59	University	183031	6/25/2022	S117	Emergency Diesel Genertaor (Minor Addition) (Mino	Combustion	Internal Combustion Engine	Emergency Standby	1	1140	Lead (all) p	8.04E-07	1.47E-07
59	University	183031	6/25/2022	S117	Emergency Diesel Genertaor (Minor Addition) (Mino	Combustion	Internal Combustion Engine	Emergency Standby	1	1160	Manganese	1.26E-06	2.30E-07
59	University	183031	6/25/2022	S117	Emergency Diesel Genertaor (Minor Addition) (Mino	Combustion	Internal Combustion Engine	Emergency Standby	1	1180	Nickel pollu	1.53E-05	2.80E-06
59	University	183031	6/25/2022	S117	Emergency Diesel Genertaor (Minor Addition) (Mino	Combustion	Internal Combustion Engine	Emergency Standby	1	1190	Mercury (a	2.68E-07	4.89E-08
59	University	183031	6/25/2022	S117	Emergency Diesel Genertaor (Minor Addition) (Mino	Combustion	Internal Combustion Engine	Emergency Standby	1	1350	Diesel Engi	0.004186	0.000764
59	University	183031	6/25/2022	S117	Emergency Diesel Genertaor (Minor Addition) (Mino	Combustion	Internal Combustion Engine	Emergency Standby	1	1840	PAHs (non-	2.00E-06	3.65E-07
59	University	183031	6/25/2022	S117	Emergency Diesel Genertaor (Minor Addition) (Mino	Combustion	Internal Combustion Engine	Emergency Standby	1	2030	Nitrous Oxi	0.000117	2.13E-05
59	University	183031	6/25/2022	S117	Emergency Diesel Genertaor (Minor Addition) (Mino	Combustion	Internal Combustion Engine	Emergency Standby	1	2990	Nitrogen O	0.306739	0.05598
59	University	183031	6/25/2022	S117	Emergency Diesel Genertaor (Minor Addition) (Mino	Combustion	Internal Combustion Engine	Emergency Standby	1	3990	Sulfur Diox	0.000142	2.60E-05
59	University	183031	6/25/2022	S117	Emergency Diesel Genertaor (Minor Addition) (Mino	Combustion	Internal Combustion Engine	Emergency Standby	1	4990	Carbon Mo	0.066711	0.012175
59	University	183031	6/25/2022	S117	Emergency Diesel Genertaor (Minor Addition) (Mino	Combustion	Internal Combustion Engine	Emergency Standby	1	6960	Carbon Dio	14.59004	2.662682
59	University	183031	6/25/2022	S117	Emergency Diesel Genertaor (Minor Addition) (Mino	Combustion	Internal Combustion Engine	Emergency Standby	1	6970	Methane ((	0.000583	0.000106
59	University	183031	6/25/2022	S118	Emergency Diesel Generator (NWAF, North)	Combustion	Internal Combustion Engine	Emergency Standby	1	41	Benzene	0.000507	9.25E-05
59	University	183031	6/25/2022	S118	Emergency Diesel Generator (NWAF, North)	Combustion	Internal Combustion Engine	Emergency Standby	1	124	Formaldeh	4.19E-05	7.65E-06
59	University	183031	6/25/2022	S118	Emergency Diesel Generator (NWAF, North)	Combustion	Internal Combustion Engine	Emergency Standby	1	990	Organics (p	0.022518	0.00411
59	University	183031	6/25/2022	S118	Emergency Diesel Generator (NWAF, North)	Combustion	Internal Combustion Engine	Emergency Standby	1	1030	Arsenic (all	4.41E-07	8.05E-08
59	University	183031	6/25/2022	S118	Emergency Diesel Generator (NWAF, North)	Combustion	Internal Combustion Engine	Emergency Standby	1	1040	Beryllium (	2.59E-07	4.72E-08
59	University	183031	6/25/2022	S118	Emergency Diesel Generator (NWAF, North)	Combustion	Internal Combustion Engine	Emergency Standby	1	1070	Cadmium	1.10E-06	2.01E-07
59	University	183031	6/25/2022	S118	Emergency Diesel Generator (NWAF, North)	Combustion	Internal Combustion Engine	Emergency Standby	1	1095	Chromium	2.28E-08	4.17E-09
59	University	183031	6/25/2022	S118	Emergency Diesel Generator (NWAF, North)	Combustion	Internal Combustion Engine	Emergency Standby	1	1140	Lead (all) p	9.36E-07	1.71E-07
59	University	183031	6/25/2022	S118	Emergency Diesel Generator (NWAF, North)	Combustion	Internal Combustion Engine	Emergency Standby	1	1160	Manganese	1.47E-06	2.68E-07
59	University	183031	6/25/2022	S118	Emergency Diesel Generator (NWAF, North)	Combustion	Internal Combustion Engine	Emergency Standby	1	1180	Nickel pollu	1.78E-05	3.26E-06
59	University	183031	6/25/2022	S118	Emergency Diesel Generator (NWAF, North)	Combustion	Internal Combustion Engine	Emergency Standby	1	1190	Mercury (a	3.12E-07	5.69E-08
59	University	183031	6/25/2022	S118	Emergency Diesel Generator (NWAF, North)	Combustion	Internal Combustion Engine	Emergency Standby	1	1350	Diesel Engi	0.00346	0.000631
59	University	183031	6/25/2022	S118	Emergency Diesel Generator (NWAF, North)	Combustion	Internal Combustion Engine	Emergency Standby	1	1840	PAHs (non-	2.33E-06	4.25E-07
59	University	183031	6/25/2022	S118	Emergency Diesel Generator (NWAF, North)	Combustion	Internal Combustion Engine	Emergency Standby	1	2030	Nitrous Oxi	0.000136	2.48E-05
59	University	183031	6/25/2022	S118	Emergency Diesel Generator (NWAF, North)	Combustion	Internal Combustion Engine	Emergency Standby	1	2990	Nitrogen O	0.159162	0.029047
59	University	183031	6/25/2022	S118	Emergency Diesel Generator (NWAF, North)	Combustion	Internal Combustion Engine	Emergency Standby	1	3990	Sulfur Diox	0.000165	3.02E-05
59	University	183031	6/25/2022	S118	Emergency Diesel Generator (NWAF, North)	Combustion	Internal Combustion Engine	Emergency Standby	1	4990	Carbon Mo	0.196069	0.035783
59	University	183031	6/25/2022	S118	Emergency Diesel Generator (NWAF, North)	Combustion	Internal Combustion Engine	Emergency Standby	1	6960	Carbon Dio	16.97242	3.097467
59	University	183031	6/25/2022	S118	Emergency Diesel Generator (NWAF, North)	Combustion	Internal Combustion Engine	Emergency Standby	1	6970	Methane ((	0.000679	0.000124
59	University	183031	6/25/2022	S120	Emergency Diesel Generator (Sproul) (Sproel Hall, Ba	Combustion	Internal Combustion Engine	Emergency Standby	1	41	Benzene	0.000233	4.26E-05
59	University	183031	6/25/2022	S120	Emergency Diesel Generator (Sproul) (Sproel Hall, Ba	Combustion	Internal Combustion Engine	Emergency Standby	1	124	Formaldeh	1.93E-05	3.52E-06
59	University	183031	6/25/2022	S120	Emergency Diesel Generator (Sproul) (Sproel Hall, Ba	Combustion	Internal Combustion Engine	Emergency Standby	1	990	Organics (p	0.011262	0.002055
59	University	183031	6/25/2022	S120	Emergency Diesel Generator (Sproul) (Sproel Hall, Ba	Combustion	Internal Combustion Engine	Emergency Standby	1	1030	Arsenic (all	2.03E-07	3.71E-08
59	University	183031	6/25/2022	S120	Emergency Diesel Generator (Sproul) (Sproel Hall, Ba	Combustion	Internal Combustion Engine	Emergency Standby	1	1040	Beryllium (	1.19E-07	2.17E-08
59	University	183031	6/25/2022	S120	Emergency Diesel Generator (Sproul) (Sproel Hall, Ba	Combustion	Internal Combustion Engine	Emergency Standby	1	1070	Cadmium	5.08E-07	9.27E-08
59	University	183031	6/25/2022	S120	Emergency Diesel Generator (Sproul) (Sproel Hall, Ba	Combustion	Internal Combustion Engine	Emergency Standby	1	1095	Chromium	1.05E-08	1.92E-09
59	University	183031	6/25/2022	S120	Emergency Diesel Generator (Sproul) (Sproel Hall, Ba	Combustion	Internal Combustion Engine	Emergency Standby	1	1140	Lead (all) p	4.31E-07	7.86E-08
59	University	183031	6/25/2022	S120	Emergency Diesel Generator (Sproul) (Sproel Hall, Ba	Combustion	Internal Combustion Engine	Emergency Standby	1	1160	Manganese	6.76E-07	1.23E-07
59	University	183031	6/25/2022	S120	Emergency Diesel Generator (Sproul) (Sproel Hall, Ba	Combustion	Internal Combustion Engine	Emergency Standby	1	1180	Nickel pollu	8.21E-06	1.50E-06
59	University	183031	6/25/2022	S120	Emergency Diesel Generator (Sproul) (Sproel Hall, Ba	Combustion	Internal Combustion Engine	Emergency Standby	1	1190	Mercury (a	1.44E-07	2.62E-08
59	University	183031	6/25/2022	S120	Emergency Diesel Generator (Sproul) (Sproel Hall, Ba	Combustion	Internal Combustion Engine	Emergency Standby	1	1350	Diesel Engi	0.002241	0.000409
59	University	183031	6/25/2022	S120	Emergency Diesel Generator (Sproul) (Sproel Hall, Ba	Combustion	Internal Combustion Engine	Emergency Standby	1	1840	PAHs (non-	1.07E-06	1.96E-07
59	University	183031	6/25/2022	S120	Emergency Diesel Generator (Sproul) (Sproel Hall, Ba	Combustion	Internal Combustion Engine	Emergency Standby	1	2030	Nitrous Oxi	6.25E-05	1.14E-05
59	University	183031	6/25/2022	S120	Emergency Diesel Generator (Sproul) (Sproel Hall, Ba	Combustion	Internal Combustion Engine	Emergency Standby	1	2990	Nitrogen O	0.164214	0.029969
59	University	183031	6/25/2022	S120	Emergency Diesel Generator (Sproul) (Sproel Hall, Ba	Combustion	Internal Combustion Engine	Emergency Standby	1	3990	Sulfur Diox	7.62E-05	1.39E-05
59	University	183031	6/25/2022	S120	Emergency Diesel Generator (Sproul) (Sproel Hall, Ba	Combustion	Internal Combustion Engine	Emergency Standby	1	4990	Carbon Mo	0.035714	0.006518
59	University	183031	6/25/2022	S120	Emergency Diesel Generator (Sproul) (Sproel Hall, Ba	Combustion	Internal Combustion Engine	Emergency Standby	1	6960	Carbon Dio	7.810857	1.425481
59	University	183031	6/25/2022	S120	Emergency Diesel Generator (Sproul) (Sproel Hall, Ba	Combustion	Internal Combustion Engine	Emergency Standby	1	6970	Methane ((	0.000312	5.70E-05
59	University	183031	6/25/2022	S121	Emergency Diesel Generator (International House) (I	Combustion	Internal Combustion Engine	Emergency Standby	0	NULL	NULL	NULL	NULL
59	University	183031	6/25/2022	S122	Emergency Diesel Generator (Silver Space Add.) (Silv	Combustion	Internal Combustion Engine	Emergency Standby	1	41	Benzene	0.000214	3.91E-05
59	University	183031	6/25/2022	S122	Emergency Diesel Generator (Silver Space Add.) (Silv	Combustion	Internal Combustion Engine	Emergency Standby	1	124	Formaldeh	1.77E-05	3.23E-06
59	University	183031	6/25/2022	S122	Emergency Diesel Generator (Silver Space Add.) (Silv	Combustion	Internal Combustion Engine	Emergency Standby	1	990	Organics (p	0.010334	0.001886
59	University	183031	6/25/2022	S122	Emergency Diesel Generator (Silver Space Add.) (Silv	Combustion	Internal Combustion Engine	Emergency Standby	1	1030	Arsenic (all	1.86E-07	3.40E-08
59	University	183031	6/25/2022	S122	Emergency Diesel Generator (Silver Space Add.) (Silv	Combustion	Internal Combustion Engine	Emergency Standby	1	1040	Beryllium (	1.09E-07	1.99E-08
59	University	183031	6/25/2022	S122	Emergency Diesel Generator (Silver Space Add.) (Silv	Combustion	Internal Combustion Engine	Emergency Standby	1	1070	Cadmium	4.66E-07	8.50E-08
59	University	183031	6/25/2022	S122	Emergency Diesel Generator (Silver Space Add.) (Silv	Combustion	Internal Combustion Engine	Emergency Standby	1	1095	Chromium	9.64E-09	1.76E-09
59	University	183031	6/25/2022	S122	Emergency Diesel Generator (Silver Space Add.) (Silv	Combustion	Internal Combustion Engine	Emergency Standby	1	1140	Lead (all) p	3.95E-07	7.21E-08
59	University	183031	6/25/2022	S122	Emergency Diesel Generator (Silver Space Add.) (Silv	Combustion	Internal Combustion Engine	Emergency Standby	1	1160	Manganese	6.20E-07	1.13E-07
59	University	183031	6/25/2022	S122	Emergency Diesel Generator (Silver Space Add.) (Silv	Combustion	Internal Combustion Engine	Emergency Standby	1	1180	Nickel pollu	7.54E-06	1.38E-06
59	University	183031	6/25/2022	S122	Emergency Diesel Generator (Silver Space Add.) (Silv	Combustion	Internal Combustion Engine	Emergency Standby	1	1190	Mercury (a	1.32E-07	2.40E-08
59	University	183031	6/25/2022	S122	Emergency Diesel Generator (Silver Space Add.) (Silv	Combustion	Internal Combustion Engine	Emergency Standby	1	1350	Diesel Engi	0.002056	0.000375
59	University	183031	6/25/2022	S122	Emergency Diesel Generator (Silver Space Add.) (Silv	Combustion	Internal Combustion Engine	Emergency Standby	1	1840	PAHs (non-	9.83E-07	1.79E-07
59	University	183031	6/25/2022	S122	Emergency Diesel Generator (Silver Space Add.) (Silv	Combustion	Internal Combustion Engine	Emergency Standby	1	2030	Nitrous Oxi	5.73E-05	1.05E-05
59	University	183031	6/25/2022	S122	Emergency Diesel Generator (Silver Space Add.) (Silv	Combustion	Internal Combustion Engine	Emergency Standby	1	2990	Nitrogen O	0.067213	0.012266
59	University	183031	6/25/2022	S122	Emergency Diesel Generator (Silver Space Add.) (Silv	Combustion	Internal Combustion Engine	Emergency Standby	1	3990	Sulfur Diox	6.99E-05	1.28E-05
59	University	183031	6/25/2022	S122	Emergency Diesel Generator (Silver Space Add.) (Silv	Combustion	Internal Combustion Engine	Emergency Standby	1	4990	Carbon Mo	0.032771	0.005981
59	University	183031	6/25/2022	S122	Emergency Diesel Generator (Silver Space Add.) (Silv	Combustion	Internal Combustion Engine	Emergency Standby	1	6960	Carbon Dio	7.167287	1.30803
59	University	183031	6/25/2022	S122	Emergency Diesel Generator (Silver Space Add.) (Silv	Combustion	Internal Combustion Engine	Emergency Standby	1	6970	Methane ((	0.000287	5.23E-05
59	University	183031	6/25/2022	S123	Emergency Diesel Generator (Doe Library - Bancroft	Combustion	Internal Combustion Engine	Emergency Standby	1	41	Benzene	0.000247	4.52E-05
59	University	183031	6/25/2022	S123	Emergency Diesel Generator (Doe Library - Bancroft	Combustion	Internal Combustion Engine	Emergency Standby	1	124	Formaldeh	2.05E-05	3.74E-06

59	University	183031	6/25/2022	S123	Emergency Diesel Generator (Doe Library - Bancroft	Combustion	Internal Combustion Engine	Emergency Standby	1	990	Organics (p	0.011949	0.002181
59	University	183031	6/25/2022	S123	Emergency Diesel Generator (Doe Library - Bancroft	Combustion	Internal Combustion Engine	Emergency Standby	1	1030	Arsenic (all	2.15E-07	3.93E-08
59	University	183031	6/25/2022	S123	Emergency Diesel Generator (Doe Library - Bancroft	Combustion	Internal Combustion Engine	Emergency Standby	1	1040	Beryllium (	1.26E-07	2.31E-08
59	University	183031	6/25/2022	S123	Emergency Diesel Generator (Doe Library - Bancroft	Combustion	Internal Combustion Engine	Emergency Standby	1	1070	Cadmium	5.39E-07	9.83E-08
59	University	183031	6/25/2022	S123	Emergency Diesel Generator (Doe Library - Bancroft	Combustion	Internal Combustion Engine	Emergency Standby	1	1095	Chromium	1.11E-08	2.03E-09
59	University	183031	6/25/2022	S123	Emergency Diesel Generator (Doe Library - Bancroft	Combustion	Internal Combustion Engine	Emergency Standby	1	1140	Lead (all) p	4.57E-07	8.34E-08
59	University	183031	6/25/2022	S123	Emergency Diesel Generator (Doe Library - Bancroft	Combustion	Internal Combustion Engine	Emergency Standby	1	1160	Manganese	7.17E-07	1.31E-07
59	University	183031	6/25/2022	S123	Emergency Diesel Generator (Doe Library - Bancroft	Combustion	Internal Combustion Engine	Emergency Standby	1	1180	Nickel pollu	8.72E-06	1.59E-06
59	University	183031	6/25/2022	S123	Emergency Diesel Generator (Doe Library - Bancroft	Combustion	Internal Combustion Engine	Emergency Standby	1	1190	Mercury (a	1.52E-07	2.78E-08
59	University	183031	6/25/2022	S123	Emergency Diesel Generator (Doe Library - Bancroft	Combustion	Internal Combustion Engine	Emergency Standby	1	1350	Diesel Engi	0.002378	0.000434
59	University	183031	6/25/2022	S123	Emergency Diesel Generator (Doe Library - Bancroft	Combustion	Internal Combustion Engine	Emergency Standby	1	1840	PAHs (non-	1.14E-06	2.07E-07
59	University	183031	6/25/2022	S123	Emergency Diesel Generator (Doe Library - Bancroft	Combustion	Internal Combustion Engine	Emergency Standby	1	2030	Nitrous Oxi	6.63E-05	1.21E-05
59	University	183031	6/25/2022	S123	Emergency Diesel Generator (Doe Library - Bancroft	Combustion	Internal Combustion Engine	Emergency Standby	1	2990	Nitrogen O	0.174237	0.031798
59	University	183031	6/25/2022	S123	Emergency Diesel Generator (Doe Library - Bancroft	Combustion	Internal Combustion Engine	Emergency Standby	1	3990	Sulfur Diox	8.08E-05	1.47E-05
59	University	183031	6/25/2022	S123	Emergency Diesel Generator (Doe Library - Bancroft	Combustion	Internal Combustion Engine	Emergency Standby	1	4990	Carbon Mo	0.037894	0.006916
59	University	183031	6/25/2022	S123	Emergency Diesel Generator (Doe Library - Bancroft	Combustion	Internal Combustion Engine	Emergency Standby	1	6960	Carbon Dio	8.287575	1.512482
59	University	183031	6/25/2022	S123	Emergency Diesel Generator (Doe Library - Bancroft	Combustion	Internal Combustion Engine	Emergency Standby	1	6970	Methane (	0.000331	6.05E-05
59	University	183031	6/25/2022	S125	Emergency Diesel Generator (Hazardous Materials F	Combustion	Internal Combustion Engine	Emergency Standby	1	41	Benzene	0.000236	4.30E-05
59	University	183031	6/25/2022	S125	Emergency Diesel Generator (Hazardous Materials F	Combustion	Internal Combustion Engine	Emergency Standby	1	124	Formaldeh	1.95E-05	3.56E-06
59	University	183031	6/25/2022	S125	Emergency Diesel Generator (Hazardous Materials F	Combustion	Internal Combustion Engine	Emergency Standby	1	990	Organics (p	0.011381	0.002077
59	University	183031	6/25/2022	S125	Emergency Diesel Generator (Hazardous Materials F	Combustion	Internal Combustion Engine	Emergency Standby	1	1030	Arsenic (all	2.05E-07	3.75E-08
59	University	183031	6/25/2022	S125	Emergency Diesel Generator (Hazardous Materials F	Combustion	Internal Combustion Engine	Emergency Standby	1	1040	Beryllium (	1.20E-07	2.20E-08
59	University	183031	6/25/2022	S125	Emergency Diesel Generator (Hazardous Materials F	Combustion	Internal Combustion Engine	Emergency Standby	1	1070	Cadmium	5.13E-07	9.36E-08
59	University	183031	6/25/2022	S125	Emergency Diesel Generator (Hazardous Materials F	Combustion	Internal Combustion Engine	Emergency Standby	1	1095	Chromium	1.06E-08	1.94E-09
59	University	183031	6/25/2022	S125	Emergency Diesel Generator (Hazardous Materials F	Combustion	Internal Combustion Engine	Emergency Standby	1	1140	Lead (all) p	4.35E-07	7.94E-08
59	University	183031	6/25/2022	S125	Emergency Diesel Generator (Hazardous Materials F	Combustion	Internal Combustion Engine	Emergency Standby	1	1160	Manganese	6.83E-07	1.25E-07
59	University	183031	6/25/2022	S125	Emergency Diesel Generator (Hazardous Materials F	Combustion	Internal Combustion Engine	Emergency Standby	1	1180	Nickel pollu	8.30E-06	1.51E-06
59	University	183031	6/25/2022	S125	Emergency Diesel Generator (Hazardous Materials F	Combustion	Internal Combustion Engine	Emergency Standby	1	1190	Mercury (a	1.45E-07	2.65E-08
59	University	183031	6/25/2022	S125	Emergency Diesel Generator (Hazardous Materials F	Combustion	Internal Combustion Engine	Emergency Standby	1	1350	Diesel Engi	0.002265	0.000413
59	University	183031	6/25/2022	S125	Emergency Diesel Generator (Hazardous Materials F	Combustion	Internal Combustion Engine	Emergency Standby	1	1840	PAHs (non-	1.08E-06	1.98E-07
59	University	183031	6/25/2022	S125	Emergency Diesel Generator (Hazardous Materials F	Combustion	Internal Combustion Engine	Emergency Standby	1	2030	Nitrous Oxi	6.31E-05	1.15E-05
59	University	183031	6/25/2022	S125	Emergency Diesel Generator (Hazardous Materials F	Combustion	Internal Combustion Engine	Emergency Standby	1	2990	Nitrogen O	0.074021	0.013509
59	University	183031	6/25/2022	S125	Emergency Diesel Generator (Hazardous Materials F	Combustion	Internal Combustion Engine	Emergency Standby	1	3990	Sulfur Diox	7.70E-05	1.40E-05
59	University	183031	6/25/2022	S125	Emergency Diesel Generator (Hazardous Materials F	Combustion	Internal Combustion Engine	Emergency Standby	1	4990	Carbon Mo	0.036091	0.006587
59	University	183031	6/25/2022	S125	Emergency Diesel Generator (Hazardous Materials F	Combustion	Internal Combustion Engine	Emergency Standby	1	6960	Carbon Dio	7.893365	1.440539
59	University	183031	6/25/2022	S125	Emergency Diesel Generator (Hazardous Materials F	Combustion	Internal Combustion Engine	Emergency Standby	1	6970	Methane (	0.000316	5.76E-05
59	University	183031	6/25/2022	S126	Emergency Diesel Generator (Caesar Chavez) (Cesar	Combustion	Internal Combustion Engine	Emergency Standby	1	41	Benzene	0.000131	2.38E-05
59	University	183031	6/25/2022	S126	Emergency Diesel Generator (Caesar Chavez) (Cesar	Combustion	Internal Combustion Engine	Emergency Standby	1	124	Formaldeh	1.08E-05	1.97E-06
59	University	183031	6/25/2022	S126	Emergency Diesel Generator (Caesar Chavez) (Cesar	Combustion	Internal Combustion Engine	Emergency Standby	1	990	Organics (p	0.006308	0.001151
59	University	183031	6/25/2022	S126	Emergency Diesel Generator (Caesar Chavez) (Cesar	Combustion	Internal Combustion Engine	Emergency Standby	1	1030	Arsenic (all	1.14E-07	2.08E-08
59	University	183031	6/25/2022	S126	Emergency Diesel Generator (Caesar Chavez) (Cesar	Combustion	Internal Combustion Engine	Emergency Standby	1	1040	Beryllium (	6.67E-08	1.22E-08
59	University	183031	6/25/2022	S126	Emergency Diesel Generator (Caesar Chavez) (Cesar	Combustion	Internal Combustion Engine	Emergency Standby	1	1070	Cadmium	2.84E-07	5.19E-08
59	University	183031	6/25/2022	S126	Emergency Diesel Generator (Caesar Chavez) (Cesar	Combustion	Internal Combustion Engine	Emergency Standby	1	1095	Chromium	5.88E-09	1.07E-09
59	University	183031	6/25/2022	S126	Emergency Diesel Generator (Caesar Chavez) (Cesar	Combustion	Internal Combustion Engine	Emergency Standby	1	1140	Lead (all) p	2.41E-07	4.40E-08
59	University	183031	6/25/2022	S126	Emergency Diesel Generator (Caesar Chavez) (Cesar	Combustion	Internal Combustion Engine	Emergency Standby	1	1160	Manganese	3.78E-07	6.91E-08
59	University	183031	6/25/2022	S126	Emergency Diesel Generator (Caesar Chavez) (Cesar	Combustion	Internal Combustion Engine	Emergency Standby	1	1180	Nickel pollu	4.60E-06	8.40E-07
59	University	183031	6/25/2022	S126	Emergency Diesel Generator (Caesar Chavez) (Cesar	Combustion	Internal Combustion Engine	Emergency Standby	1	1190	Mercury (a	8.04E-08	1.47E-08
59	University	183031	6/25/2022	S126	Emergency Diesel Generator (Caesar Chavez) (Cesar	Combustion	Internal Combustion Engine	Emergency Standby	1	1350	Diesel Engi	0.001255	0.000229
59	University	183031	6/25/2022	S126	Emergency Diesel Generator (Caesar Chavez) (Cesar	Combustion	Internal Combustion Engine	Emergency Standby	1	1840	PAHs (non-	6.00E-07	1.10E-07
59	University	183031	6/25/2022	S126	Emergency Diesel Generator (Caesar Chavez) (Cesar	Combustion	Internal Combustion Engine	Emergency Standby	1	2030	Nitrous Oxi	3.50E-05	6.39E-06
59	University	183031	6/25/2022	S126	Emergency Diesel Generator (Caesar Chavez) (Cesar	Combustion	Internal Combustion Engine	Emergency Standby	1	2990	Nitrogen O	0.041026	0.007487
59	University	183031	6/25/2022	S126	Emergency Diesel Generator (Caesar Chavez) (Cesar	Combustion	Internal Combustion Engine	Emergency Standby	1	3990	Sulfur Diox	4.27E-05	7.78E-06
59	University	183031	6/25/2022	S126	Emergency Diesel Generator (Caesar Chavez) (Cesar	Combustion	Internal Combustion Engine	Emergency Standby	1	4990	Carbon Mo	0.020003	0.003651
59	University	183031	6/25/2022	S126	Emergency Diesel Generator (Caesar Chavez) (Cesar	Combustion	Internal Combustion Engine	Emergency Standby	1	6960	Carbon Dio	4.374813	0.798403
59	University	183031	6/25/2022	S126	Emergency Diesel Generator (Caesar Chavez) (Cesar	Combustion	Internal Combustion Engine	Emergency Standby	1	6970	Methane (	0.000175	3.19E-05
59	University	183031	6/25/2022	S128	Emergency Diesel Generator (Donner) (Donner Labo	Combustion	Internal Combustion Engine	Emergency Standby	1	41	Benzene	8.62E-05	1.57E-05
59	University	183031	6/25/2022	S128	Emergency Diesel Generator (Donner) (Donner Labo	Combustion	Internal Combustion Engine	Emergency Standby	1	124	Formaldeh	7.13E-06	1.30E-06
59	University	183031	6/25/2022	S128	Emergency Diesel Generator (Donner) (Donner Labo	Combustion	Internal Combustion Engine	Emergency Standby	1	990	Organics (p	0.000463	8.45E-05
59	University	183031	6/25/2022	S128	Emergency Diesel Generator (Donner) (Donner Labo	Combustion	Internal Combustion Engine	Emergency Standby	1	1030	Arsenic (all	7.51E-08	1.37E-08
59	University	183031	6/25/2022	S128	Emergency Diesel Generator (Donner) (Donner Labo	Combustion	Internal Combustion Engine	Emergency Standby	1	1040	Beryllium (	4.40E-08	8.03E-09
59	University	183031	6/25/2022	S128	Emergency Diesel Generator (Donner) (Donner Labo	Combustion	Internal Combustion Engine	Emergency Standby	1	1070	Cadmium	1.88E-07	3.43E-08
59	University	183031	6/25/2022	S128	Emergency Diesel Generator (Donner) (Donner Labo	Combustion	Internal Combustion Engine	Emergency Standby	1	1095	Chromium	3.88E-09	7.09E-10
59	University	183031	6/25/2022	S128	Emergency Diesel Generator (Donner) (Donner Labo	Combustion	Internal Combustion Engine	Emergency Standby	1	1140	Lead (all) p	1.59E-07	2.91E-08
59	University	183031	6/25/2022	S128	Emergency Diesel Generator (Donner) (Donner Labo	Combustion	Internal Combustion Engine	Emergency Standby	1	1160	Manganese	2.50E-07	4.56E-08
59	University	183031	6/25/2022	S128	Emergency Diesel Generator (Donner) (Donner Labo	Combustion	Internal Combustion Engine	Emergency Standby	1	1180	Nickel pollu	3.04E-06	5.54E-07
59	University	183031	6/25/2022	S128	Emergency Diesel Generator (Donner) (Donner Labo	Combustion	Internal Combustion Engine	Emergency Standby	1	1190	Mercury (a	5.31E-08	9.69E-09
59	University	183031	6/25/2022	S128	Emergency Diesel Generator (Donner) (Donner Labo	Combustion	Internal Combustion Engine	Emergency Standby	1	1350	Diesel Engi	0.000439	8.02E-05
59	University	183031	6/25/2022	S128	Emergency Diesel Generator (Donner) (Donner Labo	Combustion	Internal Combustion Engine	Emergency Standby	1	1840	PAHs (non-	3.96E-07	7.23E-08
59	University	183031	6/25/2022	S128	Emergency Diesel Generator (Donner) (Donner Labo	Combustion	Internal Combustion Engine	Emergency Standby	1	2030	Nitrous Oxi	2.31E-05	4.22E-06
59	University	183031	6/25/2022	S128	Emergency Diesel Generator (Donner) (Donner Labo	Combustion	Internal Combustion Engine	Emergency Standby	1	2990	Nitrogen O	0.0104	0.001898
59	University	183031	6/25/2022	S128	Emergency Diesel Generator (Donner) (Donner Labo	Combustion	Internal Combustion Engine	Emergency Standby	1	3990	Sulfur Diox	2.82E-05	5.14E-06
59	University	183031	6/25/2022	S128	Emergency Diesel Generator (Donner) (Donner Labo	Combustion	Internal Combustion Engine	Emergency Standby	1	4990	Carbon Mo	0.010253	0.001871
59	University	183031	6/25/2022	S128	Emergency Diesel Generator (Donner) (Donner Labo	Combustion	Internal Combustion Engine	Emergency Standby	1	6960	Carbon Dio	2.888428	0.527138
59	University	183031	6/25/2022	S128	Emergency Diesel Generator (Donner) (Donner Labo	Combustion	Internal Combustion Engine	Emergency Standby	1	6970	Methane (	0.000116	2.11E-05
59	University	183031	6/25/2022	S129	Emergency Standby Generator (Birge Hall)	Combustion	Internal Combustion Engine	Emergency Standby	0	NULL	NULL	NULL	NULL
59	University	183031	6/25/2022	S130	Emergency Diesel Generator Engine (Hildebrand Hal	Combustion	Internal Combustion Engine	Emergency Standby	1	41	Benzene	6.48E-05	1.18E-05
59	University	183031	6/25/2022	S130	Emergency Diesel Generator Engine (Hildebrand Hal	Combustion	Internal Combustion Engine	Emergency Standby	1	124	Formaldeh	5.36E-06	9.79E-07
59	University	183031	6/25/2022	S130	Emergency Diesel Generator Engine (Hildebrand Hal	Combustion	Internal Combustion Engine	Emergency Standby	1	990	Organics (p	0.00313	0.000571
59	University	183031	6/25/2022	S130	Emergency Diesel Generator Engine (Hildebrand Hal	Combustion	Internal Combustion Engine	Emergency Standby	1	1030	Arsenic (all	5.64E-08	1.03E-08
59	University	183031	6/25/2022	S130	Emergency Diesel Generator Engine (Hildebrand Hal	Combustion	Internal Combustion Engine	Emergency Standby	1	1040	Beryllium (	3.31E-08	6.04E-09
59	University	183031	6/25/2022	S130	Emergency Diesel Generator Engine (Hildebrand Hal	Combustion	Internal Combustion Engine	Emergency Standby	1	1070	Cadmium	1.41E-07	2.58E-08
59	University	183031	6/25/2022	S130	Emergency Diesel Generator Engine (Hildebrand Hal	Combustion	Internal Combustion Engine	Emergency Standby	1	1095	Chromium	2.92E-09	5.33E-10
59	University	183031	6/25/2022	S130	Emergency Diesel Generator Engine (Hildebrand Hal	Combustion	Internal Combustion Engine	Emergency Standby	1	1140	Lead (all) p	1.20E-07	2.18E-08
59	University	183031	6/25/2022	S130	Emergency Diesel Generator Engine (Hildebrand Hal	Combustion	Internal Combustion Engine	Emergency Standby	1	1160	Manganese	1.88E-07	3.43E-08
59	University	183031	6/25/2022	S130	Emergency Diesel Generator Engine (Hildebrand Hal	Combustion	Internal Combustion Engine	Emergency Standby	1	1180	Nickel pollu	2.28E-06	4.17E-07
59	University	183031	6/25/2022	S130	Emergency Diesel Generator Engine (Hildebrand Hal	Combustion	Internal Combustion Engine	Emergency Standby	1	1190	Mercury (a	3.99E-08	7.28E-09
59	University	183031	6/25/2022	S130	Emergency Diesel Generator Engine (Hildebrand Hal	Combustion	Internal Combustion Engine	Emergency Standby	1	1350	Diesel Engi	0.000623	0.000114
59	University	183031	6/25/2022	S130	Emergency Diesel Generator Engine (Hildebrand Hal	Combustion	Internal Combustion Engine	Emergency Standby	1	1840	PAHs (non-	2.98E-07	5.43E-08
59	University	183031	6/25/2022	S130	Emergency Diesel Generator Engine (Hildebrand Hal	Combustion	Internal Combustion Engine	Emergency Standby	1	2030	Nitrous Oxi	1.74E-05	3.17E-06
59	University	183031	6/25/2022	S130	Emergency Diesel Generator Engine (Hildebrand Hal	Combustion	Internal Combustion Engine	Emergency Standby	1	2990	Nitrogen O	0.045641	0.008329
59	University	183031	6/25/2022	S130	Emergency Diesel Generator Engine (Hildebrand Hal	Combustion	Internal Combustion Engine	Emergency Standby	1	3990	Sulfur Diox	2.12E-05	3.86E-06
59	University	183031	6/25/2022	S130	Emergency Diesel Generator Engine (Hildebrand Hal	Combustion	Internal Combustion Engine	Emergency Standby	1	4990	Carbon Mo	0.009926	0.001812
59	University	183031	6/25/2022	S130	Emergency Diesel Generator Engine (Hildebrand Hal	Combustion	Internal Combustion Engine	Emergency Standby	1	6960	Carbon Dio	2.170904	0.39619
59	University	183031	6/25/2022	S130	Emergency Diesel Generator Engine (Hildebrand Hal	Combustion	Internal Combustion Engine	Emergency Standby	1	6970	Methane (	8.68E-05	1.58E-05
59	University	183031	6/25/2022	S131	Emergency Diesel Generator (Recreational Sports Fa	Combustion	Internal Combustion Engine	Emergency Standby	1	41	Benzene	3.31E-05	6.04E-06
59	University	183031	6/25/2022	S131	Emergency Diesel Generator (Recreational Sports Fa	Combustion	Internal Combustion Engine	Emergency Standby	1	124	Formaldeh	2.74E-06	5.00E-07
59	University	183031	6/25/2022	S131	Emergency Diesel Generator (Recreational Sports Fa	Combustion	Internal Combustion Engine	Emergency Standby	1	990	Organics (p	0.001599	0.000292
59	University	183031	6/25/2022	S131	Emergency Diesel Generator (Recreational Sports Fa	Combustion	Internal Combustion Engine	Emergency Standby	1	1030	Arsenic (all	2.88E-08	5.26E-09
59	University	183031	6/25/2022	S131	Emergency Diesel Generator (Recreational Sports Fa	Combustion	Internal Combustion Engine	Emergency Standby	1	1040	Beryllium (	1.69E-08	3.09E-09
59	University	183031	6/25/2022	S131	Emergency Diesel Generator (Recreational Sports Fa	Combustion	Internal Combustion Engine	Emergency Standby	1	1070	Cadmium	7.21E-08	1.32E-08
59	University	183031	6/25/2022	S131	Emergency Diesel Generator (Recreational Sports Fa	Combustion	Internal Combustion Engine	Emergency Standby	1	1095	Chromium	1.49E-09	2.72E-10
59	University	183031	6/25/2022	S131	Emergency Diesel Generator (Recreational Sports Fa	Combustion	Internal Combustion Engine	Emergency Standby	1	1140	Lead (all) p	6.12E-08	1.12E-08
59	University	183031	6/25/2022	S131	Emergency Diesel Generator (Recreational Sports Fa	Combustion	Internal Combustion Engine	Emergency Standby	1	1160	Manganese	9.60E-08	1.75E-08
59	University	183031	6/25/2022	S131	Emergency Diesel Generator (Recreational Sports Fa	Combustion	Internal Combustion Engine	Emergency Standby	1	1180	Nickel pollu	1.17E-06	2.13E-07
59	University	183031	6/25/2022	S131	Emergency Diesel Generator (Recreational Sports Fa	Combustion	Internal Combustion Engine	Emergency Standby	1	1190	Mercury (a	2.04E-08	3.72E-09
59	University	183031	6/25/2022	S131	Emergency Diesel Generator (Recreational Sports Fa	Combustion	Internal Combustion Engine	Emergency Standby	1	1350	Diesel Engi	0.000318	5.81E-05
59	University	183031	6/25/2022	S131	Emergency Diesel Generator (Recreational Sports Fa	Combustion	Internal Combustion Engine	Emergency Standby	1	1840	PAHs (non-	1.52E-07	2.78E-08

59	University	183031	6/25/2022	S131	Emergency Diesel Generator (Recreational Sports Fa	Combustion	Internal Combustion Engine	Emergency Standby	1	2030	Nitrous Oxi	8.87E-06	1.62E-06
59	University	183031	6/25/2022	S131	Emergency Diesel Generator (Recreational Sports Fa	Combustion	Internal Combustion Engine	Emergency Standby	1	2990	Nitrogen O	0.023322	0.004256
59	University	183031	6/25/2022	S131	Emergency Diesel Generator (Recreational Sports Fa	Combustion	Internal Combustion Engine	Emergency Standby	1	3990	Sulfur Diox	1.08E-05	1.97E-06
59	University	183031	6/25/2022	S131	Emergency Diesel Generator (Recreational Sports Fa	Combustion	Internal Combustion Engine	Emergency Standby	1	4990	Carbon Mo	0.005072	0.000926
59	University	183031	6/25/2022	S131	Emergency Diesel Generator (Recreational Sports Fa	Combustion	Internal Combustion Engine	Emergency Standby	1	6960	Carbon Dio	1.109288	0.202445
59	University	183031	6/25/2022	S131	Emergency Diesel Generator (Recreational Sports Fa	Combustion	Internal Combustion Engine	Emergency Standby	1	6970	Methane ((	4.44E-05	8.10E-06
59	University	183031	6/25/2022	S132	Emergency Diesel Generator (Mulford/Morgan) (Mo	Combustion	Internal Combustion Engine	Emergency Standby	1	41	Benzene	1.55E-05	2.83E-06
59	University	183031	6/25/2022	S132	Emergency Diesel Generator (Mulford/Morgan) (Mo	Combustion	Internal Combustion Engine	Emergency Standby	1	124	Formaldeh	1.28E-06	2.34E-07
59	University	183031	6/25/2022	S132	Emergency Diesel Generator (Mulford/Morgan) (Mo	Combustion	Internal Combustion Engine	Emergency Standby	1	990	Organics (p	0.000749	0.000137
59	University	183031	6/25/2022	S132	Emergency Diesel Generator (Mulford/Morgan) (Mo	Combustion	Internal Combustion Engine	Emergency Standby	1	1030	Arsenic (all	1.35E-08	2.47E-09
59	University	183031	6/25/2022	S132	Emergency Diesel Generator (Mulford/Morgan) (Mo	Combustion	Internal Combustion Engine	Emergency Standby	1	1040	Beryllium (	7.92E-09	1.45E-09
59	University	183031	6/25/2022	S132	Emergency Diesel Generator (Mulford/Morgan) (Mo	Combustion	Internal Combustion Engine	Emergency Standby	1	1070	Cadmium	3.38E-08	6.16E-09
59	University	183031	6/25/2022	S132	Emergency Diesel Generator (Mulford/Morgan) (Mo	Combustion	Internal Combustion Engine	Emergency Standby	1	1095	Chromium	6.99E-10	1.28E-10
59	University	183031	6/25/2022	S132	Emergency Diesel Generator (Mulford/Morgan) (Mo	Combustion	Internal Combustion Engine	Emergency Standby	1	1140	Lead (all) p	2.86E-08	5.23E-09
59	University	183031	6/25/2022	S132	Emergency Diesel Generator (Mulford/Morgan) (Mo	Combustion	Internal Combustion Engine	Emergency Standby	1	1160	Manganese	4.49E-08	8.20E-09
59	University	183031	6/25/2022	S132	Emergency Diesel Generator (Mulford/Morgan) (Mo	Combustion	Internal Combustion Engine	Emergency Standby	1	1180	Nickel pollu	5.46E-07	9.97E-08
59	University	183031	6/25/2022	S132	Emergency Diesel Generator (Mulford/Morgan) (Mo	Combustion	Internal Combustion Engine	Emergency Standby	1	1190	Mercury (a	9.55E-09	1.74E-09
59	University	183031	6/25/2022	S132	Emergency Diesel Generator (Mulford/Morgan) (Mo	Combustion	Internal Combustion Engine	Emergency Standby	1	1350	Diesel Engi	0.000149	2.72E-05
59	University	183031	6/25/2022	S132	Emergency Diesel Generator (Mulford/Morgan) (Mo	Combustion	Internal Combustion Engine	Emergency Standby	1	1840	PAHs (non-	7.13E-08	1.30E-08
59	University	183031	6/25/2022	S132	Emergency Diesel Generator (Mulford/Morgan) (Mo	Combustion	Internal Combustion Engine	Emergency Standby	1	2030	Nitrous Oxi	4.15E-06	7.58E-07
59	University	183031	6/25/2022	S132	Emergency Diesel Generator (Mulford/Morgan) (Mo	Combustion	Internal Combustion Engine	Emergency Standby	1	2990	Nitrogen O	0.010922	0.001993
59	University	183031	6/25/2022	S132	Emergency Diesel Generator (Mulford/Morgan) (Mo	Combustion	Internal Combustion Engine	Emergency Standby	1	3990	Sulfur Diox	5.07E-06	9.24E-07
59	University	183031	6/25/2022	S132	Emergency Diesel Generator (Mulford/Morgan) (Mo	Combustion	Internal Combustion Engine	Emergency Standby	1	4990	Carbon Mo	0.002375	0.000434
59	University	183031	6/25/2022	S132	Emergency Diesel Generator (Mulford/Morgan) (Mo	Combustion	Internal Combustion Engine	Emergency Standby	1	6960	Carbon Dio	0.519501	0.094809
59	University	183031	6/25/2022	S132	Emergency Diesel Generator (Mulford/Morgan) (Mo	Combustion	Internal Combustion Engine	Emergency Standby	1	6970	Methane ((	2.08E-05	3.79E-06
59	University	183031	6/25/2022	S133	Emergency Diesel Generator (Hearst Memorial Mini	Combustion	Internal Combustion Engine	Emergency Standby	1	41	Benzene	0.00027	4.93E-05
59	University	183031	6/25/2022	S133	Emergency Diesel Generator (Hearst Memorial Mini	Combustion	Internal Combustion Engine	Emergency Standby	1	124	Formaldeh	2.23E-05	4.08E-06
59	University	183031	6/25/2022	S133	Emergency Diesel Generator (Hearst Memorial Mini	Combustion	Internal Combustion Engine	Emergency Standby	1	990	Organics (p	0.013042	0.00238
59	University	183031	6/25/2022	S133	Emergency Diesel Generator (Hearst Memorial Mini	Combustion	Internal Combustion Engine	Emergency Standby	1	1030	Arsenic (all	2.35E-07	4.29E-08
59	University	183031	6/25/2022	S133	Emergency Diesel Generator (Hearst Memorial Mini	Combustion	Internal Combustion Engine	Emergency Standby	1	1040	Beryllium (	1.38E-07	2.52E-08
59	University	183031	6/25/2022	S133	Emergency Diesel Generator (Hearst Memorial Mini	Combustion	Internal Combustion Engine	Emergency Standby	1	1070	Cadmium	5.88E-07	1.07E-07
59	University	183031	6/25/2022	S133	Emergency Diesel Generator (Hearst Memorial Mini	Combustion	Internal Combustion Engine	Emergency Standby	1	1095	Chromium	1.22E-08	2.22E-09
59	University	183031	6/25/2022	S133	Emergency Diesel Generator (Hearst Memorial Mini	Combustion	Internal Combustion Engine	Emergency Standby	1	1140	Lead (all) p	4.99E-07	9.10E-08
59	University	183031	6/25/2022	S133	Emergency Diesel Generator (Hearst Memorial Mini	Combustion	Internal Combustion Engine	Emergency Standby	1	1160	Manganese	7.83E-07	1.43E-07
59	University	183031	6/25/2022	S133	Emergency Diesel Generator (Hearst Memorial Mini	Combustion	Internal Combustion Engine	Emergency Standby	1	1180	Nickel pollu	9.51E-06	1.74E-06
59	University	183031	6/25/2022	S133	Emergency Diesel Generator (Hearst Memorial Mini	Combustion	Internal Combustion Engine	Emergency Standby	1	1190	Mercury (a	1.66E-07	3.03E-08
59	University	183031	6/25/2022	S133	Emergency Diesel Generator (Hearst Memorial Mini	Combustion	Internal Combustion Engine	Emergency Standby	1	1350	Diesel Engi	0.002595	0.000474
59	University	183031	6/25/2022	S133	Emergency Diesel Generator (Hearst Memorial Mini	Combustion	Internal Combustion Engine	Emergency Standby	1	1840	PAHs (non-	1.24E-06	2.26E-07
59	University	183031	6/25/2022	S133	Emergency Diesel Generator (Hearst Memorial Mini	Combustion	Internal Combustion Engine	Emergency Standby	1	2030	Nitrous Oxi	7.23E-05	1.32E-05
59	University	183031	6/25/2022	S133	Emergency Diesel Generator (Hearst Memorial Mini	Combustion	Internal Combustion Engine	Emergency Standby	1	2990	Nitrogen O	0.19017	0.034706
59	University	183031	6/25/2022	S133	Emergency Diesel Generator (Hearst Memorial Mini	Combustion	Internal Combustion Engine	Emergency Standby	1	3990	Sulfur Diox	8.82E-05	1.61E-05
59	University	183031	6/25/2022	S133	Emergency Diesel Generator (Hearst Memorial Mini	Combustion	Internal Combustion Engine	Emergency Standby	1	4990	Carbon Mo	0.041359	0.007548
59	University	183031	6/25/2022	S133	Emergency Diesel Generator (Hearst Memorial Mini	Combustion	Internal Combustion Engine	Emergency Standby	1	6960	Carbon Dio	9.045435	1.650792
59	University	183031	6/25/2022	S133	Emergency Diesel Generator (Hearst Memorial Mini	Combustion	Internal Combustion Engine	Emergency Standby	1	6970	Methane ((	0.000362	6.60E-05
59	University	183031	6/25/2022	S139	Emergency Electrical Generator (Moffitt Library - Bas	Combustion	Internal Combustion Engine	Emergency Standby	1	41	Benzene	2.03E-05	3.70E-06
59	University	183031	6/25/2022	S139	Emergency Electrical Generator (Moffitt Library - Bas	Combustion	Internal Combustion Engine	Emergency Standby	1	124	Formaldeh	0.000183	3.34E-05
59	University	183031	6/25/2022	S139	Emergency Electrical Generator (Moffitt Library - Bas	Combustion	Internal Combustion Engine	Emergency Standby	1	990	Organics (p	0.018222	0.003326
59	University	183031	6/25/2022	S139	Emergency Electrical Generator (Moffitt Library - Bas	Combustion	Internal Combustion Engine	Emergency Standby	1	1990	Particulate	0.000132	2.40E-05
59	University	183031	6/25/2022	S139	Emergency Electrical Generator (Moffitt Library - Bas	Combustion	Internal Combustion Engine	Emergency Standby	1	2030	Nitrous Oxi	3.04E-06	5.55E-07
59	University	183031	6/25/2022	S139	Emergency Electrical Generator (Moffitt Library - Bas	Combustion	Internal Combustion Engine	Emergency Standby	1	2990	Nitrogen O	0.044766	0.00817
59	University	183031	6/25/2022	S139	Emergency Electrical Generator (Moffitt Library - Bas	Combustion	Internal Combustion Engine	Emergency Standby	1	3990	Sulfur Diox	7.48E-06	1.37E-06
59	University	183031	6/25/2022	S139	Emergency Electrical Generator (Moffitt Library - Bas	Combustion	Internal Combustion Engine	Emergency Standby	1	4990	Carbon Mo	0.005662	0.001033
59	University	183031	6/25/2022	S139	Emergency Electrical Generator (Moffitt Library - Bas	Combustion	Internal Combustion Engine	Emergency Standby	1	6960	Carbon Dio	1.612564	0.294293
59	University	183031	6/25/2022	S139	Emergency Electrical Generator (Moffitt Library - Bas	Combustion	Internal Combustion Engine	Emergency Standby	1	6970	Methane ((	0.017972	0.00328
59	University	183031	6/25/2022	S140	Emergency Electrical Generator (University Hall) (Un	Combustion	Internal Combustion Engine	Emergency Standby	1	990	Organics (p	0.002374	0.000433
59	University	183031	6/25/2022	S140	Emergency Electrical Generator (University Hall) (Un	Combustion	Internal Combustion Engine	Emergency Standby	1	1990	Particulate	7.42E-05	1.35E-05
59	University	183031	6/25/2022	S140	Emergency Electrical Generator (University Hall) (Un	Combustion	Internal Combustion Engine	Emergency Standby	1	2030	Nitrous Oxi	7.97E-06	1.46E-06
59	University	183031	6/25/2022	S140	Emergency Electrical Generator (University Hall) (Un	Combustion	Internal Combustion Engine	Emergency Standby	1	2990	Nitrogen O	0.017786	0.003246
59	University	183031	6/25/2022	S140	Emergency Electrical Generator (University Hall) (Un	Combustion	Internal Combustion Engine	Emergency Standby	1	3990	Sulfur Diox	7.15E-05	1.31E-05
59	University	183031	6/25/2022	S140	Emergency Electrical Generator (University Hall) (Un	Combustion	Internal Combustion Engine	Emergency Standby	1	4990	Carbon Mo	0.041876	0.007642
59	University	183031	6/25/2022	S140	Emergency Electrical Generator (University Hall) (Un	Combustion	Internal Combustion Engine	Emergency Standby	1	6960	Carbon Dio	1.041288	0.190035
59	University	183031	6/25/2022	S140	Emergency Electrical Generator (University Hall) (Un	Combustion	Internal Combustion Engine	Emergency Standby	1	6970	Methane ((	3.95E-05	7.20E-06
59	University	183031	6/25/2022	S142	Emergencey Diesel Generator, Res 1-3 (btwn Chenn	Combustion	Internal Combustion Engine	Emergency Standby	1	41	Benzene	0.000115	2.10E-05
59	University	183031	6/25/2022	S142	Emergencey Diesel Generator, Res 1-3 (btwn Chenn	Combustion	Internal Combustion Engine	Emergency Standby	1	124	Formaldeh	9.53E-06	1.74E-06
59	University	183031	6/25/2022	S142	Emergencey Diesel Generator, Res 1-3 (btwn Chenn	Combustion	Internal Combustion Engine	Emergency Standby	1	990	Organics (p	0.005566	0.001016
59	University	183031	6/25/2022	S142	Emergencey Diesel Generator, Res 1-3 (btwn Chenn	Combustion	Internal Combustion Engine	Emergency Standby	1	1030	Arsenic (all	1.51E-07	2.75E-08
59	University	183031	6/25/2022	S142	Emergencey Diesel Generator, Res 1-3 (btwn Chenn	Combustion	Internal Combustion Engine	Emergency Standby	1	1040	Beryllium (	8.82E-08	1.61E-08
59	University	183031	6/25/2022	S142	Emergencey Diesel Generator, Res 1-3 (btwn Chenn	Combustion	Internal Combustion Engine	Emergency Standby	1	1070	Cadmium	3.76E-07	6.87E-08
59	University	183031	6/25/2022	S142	Emergencey Diesel Generator, Res 1-3 (btwn Chenn	Combustion	Internal Combustion Engine	Emergency Standby	1	1095	Chromium	7.79E-09	1.42E-09
59	University	183031	6/25/2022	S142	Emergencey Diesel Generator, Res 1-3 (btwn Chenn	Combustion	Internal Combustion Engine	Emergency Standby	1	1140	Lead (all) p	3.19E-07	5.83E-08
59	University	183031	6/25/2022	S142	Emergencey Diesel Generator, Res 1-3 (btwn Chenn	Combustion	Internal Combustion Engine	Emergency Standby	1	1160	Manganese	5.01E-07	9.14E-08
59	University	183031	6/25/2022	S142	Emergencey Diesel Generator, Res 1-3 (btwn Chenn	Combustion	Internal Combustion Engine	Emergency Standby	1	1180	Nickel pollu	6.09E-06	1.11E-06
59	University	183031	6/25/2022	S142	Emergencey Diesel Generator, Res 1-3 (btwn Chenn	Combustion	Internal Combustion Engine	Emergency Standby	1	1190	Mercury (a	1.06E-07	1.94E-08
59	University	183031	6/25/2022	S142	Emergencey Diesel Generator, Res 1-3 (btwn Chenn	Combustion	Internal Combustion Engine	Emergency Standby	1	1350	Diesel Engi	0.001163	0.000212
59	University	183031	6/25/2022	S142	Emergencey Diesel Generator, Res 1-3 (btwn Chenn	Combustion	Internal Combustion Engine	Emergency Standby	1	1840	PAHs (non-	7.94E-07	1.45E-07
59	University	183031	6/25/2022	S142	Emergencey Diesel Generator, Res 1-3 (btwn Chenn	Combustion	Internal Combustion Engine	Emergency Standby	1	2030	Nitrous Oxi	0.000309	5.63E-05
59	University	183031	6/25/2022	S142	Emergencey Diesel Generator, Res 1-3 (btwn Chenn	Combustion	Internal Combustion Engine	Emergency Standby	1	2990	Nitrogen O	0.396079	0.072284
59	University	183031	6/25/2022	S142	Emergencey Diesel Generator, Res 1-3 (btwn Chenn	Combustion	Internal Combustion Engine	Emergency Standby	1	3990	Sulfur Diox	0.000376	6.87E-05
59	University	183031	6/25/2022	S142	Emergencey Diesel Generator, Res 1-3 (btwn Chenn	Combustion	Internal Combustion Engine	Emergency Standby	1	4990	Carbon Mo	0.005278	0.000963
59	University	183031	6/25/2022	S142	Emergencey Diesel Generator, Res 1-3 (btwn Chenn	Combustion	Internal Combustion Engine	Emergency Standby	1	6960	Carbon Dio	38.6787	7.058863
59	University	183031	6/25/2022	S142	Emergencey Diesel Generator, Res 1-3 (btwn Chenn	Combustion	Internal Combustion Engine	Emergency Standby	1	6970	Methane ((	0.000154	2.82E-05
59	University	183031	6/25/2022	S143	Emergency Diesel Generator, Res 2-3 (btwn Cunning	Combustion	Internal Combustion Engine	Emergency Standby	1	41	Benzene	1.37E-05	2.50E-06
59	University	183031	6/25/2022	S143	Emergency Diesel Generator, Res 2-3 (btwn Cunning	Combustion	Internal Combustion Engine	Emergency Standby	1	124	Formaldeh	1.14E-06	2.07E-07
59	University	183031	6/25/2022	S143	Emergency Diesel Generator, Res 2-3 (btwn Cunning	Combustion	Internal Combustion Engine	Emergency Standby	1	990	Organics (p	0.000663	0.000121
59	University	183031	6/25/2022	S143	Emergency Diesel Generator, Res 2-3 (btwn Cunning	Combustion	Internal Combustion Engine	Emergency Standby	1	1030	Arsenic (all	1.79E-08	3.27E-09
59	University	183031	6/25/2022	S143	Emergency Diesel Generator, Res 2-3 (btwn Cunning	Combustion	Internal Combustion Engine	Emergency Standby	1	1040	Beryllium (	1.05E-08	1.92E-09
59	University	183031	6/25/2022	S143	Emergency Diesel Generator, Res 2-3 (btwn Cunning	Combustion	Internal Combustion Engine	Emergency Standby	1	1070	Cadmium	4.48E-08	8.18E-09
59	University	183031	6/25/2022	S143	Emergency Diesel Generator, Res 2-3 (btwn Cunning	Combustion	Internal Combustion Engine	Emergency Standby	1	1095	Chromium	9.27E-10	1.69E-10
59	University	183031	6/25/2022	S143	Emergency Diesel Generator, Res 2-3 (btwn Cunning	Combustion	Internal Combustion Engine	Emergency Standby	1	1140	Lead (all) p	3.80E-08	6.94E-09
59	University	183031	6/25/2022	S143	Emergency Diesel Generator, Res 2-3 (btwn Cunning	Combustion	Internal Combustion Engine	Emergency Standby	1	1160	Manganese	5.96E-08	1.09E-08
59	University	183031	6/25/2022	S143	Emergency Diesel Generator, Res 2-3 (btwn Cunning	Combustion	Internal Combustion Engine	Emergency Standby	1	1180	Nickel pollu	7.25E-07	1.32E-07
59	University	183031	6/25/2022	S143	Emergency Diesel Generator, Res 2-3 (btwn Cunning	Combustion	Internal Combustion Engine	Emergency Standby	1	1190	Mercury (a	1.27E-08	2.31E-09
59	University	183031	6/25/2022	S143	Emergency Diesel Generator, Res 2-3 (btwn Cunning	Combustion	Internal Combustion Engine	Emergency Standby	1	1350	Diesel Engi	0.000138	2.53E-05
59	University	183031	6/25/2022	S143	Emergency Diesel Generator, Res 2-3 (btwn Cunning	Combustion	Internal Combustion Engine	Emergency Standby	1	1840	PAHs (non-	9.46E-08	1.73E-08
59	University	183031	6/25/2022	S143	Emergency Diesel Generator, Res 2-3 (btwn Cunning	Combustion	Internal Combustion Engine	Emergency Standby	1	2030	Nitrous Oxi	3.68E-05	6.71E-06
59	University	183031	6/25/2022	S143	Emergency Diesel Generator, Res 2-3 (btwn Cunning	Combustion	Internal Combustion Engine	Emergency Standby	1	2990	Nitrogen O	0.04716	0.008607
59	University	183031	6/25/2022	S143	Emergency Diesel Generator, Res 2-3 (btwn Cunning	Combustion	Internal Combustion Engine	Emergency Standby	1	3990	Sulfur Diox	4.48E-05	8.18E-06
59	University	183031	6/25/2022	S143	Emergency Diesel Generator, Res 2-3 (btwn Cunning	Combustion	Internal Combustion Engine	Emergency Standby	1	4990	Carbon Mo	0.000628	0.000115
59	University	183031	6/25/2022	S143	Emergency Diesel Generator, Res 2-3 (btwn Cunning	Combustion	Internal Combustion Engine	Emergency Standby	1	6960	Carbon Dio	4.605336	0.840474
59	University	183031	6/25/2022	S143	Emergency Diesel Generator, Res 2-3 (btwn Cunning	Combustion	Internal Combustion Engine	Emergency Standby	1	6970	Methane ((	1.84E-05	3.35E-06
59	University	183031	6/25/2022	S144	Emergency Diesel Generator (Earl Warren Hall) (219	Combustion	Internal Combustion Engine	Emergency Standby	1	41	Benzene	0.000134	2.45E-05
59	University	183031	6/25/2022	S144	Emergency Diesel Generator (Earl Warren Hall) (219	Combustion	Internal Combustion Engine	Emergency Standby	1	124	Formaldeh	1.11E-05	2.02E-06
59	University	183031	6/25/2022	S144	Emergency Diesel Generator (Earl Warren Hall) (219	Combustion	Internal Combustion Engine	Emergency Standby	1	990	Organics (p	0.006472	0.001181
59	University	183031	6/25/2022	S144	Emergency Diesel Generator (Earl Warren Hall) (219	Combustion	Internal Combustion Engine	Emergency Standby	1	1030	Arsenic (all	1.17E-07	2.13E-08
59	University	183031	6/25/2022	S144	Emergency Diesel Generator (Earl Warren Hall) (219	Combustion	Internal Combustion Engine	Emergency Standby	1	1040	Beryllium (	6.84E-08	1.25E-08
59	University	183031	6/25/2022	S144	Emergency Diesel Generator (Earl Warren Hall) (219	Combustion	Internal Combustion Engine	Emergency Standby	1	1070	Cadmium	2.92E-07	5.32E-08
59	University	183031	6/25/2022	S144	Emergency Diesel Generator (Earl Warren Hall) (219	Combustion	Internal Combustion Engine	Emergency Standby	1	1095	Chromium	6.04E-09	1.10E-09

59	University (	183031	6/25/2022	S144	Emergency Diesel Generator (Earl Warren Hall) (219	Combustion	Internal Combustion Engine	Emergency Standby	1	1140	Lead (all) p	2.47E-07	4.52E-08
59	University (	183031	6/25/2022	S144	Emergency Diesel Generator (Earl Warren Hall) (219	Combustion	Internal Combustion Engine	Emergency Standby	1	1160	Manganese	3.88E-07	7.09E-08
59	University (	183031	6/25/2022	S144	Emergency Diesel Generator (Earl Warren Hall) (219	Combustion	Internal Combustion Engine	Emergency Standby	1	1180	Nickel pollu	4.72E-06	8.61E-07
59	University (	183031	6/25/2022	S144	Emergency Diesel Generator (Earl Warren Hall) (219	Combustion	Internal Combustion Engine	Emergency Standby	1	1190	Mercury (a	8.25E-08	1.51E-08
59	University (	183031	6/25/2022	S144	Emergency Diesel Generator (Earl Warren Hall) (219	Combustion	Internal Combustion Engine	Emergency Standby	1	1350	Diesel Engi	0.001288	0.000235
59	University (	183031	6/25/2022	S144	Emergency Diesel Generator (Earl Warren Hall) (219	Combustion	Internal Combustion Engine	Emergency Standby	1	1840	PAHs (non-	6.16E-07	1.12E-07
59	University (	183031	6/25/2022	S144	Emergency Diesel Generator (Earl Warren Hall) (219	Combustion	Internal Combustion Engine	Emergency Standby	1	2030	Nitrous Oxi	0.000239	4.37E-05
59	University (	183031	6/25/2022	S144	Emergency Diesel Generator (Earl Warren Hall) (219	Combustion	Internal Combustion Engine	Emergency Standby	1	2990	Nitrogen O	0.629103	0.114811
59	University (	183031	6/25/2022	S144	Emergency Diesel Generator (Earl Warren Hall) (219	Combustion	Internal Combustion Engine	Emergency Standby	1	3990	Sulfur Diox	0.000292	5.32E-05
59	University (	183031	6/25/2022	S144	Emergency Diesel Generator (Earl Warren Hall) (219	Combustion	Internal Combustion Engine	Emergency Standby	1	4990	Carbon Mo	0.013682	0.002497
59	University (	183031	6/25/2022	S144	Emergency Diesel Generator (Earl Warren Hall) (219	Combustion	Internal Combustion Engine	Emergency Standby	1	6960	Carbon Dio	29.92328	5.460999
59	University (	183031	6/25/2022	S144	Emergency Diesel Generator (Earl Warren Hall) (219	Combustion	Internal Combustion Engine	Emergency Standby	1	6970	Methane (	0.000179	3.28E-05
59	University (	183031	6/25/2022	S145	Emergency Diesel Generator (Stanley Hall) (Stanley H	Combustion	Internal Combustion Engine	Emergency Standby	1	41	Benzene	0.006204	0.001132
59	University (	183031	6/25/2022	S145	Emergency Diesel Generator (Stanley Hall) (Stanley H	Combustion	Internal Combustion Engine	Emergency Standby	1	124	Formaldeh	0.000513	9.37E-05
59	University (	183031	6/25/2022	S145	Emergency Diesel Generator (Stanley Hall) (Stanley H	Combustion	Internal Combustion Engine	Emergency Standby	1	990	Organics (p	0.129014	0.023545
59	University (	183031	6/25/2022	S145	Emergency Diesel Generator (Stanley Hall) (Stanley H	Combustion	Internal Combustion Engine	Emergency Standby	1	1030	Arsenic (all	5.40E-06	9.86E-07
59	University (	183031	6/25/2022	S145	Emergency Diesel Generator (Stanley Hall) (Stanley H	Combustion	Internal Combustion Engine	Emergency Standby	1	1040	Beryllium (	3.17E-06	5.78E-07
59	University (	183031	6/25/2022	S145	Emergency Diesel Generator (Stanley Hall) (Stanley H	Combustion	Internal Combustion Engine	Emergency Standby	1	1070	Cadmium	1.35E-05	2.47E-06
59	University (	183031	6/25/2022	S145	Emergency Diesel Generator (Stanley Hall) (Stanley H	Combustion	Internal Combustion Engine	Emergency Standby	1	1095	Chromium	2.79E-07	5.10E-08
59	University (	183031	6/25/2022	S145	Emergency Diesel Generator (Stanley Hall) (Stanley H	Combustion	Internal Combustion Engine	Emergency Standby	1	1140	Lead (all) p	1.15E-05	2.09E-06
59	University (	183031	6/25/2022	S145	Emergency Diesel Generator (Stanley Hall) (Stanley H	Combustion	Internal Combustion Engine	Emergency Standby	1	1160	Manganese	1.80E-05	3.28E-06
59	University (	183031	6/25/2022	S145	Emergency Diesel Generator (Stanley Hall) (Stanley H	Combustion	Internal Combustion Engine	Emergency Standby	1	1180	Nickel pollu	0.000219	3.99E-05
59	University (	183031	6/25/2022	S145	Emergency Diesel Generator (Stanley Hall) (Stanley H	Combustion	Internal Combustion Engine	Emergency Standby	1	1190	Mercury (a	3.82E-06	6.97E-07
59	University (	183031	6/25/2022	S145	Emergency Diesel Generator (Stanley Hall) (Stanley H	Combustion	Internal Combustion Engine	Emergency Standby	1	1350	Diesel Engi	0.043005	0.007848
59	University (	183031	6/25/2022	S145	Emergency Diesel Generator (Stanley Hall) (Stanley H	Combustion	Internal Combustion Engine	Emergency Standby	1	1840	PAHs (non-	2.85E-05	5.20E-06
59	University (	183031	6/25/2022	S145	Emergency Diesel Generator (Stanley Hall) (Stanley H	Combustion	Internal Combustion Engine	Emergency Standby	1	2030	Nitrous Oxi	0.001662	0.000303
59	University (	183031	6/25/2022	S145	Emergency Diesel Generator (Stanley Hall) (Stanley H	Combustion	Internal Combustion Engine	Emergency Standby	1	2990	Nitrogen O	2.661967	0.485809
59	University (	183031	6/25/2022	S145	Emergency Diesel Generator (Stanley Hall) (Stanley H	Combustion	Internal Combustion Engine	Emergency Standby	1	3990	Sulfur Diox	0.002026	0.00037
59	University (	183031	6/25/2022	S145	Emergency Diesel Generator (Stanley Hall) (Stanley H	Combustion	Internal Combustion Engine	Emergency Standby	1	4990	Carbon Mo	0.382747	0.069851
59	University (	183031	6/25/2022	S145	Emergency Diesel Generator (Stanley Hall) (Stanley H	Combustion	Internal Combustion Engine	Emergency Standby	1	6960	Carbon Dio	207.8006	37.92361
59	University (	183031	6/25/2022	S145	Emergency Diesel Generator (Stanley Hall) (Stanley H	Combustion	Internal Combustion Engine	Emergency Standby	1	6970	Methane (	0.00831	0.001517
59	University (	183031	6/25/2022	S146	Emergency Diesel Generator (Underhill Parking Lot)	Combustion	Internal Combustion Engine	Emergency Standby	1	41	Benzene	2.32E-05	4.24E-06
59	University (	183031	6/25/2022	S146	Emergency Diesel Generator (Underhill Parking Lot)	Combustion	Internal Combustion Engine	Emergency Standby	1	124	Formaldeh	1.92E-06	3.51E-07
59	University (	183031	6/25/2022	S146	Emergency Diesel Generator (Underhill Parking Lot)	Combustion	Internal Combustion Engine	Emergency Standby	1	990	Organics (p	0.000352	6.43E-05
59	University (	183031	6/25/2022	S146	Emergency Diesel Generator (Underhill Parking Lot)	Combustion	Internal Combustion Engine	Emergency Standby	1	1030	Arsenic (all	2.02E-08	3.69E-09
59	University (	183031	6/25/2022	S146	Emergency Diesel Generator (Underhill Parking Lot)	Combustion	Internal Combustion Engine	Emergency Standby	1	1040	Beryllium (	1.19E-08	2.17E-09
59	University (	183031	6/25/2022	S146	Emergency Diesel Generator (Underhill Parking Lot)	Combustion	Internal Combustion Engine	Emergency Standby	1	1070	Cadmium	5.06E-08	9.24E-09
59	University (	183031	6/25/2022	S146	Emergency Diesel Generator (Underhill Parking Lot)	Combustion	Internal Combustion Engine	Emergency Standby	1	1095	Chromium	1.05E-09	1.91E-10
59	University (	183031	6/25/2022	S146	Emergency Diesel Generator (Underhill Parking Lot)	Combustion	Internal Combustion Engine	Emergency Standby	1	1140	Lead (all) p	4.29E-08	7.84E-09
59	University (	183031	6/25/2022	S146	Emergency Diesel Generator (Underhill Parking Lot)	Combustion	Internal Combustion Engine	Emergency Standby	1	1160	Manganese	6.74E-08	1.23E-08
59	University (	183031	6/25/2022	S146	Emergency Diesel Generator (Underhill Parking Lot)	Combustion	Internal Combustion Engine	Emergency Standby	1	1180	Nickel pollu	8.19E-07	1.49E-07
59	University (	183031	6/25/2022	S146	Emergency Diesel Generator (Underhill Parking Lot)	Combustion	Internal Combustion Engine	Emergency Standby	1	1190	Mercury (a	1.43E-08	2.61E-09
59	University (	183031	6/25/2022	S146	Emergency Diesel Generator (Underhill Parking Lot)	Combustion	Internal Combustion Engine	Emergency Standby	1	1350	Diesel Engi	0.00012	2.19E-05
59	University (	183031	6/25/2022	S146	Emergency Diesel Generator (Underhill Parking Lot)	Combustion	Internal Combustion Engine	Emergency Standby	1	1840	PAHs (non-	1.07E-07	1.95E-08
59	University (	183031	6/25/2022	S146	Emergency Diesel Generator (Underhill Parking Lot)	Combustion	Internal Combustion Engine	Emergency Standby	1	2030	Nitrous Oxi	6.23E-06	1.14E-06
59	University (	183031	6/25/2022	S146	Emergency Diesel Generator (Underhill Parking Lot)	Combustion	Internal Combustion Engine	Emergency Standby	1	2990	Nitrogen O	0.007175	0.001309
59	University (	183031	6/25/2022	S146	Emergency Diesel Generator (Underhill Parking Lot)	Combustion	Internal Combustion Engine	Emergency Standby	1	3990	Sulfur Diox	7.59E-06	1.39E-06
59	University (	183031	6/25/2022	S146	Emergency Diesel Generator (Underhill Parking Lot)	Combustion	Internal Combustion Engine	Emergency Standby	1	4990	Carbon Mo	0.000719	0.000131
59	University (	183031	6/25/2022	S146	Emergency Diesel Generator (Underhill Parking Lot)	Combustion	Internal Combustion Engine	Emergency Standby	1	6960	Carbon Dio	0.778641	0.142102
59	University (	183031	6/25/2022	S146	Emergency Diesel Generator (Underhill Parking Lot)	Combustion	Internal Combustion Engine	Emergency Standby	1	6970	Methane (	3.11E-05	5.68E-06
59	University (	183031	6/25/2022	S148	Emergency Diesel Generator (Sutarja Dai Hall) (O'Bri	Combustion	Internal Combustion Engine	Emergency Standby	1	41	Benzene	0.000975	0.000178
59	University (	183031	6/25/2022	S148	Emergency Diesel Generator (Sutarja Dai Hall) (O'Bri	Combustion	Internal Combustion Engine	Emergency Standby	1	124	Formaldeh	8.07E-05	1.47E-05
59	University (	183031	6/25/2022	S148	Emergency Diesel Generator (Sutarja Dai Hall) (O'Bri	Combustion	Internal Combustion Engine	Emergency Standby	1	990	Organics (p	0.012348	0.002253
59	University (	183031	6/25/2022	S148	Emergency Diesel Generator (Sutarja Dai Hall) (O'Bri	Combustion	Internal Combustion Engine	Emergency Standby	1	1030	Arsenic (all	8.49E-07	1.55E-07
59	University (	183031	6/25/2022	S148	Emergency Diesel Generator (Sutarja Dai Hall) (O'Bri	Combustion	Internal Combustion Engine	Emergency Standby	1	1040	Beryllium (	4.98E-07	9.09E-08
59	University (	183031	6/25/2022	S148	Emergency Diesel Generator (Sutarja Dai Hall) (O'Bri	Combustion	Internal Combustion Engine	Emergency Standby	1	1070	Cadmium	2.12E-06	3.88E-07
59	University (	183031	6/25/2022	S148	Emergency Diesel Generator (Sutarja Dai Hall) (O'Bri	Combustion	Internal Combustion Engine	Emergency Standby	1	1095	Chromium	4.39E-08	8.02E-09
59	University (	183031	6/25/2022	S148	Emergency Diesel Generator (Sutarja Dai Hall) (O'Bri	Combustion	Internal Combustion Engine	Emergency Standby	1	1140	Lead (all) p	1.80E-06	3.29E-07
59	University (	183031	6/25/2022	S148	Emergency Diesel Generator (Sutarja Dai Hall) (O'Bri	Combustion	Internal Combustion Engine	Emergency Standby	1	1160	Manganese	2.83E-06	5.16E-07
59	University (	183031	6/25/2022	S148	Emergency Diesel Generator (Sutarja Dai Hall) (O'Bri	Combustion	Internal Combustion Engine	Emergency Standby	1	1180	Nickel pollu	3.44E-05	6.27E-06
59	University (	183031	6/25/2022	S148	Emergency Diesel Generator (Sutarja Dai Hall) (O'Bri	Combustion	Internal Combustion Engine	Emergency Standby	1	1190	Mercury (a	6.00E-07	1.10E-07
59	University (	183031	6/25/2022	S148	Emergency Diesel Generator (Sutarja Dai Hall) (O'Bri	Combustion	Internal Combustion Engine	Emergency Standby	1	1350	Diesel Engi	0.007081	0.001292
59	University (	183031	6/25/2022	S148	Emergency Diesel Generator (Sutarja Dai Hall) (O'Bri	Combustion	Internal Combustion Engine	Emergency Standby	1	1840	PAHs (non-	4.48E-06	8.18E-07
59	University (	183031	6/25/2022	S148	Emergency Diesel Generator (Sutarja Dai Hall) (O'Bri	Combustion	Internal Combustion Engine	Emergency Standby	1	2030	Nitrous Oxi	0.000261	4.77E-05
59	University (	183031	6/25/2022	S148	Emergency Diesel Generator (Sutarja Dai Hall) (O'Bri	Combustion	Internal Combustion Engine	Emergency Standby	1	2990	Nitrogen O	0.25467	0.046477
59	University (	183031	6/25/2022	S148	Emergency Diesel Generator (Sutarja Dai Hall) (O'Bri	Combustion	Internal Combustion Engine	Emergency Standby	1	3990	Sulfur Diox	0.000319	5.81E-05
59	University (	183031	6/25/2022	S148	Emergency Diesel Generator (Sutarja Dai Hall) (O'Bri	Combustion	Internal Combustion Engine	Emergency Standby	1	4990	Carbon Mo	0.080928	0.014769
59	University (	183031	6/25/2022	S148	Emergency Diesel Generator (Sutarja Dai Hall) (O'Bri	Combustion	Internal Combustion Engine	Emergency Standby	1	6960	Carbon Dio	32.66869	5.962036
59	University (	183031	6/25/2022	S148	Emergency Diesel Generator (Sutarja Dai Hall) (O'Bri	Combustion	Internal Combustion Engine	Emergency Standby	1	6970	Methane (	0.001306	0.000238
59	University (	183031	6/25/2022	S149	Emergency Diesel Generator (Li Ka Shing) (Li Ka Shin	Combustion	Internal Combustion Engine	Emergency Standby	1	41	Benzene	0.000973	0.000178
59	University (	183031	6/25/2022	S149	Emergency Diesel Generator (Li Ka Shing) (Li Ka Shin	Combustion	Internal Combustion Engine	Emergency Standby	1	124	Formaldeh	8.05E-05	1.47E-05
59	University (	183031	6/25/2022	S149	Emergency Diesel Generator (Li Ka Shing) (Li Ka Shin	Combustion	Internal Combustion Engine	Emergency Standby	1	990	Organics (p	0.01291	0.002356
59	University (	183031	6/25/2022	S149	Emergency Diesel Generator (Li Ka Shing) (Li Ka Shin	Combustion	Internal Combustion Engine	Emergency Standby	1	1030	Arsenic (all	8.48E-07	1.55E-07
59	University (	183031	6/25/2022	S149	Emergency Diesel Generator (Li Ka Shing) (Li Ka Shin	Combustion	Internal Combustion Engine	Emergency Standby	1	1040	Beryllium (	4.97E-07	9.07E-08
59	University (	183031	6/25/2022	S149	Emergency Diesel Generator (Li Ka Shing) (Li Ka Shin	Combustion	Internal Combustion Engine	Emergency Standby	1	1070	Cadmium	2.12E-06	3.87E-07
59	University (	183031	6/25/2022	S149	Emergency Diesel Generator (Li Ka Shing) (Li Ka Shin	Combustion	Internal Combustion Engine	Emergency Standby	1	1095	Chromium	4.38E-08	8.00E-09
59	University (	183031	6/25/2022	S149	Emergency Diesel Generator (Li Ka Shing) (Li Ka Shin	Combustion	Internal Combustion Engine	Emergency Standby	1	1140	Lead (all) p	1.80E-06	3.28E-07
59	University (	183031	6/25/2022	S149	Emergency Diesel Generator (Li Ka Shing) (Li Ka Shin	Combustion	Internal Combustion Engine	Emergency Standby	1	1160	Manganese	2.82E-06	5.15E-07
59	University (	183031	6/25/2022	S149	Emergency Diesel Generator (Li Ka Shing) (Li Ka Shin	Combustion	Internal Combustion Engine	Emergency Standby	1	1180	Nickel pollu	3.43E-05	6.26E-06
59	University (	183031	6/25/2022	S149	Emergency Diesel Generator (Li Ka Shing) (Li Ka Shin	Combustion	Internal Combustion Engine	Emergency Standby	1	1190	Mercury (a	5.99E-07	1.09E-07
59	University (	183031	6/25/2022	S149	Emergency Diesel Generator (Li Ka Shing) (Li Ka Shin	Combustion	Internal Combustion Engine	Emergency Standby	1	1350	Diesel Engi	0.007573	0.001382
59	University (	183031	6/25/2022	S149	Emergency Diesel Generator (Li Ka Shing) (Li Ka Shin	Combustion	Internal Combustion Engine	Emergency Standby	1	1840	PAHs (non-	4.47E-06	8.16E-07
59	University (	183031	6/25/2022	S149	Emergency Diesel Generator (Li Ka Shing) (Li Ka Shin	Combustion	Internal Combustion Engine	Emergency Standby	1	2030	Nitrous Oxi	0.000261	4.76E-05
59	University (	183031	6/25/2022	S149	Emergency Diesel Generator (Li Ka Shing) (Li Ka Shin	Combustion	Internal Combustion Engine	Emergency Standby	1	2990	Nitrogen O	0.265308	0.048419
59	University (	183031	6/25/2022	S149	Emergency Diesel Generator (Li Ka Shing) (Li Ka Shin	Combustion	Internal Combustion Engine	Emergency Standby	1	3990	Sulfur Diox	0.000318	5.80E-05
59	University (	183031	6/25/2022	S149	Emergency Diesel Generator (Li Ka Shing) (Li Ka Shin	Combustion	Internal Combustion Engine	Emergency Standby	1	4990	Carbon Mo	0.052068	0.009502
59	University (	183031	6/25/2022	S149	Emergency Diesel Generator (Li Ka Shing) (Li Ka Shin	Combustion	Internal Combustion Engine	Emergency Standby	1	6960	Carbon Dio	32.60451	5.950323
59	University (	183031	6/25/2022	S149	Emergency Diesel Generator (Li Ka Shing) (Li Ka Shin	Combustion	Internal Combustion Engine	Emergency Standby	1	6970	Methane (	0.001304	0.000238
59	University (	183031	6/25/2022	S150	Emergency Diesel Generator Set (Barrows) (Barrows	Combustion	Internal Combustion Engine	Emergency Standby	1	41	Benzene	6.80E-05	1.24E-05
59	University (	183031	6/25/2022	S150	Emergency Diesel Generator Set (Barrows) (Barrows	Combustion	Internal Combustion Engine	Emergency Standby	1	124	Formaldeh	5.63E-06	1.03E-06
59	University (	183031	6/25/2022	S150	Emergency Diesel Generator Set (Barrows) (Barrows	Combustion	Internal Combustion Engine	Emergency Standby	1	990	Organics (p	0.000524	9.56E-05
59	University (	183031	6/25/2022	S150	Emergency Diesel Generator Set (Barrows) (Barrows	Combustion	Internal Combustion Engine	Emergency Standby	1	1030	Arsenic (all	5.93E-08	1.08E-08
59	University (	183031	6/25/2022	S150	Emergency Diesel Generator Set (Barrows) (Barrows	Combustion	Internal Combustion Engine	Emergency Standby	1	1040	Beryllium (	3.47E-08	6.34E-09
59	University (	183031	6/25/2022	S150	Emergency Diesel Generator Set (Barrows) (Barrows	Combustion	Internal Combustion Engine	Emergency Standby	1	1070	Cadmium	1.48E-07	2.70E-08
59	University (	183031	6/25/2022	S150	Emergency Diesel Generator Set (Barrows) (Barrows	Combustion	Internal Combustion Engine	Emergency Standby	1	1095	Chromium	3.06E-09	5.59E-10
59	University (	183031	6/25/2022	S150	Emergency Diesel Generator Set (Barrows) (Barrows	Combustion	Internal Combustion Engine	Emergency Standby	1	1140	Lead (all) p	1.26E-07	2.29E-08
59	University (	183031	6/25/2022	S150	Emergency Diesel Generator Set (Barrows) (Barrows	Combustion	Internal Combustion Engine	Emergency Standby	1	1160	Manganese	1.97E-07	3.60E-08
59	University (	183031	6/25/2022	S150	Emergency Diesel Generator Set (Barrows) (Barrows	Combustion	Internal Combustion Engine	Emergency Standby	1	1180	Nickel pollu	2.40E-06	4.37E-07
59	University (	183031	6/25/2022	S150	Emergency Diesel Generator Set (Barrows) (Barrows	Combustion	Internal Combustion Engine	Emergency Standby	1	1190	Mercury (a	4.19E-08	7.64E-09
59	University (	183031	6/25/2022	S150	Emergency Diesel Generator Set (Barrows) (Barrows	Combustion	Internal Combustion Engine	Emergency Standby	1	1350	Diesel Engi	0.000549	0.0001
59	University (	183031	6/25/2022	S150	Emergency Diesel Generator Set (Barrows) (Barrows	Combustion	Internal Combustion Engine	Emergency Standby	1	1840	PAHs (non-	3.13E-07	5.71E-08
59	University (	183031	6/25/2022	S150	Emergency Diesel Generator Set (Barrows) (Barrows	Combustion	Internal Combustion Engine	Emergency Standby	1	2030	Nitrous Oxi	1.82E-05	3.33E-06
59	University (	183031	6/25/2022	S150	Emergency Diesel Generator Set (Barrows) (Barrows	Combustion	Internal Combustion Engine	Emergency Standby	1	2990	Nitrogen O	0.011353	0.002072
59	University (	183031	6/25/2022	S150	Emergency Diesel Generator Set (Barrows) (Barrows	Combustion	Internal Combustion Engine	Emergency Standby	1	3990	Sulfur Diox	2.22E-05	4.06E-06
59	University (	183031	6/25/2022	S150	Emergency Diesel Generator Set (Barrows) (Barrows	Combustion	Internal Combustion Engine	Emergency Standby	1	4990	Carbon Mo	0.005168	0.000943
59	University (	183031	6/25/2022	S150	Emergency Diesel Generator Set (Barrows) (Barrows	Combustion	Internal Combustion Engine	Emergency Standby	1	6960	Carbon Dio	2.279083	0.415933
59	University (	183031	6/25/2022	S150	Emergency Diesel Generator Set (Barrows) (Barrows	Combustion	Internal Combustion Engine	Emergency Standby	1	6970	Methane (	9.11E-05	1.66E-05

59	University (	183031	6/25/2022	S151	Standby Generator Set - Silver Space Sciences (Silver	Combustion	Internal Combustion Engine	Emergency Standby	1	41	Benzene	3.09E-05	5.65E-06
59	University (	183031	6/25/2022	S151	Standby Generator Set - Silver Space Sciences (Silver	Combustion	Internal Combustion Engine	Emergency Standby	1	124	Formaldeh	0.000279	5.10E-05
59	University (	183031	6/25/2022	S151	Standby Generator Set - Silver Space Sciences (Silver	Combustion	Internal Combustion Engine	Emergency Standby	1	990	Organics (p	0.027806	0.005075
59	University (	183031	6/25/2022	S151	Standby Generator Set - Silver Space Sciences (Silver	Combustion	Internal Combustion Engine	Emergency Standby	1	1990	Particulate	0.000201	3.67E-05
59	University (	183031	6/25/2022	S151	Standby Generator Set - Silver Space Sciences (Silver	Combustion	Internal Combustion Engine	Emergency Standby	1	2030	Nitrous Oxi	4.64E-06	8.47E-07
59	University (	183031	6/25/2022	S151	Standby Generator Set - Silver Space Sciences (Silver	Combustion	Internal Combustion Engine	Emergency Standby	1	2990	Nitrogen O	0.068311	0.012467
59	University (	183031	6/25/2022	S151	Standby Generator Set - Silver Space Sciences (Silver	Combustion	Internal Combustion Engine	Emergency Standby	1	3990	Sulfur Diox	1.14E-05	2.08E-06
59	University (	183031	6/25/2022	S151	Standby Generator Set - Silver Space Sciences (Silver	Combustion	Internal Combustion Engine	Emergency Standby	1	4990	Carbon Mo	0.008639	0.001577
59	University (	183031	6/25/2022	S151	Standby Generator Set - Silver Space Sciences (Silver	Combustion	Internal Combustion Engine	Emergency Standby	1	6960	Carbon Dio	2.460709	0.449079
59	University (	183031	6/25/2022	S151	Standby Generator Set - Silver Space Sciences (Silver	Combustion	Internal Combustion Engine	Emergency Standby	1	6970	Methane ((	0.027425	0.005005
59	University (	183031	6/25/2022	S152	Standby Emergency Diesel Generator Set (Energy Bi	Combustion	Internal Combustion Engine	Emergency Standby	1	41	Benzene	0.000254	4.63E-05
59	University (	183031	6/25/2022	S152	Standby Emergency Diesel Generator Set (Energy Bi	Combustion	Internal Combustion Engine	Emergency Standby	1	124	Formaldeh	2.07E-05	3.78E-06
59	University (	183031	6/25/2022	S152	Standby Emergency Diesel Generator Set (Energy Bi	Combustion	Internal Combustion Engine	Emergency Standby	1	990	Organics (p	0.003631	0.000663
59	University (	183031	6/25/2022	S152	Standby Emergency Diesel Generator Set (Energy Bi	Combustion	Internal Combustion Engine	Emergency Standby	1	1030	Arsenic (all	2.18E-07	3.98E-08
59	University (	183031	6/25/2022	S152	Standby Emergency Diesel Generator Set (Energy Bi	Combustion	Internal Combustion Engine	Emergency Standby	1	1040	Beryllium (	1.28E-07	2.33E-08
59	University (	183031	6/25/2022	S152	Standby Emergency Diesel Generator Set (Energy Bi	Combustion	Internal Combustion Engine	Emergency Standby	1	1070	Cadmium	5.45E-07	9.94E-08
59	University (	183031	6/25/2022	S152	Standby Emergency Diesel Generator Set (Energy Bi	Combustion	Internal Combustion Engine	Emergency Standby	1	1095	Chromium	1.13E-08	2.06E-09
59	University (	183031	6/25/2022	S152	Standby Emergency Diesel Generator Set (Energy Bi	Combustion	Internal Combustion Engine	Emergency Standby	1	1140	Lead (all) p	4.62E-07	8.43E-08
59	University (	183031	6/25/2022	S152	Standby Emergency Diesel Generator Set (Energy Bi	Combustion	Internal Combustion Engine	Emergency Standby	1	1160	Manganese	7.25E-07	1.32E-07
59	University (	183031	6/25/2022	S152	Standby Emergency Diesel Generator Set (Energy Bi	Combustion	Internal Combustion Engine	Emergency Standby	1	1180	Nickel pollu	8.81E-06	1.61E-06
59	University (	183031	6/25/2022	S152	Standby Emergency Diesel Generator Set (Energy Bi	Combustion	Internal Combustion Engine	Emergency Standby	1	1190	Mercury (a	1.54E-07	2.81E-08
59	University (	183031	6/25/2022	S152	Standby Emergency Diesel Generator Set (Energy Bi	Combustion	Internal Combustion Engine	Emergency Standby	1	1350	Diesel Engi	0.002441	0.000445
59	University (	183031	6/25/2022	S152	Standby Emergency Diesel Generator Set (Energy Bi	Combustion	Internal Combustion Engine	Emergency Standby	1	1840	PAHs (non-	1.15E-06	2.10E-07
59	University (	183031	6/25/2022	S152	Standby Emergency Diesel Generator Set (Energy Bi	Combustion	Internal Combustion Engine	Emergency Standby	1	2030	Nitrous Oxi	6.70E-05	1.22E-05
59	University (	183031	6/25/2022	S152	Standby Emergency Diesel Generator Set (Energy Bi	Combustion	Internal Combustion Engine	Emergency Standby	1	2990	Nitrogen O	0.074207	0.013543
59	University (	183031	6/25/2022	S152	Standby Emergency Diesel Generator Set (Energy Bi	Combustion	Internal Combustion Engine	Emergency Standby	1	3990	Sulfur Diox	8.17E-05	1.49E-05
59	University (	183031	6/25/2022	S152	Standby Emergency Diesel Generator Set (Energy Bi	Combustion	Internal Combustion Engine	Emergency Standby	1	4990	Carbon Mo	0.042311	0.007722
59	University (	183031	6/25/2022	S152	Standby Emergency Diesel Generator Set (Energy Bi	Combustion	Internal Combustion Engine	Emergency Standby	1	6960	Carbon Dio	8.379253	1.529214
59	University (	183031	6/25/2022	S152	Standby Emergency Diesel Generator Set (Energy Bi	Combustion	Internal Combustion Engine	Emergency Standby	1	6970	Methane ((	0.000335	6.12E-05
59	University (	183031	6/25/2022	S153	Standby Generator Set - Maximino Martinez Commo	Combustion	Internal Combustion Engine	Emergency Standby	1	41	Benzene	7.12E-06	1.30E-06
59	University (	183031	6/25/2022	S153	Standby Generator Set - Maximino Martinez Commo	Combustion	Internal Combustion Engine	Emergency Standby	1	124	Formaldeh	5.89E-07	1.07E-07
59	University (	183031	6/25/2022	S153	Standby Generator Set - Maximino Martinez Commo	Combustion	Internal Combustion Engine	Emergency Standby	1	990	Organics (p	5.46E-05	9.96E-06
59	University (	183031	6/25/2022	S153	Standby Generator Set - Maximino Martinez Commo	Combustion	Internal Combustion Engine	Emergency Standby	1	1030	Arsenic (all	6.20E-09	1.13E-09
59	University (	183031	6/25/2022	S153	Standby Generator Set - Maximino Martinez Commo	Combustion	Internal Combustion Engine	Emergency Standby	1	1040	Beryllium (	3.63E-09	6.63E-10
59	University (	183031	6/25/2022	S153	Standby Generator Set - Maximino Martinez Commo	Combustion	Internal Combustion Engine	Emergency Standby	1	1070	Cadmium	1.55E-08	2.83E-09
59	University (	183031	6/25/2022	S153	Standby Generator Set - Maximino Martinez Commo	Combustion	Internal Combustion Engine	Emergency Standby	1	1095	Chromium	3.21E-10	5.85E-11
59	University (	183031	6/25/2022	S153	Standby Generator Set - Maximino Martinez Commo	Combustion	Internal Combustion Engine	Emergency Standby	1	1140	Lead (all) p	1.31E-08	2.40E-09
59	University (	183031	6/25/2022	S153	Standby Generator Set - Maximino Martinez Commo	Combustion	Internal Combustion Engine	Emergency Standby	1	1160	Manganese	2.06E-08	3.76E-09
59	University (	183031	6/25/2022	S153	Standby Generator Set - Maximino Martinez Commo	Combustion	Internal Combustion Engine	Emergency Standby	1	1180	Nickel pollu	2.51E-07	4.57E-08
59	University (	183031	6/25/2022	S153	Standby Generator Set - Maximino Martinez Commo	Combustion	Internal Combustion Engine	Emergency Standby	1	1190	Mercury (a	4.38E-09	8.00E-10
59	University (	183031	6/25/2022	S153	Standby Generator Set - Maximino Martinez Commo	Combustion	Internal Combustion Engine	Emergency Standby	1	1350	Diesel Engi	6.23E-05	1.14E-05
59	University (	183031	6/25/2022	S153	Standby Generator Set - Maximino Martinez Commo	Combustion	Internal Combustion Engine	Emergency Standby	1	1840	PAHs (non-	3.27E-08	5.97E-09
59	University (	183031	6/25/2022	S153	Standby Generator Set - Maximino Martinez Commo	Combustion	Internal Combustion Engine	Emergency Standby	1	2030	Nitrous Oxi	1.91E-06	3.48E-07
59	University (	183031	6/25/2022	S153	Standby Generator Set - Maximino Martinez Commo	Combustion	Internal Combustion Engine	Emergency Standby	1	2990	Nitrogen O	0.001183	0.000216
59	University (	183031	6/25/2022	S153	Standby Generator Set - Maximino Martinez Commo	Combustion	Internal Combustion Engine	Emergency Standby	1	3990	Sulfur Diox	2.32E-06	4.24E-07
59	University (	183031	6/25/2022	S153	Standby Generator Set - Maximino Martinez Commo	Combustion	Internal Combustion Engine	Emergency Standby	1	4990	Carbon Mo	0.00045	8.21E-05
59	University (	183031	6/25/2022	S153	Standby Generator Set - Maximino Martinez Commo	Combustion	Internal Combustion Engine	Emergency Standby	1	6960	Carbon Dio	0.238359	0.043501
59	University (	183031	6/25/2022	S153	Standby Generator Set - Maximino Martinez Commo	Combustion	Internal Combustion Engine	Emergency Standby	1	6970	Methane ((	9.53E-06	1.74E-06
59	University (	183031	6/25/2022	S154	Emergency Standby Diesel Generator Set (EBRCSA)	Combustion	Internal Combustion Engine	Emergency Standby	1	41	Benzene	9.78E-05	1.79E-05
59	University (	183031	6/25/2022	S154	Emergency Standby Diesel Generator Set (EBRCSA)	Combustion	Internal Combustion Engine	Emergency Standby	1	124	Formaldeh	8.09E-06	1.48E-06
59	University (	183031	6/25/2022	S154	Emergency Standby Diesel Generator Set (EBRCSA)	Combustion	Internal Combustion Engine	Emergency Standby	1	990	Organics (p	0.000855	0.000156
59	University (	183031	6/25/2022	S154	Emergency Standby Diesel Generator Set (EBRCSA)	Combustion	Internal Combustion Engine	Emergency Standby	1	1030	Arsenic (all	8.52E-08	1.55E-08
59	University (	183031	6/25/2022	S154	Emergency Standby Diesel Generator Set (EBRCSA)	Combustion	Internal Combustion Engine	Emergency Standby	1	1040	Beryllium (	4.99E-08	9.12E-09
59	University (	183031	6/25/2022	S154	Emergency Standby Diesel Generator Set (EBRCSA)	Combustion	Internal Combustion Engine	Emergency Standby	1	1070	Cadmium	2.13E-07	3.89E-08
59	University (	183031	6/25/2022	S154	Emergency Standby Diesel Generator Set (EBRCSA)	Combustion	Internal Combustion Engine	Emergency Standby	1	1095	Chromium	4.41E-09	8.04E-10
59	University (	183031	6/25/2022	S154	Emergency Standby Diesel Generator Set (EBRCSA)	Combustion	Internal Combustion Engine	Emergency Standby	1	1140	Lead (all) p	1.81E-07	3.30E-08
59	University (	183031	6/25/2022	S154	Emergency Standby Diesel Generator Set (EBRCSA)	Combustion	Internal Combustion Engine	Emergency Standby	1	1160	Manganese	2.84E-07	5.17E-08
59	University (	183031	6/25/2022	S154	Emergency Standby Diesel Generator Set (EBRCSA)	Combustion	Internal Combustion Engine	Emergency Standby	1	1180	Nickel pollu	3.45E-06	6.29E-07
59	University (	183031	6/25/2022	S154	Emergency Standby Diesel Generator Set (EBRCSA)	Combustion	Internal Combustion Engine	Emergency Standby	1	1190	Mercury (a	6.02E-08	1.10E-08
59	University (	183031	6/25/2022	S154	Emergency Standby Diesel Generator Set (EBRCSA)	Combustion	Internal Combustion Engine	Emergency Standby	1	1350	Diesel Engi	0.000984	0.00018
59	University (	183031	6/25/2022	S154	Emergency Standby Diesel Generator Set (EBRCSA)	Combustion	Internal Combustion Engine	Emergency Standby	1	1840	PAHs (non-	4.50E-07	8.20E-08
59	University (	183031	6/25/2022	S154	Emergency Standby Diesel Generator Set (EBRCSA)	Combustion	Internal Combustion Engine	Emergency Standby	1	2030	Nitrous Oxi	2.62E-05	4.78E-06
59	University (	183031	6/25/2022	S154	Emergency Standby Diesel Generator Set (EBRCSA)	Combustion	Internal Combustion Engine	Emergency Standby	1	2990	Nitrogen O	0.018249	0.00333
59	University (	183031	6/25/2022	S154	Emergency Standby Diesel Generator Set (EBRCSA)	Combustion	Internal Combustion Engine	Emergency Standby	1	3990	Sulfur Diox	3.20E-05	5.83E-06
59	University (	183031	6/25/2022	S154	Emergency Standby Diesel Generator Set (EBRCSA)	Combustion	Internal Combustion Engine	Emergency Standby	1	4990	Carbon Mo	0.007965	0.001454
59	University (	183031	6/25/2022	S154	Emergency Standby Diesel Generator Set (EBRCSA)	Combustion	Internal Combustion Engine	Emergency Standby	1	6960	Carbon Dio	3.277137	0.598078
59	University (	183031	6/25/2022	S154	Emergency Standby Diesel Generator Set (EBRCSA)	Combustion	Internal Combustion Engine	Emergency Standby	1	6970	Methane ((	0.000131	2.39E-05
59	University (	183031	6/25/2022	S155	Emergency Diesel Generator Engine (Memorial Stadi	Combustion	Internal Combustion Engine	Emergency Standby	1	41	Benzene	0.000941	0.000172
59	University (	183031	6/25/2022	S155	Emergency Diesel Generator Engine (Memorial Stadi	Combustion	Internal Combustion Engine	Emergency Standby	1	124	Formaldeh	7.79E-05	1.42E-05
59	University (	183031	6/25/2022	S155	Emergency Diesel Generator Engine (Memorial Stadi	Combustion	Internal Combustion Engine	Emergency Standby	1	990	Organics (p	0.01707	0.003115
59	University (	183031	6/25/2022	S155	Emergency Diesel Generator Engine (Memorial Stadi	Combustion	Internal Combustion Engine	Emergency Standby	1	1030	Arsenic (all	8.20E-07	1.50E-07
59	University (	183031	6/25/2022	S155	Emergency Diesel Generator Engine (Memorial Stadi	Combustion	Internal Combustion Engine	Emergency Standby	1	1040	Beryllium (	4.81E-07	8.77E-08
59	University (	183031	6/25/2022	S155	Emergency Diesel Generator Engine (Memorial Stadi	Combustion	Internal Combustion Engine	Emergency Standby	1	1070	Cadmium	2.05E-06	3.74E-07
59	University (	183031	6/25/2022	S155	Emergency Diesel Generator Engine (Memorial Stadi	Combustion	Internal Combustion Engine	Emergency Standby	1	1095	Chromium	4.24E-08	7.74E-09
59	University (	183031	6/25/2022	S155	Emergency Diesel Generator Engine (Memorial Stadi	Combustion	Internal Combustion Engine	Emergency Standby	1	1140	Lead (all) p	1.74E-06	3.17E-07
59	University (	183031	6/25/2022	S155	Emergency Diesel Generator Engine (Memorial Stadi	Combustion	Internal Combustion Engine	Emergency Standby	1	1160	Manganese	2.73E-06	4.98E-07
59	University (	183031	6/25/2022	S155	Emergency Diesel Generator Engine (Memorial Stadi	Combustion	Internal Combustion Engine	Emergency Standby	1	1180	Nickel pollu	3.32E-05	6.05E-06
59	University (	183031	6/25/2022	S155	Emergency Diesel Generator Engine (Memorial Stadi	Combustion	Internal Combustion Engine	Emergency Standby	1	1190	Mercury (a	5.80E-07	1.06E-07
59	University (	183031	6/25/2022	S155	Emergency Diesel Generator Engine (Memorial Stadi	Combustion	Internal Combustion Engine	Emergency Standby	1	1350	Diesel Engi	0.005396	0.000985
59	University (	183031	6/25/2022	S155	Emergency Diesel Generator Engine (Memorial Stadi	Combustion	Internal Combustion Engine	Emergency Standby	1	1840	PAHs (non-	4.33E-06	7.89E-07
59	University (	183031	6/25/2022	S155	Emergency Diesel Generator Engine (Memorial Stadi	Combustion	Internal Combustion Engine	Emergency Standby	1	2030	Nitrous Oxi	0.000252	4.60E-05
59	University (	183031	6/25/2022	S155	Emergency Diesel Generator Engine (Memorial Stadi	Combustion	Internal Combustion Engine	Emergency Standby	1	2990	Nitrogen O	0.265285	0.048414
59	University (	183031	6/25/2022	S155	Emergency Diesel Generator Engine (Memorial Stadi	Combustion	Internal Combustion Engine	Emergency Standby	1	3990	Sulfur Diox	0.000307	5.61E-05
59	University (	183031	6/25/2022	S155	Emergency Diesel Generator Engine (Memorial Stadi	Combustion	Internal Combustion Engine	Emergency Standby	1	4990	Carbon Mo	0.031474	0.005744
59	University (	183031	6/25/2022	S155	Emergency Diesel Generator Engine (Memorial Stadi	Combustion	Internal Combustion Engine	Emergency Standby	1	6960	Carbon Dio	31.53068	5.754349
59	University (	183031	6/25/2022	S155	Emergency Diesel Generator Engine (Memorial Stadi	Combustion	Internal Combustion Engine	Emergency Standby	1	6970	Methane ((	0.001261	0.00023
59	University (	183031	6/25/2022	S156	Standby Diesel Generator Set (Campbell Hall) (Camp	Combustion	Internal Combustion Engine	Emergency Standby	1	41	Benzene	2.56E-05	4.67E-06
59	University (	183031	6/25/2022	S156	Standby Diesel Generator Set (Campbell Hall) (Camp	Combustion	Internal Combustion Engine	Emergency Standby	1	124	Formaldeh	2.11E-06	3.86E-07
59	University (	183031	6/25/2022	S156	Standby Diesel Generator Set (Campbell Hall) (Camp	Combustion	Internal Combustion Engine	Emergency Standby	1	990	Organics (p	7.04E-05	1.28E-05
59	University (	183031	6/25/2022	S156	Standby Diesel Generator Set (Campbell Hall) (Camp	Combustion	Internal Combustion Engine	Emergency Standby	1	1030	Arsenic (all	2.23E-08	4.06E-09
59	University (	183031	6/25/2022	S156	Standby Diesel Generator Set (Campbell Hall) (Camp	Combustion	Internal Combustion Engine	Emergency Standby	1	1040	Beryllium (	1.31E-08	2.38E-09
59	University (	183031	6/25/2022	S156	Standby Diesel Generator Set (Campbell Hall) (Camp	Combustion	Internal Combustion Engine	Emergency Standby	1	1070	Cadmium	5.57E-08	1.02E-08
59	University (	183031	6/25/2022	S156	Standby Diesel Generator Set (Campbell Hall) (Camp	Combustion	Internal Combustion Engine	Emergency Standby	1	1095	Chromium	1.15E-09	2.10E-10
59	University (	183031	6/25/2022	S156	Standby Diesel Generator Set (Campbell Hall) (Camp	Combustion	Internal Combustion Engine	Emergency Standby	1	1140	Lead (all) p	4.72E-08	8.62E-09
59	University (	183031	6/25/2022	S156	Standby Diesel Generator Set (Campbell Hall) (Camp	Combustion	Internal Combustion Engine	Emergency Standby	1	1160	Manganese	7.41E-08	1.35E-08
59	University (	183031	6/25/2022	S156	Standby Diesel Generator Set (Campbell Hall) (Camp	Combustion	Internal Combustion Engine	Emergency Standby	1	1180	Nickel pollu	9.00E-07	1.64E-07
59	University (	183031	6/25/2022	S156	Standby Diesel Generator Set (Campbell Hall) (Camp	Combustion	Internal Combustion Engine	Emergency Standby	1	1190	Mercury (a	1.57E-08	2.87E-09
59	University (	183031	6/25/2022	S156	Standby Diesel Generator Set (Campbell Hall) (Camp	Combustion	Internal Combustion Engine	Emergency Standby	1	1350	Diesel Engi	7.00E-06	1.28E-06
59	University (	183031	6/25/2022	S156	Standby Diesel Generator Set (Campbell Hall) (Camp	Combustion	Internal Combustion Engine	Emergency Standby	1	1840	PAHs (non-	1.17E-07	2.14E-08
59	University (	183031	6/25/2022	S156	Standby Diesel Generator Set (Campbell Hall) (Camp	Combustion	Internal Combustion Engine	Emergency Standby	1	2030	Nitrous Oxi	6.85E-06	1.25E-06
59	University (	183031	6/25/2022	S156	Standby Diesel Generator Set (Campbell Hall) (Camp	Combustion	Internal Combustion Engine	Emergency Standby	1	2990	Nitrogen O	0.001051	0.000192
59	University (	183031	6/25/2022	S156	Standby Diesel Generator Set (Campbell Hall) (Camp	Combustion	Internal Combustion Engine	Emergency Standby	1	3990	Sulfur Diox	8.35E-06	1.52E-06
59	University (	183031	6/25/2022	S156	Standby Diesel Generator Set (Campbell Hall) (Camp	Combustion	Internal Combustion Engine	Emergency Standby	1	4990	Carbon Mo	0.001821	0.000332
59	University (	183031	6/25/2022	S156	Standby Diesel Generator Set (Campbell Hall) (Camp	Combustion	Internal Combustion Engine	Emergency Standby	1	6960	Carbon Dio	0.856261	0.156268
59	University (	183031	6/25/2022	S156	Standby Diesel Generator Set (Campbell Hall) (Camp	Combustion	Internal Combustion Engine	Emergency Standby	1	6970	Methane ((	3.42E-05	6.25E-06
59	University (	183031	6/25/2022	S157	Emergency Standby Diesel Generator Set (MLK Eshle	Combustion	Internal Combustion Engine	Emergency Standby	1	41	Benzene	0.000132	2.40E-05
59	University (	183031	6/25/2022	S157	Emergency Standby Diesel Generator Set (MLK Eshle	Combustion	Internal Combustion Engine	Emergency Standby	1	124	Formaldeh	1.09E-05	1.99E-06

59	University (	183031	6/25/2022	S157	Emergency Standby Diesel Generator Set (MLK Eshle	Combustion	Internal Combustion Engine	Emergency Standby	1	990	Organics (p	0.000569	0.000104
59	University (	183031	6/25/2022	S157	Emergency Standby Diesel Generator Set (MLK Eshle	Combustion	Internal Combustion Engine	Emergency Standby	1	1030	Arsenic (all	1.15E-07	2.09E-08
59	University (	183031	6/25/2022	S157	Emergency Standby Diesel Generator Set (MLK Eshle	Combustion	Internal Combustion Engine	Emergency Standby	1	1040	Beryllium (	6.72E-08	1.23E-08
59	University (	183031	6/25/2022	S157	Emergency Standby Diesel Generator Set (MLK Eshle	Combustion	Internal Combustion Engine	Emergency Standby	1	1070	Cadmium	2.86E-07	5.23E-08
59	University (	183031	6/25/2022	S157	Emergency Standby Diesel Generator Set (MLK Eshle	Combustion	Internal Combustion Engine	Emergency Standby	1	1095	Chromium	5.93E-09	1.08E-09
59	University (	183031	6/25/2022	S157	Emergency Standby Diesel Generator Set (MLK Eshle	Combustion	Internal Combustion Engine	Emergency Standby	1	1140	Lead (all) p	2.43E-07	4.43E-08
59	University (	183031	6/25/2022	S157	Emergency Standby Diesel Generator Set (MLK Eshle	Combustion	Internal Combustion Engine	Emergency Standby	1	1160	Manganese	3.81E-07	6.96E-08
59	University (	183031	6/25/2022	S157	Emergency Standby Diesel Generator Set (MLK Eshle	Combustion	Internal Combustion Engine	Emergency Standby	1	1180	Nickel pollu	4.63E-06	8.46E-07
59	University (	183031	6/25/2022	S157	Emergency Standby Diesel Generator Set (MLK Eshle	Combustion	Internal Combustion Engine	Emergency Standby	1	1190	Mercury (a	8.10E-08	1.48E-08
59	University (	183031	6/25/2022	S157	Emergency Standby Diesel Generator Set (MLK Eshle	Combustion	Internal Combustion Engine	Emergency Standby	1	1350	Diesel Engi	0.000647	0.000118
59	University (	183031	6/25/2022	S157	Emergency Standby Diesel Generator Set (MLK Eshle	Combustion	Internal Combustion Engine	Emergency Standby	1	1840	PAHs (non-	6.04E-07	1.10E-07
59	University (	183031	6/25/2022	S157	Emergency Standby Diesel Generator Set (MLK Eshle	Combustion	Internal Combustion Engine	Emergency Standby	1	2030	Nitrous Oxi	3.52E-05	6.43E-06
59	University (	183031	6/25/2022	S157	Emergency Standby Diesel Generator Set (MLK Eshle	Combustion	Internal Combustion Engine	Emergency Standby	1	2990	Nitrogen O	0.021415	0.003908
59	University (	183031	6/25/2022	S157	Emergency Standby Diesel Generator Set (MLK Eshle	Combustion	Internal Combustion Engine	Emergency Standby	1	3990	Sulfur Diox	4.30E-05	7.84E-06
59	University (	183031	6/25/2022	S157	Emergency Standby Diesel Generator Set (MLK Eshle	Combustion	Internal Combustion Engine	Emergency Standby	1	4990	Carbon Mo	0.003882	0.000708
59	University (	183031	6/25/2022	S157	Emergency Standby Diesel Generator Set (MLK Eshle	Combustion	Internal Combustion Engine	Emergency Standby	1	6960	Carbon Dio	4.405983	0.804092
59	University (	183031	6/25/2022	S157	Emergency Standby Diesel Generator Set (MLK Eshle	Combustion	Internal Combustion Engine	Emergency Standby	1	6970	Methane ((	0.000176	3.22E-05
59	University (	183031	6/25/2022	S158	Emergency Standby Diesel Generator Set (Berkeley /	Combustion	Internal Combustion Engine	Emergency Standby	1	41	Benzene	0.000169	3.08E-05
59	University (	183031	6/25/2022	S158	Emergency Standby Diesel Generator Set (Berkeley /	Combustion	Internal Combustion Engine	Emergency Standby	1	124	Formaldeh	1.39E-05	2.55E-06
59	University (	183031	6/25/2022	S158	Emergency Standby Diesel Generator Set (Berkeley /	Combustion	Internal Combustion Engine	Emergency Standby	1	990	Organics (p	0.000732	0.000134
59	University (	183031	6/25/2022	S158	Emergency Standby Diesel Generator Set (Berkeley /	Combustion	Internal Combustion Engine	Emergency Standby	1	1030	Arsenic (all	1.47E-07	2.68E-08
59	University (	183031	6/25/2022	S158	Emergency Standby Diesel Generator Set (Berkeley /	Combustion	Internal Combustion Engine	Emergency Standby	1	1040	Beryllium (	8.61E-08	1.57E-08
59	University (	183031	6/25/2022	S158	Emergency Standby Diesel Generator Set (Berkeley /	Combustion	Internal Combustion Engine	Emergency Standby	1	1070	Cadmium	3.67E-07	6.70E-08
59	University (	183031	6/25/2022	S158	Emergency Standby Diesel Generator Set (Berkeley /	Combustion	Internal Combustion Engine	Emergency Standby	1	1095	Chromium	7.59E-09	1.39E-09
59	University (	183031	6/25/2022	S158	Emergency Standby Diesel Generator Set (Berkeley /	Combustion	Internal Combustion Engine	Emergency Standby	1	1140	Lead (all) p	3.11E-07	5.68E-08
59	University (	183031	6/25/2022	S158	Emergency Standby Diesel Generator Set (Berkeley /	Combustion	Internal Combustion Engine	Emergency Standby	1	1160	Manganese	4.89E-07	8.92E-08
59	University (	183031	6/25/2022	S158	Emergency Standby Diesel Generator Set (Berkeley /	Combustion	Internal Combustion Engine	Emergency Standby	1	1180	Nickel pollu	5.94E-06	1.08E-06
59	University (	183031	6/25/2022	S158	Emergency Standby Diesel Generator Set (Berkeley /	Combustion	Internal Combustion Engine	Emergency Standby	1	1190	Mercury (a	1.04E-07	1.89E-08
59	University (	183031	6/25/2022	S158	Emergency Standby Diesel Generator Set (Berkeley /	Combustion	Internal Combustion Engine	Emergency Standby	1	1350	Diesel Engi	0.000915	0.000167
59	University (	183031	6/25/2022	S158	Emergency Standby Diesel Generator Set (Berkeley /	Combustion	Internal Combustion Engine	Emergency Standby	1	1840	PAHs (non-	7.75E-07	1.41E-07
59	University (	183031	6/25/2022	S158	Emergency Standby Diesel Generator Set (Berkeley /	Combustion	Internal Combustion Engine	Emergency Standby	1	2030	Nitrous Oxi	4.52E-05	8.24E-06
59	University (	183031	6/25/2022	S158	Emergency Standby Diesel Generator Set (Berkeley /	Combustion	Internal Combustion Engine	Emergency Standby	1	2990	Nitrogen O	0.054581	0.009961
59	University (	183031	6/25/2022	S158	Emergency Standby Diesel Generator Set (Berkeley /	Combustion	Internal Combustion Engine	Emergency Standby	1	3990	Sulfur Diox	5.51E-05	1.00E-05
59	University (	183031	6/25/2022	S158	Emergency Standby Diesel Generator Set (Berkeley /	Combustion	Internal Combustion Engine	Emergency Standby	1	4990	Carbon Mo	0.016263	0.002968
59	University (	183031	6/25/2022	S158	Emergency Standby Diesel Generator Set (Berkeley /	Combustion	Internal Combustion Engine	Emergency Standby	1	6960	Carbon Dio	5.647285	1.03063
59	University (	183031	6/25/2022	S158	Emergency Standby Diesel Generator Set (Berkeley /	Combustion	Internal Combustion Engine	Emergency Standby	1	6970	Methane ((	0.000226	4.12E-05
59	University (	183031	6/25/2022	S159	Emergency Standby Natural Gas Generator Set (ETCI	Combustion	Internal Combustion Engine	Emergency Standby	1	41	Benzene	3.98E-05	7.26E-06
59	University (	183031	6/25/2022	S159	Emergency Standby Natural Gas Generator Set (ETCI	Combustion	Internal Combustion Engine	Emergency Standby	1	124	Formaldeh	0.000359	6.55E-05
59	University (	183031	6/25/2022	S159	Emergency Standby Natural Gas Generator Set (ETCI	Combustion	Internal Combustion Engine	Emergency Standby	1	990	Organics (p	0.035733	0.006521
59	University (	183031	6/25/2022	S159	Emergency Standby Natural Gas Generator Set (ETCI	Combustion	Internal Combustion Engine	Emergency Standby	1	1990	Particulate	0.000258	4.71E-05
59	University (	183031	6/25/2022	S159	Emergency Standby Natural Gas Generator Set (ETCI	Combustion	Internal Combustion Engine	Emergency Standby	1	2030	Nitrous Oxi	5.96E-06	1.09E-06
59	University (	183031	6/25/2022	S159	Emergency Standby Natural Gas Generator Set (ETCI	Combustion	Internal Combustion Engine	Emergency Standby	1	2990	Nitrogen O	0.000123	2.24E-05
59	University (	183031	6/25/2022	S159	Emergency Standby Natural Gas Generator Set (ETCI	Combustion	Internal Combustion Engine	Emergency Standby	1	3990	Sulfur Diox	1.47E-05	2.68E-06
59	University (	183031	6/25/2022	S159	Emergency Standby Natural Gas Generator Set (ETCI	Combustion	Internal Combustion Engine	Emergency Standby	1	4990	Carbon Mo	0.002149	0.000392
59	University (	183031	6/25/2022	S159	Emergency Standby Natural Gas Generator Set (ETCI	Combustion	Internal Combustion Engine	Emergency Standby	1	6960	Carbon Dio	3.162171	0.577096
59	University (	183031	6/25/2022	S159	Emergency Standby Natural Gas Generator Set (ETCI	Combustion	Internal Combustion Engine	Emergency Standby	1	6970	Methane ((	0.035242	0.006432
59	University (	183031	6/25/2022	S160	Emergency Standby Diesel Generator Set (Lawrence	Combustion	Internal Combustion Engine	Emergency Standby	1	41	Benzene	0.000238	4.35E-05
59	University (	183031	6/25/2022	S160	Emergency Standby Diesel Generator Set (Lawrence	Combustion	Internal Combustion Engine	Emergency Standby	1	124	Formaldeh	1.97E-05	3.60E-06
59	University (	183031	6/25/2022	S160	Emergency Standby Diesel Generator Set (Lawrence	Combustion	Internal Combustion Engine	Emergency Standby	1	990	Organics (p	0.002687	0.00049
59	University (	183031	6/25/2022	S160	Emergency Standby Diesel Generator Set (Lawrence	Combustion	Internal Combustion Engine	Emergency Standby	1	1030	Arsenic (all	2.07E-07	3.79E-08
59	University (	183031	6/25/2022	S160	Emergency Standby Diesel Generator Set (Lawrence	Combustion	Internal Combustion Engine	Emergency Standby	1	1040	Beryllium (	1.22E-07	2.22E-08
59	University (	183031	6/25/2022	S160	Emergency Standby Diesel Generator Set (Lawrence	Combustion	Internal Combustion Engine	Emergency Standby	1	1070	Cadmium	5.19E-07	9.47E-08
59	University (	183031	6/25/2022	S160	Emergency Standby Diesel Generator Set (Lawrence	Combustion	Internal Combustion Engine	Emergency Standby	1	1095	Chromium	1.07E-08	1.96E-09
59	University (	183031	6/25/2022	S160	Emergency Standby Diesel Generator Set (Lawrence	Combustion	Internal Combustion Engine	Emergency Standby	1	1140	Lead (all) p	4.40E-07	8.03E-08
59	University (	183031	6/25/2022	S160	Emergency Standby Diesel Generator Set (Lawrence	Combustion	Internal Combustion Engine	Emergency Standby	1	1160	Manganese	6.90E-07	1.26E-07
59	University (	183031	6/25/2022	S160	Emergency Standby Diesel Generator Set (Lawrence	Combustion	Internal Combustion Engine	Emergency Standby	1	1180	Nickel pollu	8.39E-06	1.53E-06
59	University (	183031	6/25/2022	S160	Emergency Standby Diesel Generator Set (Lawrence	Combustion	Internal Combustion Engine	Emergency Standby	1	1190	Mercury (a	1.47E-07	2.68E-08
59	University (	183031	6/25/2022	S160	Emergency Standby Diesel Generator Set (Lawrence	Combustion	Internal Combustion Engine	Emergency Standby	1	1350	Diesel Engi	0.001718	0.000314
59	University (	183031	6/25/2022	S160	Emergency Standby Diesel Generator Set (Lawrence	Combustion	Internal Combustion Engine	Emergency Standby	1	1840	PAHs (non-	1.09E-06	2.00E-07
59	University (	183031	6/25/2022	S160	Emergency Standby Diesel Generator Set (Lawrence	Combustion	Internal Combustion Engine	Emergency Standby	1	2030	Nitrous Oxi	6.38E-05	1.16E-05
59	University (	183031	6/25/2022	S160	Emergency Standby Diesel Generator Set (Lawrence	Combustion	Internal Combustion Engine	Emergency Standby	1	2990	Nitrogen O	0.041971	0.00766
59	University (	183031	6/25/2022	S160	Emergency Standby Diesel Generator Set (Lawrence	Combustion	Internal Combustion Engine	Emergency Standby	1	3990	Sulfur Diox	7.78E-05	1.42E-05
59	University (	183031	6/25/2022	S160	Emergency Standby Diesel Generator Set (Lawrence	Combustion	Internal Combustion Engine	Emergency Standby	1	4990	Carbon Mo	0.015954	0.002912
59	University (	183031	6/25/2022	S160	Emergency Standby Diesel Generator Set (Lawrence	Combustion	Internal Combustion Engine	Emergency Standby	1	6960	Carbon Dio	7.979542	1.456266
59	University (	183031	6/25/2022	S160	Emergency Standby Diesel Generator Set (Lawrence	Combustion	Internal Combustion Engine	Emergency Standby	1	6970	Methane ((	0.000319	5.82E-05
59	University (	183031	6/25/2022	S161	Portable Emergency Diesel Generator (Edwards Stac	Combustion	Internal Combustion Engine	Emergency Standby	1	41	Benzene	3.78E-05	6.89E-06
59	University (	183031	6/25/2022	S161	Portable Emergency Diesel Generator (Edwards Stac	Combustion	Internal Combustion Engine	Emergency Standby	1	124	Formaldeh	3.12E-06	5.70E-07
59	University (	183031	6/25/2022	S161	Portable Emergency Diesel Generator (Edwards Stac	Combustion	Internal Combustion Engine	Emergency Standby	1	990	Organics (p	0.000675	0.000123
59	University (	183031	6/25/2022	S161	Portable Emergency Diesel Generator (Edwards Stac	Combustion	Internal Combustion Engine	Emergency Standby	1	1030	Arsenic (all	3.29E-08	6.00E-09
59	University (	183031	6/25/2022	S161	Portable Emergency Diesel Generator (Edwards Stac	Combustion	Internal Combustion Engine	Emergency Standby	1	1040	Beryllium (	1.93E-08	3.52E-09
59	University (	183031	6/25/2022	S161	Portable Emergency Diesel Generator (Edwards Stac	Combustion	Internal Combustion Engine	Emergency Standby	1	1070	Cadmium	8.22E-08	1.50E-08
59	University (	183031	6/25/2022	S161	Portable Emergency Diesel Generator (Edwards Stac	Combustion	Internal Combustion Engine	Emergency Standby	1	1095	Chromium	1.70E-09	3.10E-10
59	University (	183031	6/25/2022	S161	Portable Emergency Diesel Generator (Edwards Stac	Combustion	Internal Combustion Engine	Emergency Standby	1	1140	Lead (all) p	6.97E-08	1.27E-08
59	University (	183031	6/25/2022	S161	Portable Emergency Diesel Generator (Edwards Stac	Combustion	Internal Combustion Engine	Emergency Standby	1	1160	Manganese	1.09E-07	2.00E-08
59	University (	183031	6/25/2022	S161	Portable Emergency Diesel Generator (Edwards Stac	Combustion	Internal Combustion Engine	Emergency Standby	1	1180	Nickel pollu	1.33E-06	2.43E-07
59	University (	183031	6/25/2022	S161	Portable Emergency Diesel Generator (Edwards Stac	Combustion	Internal Combustion Engine	Emergency Standby	1	1190	Mercury (a	2.32E-08	4.24E-09
59	University (	183031	6/25/2022	S161	Portable Emergency Diesel Generator (Edwards Stac	Combustion	Internal Combustion Engine	Emergency Standby	1	1350	Diesel Engi	0.00047	8.58E-05
59	University (	183031	6/25/2022	S161	Portable Emergency Diesel Generator (Edwards Stac	Combustion	Internal Combustion Engine	Emergency Standby	1	1840	PAHs (non-	1.73E-07	3.17E-08
59	University (	183031	6/25/2022	S161	Portable Emergency Diesel Generator (Edwards Stac	Combustion	Internal Combustion Engine	Emergency Standby	1	2030	Nitrous Oxi	1.01E-05	1.85E-06
59	University (	183031	6/25/2022	S161	Portable Emergency Diesel Generator (Edwards Stac	Combustion	Internal Combustion Engine	Emergency Standby	1	2990	Nitrogen O	0.013601	0.002482
59	University (	183031	6/25/2022	S161	Portable Emergency Diesel Generator (Edwards Stac	Combustion	Internal Combustion Engine	Emergency Standby	1	3990	Sulfur Diox	1.23E-05	2.25E-06
59	University (	183031	6/25/2022	S161	Portable Emergency Diesel Generator (Edwards Stac	Combustion	Internal Combustion Engine	Emergency Standby	1	4990	Carbon Mo	0.003205	0.000585
59	University (	183031	6/25/2022	S161	Portable Emergency Diesel Generator (Edwards Stac	Combustion	Internal Combustion Engine	Emergency Standby	1	6960	Carbon Dio	1.264527	0.230776
59	University (	183031	6/25/2022	S161	Portable Emergency Diesel Generator (Edwards Stac	Combustion	Internal Combustion Engine	Emergency Standby	1	6970	Methane ((	5.06E-05	9.23E-06
59	University (	183031	6/25/2022	S162	Emergency Diesel Generator Set (Chou Hall, Formery	Combustion	Internal Combustion Engine	Emergency Standby	1	41	Benzene	5.82E-05	1.06E-05
59	University (	183031	6/25/2022	S162	Emergency Diesel Generator Set (Chou Hall, Formery	Combustion	Internal Combustion Engine	Emergency Standby	1	124	Formaldeh	4.82E-06	8.79E-07
59	University (	183031	6/25/2022	S162	Emergency Diesel Generator Set (Chou Hall, Formery	Combustion	Internal Combustion Engine	Emergency Standby	1	990	Organics (p	0.000923	0.000168
59	University (	183031	6/25/2022	S162	Emergency Diesel Generator Set (Chou Hall, Formery	Combustion	Internal Combustion Engine	Emergency Standby	1	1030	Arsenic (all	5.07E-08	9.26E-09
59	University (	183031	6/25/2022	S162	Emergency Diesel Generator Set (Chou Hall, Formery	Combustion	Internal Combustion Engine	Emergency Standby	1	1040	Beryllium (	2.97E-08	5.43E-09
59	University (	183031	6/25/2022	S162	Emergency Diesel Generator Set (Chou Hall, Formery	Combustion	Internal Combustion Engine	Emergency Standby	1	1070	Cadmium	1.27E-07	2.31E-08
59	University (	183031	6/25/2022	S162	Emergency Diesel Generator Set (Chou Hall, Formery	Combustion	Internal Combustion Engine	Emergency Standby	1	1095	Chromium	2.62E-09	4.79E-10
59	University (	183031	6/25/2022	S162	Emergency Diesel Generator Set (Chou Hall, Formery	Combustion	Internal Combustion Engine	Emergency Standby	1	1140	Lead (all) p	1.08E-07	1.96E-08
59	University (	183031	6/25/2022	S162	Emergency Diesel Generator Set (Chou Hall, Formery	Combustion	Internal Combustion Engine	Emergency Standby	1	1160	Manganese	1.69E-07	3.08E-08
59	University (	183031	6/25/2022	S162	Emergency Diesel Generator Set (Chou Hall, Formery	Combustion	Internal Combustion Engine	Emergency Standby	1	1180	Nickel pollu	2.05E-06	3.74E-07
59	University (	183031	6/25/2022	S162	Emergency Diesel Generator Set (Chou Hall, Formery	Combustion	Internal Combustion Engine	Emergency Standby	1	1190	Mercury (a	3.59E-08	6.54E-09
59	University (	183031	6/25/2022	S162	Emergency Diesel Generator Set (Chou Hall, Formery	Combustion	Internal Combustion Engine	Emergency Standby	1	1350	Diesel Engi	0.000493	9.00E-05
59	University (	183031	6/25/2022	S162	Emergency Diesel Generator Set (Chou Hall, Formery	Combustion	Internal Combustion Engine	Emergency Standby	1	1840	PAHs (non-	2.68E-07	4.88E-08
59	University (	183031	6/25/2022	S162	Emergency Diesel Generator Set (Chou Hall, Formery	Combustion	Internal Combustion Engine	Emergency Standby	1	2030	Nitrous Oxi	1.56E-05	2.85E-06
59	University (	183031	6/25/2022	S162	Emergency Diesel Generator Set (Chou Hall, Formery	Combustion	Internal Combustion Engine	Emergency Standby	1	2990	Nitrogen O	0.002113	0.000386
59	University (	183031	6/25/2022	S162	Emergency Diesel Generator Set (Chou Hall, Formery	Combustion	Internal Combustion Engine	Emergency Standby	1	3990	Sulfur Diox	1.90E-05	3.47E-06
59	University (	183031	6/25/2022	S162	Emergency Diesel Generator Set (Chou Hall, Formery	Combustion	Internal Combustion Engine	Emergency Standby	1	4990	Carbon Mo	0.01831	0.003342
59	University (	183031	6/25/2022	S162	Emergency Diesel Generator Set (Chou Hall, Formery	Combustion	Internal Combustion Engine	Emergency Standby	1	6960	Carbon Dio	1.950881	0.356036
59	University (	183031	6/25/2022	S162	Emergency Diesel Generator Set (Chou Hall, Formery	Combustion	Internal Combustion Engine	Emergency Standby	1	6970	Methane ((	7.80E-05	1.42E-05
59	University (	183031	6/25/2022	S163	Stationary Emergency Diesel Engine Generator Set (:	Combustion	Internal Combustion Engine	Emergency Standby	1	41	Benzene	0.000528	9.64E-05
59	University (	183031	6/25/2022	S163	Stationary Emergency Diesel Engine Generator Set (:	Combustion	Internal Combustion Engine	Emergency Standby	1	124	Formaldeh	4.37E-05	7.98E-06
59	University (	183031	6/25/2022	S163	Stationary Emergency Diesel Engine Generator Set (:	Combustion	Internal Combustion Engine	Emergency Standby	1	990	Organics (p	0.004583	0.000836
59	University (	183031	6/25/2022	S163	Stationary Emergency Diesel Engine Generator Set (:	Combustion	Internal Combustion Engine	Emergency Standby	1	1030	Arsenic (all	6.90E-08	1.26E-08

59	University	183031	6/25/2022	S163	Stationary Emergency Diesel Engine Generator Set (	Combustion	Internal Combustion Engine	Emergency Standby	1	1040	Beryllium (	4.05E-08	7.38E-09
59	University	183031	6/25/2022	S163	Stationary Emergency Diesel Engine Generator Set (	Combustion	Internal Combustion Engine	Emergency Standby	1	1070	Cadmium	1.73E-07	3.15E-08
59	University	183031	6/25/2022	S163	Stationary Emergency Diesel Engine Generator Set (	Combustion	Internal Combustion Engine	Emergency Standby	1	1095	Chromium	3.57E-09	6.52E-10
59	University	183031	6/25/2022	S163	Stationary Emergency Diesel Engine Generator Set (	Combustion	Internal Combustion Engine	Emergency Standby	1	1140	Lead (all) p	1.46E-07	2.67E-08
59	University	183031	6/25/2022	S163	Stationary Emergency Diesel Engine Generator Set (	Combustion	Internal Combustion Engine	Emergency Standby	1	1160	Manganese	2.30E-07	4.19E-08
59	University	183031	6/25/2022	S163	Stationary Emergency Diesel Engine Generator Set (	Combustion	Internal Combustion Engine	Emergency Standby	1	1180	Nickel pollu	2.79E-06	5.10E-07
59	University	183031	6/25/2022	S163	Stationary Emergency Diesel Engine Generator Set (	Combustion	Internal Combustion Engine	Emergency Standby	1	1190	Mercury (a	4.88E-08	8.91E-09
59	University	183031	6/25/2022	S163	Stationary Emergency Diesel Engine Generator Set (	Combustion	Internal Combustion Engine	Emergency Standby	1	1350	Diesel Engi	0.000387	7.06E-05
59	University	183031	6/25/2022	S163	Stationary Emergency Diesel Engine Generator Set (	Combustion	Internal Combustion Engine	Emergency Standby	1	1840	PAHs (non-	3.64E-07	6.65E-08
59	University	183031	6/25/2022	S163	Stationary Emergency Diesel Engine Generator Set (	Combustion	Internal Combustion Engine	Emergency Standby	1	2030	Nitrous Oxi	0.000142	2.58E-05
59	University	183031	6/25/2022	S163	Stationary Emergency Diesel Engine Generator Set (	Combustion	Internal Combustion Engine	Emergency Standby	1	2990	Nitrogen O	0.01841	0.00336
59	University	183031	6/25/2022	S163	Stationary Emergency Diesel Engine Generator Set (	Combustion	Internal Combustion Engine	Emergency Standby	1	3990	Sulfur Diox	0.000173	3.15E-05
59	University	183031	6/25/2022	S163	Stationary Emergency Diesel Engine Generator Set (	Combustion	Internal Combustion Engine	Emergency Standby	1	4990	Carbon Mo	0.095731	0.017471
59	University	183031	6/25/2022	S163	Stationary Emergency Diesel Engine Generator Set (	Combustion	Internal Combustion Engine	Emergency Standby	1	6960	Carbon Dio	17.69971	3.230197
59	University	183031	6/25/2022	S163	Stationary Emergency Diesel Engine Generator Set (	Combustion	Internal Combustion Engine	Emergency Standby	1	6970	Methane (	0.000708	0.000129
59	University	183031	6/25/2022	S164	Stationary Emergency Standby Diesel Generator Set:	Combustion	Internal Combustion Engine	Emergency Standby	0	NULL	NULL	NULL	NULL
59	University	183031	6/25/2022	S200	Emergency Standby Diesel Generator Set	Combustion	Internal Combustion Engine	Emergency Standby	1	41	Benzene	0.00042	7.66E-05
59	University	183031	6/25/2022	S200	Emergency Standby Diesel Generator Set	Combustion	Internal Combustion Engine	Emergency Standby	1	124	Formaldeh	3.47E-05	6.34E-06
59	University	183031	6/25/2022	S200	Emergency Standby Diesel Generator Set	Combustion	Internal Combustion Engine	Emergency Standby	1	990	Organics (p	0.020272	0.0037
59	University	183031	6/25/2022	S200	Emergency Standby Diesel Generator Set	Combustion	Internal Combustion Engine	Emergency Standby	1	1030	Arsenic (all	3.66E-07	6.67E-08
59	University	183031	6/25/2022	S200	Emergency Standby Diesel Generator Set	Combustion	Internal Combustion Engine	Emergency Standby	1	1040	Beryllium (	2.14E-07	3.91E-08
59	University	183031	6/25/2022	S200	Emergency Standby Diesel Generator Set	Combustion	Internal Combustion Engine	Emergency Standby	1	1070	Cadmium	9.14E-07	1.67E-07
59	University	183031	6/25/2022	S200	Emergency Standby Diesel Generator Set	Combustion	Internal Combustion Engine	Emergency Standby	1	1095	Chromium	1.89E-08	3.45E-09
59	University	183031	6/25/2022	S200	Emergency Standby Diesel Generator Set	Combustion	Internal Combustion Engine	Emergency Standby	1	1140	Lead (all) p	7.75E-07	1.41E-07
59	University	183031	6/25/2022	S200	Emergency Standby Diesel Generator Set	Combustion	Internal Combustion Engine	Emergency Standby	1	1160	Manganese	1.22E-06	2.22E-07
59	University	183031	6/25/2022	S200	Emergency Standby Diesel Generator Set	Combustion	Internal Combustion Engine	Emergency Standby	1	1180	Nickel pollu	1.48E-05	2.70E-06
59	University	183031	6/25/2022	S200	Emergency Standby Diesel Generator Set	Combustion	Internal Combustion Engine	Emergency Standby	1	1190	Mercury (a	2.58E-07	4.72E-08
59	University	183031	6/25/2022	S200	Emergency Standby Diesel Generator Set	Combustion	Internal Combustion Engine	Emergency Standby	1	1350	Diesel Engi	0.004034	0.000736
59	University	183031	6/25/2022	S200	Emergency Standby Diesel Generator Set	Combustion	Internal Combustion Engine	Emergency Standby	1	1840	PAHs (non-	1.93E-06	3.52E-07
59	University	183031	6/25/2022	S200	Emergency Standby Diesel Generator Set	Combustion	Internal Combustion Engine	Emergency Standby	1	2030	Nitrous Oxi	0.000112	2.05E-05
59	University	183031	6/25/2022	S200	Emergency Standby Diesel Generator Set	Combustion	Internal Combustion Engine	Emergency Standby	1	2990	Nitrogen O	0.295599	0.053947
59	University	183031	6/25/2022	S200	Emergency Standby Diesel Generator Set	Combustion	Internal Combustion Engine	Emergency Standby	1	3990	Sulfur Diox	0.000137	2.50E-05
59	University	183031	6/25/2022	S200	Emergency Standby Diesel Generator Set	Combustion	Internal Combustion Engine	Emergency Standby	1	4990	Carbon Mo	0.064288	0.011733
59	University	183031	6/25/2022	S200	Emergency Standby Diesel Generator Set	Combustion	Internal Combustion Engine	Emergency Standby	1	6960	Carbon Dio	14.06015	2.565977
59	University	183031	6/25/2022	S200	Emergency Standby Diesel Generator Set	Combustion	Internal Combustion Engine	Emergency Standby	1	6970	Methane (	0.000562	0.000103
59	University	183031	6/25/2022	S201	Gas Turbine in combined cycle cogeneration plant	Combustion	Turbine	Co-generation	0	NULL	NULL	NULL	NULL
59	University	183031	6/25/2022	S201	Gas Turbine in combined cycle cogeneration plant	Combustion	Turbine	Co-generation	1	41	Benzene	0.182791	0.033359
59	University	183031	6/25/2022	S201	Gas Turbine in combined cycle cogeneration plant	Combustion	Turbine	Co-generation	1	124	Formaldeh	2.866492	0.523135
59	University	183031	6/25/2022	S201	Gas Turbine in combined cycle cogeneration plant	Combustion	Turbine	Co-generation	1	990	Organics (p	132.9388	24.26133
59	University	183031	6/25/2022	S201	Gas Turbine in combined cycle cogeneration plant	Combustion	Turbine	Co-generation	1	1990	Particulate	58.16071	10.61433
59	University	183031	6/25/2022	S201	Gas Turbine in combined cycle cogeneration plant	Combustion	Turbine	Co-generation	1	2030	Nitrous Oxi	0.959652	0.175136
59	University	183031	6/25/2022	S201	Gas Turbine in combined cycle cogeneration plant	Combustion	Turbine	Co-generation	1	2990	Nitrogen O	176.1439	32.14626
59	University	183031	6/25/2022	S201	Gas Turbine in combined cycle cogeneration plant	Combustion	Turbine	Co-generation	1	3990	Sulfur Diox	2.360692	0.430826
59	University	183031	6/25/2022	S201	Gas Turbine in combined cycle cogeneration plant	Combustion	Turbine	Co-generation	1	4990	Carbon Mo	793.4783	144.8098
59	University	183031	6/25/2022	S201	Gas Turbine in combined cycle cogeneration plant	Combustion	Turbine	Co-generation	1	6960	Carbon Dio	508807.3	92857.33
59	University	183031	6/25/2022	S201	Gas Turbine in combined cycle cogeneration plant	Combustion	Turbine	Co-generation	1	6970	Methane (	37.51366	6.846243
59	University	183031	6/25/2022	S202	Duct Burner	Combustion	Other Combustion		1	41	Benzene	0.004629	0.000845
59	University	183031	6/25/2022	S202	Duct Burner	Combustion	Other Combustion		1	124	Formaldeh	0.054416	0.009931
59	University	183031	6/25/2022	S202	Duct Burner	Combustion	Other Combustion		1	293	Toluene	0.002467	0.00045
59	University	183031	6/25/2022	S202	Duct Burner	Combustion	Other Combustion		1	990	Organics (p	4.150129	0.757399
59	University	183031	6/25/2022	S202	Duct Burner	Combustion	Other Combustion		1	1990	Particulate	2.176641	0.397237
59	University	183031	6/25/2022	S202	Duct Burner	Combustion	Other Combustion		1	2030	Nitrous Oxi	0.167601	0.030587
59	University	183031	6/25/2022	S202	Duct Burner	Combustion	Other Combustion		1	2990	Nitrogen O	30.7632	5.614284
59	University	183031	6/25/2022	S202	Duct Burner	Combustion	Other Combustion		1	3990	Sulfur Diox	0.41229	0.075243
59	University	183031	6/25/2022	S202	Duct Burner	Combustion	Other Combustion		1	4990	Carbon Mo	138.5795	25.29076
59	University	183031	6/25/2022	S202	Duct Burner	Combustion	Other Combustion		1	6960	Carbon Dio	88862.25	16217.36
59	University	183031	6/25/2022	S202	Duct Burner	Combustion	Other Combustion		1	6970	Methane (	1.37854	0.251584
59	University	183031	6/25/2022	S203	Emergency Standby Diesel Fire Pump	Combustion	Internal Combustion Engine	Emergency Standby	1	990	Organics (p	0.000904	0.000165
59	University	183031	6/25/2022	S203	Emergency Standby Diesel Fire Pump	Combustion	Internal Combustion Engine	Emergency Standby	1	1030	Arsenic (all	2.96E-08	5.39E-09
59	University	183031	6/25/2022	S203	Emergency Standby Diesel Fire Pump	Combustion	Internal Combustion Engine	Emergency Standby	1	1040	Beryllium (	1.73E-08	3.16E-09
59	University	183031	6/25/2022	S203	Emergency Standby Diesel Fire Pump	Combustion	Internal Combustion Engine	Emergency Standby	1	1070	Cadmium	7.39E-08	1.35E-08
59	University	183031	6/25/2022	S203	Emergency Standby Diesel Fire Pump	Combustion	Internal Combustion Engine	Emergency Standby	1	1095	Chromium	1.53E-09	2.79E-10
59	University	183031	6/25/2022	S203	Emergency Standby Diesel Fire Pump	Combustion	Internal Combustion Engine	Emergency Standby	1	1140	Lead (all) p	6.27E-08	1.14E-08
59	University	183031	6/25/2022	S203	Emergency Standby Diesel Fire Pump	Combustion	Internal Combustion Engine	Emergency Standby	1	1160	Manganese	9.84E-08	1.79E-08
59	University	183031	6/25/2022	S203	Emergency Standby Diesel Fire Pump	Combustion	Internal Combustion Engine	Emergency Standby	1	1180	Nickel pollu	1.20E-06	2.18E-07
59	University	183031	6/25/2022	S203	Emergency Standby Diesel Fire Pump	Combustion	Internal Combustion Engine	Emergency Standby	1	1190	Mercury (a	2.09E-08	3.81E-09
59	University	183031	6/25/2022	S203	Emergency Standby Diesel Fire Pump	Combustion	Internal Combustion Engine	Emergency Standby	1	1350	Diesel Engi	0.002205	0.000402
59	University	183031	6/25/2022	S203	Emergency Standby Diesel Fire Pump	Combustion	Internal Combustion Engine	Emergency Standby	1	1840	PAHs (non-	1.56E-07	2.85E-08
59	University	183031	6/25/2022	S203	Emergency Standby Diesel Fire Pump	Combustion	Internal Combustion Engine	Emergency Standby	1	2030	Nitrous Oxi	9.09E-06	1.66E-06
59	University	183031	6/25/2022	S203	Emergency Standby Diesel Fire Pump	Combustion	Internal Combustion Engine	Emergency Standby	1	2990	Nitrogen O	0.030732	0.005609
59	University	183031	6/25/2022	S203	Emergency Standby Diesel Fire Pump	Combustion	Internal Combustion Engine	Emergency Standby	1	3990	Sulfur Diox	1.11E-05	2.02E-06
59	University	183031	6/25/2022	S203	Emergency Standby Diesel Fire Pump	Combustion	Internal Combustion Engine	Emergency Standby	1	4990	Carbon Mo	0.001257	0.000229
59	University	183031	6/25/2022	S203	Emergency Standby Diesel Fire Pump	Combustion	Internal Combustion Engine	Emergency Standby	1	6960	Carbon Dio	1.136791	0.207464
59	University	183031	6/25/2022	S203	Emergency Standby Diesel Fire Pump	Combustion	Internal Combustion Engine	Emergency Standby	1	6970	Methane (	4.55E-05	8.30E-06

Bay Area Air Quality Management District

Roadway Screening Analysis Calculator

County specific tables containing estimates of risk and hazard impacts from roadways in the Bay Area.

INSTRUCTIONS:

Input the site-specific characteristics of your project by using the drop down menu in the "Search Parameter" box. We recommend that this analysis be used for roadways with 10,000 AADT and above.

• County: Select the County where the project is located. The calculator is only applicable for projects within the nine Bay Area counties.

• Roadway Direction: Select the orientation that best matches the roadway. If the roadway orientation is neither clearly north-south nor east-west, use the highest values predicted from either orientation.

• Side of the Roadway: Identify on which side of the roadway the project is located.

• Distance from Roadway: Enter the distance in feet from the nearest edge of the roadway to the project site. The calculator estimates values for distances greater than 10 feet and less than 1000 feet. For distances greater than 1000 feet, the user can choose to extrapolate values using a distribution curve or apply 1000 feet values for greater distances.

• Annual Average Daily Traffic (ADT): Enter the annual average daily traffic on the roadway. These data may be collected from the city or the county (if the area is unincorporated).

When the user has completed the data entries, the screening level PM2.5 annual average concentration and the cancer risk results will appear in the Results Box on the right. Please note that the roadway tool is not applicable for California State Highways and the District refers the user to the Highway Screening Analysis Tool at: http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Tools-and-Methodology.aspx.

Notes and References listed below the Search Boxes

Search Parameters

County	Alameda	
Roadway Direction	North-South	
Side of the Roadway	East	
Distance from Roadway	25	feet
Annual Average Daily Traffic (ADT)	11,722	

Results

Alameda County

NORTH-SOUTH DIRECTIONAL ROADWAY

PM2.5 annual average

0.210 (µg/m^3)

Cancer Risk

10.69 (per million)

Data for Alameda County based on meteorological data collected from Pleasanton in 2005

Notes and References:

1. Emissions were developed using EMFAC2011 for fleet mix in 2014 assuming 10,000 AADT and includes impacts from diesel and gasoline vehicle exhaust, brake and tire wear, and resuspended dust.
2. Roadways were modeled using CALINE4 air dispersion model assuming a source length of one kilometer. Meteorological data used to estimate the screening values are noted at the bottom of the "Results" box.
3. Cancer risks were estimated for 70 year lifetime exposure starting in 2014 that includes sensitivity values for early life exposures and OEHHA toxicity values adopted in 2013.

Bay Area Air Quality Management District

Roadway Screening Analysis Calculator

County specific tables containing estimates of risk and hazard impacts from roadways in the Bay Area.

INSTRUCTIONS:

Input the site-specific characteristics of your project by using the drop down menu in the “Search Parameter” box. We recommend that this analysis be used for roadways with 10,000 AADT and above.

• County: Select the County where the project is located. The calculator is only applicable for projects within the nine Bay Area counties.

• Roadway Direction: Select the orientation that best matches the roadway. If the roadway orientation is neither clearly north-south nor east-west, use the highest values predicted from either orientation.

• Side of the Roadway: Identify on which side of the roadway the project is located.

• Distance from Roadway: Enter the distance in feet from the nearest edge of the roadway to the project site. The calculator estimates values for distances greater than 10 feet and less than 1000 feet. For distances greater than 1000 feet, the user can choose to extrapolate values using a distribution curve or apply 1000 feet values for greater distances.

• Annual Average Daily Traffic (ADT): Enter the annual average daily traffic on the roadway. These data may be collected from the city or the county (if the area is unincorporated).

When the user has completed the data entries, the screening level PM2.5 annual average concentration and the cancer risk results will appear in the Results Box on the right. Please note that the roadway tool is not applicable for California State Highways and the District refers the user to the Highway Screening Analysis Tool at: http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Tools-and-Methodology.aspx.

Notes and References listed below the Search Boxes

Search Parameters

County	Alameda	
Roadway Direction	North-South	
Side of the Roadway	West	
Distance from Roadway	285	feet
Annual Average Daily Traffic (ADT)	11,722	

Results

Alameda County

NORTH-SOUTH DIRECTIONAL ROADWAY

PM2.5 annual average

0.029 ($\mu g/m^3$)

Cancer Risk

1.67 (per million)

Data for Alameda County based on meteorological data collected from Pleasanton in 2005

Notes and References:

1. Emissions were developed using EMFAC2011 for fleet mix in 2014 assuming 10,000 AADT and includes impacts from diesel and gasoline vehicle exhaust, brake and tire wear, and resuspended dust.
2. Roadways were modeled using CALINE4 air dispersion model assuming a source length of one kilometer. Meteorological data used to estimate the screening values are noted at the bottom of the “Results” box.
3. Cancer risks were estimated for 70 year lifetime exposure starting in 2014 that includes sensitivity values for early life exposures and OEHHA toxicity values adopted in 2013.

Diesel Internal Combustion (IC) Engine Distance Multiplier Tool: This distance multiplier tool refines the screening values for cancer risk and $PM_{2.5}$ concentrations found in the District's Stationary Source Screening Analysis Tool for permitted facilities which contain only diesel IC engines, to represent adjusted risk and hazard impacts that can be expected with farther distances from the source of emissions.

Generic Distance Multiplier Tool: This distance multiplier tool refines the screening values to represent adjusted risk and hazard impacts that can be expected with farther distances from the source of emissions.

Diesel Internal Combustion Engines

Distance (meters)	Distance (feet)	**Distance adjustment multiplier**	**Enter Risk or Hazard**	**Adjusted Risk or Hazard**	**Enter PM2.5 Concentration**	**Adjusted PM2.5 Concentration**
0	0.0	1.000	1853.2612	1853.261197	4.68	4.68
5	16.4	1.000	10.69	10.69	0.21	0.21
10	32.8	1.000	1853.2612	1853.261197	4.68	4.68
15	49.2	1.000	1853.2612	1853.261197	4.68	4.68
20	65.6	1.000	1853.2612	1853.261197	4.68	4.68
25	82.0	0.85	1853.2612	1575.272018	4.68	3.978
30	98.4	0.73	1853.2612	1352.880674	4.68	3.4164
35	114.8	0.64	1853.2612	1186.087166	4.68	2.9952
40	131.2	0.58	1853.2612	1074.891494	4.68	2.7144
50	164.0	0.5	1853.2612	926.6305986	4.68	2.34
60	196.9	0.41	1853.2612	759.8370908	4.68	1.9188
70	229.7	0.31	1853.2612	574.5109711	4.68	1.4508
80	262.5	0.28	1.67	0.4676	0.029	0.00812
90	295.3	0.25	1853.2612	463.3152993	4.68	1.17
100	328.1	0.22	1853.2612	407.7174634	4.68	1.0296
110	360.9	0.18	1853.2612	333.5870155	4.68	0.8424
120	393.7	0.16	18.71	2.9936	4.68	0.7488
130	426.5	0.15	1853.2612	277.9891796	4.68	0.702
140	459.3	0.14	1853.2612	259.4565676	4.68	0.6552
150	492.1	0.12	7.26	0.8712	5.0112	0.601344
160	524.9	0.1	1853.2612	185.3261197	4.68	0.468
180	590.6	0.09	1853.2612	166.7935077	4.68	0.4212
200	656.2	0.08	45.39	3.6312	31.32	2.5056
220	721.8	0.07	54.468	3.81276	37.58445	2.6309115
240	787.4	0.06	1853.2612	111.1956718	4.68	0.2808
260	853.0	0.05	18.076	0.9038	0.024	0.0012
280	918.6	0.04	181.56	7.2624	125.28	5.0112

Generic Case

Distance (meters)	Distance (feet)	Multiplier	**Enter Risk or Hazard**	**Adjusted Risk or Hazard**	**Enter PM2.5 Concentration**	**Adjusted PM2.5 Concentration**
0	0.0	1.000		0		0
5	16.4	1.000		0		0
10	32.8	0.883		0		0
15	49.2	0.855		0		0
20	65.6	0.827		0		0
25	82.0	0.801		0		0
30	98.4	0.775		0		0
35	114.8	0.750		0		0
40	131.2	0.726		0		0
45	147.6	0.702		0		0
50	164.0	0.679		0		0
55	180.4	0.658		0		0
60	196.9	0.636		0		0
65	213.3	0.616		0		0
70	229.7	0.596		0		0
75	246.1	0.577		0		0
80	262.5	0.558		0		0
85	278.9	0.540		0		0
90	295.3	0.523		0		0
95	311.7	0.506		0		0
100	328.1	0.489		0		0
105	344.5	0.474		0		0
110	360.9	0.458		0		0
115	377.3	0.444		0		0
120	393.7	0.429		0		0
125	410.1	0.415		0		0
130	426.5	0.402		0		0
135	442.9	0.389		0		0
140	459.3	0.376		0		0
145	475.7	0.364		0		0
150	492.1	0.353		0		0
155	508.5	0.341		0		0
160	524.9	0.330		0		0
165	541.3	0.319		0		0
170	557.7	0.309		0		0
175	574.1	0.299		0		0
180	590.6	0.290		0		0
185	607.0	0.280		0		0
190	623.4	0.271		0		0
195	639.8	0.262		0		0
200	656.2	0.254		0		0
205	672.6	0.246		0		0
210	689.0	0.238		0		0
215	705.4	0.230		0		0
220	721.8	0.223		0		0
225	738.2	0.216		0		0
230	754.6	0.209		0		0
235	771.0	0.202		0		0
240	787.4	0.195		0		0
245	803.8	0.189		0		0
250	820.2	0.183		0		0
255	836.6	0.177		0		0
260	853.0	0.171		0		0
265	869.4	0.166		0		0
270	885.8	0.160		0		0
275	902.2	0.155		0		0
280	918.6	0.150		0		0
285	935.0	0.145		0		0
290	951.4	0.141		0		0
295	967.8	0.136		0		0
300	984.3	0.132		0		0

Time at Home/Outside
Exposure Frequency

	EF	Efa	Efai	DMP	FE
	Exposure Frequency	Exposure frequency adjusted outside	Exposure frequency adjusted inside	Percent of Risk associated with Diesel	Filter Efficiency
3rd Trimester to 2 years old	EF	Efa	Efai	DPM	FE
	350	33.5	246.5	0.7	0.9

Equation: [Raw Cancer Risk / (Time at home outside * days of exposure per year)] + [1 - (Filter Efficiency * DPM Emissions)] * [Raw Cancer Risk/(Time at home Inside * Days of exposure per year)]

(parts per million, divide adjusted cancer risk by 1 million)

Source ID	Cancer Risk after Distance Adjustment	3rd Trimester to 30 Year Cancer Exposure	
	raw cancer risk	Adj Cancer	PPM
13451	9.36E-07	3.33E-07	0.33331865
20070	1.01E-07	3.592E-08	0.03591504
200903	2.28E-07	8.106E-08	0.08105825
59_125	5.11E-07	1.821E-07	0.18214056
59_2	2.24E-08	7.981E-09	0.00798112
59_3	2.38E-08	8.48E-09	0.00847994
59_4	1.28E-08	4.561E-09	0.00456064
59_REM	3.81E-06	1.359E-06	1.3585719
Oxford Street	1.07E-05	3.809E-06	3.808847
Shattuck Avenue	1.67E-06	5.95E-07	0.595021
		Total	6.4158941

Time at Home/Outside
Exposure Frequency

EF	Efa	Efai	DMP	FE
Exposure Frequency	Exposure frequency adjusted outside	Exposure frequency adjusted inside	Percent of Risk associated with Diesel	Filter Efficiency

3rd Trimester to 2 years old

EF	Efa	Efai	PM 2.5	FE
350	33.5	246.5	1	0.85

Equation: [Raw Cancer Risk / (Time at home outside * days of exposure per year)] + [1 - (Filter Efficiency * DPM Emissions)] * [Raw Cancer Risk/(Time at home Inside * Days of exposure per year)]

Source ID	PM 2.5 Risk after Distance Adjustment	PM 2.5 Exposure
	PM 2.5 risk	Adj PM2.5
13451	1.20E-03	2.42E-04
20070	1.00E-04	2.0136E-05
200903	3.00E-04	6.0407E-05
59_125	6.00E-04	0.00012081
59_2	5.54E-02	0.01115519
59_3	5.96E-02	0.01200089
59_4	3.27E-02	0.00658438
59_REM	2.63E+00	0.52975051
Oxford Street	2.10E-01	0.042285
Shattuck Avenue	2.90E-02	0.00583936
	Total	6.08E-01

Appendix D

Traffic Impact Analysis

December 11, 2023

Kim Pham
Transportation Division
Public Works Department
City of Berkeley
1947 Center Street, Fourth Floor
Berkeley, CA 94704

Re: Trip Generation Analysis of the Proposed Changes to the 2128 Oxford Street Mixed-Use Project

This report presents the results of a trip generation analysis of the proposed proposed mixed-use project at 2128 Oxford Street in the City of Berkeley. The currently proposed project involves construction of a twenty-six-story student building with a total of 463 apartments and a total of 15,000 square feet of commercial space on the ground floor and including a rooftop restaurant. The previously proposed project included 485 apartments and a total of 13,500 square feet of commercial space. The site currently has two buildings that would be demolished as part of the project. The two existing buildings have 16 apartments and 15,000 square feet of commercial space that is occupied primarily by restaurant uses, with a little over half of the commercial units being unoccupied at the time the traffic counts were conducted.

The analysis of trip generation differences between the two versions of the project indicated the latest proposal for the site would generate approximately the same trip generation as the previously proposed project. The currently proposed project would have an estimated increase in the daily traffic of about 42 trips (979 trips per day versus 938 trips per day with the previous project). The project would be forecast to generate the exact same amount of traffic during the morning peak hour, with a forecast increase of about 4 trips per hour during the PM peak hour, compared to what was studied in the traffic impact analysis prepared for the project.[1] The increase in VMT (approximately 332 miles) is below the 836 daily VMT threshold where an updated Vehicle Miles Traveled (VMT) analysis would potentially be required, subject to City approval.[2]

[1] *2128 Oxford Street Mixed-Use Project Traffic Impact Analysis*, Abrams Associates Traffic Engineering, Walnut Creek, CA, May 4, 2023.

[2] *General Plan Amendment: Vehicle Miles Traveled (VMT) for Transportation Impact Analysis under the California Environmental Quality Act (CEQA)*, Planning Commission Staff Report, Planning and Development Department, City of Berkeley, September 2, 2020.

PROJECT TRIP GENERATION

A "*trip*" is defined in ITE's Trip Generation publication as a single or one-directional vehicular movement with either the origin or destination at the project site. As a result, a trip can be either "*to*" or "*from*" the site. Consistently, a single visit to a site is counted as two trips (i.e., one to and one from the site). For the purposes of determining the reasonable worst-case impacts of traffic on the surrounding street network from a proposed project, the trips generated by this proposed development are estimated for the peak commute hours which represent the peak hours of "*adjacent street traffic*". This is the time period when the project traffic would generally contribute to the greatest amount of congestion.

The trip generation rates are based on the ITE rates for high-rise apartments in the center city core, close to rail transit (Land Use 222) and for retail/restaurant uses (Land Use 822) taken from the 11th Edition of the Institute of Transportation Engineers (ITE) Trip Generation Manual. For the retail/restaurant portion of the project the fitted curve equations were used to derive the trip rates. The ITE trip rates for apartments are generally representative of apartment buildings with a mixture of one- and two-bedroom apartments, with studios sometimes included, for an average of no more than about 2 bedrooms per unit.

For this project the proposed number of residential units is 463 but there are 293 three- and four-bedroom units that were counted as two units each, so the resulting calculations are based on 756 units. As shown in **Table 1**, the proposed project is forecast to generate a net increase in traffic of approximately 88 trips during the AM peak hour and 144 trips during the PM peak hour. These calculations also include credit for the removal of traffic from the two buildings that would be demolished as part of the project.

Table 2 presents a trip generation comparison to the previously proposed project that had 485 apartments and 13,500 square feet of commercial space. The analysis of trip generation differences between the two versions of the project indicated the latest proposal for the site would generate approximately the same trip generation as the previously proposed project, with an estimated increase in the daily traffic of about 42 trips (979 trips per day versus 938 trips per day with the previous project). As shown in **Table 2**, the project would be forecast to generate the same amount of traffic during the morning peak hour, with a forecast increase of about 4 trips per hour during the PM peak hour.

Abrams Associates
TRAFFIC ENGINEERING, INC.

TABLE 1
TRIP GENERATION FOR THE CURRENTLY PROPOSED PROJECT

Land Use	ITE Code	Size	ADT	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
ITE Apartment Rates (Center City Core, Close to Rail Transit) - Trips per Unit	222		0.82	0.05	0.06	0.10	0.10	0.04	0.14
Apartment Trip Generation		756 units[1]	620	34	42	76	78	28	106
ITE Restaurant/Retail Rates - Trips per Square Foot	822		65.17	1.73	1.15	2.88	3.90	3.89	7.79
Restaurant Trip Generation		*14,961 sq. ft.*	*975*	26	17	43	59	58	117
Reduction for Non-Auto/Pass-By Trips (34%)			*332*	9	6	15	20	20	40
Subtotals for the Restaurant/Retail			*644*	*17*	*11*	*28*	*39*	*38*	*77*
Subtotals for the Proposed Project			***1,263***	***51***	***53***	***104***	***117***	***66***	***183***
ITE Apartment Rates (Center City Core, Close to Rail Transit) - Trips per Unit	220		1.94	0.03	0.29	0.32	0.28	0.03	0.31
Apartment Trip Generation		16 units	31	1	4	5	4	1	5
ITE Restaurant/Retail Rates - Trips per Square Foot	822		57.51	1.51	1.00	2.51	3.46	3.46	6.92
Restaurant/Retail Trip Generation		*6,675[2] sq. ft.*	*384*	10	7	17	23	23	46
Reduction for Non-Auto/Pass-By Trips (34%)			*131*	3	3	6	8	8	16
Subtotals for the Restaurant/Retail			*253*	*7*	*4*	*11*	*15*	*15*	*30*
Subtotals for the Existing Uses			*284*	*8*	*8*	*16*	*19*	*16*	*35*
Net New Trip Generation for the Currently Proposed Project			**979**	**43**	**45**	**88**	**98**	**50**	**148**

SOURCE: Institute of Transportation Engineers Trip Generation Manual (11th Edition).

NOTES: [1] The project is only proposing to include only 463 units but for the purposes of the trip generation calculations the 293 three- and four-bedroom units were counted as two units each.

[2] There is currently 15,000 square feet of existing ground floor commercial space but only 6,675 square feet was occupied at the time the traffic counts were taken.

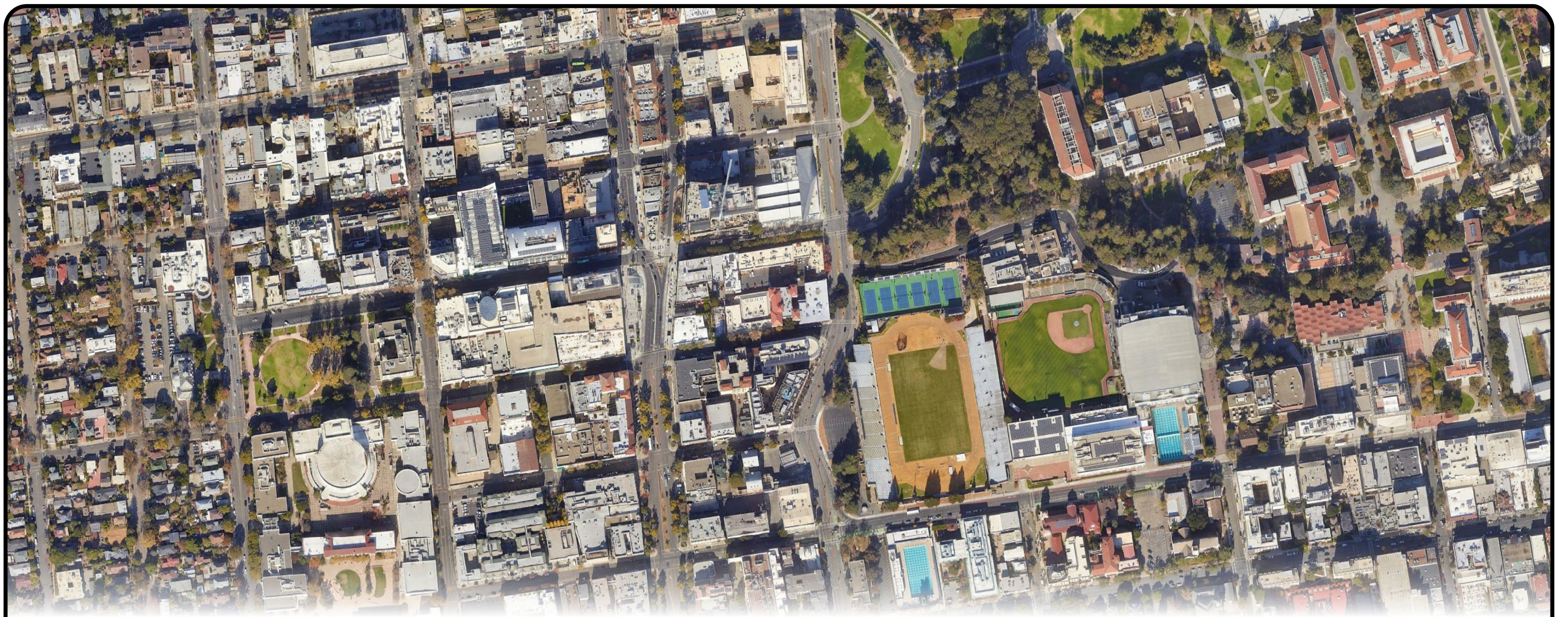
TABLE 1
TRIP GENERATION COMPARISON TO THE PREVIOUSLY PROPOSED PROJECT

Land Use	ITE Code	Size	ADT	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Net New Trip Generation for the Currently Proposed Project			**979**	**43**	**45**	**88**	**98**	**50**	**148**
Trip Generation for the Previously Proposed Project			**938**	**42**	**46**	**88**	**97**	**47**	**144**
Difference in Trip Generation between the Previous Project and the Currently Proposed Project			***42***	***0***	***-1***	***0***	***1***	***3***	***4***

Please don’t hesitate to contact me if you have any questions or need addional information.

Sincerely,

Stephen C. Abrams
President, Abrams Associates
T.E. License No. 1852



Traffic Impact Analysis

2128 Oxford Street Mixed-Use Project

City of Berkeley

Prepared by:
Abrams Associates
1875 Olympic Boulevard, Suite 210
Walnut Creek CA 94596

Abrams Associates
TRAFFIC ENGINEERING, INC.

May 4, 2023

2128 Oxford Street Mixed-Use Project

in the

City of Berkeley

TRAFFIC IMPACT ANALYSIS

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1) EXECUTIVE SUMMARY

The 2128 Oxford Street mixed-use project would involve construction of a twenty-six story student building with a total of 485 apartments and a total of 13,500 square feet of commercial space on the ground floor and including a rooftop restaurant. The only driveway to the project will be from Oxford Lane, which will provide access to a parking garage with 45 parking spaces. The site currently has two buildings that would be demolished as part of the project. The existing buildings have 16 apartments and 15,000 square feet of commercial space that is occupied primarily by restaurant uses, with a little over half of the commercial units being unoccupied at the time the traffic counts were conducted. The project proposes that its Streets and Open Space Improvement Plan (SOSIP) fees be used to help fund the pedestrianization of the east half of Center Street, as envisioned in the Downtown Area Plan. **Figure 1** shows the location of the project and the surrounding roadway network. **Figure 2** shows the ground floor site plan for the project*.* Based on the trip generation forecasts the project would generate about 88 vehicle trips during the AM peak hour and about 144 trips during the PM peak hour. The project would have a less than significant impact on vehicle miles traveled (VMT) according to the City's adopted standards.[1] A detailed review of the project's design and an analysis conducted according to the City's guidelines indicated there would be no significant traffic impacts according to the City's significance criteria, with the exception of Intersection #6, which is forecast to operate at LOS F under cumulative conditions, regardless of whether or not the project is implemented. Subject to City approval, payment of a proportionate share of the cost to install a traffic signal would be required to mitigate the project's impact at this intersection.[2]

2) INTRODUCTION

This traffic impact report describes the transportation and circulation conditions both with and without the proposed project. The study presents information on the roadway network, the pedestrian and transit conditions, and provides an analysis of the effects on transportation facilities associated with the project. This study also describes the regulatory setting; the criterion used for determining the significance of environmental impacts; and summarizes potential environmental impacts and appropriate mitigation measures when necessary. This

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[1] *General Plan Amendment: Vehicle Miles Traveled (VMT) for Transportation Impact Analysis under the California Environmental Quality Act (CEQA)*, Planning Commission Staff Report, Planning and Development Department, City of Berkeley, September 2, 2020.

[2] *Guide for Development of Traffic Impact Reports*, City of Berkeley Office of Transportation, Berkeley, CA, January, 2009.

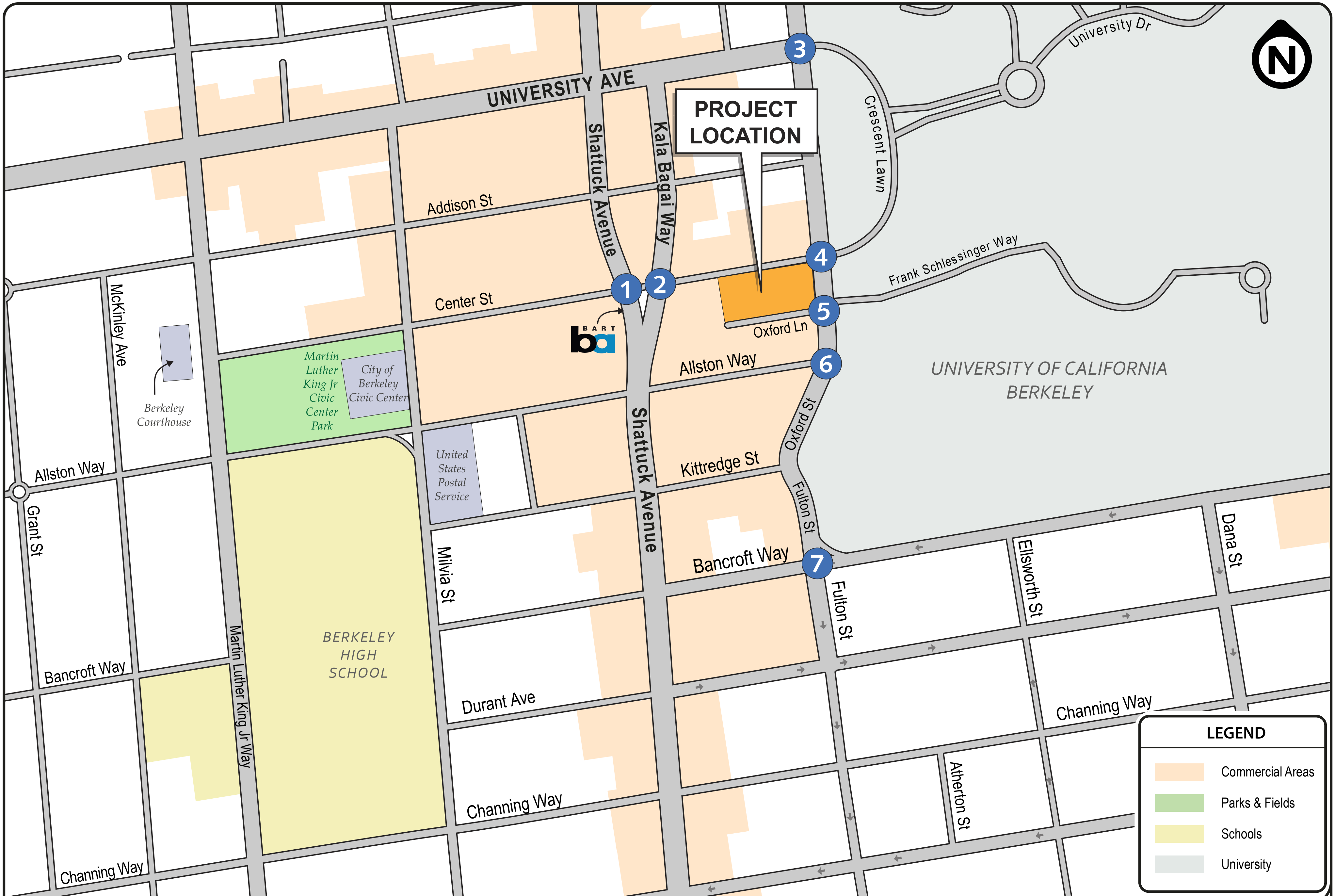

FIGURE 1 | PROJECT LOCATION

TRAFFIC IMPACT REPORT

2128 Oxford Street Mixed-Use Project

City of Berkeley

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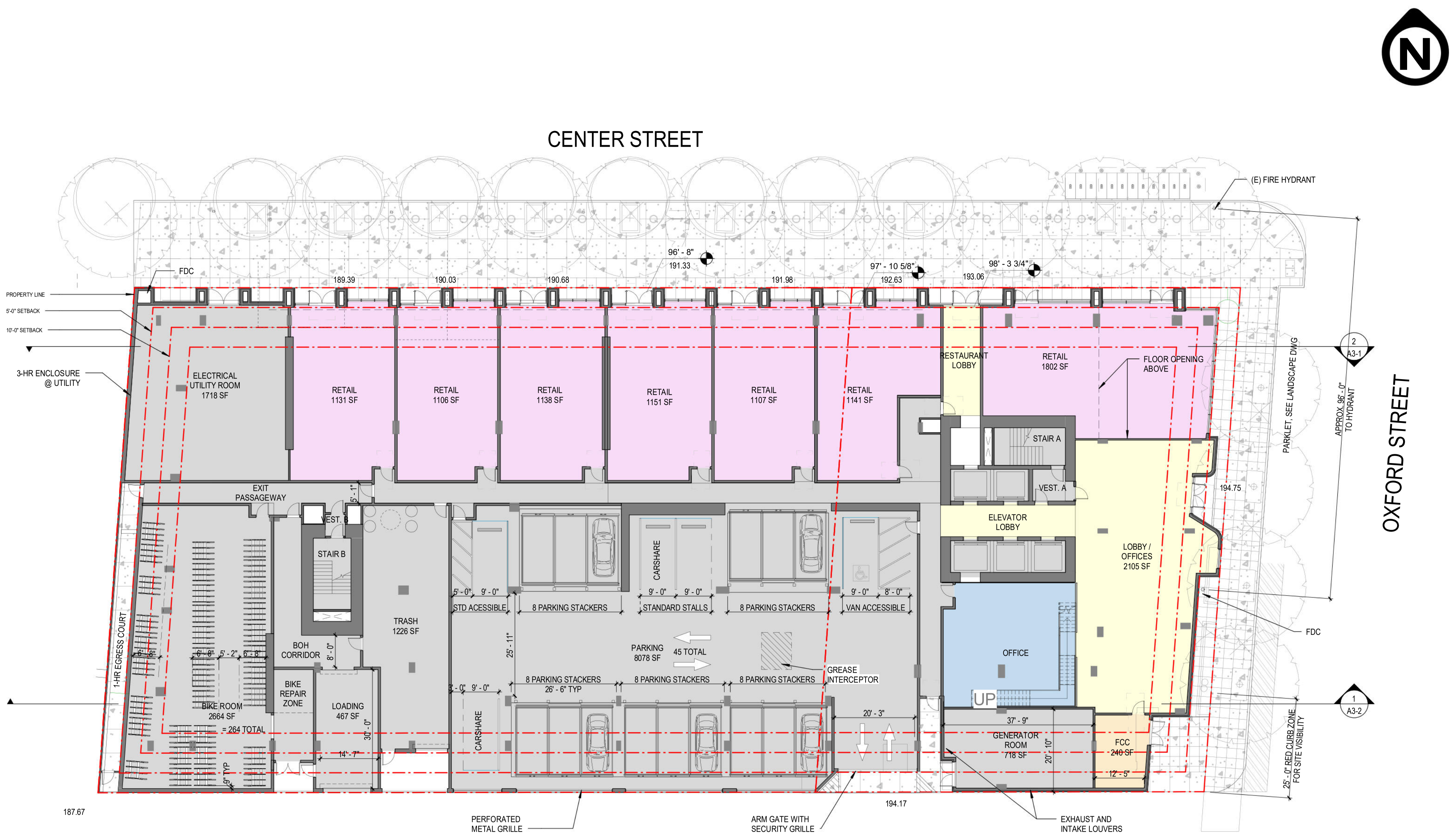

FIGURE 2 | SITE PLAN
TRAFFIC IMPACT ANALYSIS
2128 Oxford Street Mixed-Use Project
City of Berkeley

Abrams Associates
TRAFFIC ENGINEERING, INC.

study has been conducted in accordance with the requirements and methodologies set forth by the City of Berkeley, Alameda County, Caltrans, and the applicable provisions of CEQA.

3) ENVIRONMENTAL SETTING

This section of the report describes the roadways, traffic conditions and other existing transportation characteristics in the vicinity of the project. The primary basis for the traffic operations portion of the analysis is the peak hour level of service at the key study intersections. In this report, these peak commute hours will be identified as the AM and PM peak hours.

3.3 Project Study Intersections

To provide a baseline for identification of impacts on the local roadway network, existing traffic operating conditions have been determined for the key local intersections that may be affected by the project. For this analysis six study intersections were selected in coordination with City staff based on the City's Guidelines for Development of Traffic Impact Reports and their potential to be impacted by the proposed project. The six study intersections are:

1. *Shattuck Avenue at Center Street*
2. *Shattuck Avenue at Kala Bagui Way*
3. *University Avenue at Oxford Street*
4. *Oxford Street at Oxford Lane*
5. *Oxford Street at Allston Way*
6. *Bancroft Way at Fulton Street*

3.2 Traffic Analysis Scenarios

The study intersections were evaluated for the following six scenarios:

- Scenario 1: *Existing Conditions* – Level of Service (LOS) based on existing peak hour volumes and existing intersection configurations.
- Scenario 2: *Existing Plus Project* – Existing traffic volumes plus trips from the proposed project.
- Scenario 3: *Baseline (No Project) Conditions* – The Baseline scenario is based on pre-Covid volumes based on counts taken in 2018.
- Scenario 4: *Baseline Plus Project Conditions* – This scenario is based on the Baseline traffic volumes plus the trips that would be generated by the proposed project.

- Scenario 5: *Cumulative (No Project) Conditions* – The cumulative scenario is based on Year 2040 forecasts from the Alameda County Transportation Commission's (ACTC) countywide travel demand model.

- Scenario 6: *Cumulative Plus Project Conditions* – This scenario is based on the Cumulative traffic volumes plus the trips that would be generated by the proposed project.

3.3 Existing Roadway Network

As shown on **Figure 1**, the roads that would be primarily affected by the project are Oxford Street, Shattuck Avenue, Center Street, and Allston Way. The following is a brief description of these roadways:

- **Shattuck Avenue** – Shattuck Avenue is a four-lane arterial roadway extending south from Vine Street to terminate to the south at Telegraph Avenue in the City of Oakland. It serves school, residential and commercial traffic and is an important north-south travel route. It is designated as a major street and a primary transit route in the City's General Plan.

- **Oxford Street –** Oxford Street is a four lane arterial roadway extending south from Indian Rock Avenue to terminate to the south at Kittredge Street. It serves school, residential and commercial traffic and is an important north-south travel route in the downtown area. It is designated as a major street and a primary transit route in the City's General Plan.

- **Center Street –** Center Street extends east from Martin Luther King Jr. Way through downtown to terminate to the east at Oxford Street. It serves school, residential and commercial traffic and has on-street parking along most of its length.

- **Allston Way –** Allston Way extends east from Berkeley Aquatic Park across town to terminate to the east at Oxford Street. It serves school, residential and commercial traffic and is one way westbound to the east of Shattuck Avenue.

3.4 Accident History

Caltrans has established restrictions on the use of multi-way stop signs and the California Manual of Uniform Traffic Control Devices (MUTCD) provides detailed guidance on when multi-way stop applications and traffic signals are appropriate.[1] Caltrans' guidelines state that a traffic signal or all-way stop control shall be considered if: "*Five or more reported crashes, of types susceptible to correction by a traffic control signal, have occurred within a 12-month period, each crash involving personal injury or property damage apparently exceeding the applicable*

[1] *California MUTCD*, Chapter 2B, Caltrans, Sacramento, CA, November 7, 2014.

requirements for a reportable crash". A detailed review of the accident history in the study area (back to 2012) was conducted using data available from the California Highway Patrol's Statewide Integrated Traffic Records System (SWITRS). This data is included in the technical appendix and verifies the existing accident history in the area would not warrant installation of additional traffic signals, multi-way stop control, or other safety measures.

3.5 Intersection Analysis Methodology

Existing operational conditions at the study intersection were evaluated according to the requirements set forth by the City of Berkeley. Analysis of traffic operations was conducted using the 6th Edition of the *Highway Capacity Manual* (*HCM*) Level of Service (LOS) methodology with Synchro software.[1]

Level of service is an expression, in the form of a scale, of the relationship between the capacity of an intersection (or roadway segment) to accommodate the volume of traffic and the traffic moving through it at any given time. The level of service scale describes traffic flow with six ratings ranging from A to F, with "A" indicating relatively free flow of traffic and "F" indicating stop-and-go traffic characterized by traffic jams. As the amount of traffic moving through a given intersection or roadway segment increases, the traffic flow conditions that motorists experience rapidly deteriorate as the capacity of the intersection or roadway segment is reached. Under such conditions, there is general instability in the traffic flow, which means that relatively small incidents (e.g., momentary engine stall) can cause considerable fluctuations in speeds and delays that lead to traffic congestion. This near-capacity situation is labeled level of service (LOS) E. Beyond LOS E, the intersection or roadway segment capacity has effectively been exceeded, and arriving traffic will exceed the ability of the intersection to accommodate it. **Table 1** summarizes the relationship between LOS, average control delay, and the volume to capacity ratio at signalized intersections. **Table 2** summarizes the relationship between LOS and delay at unsignalized intersections

For signalized intersections, The City of Berkeley's LOS standards are based on the average delay for the entire intersection. The *HCM* methodology determines the capacity of each lane group approaching the intersection. The LOS is then based on average control delay (in seconds per vehicle) for the various movements within the intersection. A combined weighted average control delay and LOS are presented for the intersection. A summary of the HCM results and copies of the detailed HCM LOS calculations are included in the appendix to this report.

For unsignalized (all-way stop controlled and two-way stop controlled) intersections, the average control delay and LOS operating conditions are calculated by approach (e.g., northbound) and movement (e.g., northbound left-turn) for those movements that are subject to delay. Operating conditions for unsignalized intersections are presented for the worst approach.

[1] *6th Edition of the Highway Capacity Manual*, Transportation Research Board, Washington D.C., 2016.

TABLE 1
SIGNALIZED INTERSECTION LEVEL OF SERVICE DEFINITIONS

Level of Service	Description of Operations	Average Delay (sec/veh)	Volume to Capacity Ratio
A	Insignificant Delays: No approach phase is fully used and no vehicle waits longer than one red indication.	$\leq$ 10	< 0.60
B	Minimal Delays: An occasional approach phase is fully used. Drivers begin to feel restricted.	> 10 to 20	> 0.61 to 0.70
C	Acceptable Delays: Major approach phase may become fully used. Most drivers feel somewhat restricted.	> 20 to 35	> 0.71 to 0.80
D	Tolerable Delays: Drivers may wait through no more than one red indication. Queues may develop but dissipate rapidly without excessive delays.	> 35 to 55	> 0.81 to 0.90
E	Significant Delays: Volumes approaching capacity. Vehicles may wait through several signal cycles and long vehicle queues from upstream.	> 55 to 80	> 0.91 to 1.00
F	Excessive Delays: Represents conditions at capacity, with extremely long delays. Queues may block upstream intersections.	> 80	> 1.00

SOURCES: *Highway Capacity Manual, Sixth Edition*, Transportation Research Board, 2016.

TABLE 2
UNSIGNALIZED INTERSECTION LEVEL OF SERVICE DEFINITIONS

Level of Service	Description of Operations	Average Delay (seconds/vehicle)
A	No delay for stop-controlled approaches.	0 to 10
B	Operations with minor delays.	> 10 to 15
C	Operations with moderate delays.	> 15 to 25
D	Operations with some delays.	> 25 to 35
E	Operations with high delays and long queues.	> 35 to 50
F	Operation with extreme congestion, with very high delays and long queues unacceptable to most drivers.	> 50

SOURCE: *Highway Capacity Manual, Sixth Edition*, Transportation Research Board, 2016.

3.6 Existing Intersection Capacity Conditions

The existing intersection geometry at the project study intersections is presented in **Figure 3**. The existing traffic volumes at these intersections for the weekday AM and PM peak hours are presented in **Figure 4**. Traffic counts at the intersection were conducted in January, 2022 when UC Berkeley was in session but most classes were still being held online, resulting in substantially lower traffic volumes. **Table 3** summarizes the associated LOS computation results for the existing weekday AM and PM peak hour conditions at these intersections. As shown in **Table 3**, all of the study intersections currently have acceptable conditions (LOS D or better). Please note the detailed LOS calculations are included in the appendix to this report**.**

3.7 Pedestrian and Bicycle Facilities

Bicycle paths, lanes and routes are typical examples of bicycle transportation facilities, which are defined by Caltrans as being in one of the following five classes:

Class I – Provides a completely separated facility designed for the exclusive use of bicyclists and pedestrians with crossing points minimized.
Class II – Provides a restricted right-of-way designated lane for the exclusive or semi-exclusive use of bicycles with through travel by motor vehicles or pedestrians prohibited, but with vehicle parking and cross-flows by pedestrians and motorists permitted.
Class III – Provides a right-of-way designated by signs or permanent markings and shared with pedestrians and motorists.
Class IV – Provides an adjacent bike lane or bikeway that is physically separated from motor vehicle traffic.

In the vicinity of the project Center Street, Oxford Street, and Bancroft Way are Class II bike routes with bike lanes.

3.8 Transit Service

The Downtown Berkeley BART station is located less than five hundred feet from the project site. This station is located on the Richmond-Fremont Line which connected to other destinations in the Bay Area at the MacArthur Station. There is also direct service to Downtown San Francisco as well as continuing service to Milbrae. There is also extensive bus transit service provided by Alameda-Contra Costa County Transit (AC Transit) at the BART Station. In addition to local bus routes 6, 18, 51B, and 79, the following special lines operate less than a block from the project:

> **800:** (All Nighter) Richmond BART to Market St. and Van Ness Ave, S.F., via Macdonald Ave, San Pablo Ave, University Ave, Telegraph Ave and downtown Oakland. Returns via Market St. and West Oakland BART.
> **851:** (All Nighter) Downtown Berkeley to Fruitvale BART via Southside Berkeley (UC campus), College Ave., Broadway, downtown Oakland, Webster St., Santa Clara Ave., Broadway, and Fruitvale Ave.

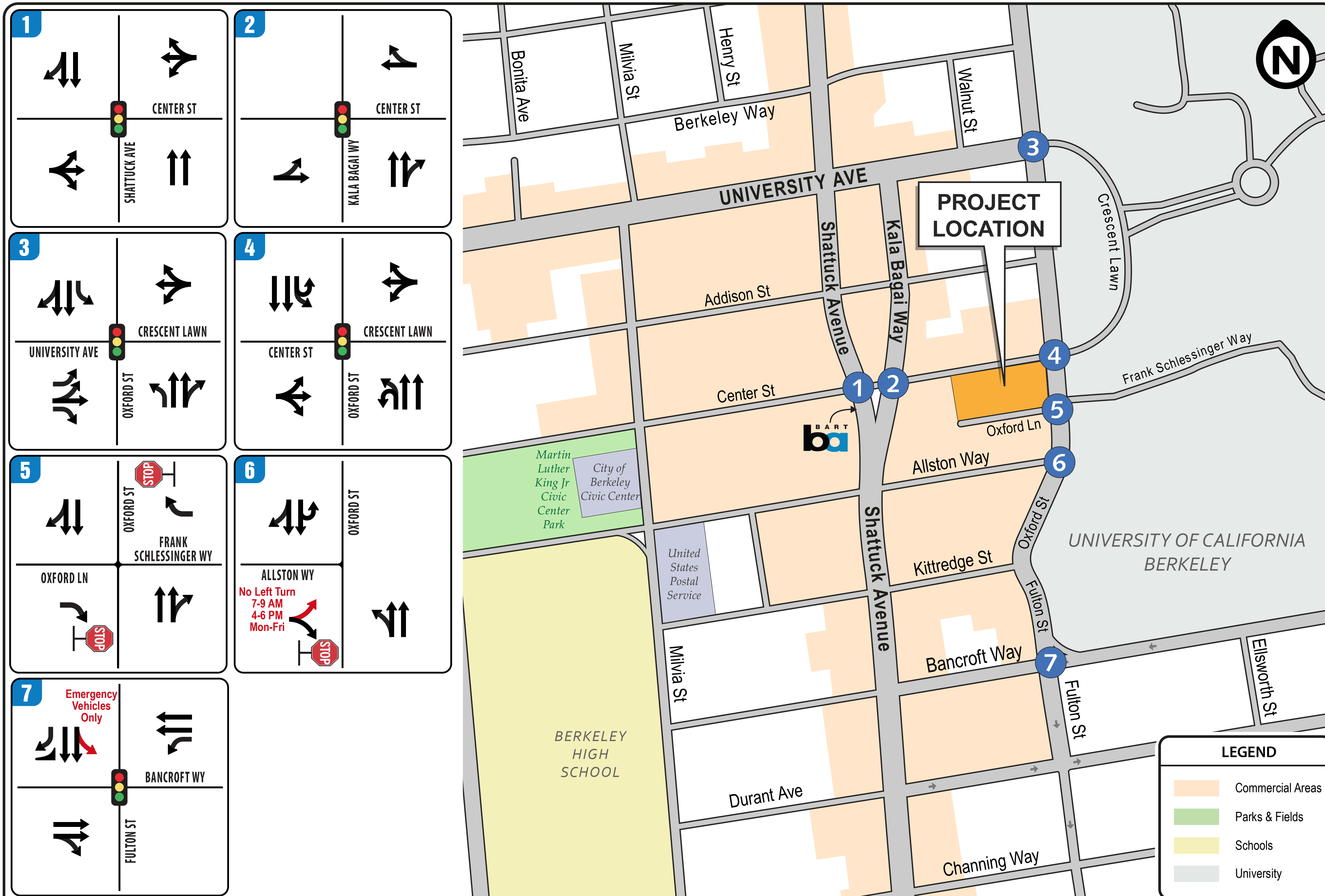

FIGURE 3 | EXISTING LANE CONFIGURATION

TRAFFIC IMPACT ANALYSIS

2128 Oxford Street Mixed-Use Project

City of Berkeley

Abrams Associates
TRAFFIC ENGINEERING, INC.

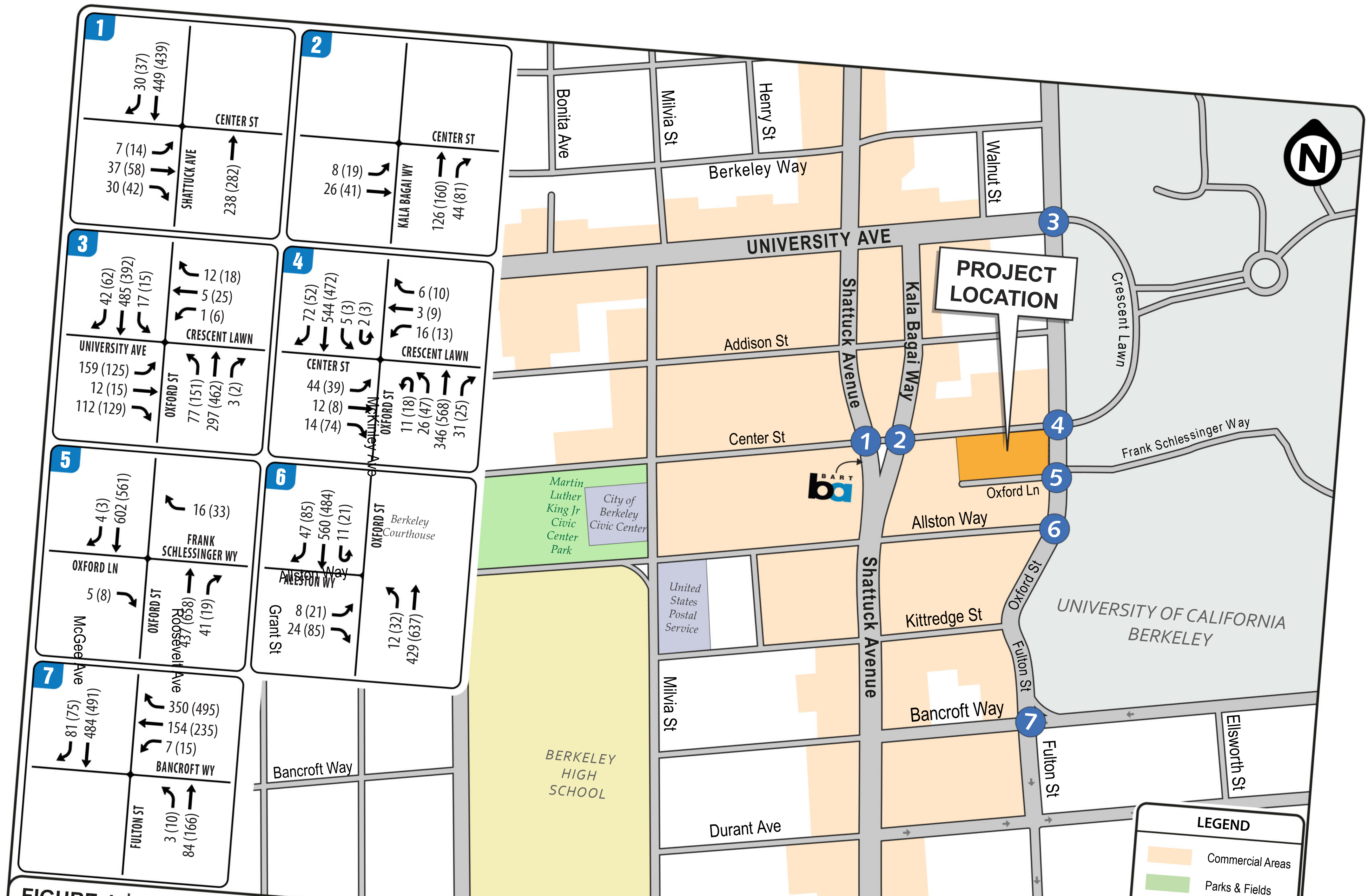

FIGURE 4 | EXISTING AM(PM) PEAK HOUR TRAFFIC VOLUMES
TRAFFIC IMPACT ANALYSIS
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TABLE 3
EXISTING INTERSECTION LEVEL OF SERVICE CONDITIONS

INTERSECTION		CONTROL	PEAK HOUR	EXISTING	
				Delay	LOS
1	SHATTUCK AVENUE & CENTER STREET	Signalized	AM	15.0	B
			PM	18.2	B
2	SHATTUCK AVENUE & KALA BAGUI WAY	Signalized	AM	0.3	A
			PM	0.3	A
3	UNIVERSITY AVENUE & OXFORD STREET	Signalized	AM	13.0	B
			PM	19.2	B
4	OXFORD STREET & CENTER STREET	Signalized	AM	10.4	B
			PM	15.3	B
5	OXFORD STREET & OXFORD LANE	Side Street Stop	AM	12.3	B
			PM	12.3	B
6	OXFORD STREET & ALLSTON WAY	Side Street Stop	AM	16.7	C
			PM	22.5	C
7	BANCROFT WAY & FULTON STREET	Signalized	AM	22.2	C
			PM	27.2	C

SOURCE: Abrams Associates, 2023

NOTES: HCM LOS results are presented in terms of average intersection delay in seconds per vehicle.

F: (Transbay) UC Campus to Transbay Temporary Terminal, San Francisco via Shattuck Ave, Adeline St and 40th St.

Please note the nearest bus stops are less than a block from the project site at Shattuck Avenue and Center Street.

4) REGULATORY CONTEXT

Existing policies, laws and regulations that apply to the proposed project are summarized below.

4.1 State

The California Department of Transportation (Caltrans) has jurisdiction over State highways and any improvements to these roadways would require Caltrans' approval.

4.2 Local

***City of Berkeley General Plan* -** The Transportation and Circulation Element the City of Berkeley General Plan addresses the location and extent of existing and planned transportation routes, terminals, and other local public utilities and facilities. The General Plan identifies roadway and transit goals and policies that have been adopted to ensure that the transportation system of the City will have adequate capacity to serve planned growth. These goals and policies are intended to provide a plan and implementation measures for an integrated, multimodal transportation system that will safely and efficiently meet the transportation needs of all economic and social segments of the City.

4.3 Significance Criteria

It is important to note that this project has not been found to have any significant impacts according to CEQA and the CEQA criteria at the bottom of this section are presented for informational purposes only. In addition, the level of service criteria described below are based on the City's General Plan standards, not CEQA, and any proposed mitigations are intended to address the City standards. Traffic improvements to improve traffic operations at the project study intersections are not considered to be required mitigations under CEQA. The City's General Plan states that the traffic from a project could cause an intersection to exceed City standards if the LOS at the intersection is reduced from LOS A, B, C, or D to LOS E (with the addition of two (2) seconds of average delay) for signalized intersections. Improvement measures to improve the LOS should be considered at intersections that exceed this service level threshold. Exceptions to the LOS D standard arise when the project is not expected to add more than two seconds at an intersection going from LOS D to LOS E or more than three seconds of delay at an intersection that is already operating at LOS E. In addition, improvement measures would also need to be considered if a project would increase the volume to capacity (V/C) ratio by more than 0.01 at a signalized intersection that is already operating at LOS F. For unsignalized intersections, additional considerations are involved, including the number of vehicles on the critical approach, vehicles contributed by the proposed project, and signal warrant analysis. At an unsignalized intersection, improvement measures are required if a movement is LOS F, the peak hour signal warrant is met, and a minimum of 10 vehicles are added to the critical movement. In this case the project has not been found to have any significant impacts but it should be noted that according to CEQA guidelines, a project could have a significant impact if it would:

- Conflict with a plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, including transit, roadway, bicycle and pedestrian facilities.
- Would the project conflict with or be inconsistent with CEQA Guidelines Section 15064.3 subdivision (b)?
- Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment).
- Result in inadequate emergency vehicle access.

5) IMPACT ANALYSIS AND MITIGATION MEASURES

5.1 Project Trip Generation

As noted above, the proposed project would consist of 485 student apartments and a total of 13,500 square feet of commercial space. The resulting trip generation calculations are shown in **Table 4**. The trip generation rates are based on the ITE rates for high-rise apartments in the center city core, close to rail transit (Land Use 222) and for retail/restaurant uses (Land Use 822) taken from the 11th Edition of the Institute of Transportation Engineers (ITE) Trip Generation Manual. For the retail/restaurant portion of the project the fitted curve equations were used to derive the trip rates. The ITE trip rates for apartments are generally representative of apartment buildings with a mixture of one- and two-bedroom apartments, with studios sometimes included, for an average of no more than about 2 bedrooms per unit. For this project the proposed number of residential units is 485 but there are 131 three- and four-bedroom units that were counted as two units each, and 83 five-bedroom units that were counted as 3 units each, so the resulting calculations are based on 782 units. As shown in **Table 4**, the proposed project is forecast to generate a net increase in traffic of approximately 88 trips during the AM peak hour and 144 trips during the PM peak hour.

5.2 Project Trip Distribution

The trip distribution assumptions have been based on the existing traffic count data including daily directional volume and peak-hour turning movements, the Alameda County travel demand model, and knowledge of the surrounding area such as commute patterns and the overall land use patterns in the area. **Figure 5** shows the project traffic that would be added at the project study intersections.

5.3 Existing Plus Project Intersection Capacity Conditions

This scenario evaluates the existing conditions with the addition of traffic from the proposed project. A comparison of the capacity calculations for the conditions with the addition of traffic from the project is shown in **Table 5**. **Figure 6** presents the existing plus project volumes used in the analysis. The corresponding LOS analysis calculation sheets are presented in the Traffic Analysis Appendix. As shown in **Table 5**, all of the study intersections would continue to have acceptable conditions (LOS D or better) during the weekday AM and PM peak hours. Therefore, the addition of traffic to these intersections would not be considered an operational impact according to City of Berkeley guidelines.

TABLE 4
TRIP GENERATION CALCULATIONS

Land Use	ITE Code	Size	ADT	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total
ITE Apartment Rates (Center City Core, Close to Rail Transit) - Trips per Unit	222		0.82	0.05	0.06	0.10	0.10	0.04	0.14
Apartment Trip Generation		782 units[1]	641	35	43	78	81	28	109
ITE Restaurant/Retail Rates - Trips per Square Foot	822		65.17	1.73	1.15	2.88	3.90	3.89	7.79
Restaurant Trip Generation		*13,500 sq. ft.*	*880*	23	16	39	53	53	106
Reduction for Non-Auto/Pass-By Trips (34%)			*299*	8	5	13	18	18	36
Subtotals for the Restaurant/Retail			*581*	*15*	*11*	*26*	*35*	*35*	*70*
Subtotals for the Proposed Project			***1,222***	***50***	***54***	***104***	***116***	***63***	***179***
ITE Apartment Rates (Center City Core, Close to Rail Transit) - Trips per Unit	220		1.94	0.03	0.29	0.32	0.28	0.03	0.31
Apartment Trip Generation		16 units	31	1	4	5	4	1	5
ITE Restaurant/Retail Rates - Trips per Square Foot	822		57.51	1.51	1.00	2.51	3.46	3.46	6.92
Restaurant/Retail Trip Generation		*6,675*[2] *sq. ft.*	*384*	10	7	17	23	23	46
Reduction for Non-Auto/Pass-By Trips (34%)			*131*	3	3	6	8	8	16
Subtotals for the Restaurant/Retail			*253*	*7*	*4*	*11*	*15*	*15*	*30*
Subtotals for the Existing Uses			***284***	***8***	***8***	***16***	***19***	***16***	***35***
Net New Trip Generation for the Proposed Project			**938**	**42**	**46**	**88**	**97**	**47**	**144**

SOURCE: Institute of Transportation Engineers Trip Generation Manual (11th Edition).

NOTES: [1] The project is only proposing to include only 485 units but for the purposes of the trip generation calculations the 131 three- and four-bedroom units were counted as two units each and the 83 five-bedroom units were counted as three each.

[2] There is currently 15,000 square feet of existing ground floor commercial space but only 6,675 square feet was occupied at the time the traffic counts were taken.

FIGURE 4 | EXISTING AM(PM) PEAK HOUR TRAFFIC VOLUMES
TRAFFIC IMPACT ANALYSIS
2128 Oxford Street Mixed-Use Project
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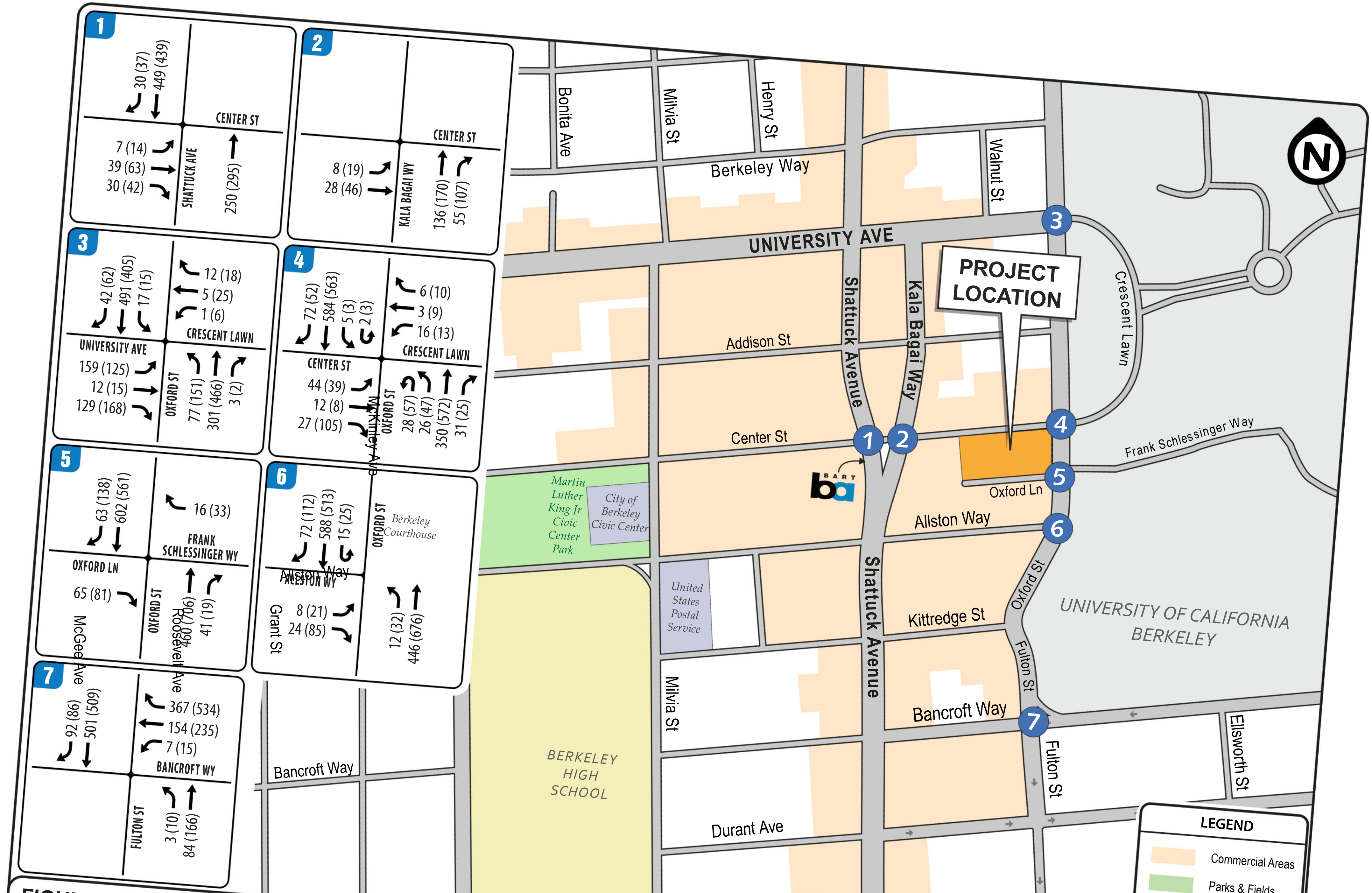

FIGURE 6 | EXISTING PLUS PROJECT AM(PM) PEAK HOUR TRAFFIC VOLUMES
TRAFFIC IMPACT ANALYSIS
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5.4 Baseline Intersection Capacity Conditions

For background conditions the pre-Covid volumes from traffic counts taken in 2018 were used. These were substantially higher than the existing traffic counts and represent a conservative estimate of post-pandemic conditions. **Figure 7** presents the resulting baseline volumes at each of the project study intersections **Table 6** summarizes the LOS results for the Baseline and Baseline Plus Project weekday AM and PM peak hour conditions. The corresponding LOS analysis calculation sheets are presented in the *Traffic Analysis Appendix*. As shown in **Table 6**, all of the study intersections currently have acceptable conditions (LOS D or better) during the weekday AM and PM peak hours with the exception of Intersection #6, which is forecast to operate at LOS E. Please note the detailed LOS calculations are included in the technical appendix to this report**.**

TABLE 5
EXISTING PLUS PROJECT INTERSECTION LEVEL OF SERVICE CONDITIONS

INTERSECTION		CONTROL	PEAK HOUR	EXISTING		EXISTING PLUS PROJECT	
				Delay	LOS	Delay	LOS
1	SHATTUCK AVENUE & CENTER STREET	Signalized	AM	15.0	B	15.0	B
			PM	18.2	B	18.2	B
2	SHATTUCK AVENUE & KALA BAGUI WAY	Signalized	AM	0.3	A	0.3	A
			PM	0.3	A	0.3	A
3	UNIVERSITY AVENUE & OXFORD STREET	Signalized	AM	13.0	B	13.6	B
			PM	19.2	B	21.0	C
4	OXFORD STREET & CENTER STREET	Signalized	AM	10.4	B	11.4	B
			PM	15.3	B	18.7	B
5	OXFORD STREET & OXFORD LANE	Side Street Stop	AM	12.3	B	13.9	B
			PM	12.3	B	15.0	C
6	OXFORD STREET & ALLSTON WAY	Side Street Stop	AM	16.7	C	17.7	C
			PM	22.5	C	25.8	D
7	BANCROFT WAY & FULTON STREET	Signalized	AM	22.2	C	22.8	C
			PM	27.2	C	28.1	C

SOURCE: Abrams Associates, 2023

NOTES: HCM LOS results are presented in terms of average intersection delay in seconds per vehicle.

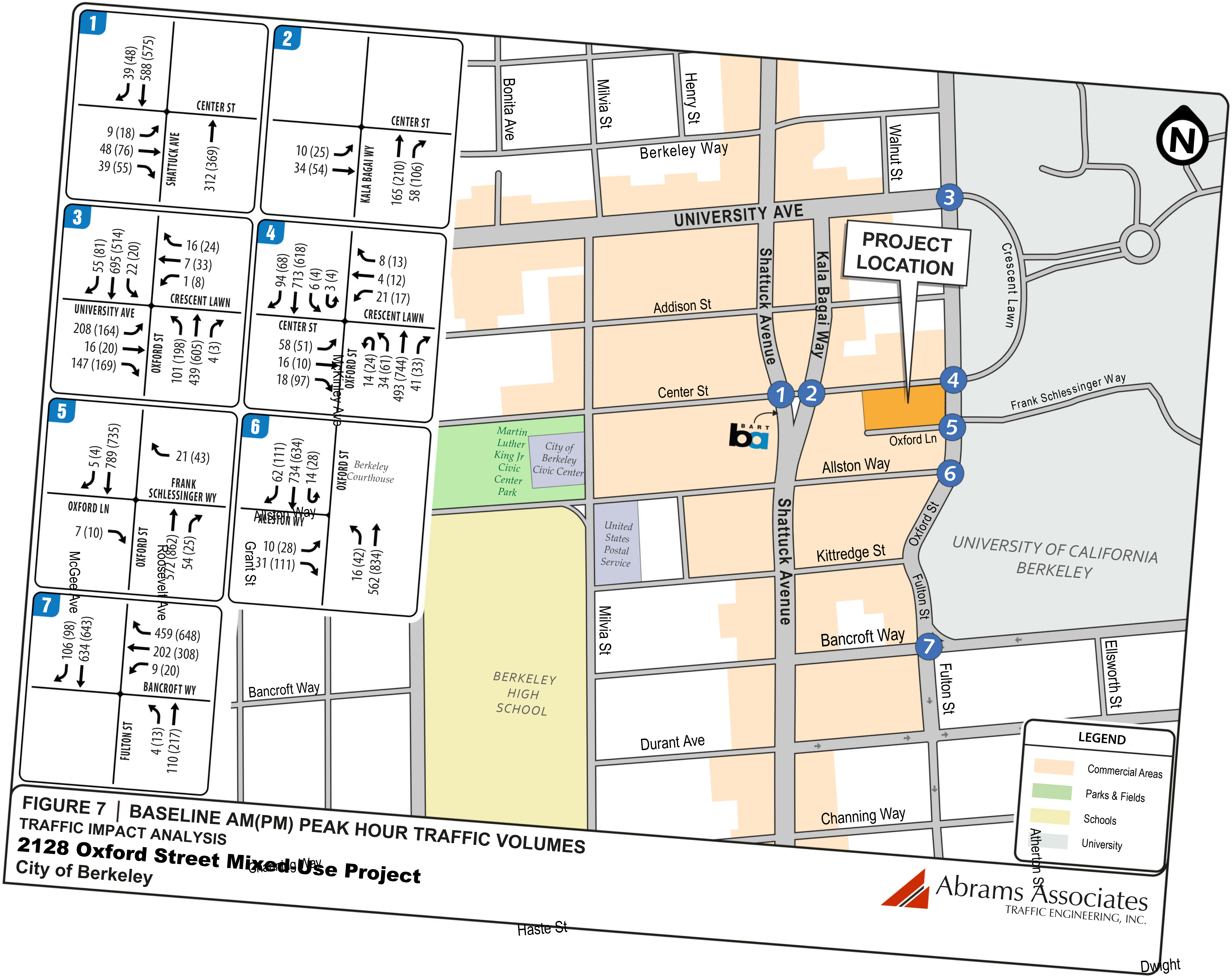

FIGURE 7 | BASELINE AM(PM) PEAK HOUR TRAFFIC VOLUMES

TRAFFIC IMPACT ANALYSIS

2128 Oxford Street Mixed-Use Project

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TABLE 6
BASELINE PLUS PROJECT INTERSECTION LEVEL OF SERVICE CONDITIONS

	INTERSECTION	CONTROL	PEAK HOUR	BASELINE		BASELINE PLUS PROJECT	
				Delay	LOS	Delay	LOS
1	SHATTUCK AVENUE & CENTER STREET	Signalized	AM	16.3	B	16.3	B
			PM	19.5	B	19.6	B
2	SHATTUCK AVENUE & KALA BAGUI WAY	Signalized	AM	0.4	A	0.4	A
			PM	0.4	A	0.4	A
3	UNIVERSITY AVENUE & OXFORD STREET	Signalized	AM	14.2	B	14.9	B
			PM	22.4	C	25.2	C
4	OXFORD STREET & CENTER STREET	Signalized	AM	12.0	B	13.0	B
			PM	18.2	B	23.3	C
5	OXFORD STREET & OXFORD LANE	Side Street Stop	AM	13.6	B	15.8	C
			PM	13.5	B	17.2	C
6	OXFORD STREET & ALLSTON WAY	Side Street Stop	AM	22.6	C	24.7	C
			PM	**> 50.0**	**F**	**> 50.0**	**F**
7	BANCROFT WAY & FULTON STREET	Signalized	AM	26.1	C	27.1	C
			PM	32.8	C	34.6	C

SOURCE: Abrams Associates, 2023
NOTES: HCM LOS results are presented in terms of seconds per vehicle.

5.5 Baseline *Plus Project* Intersection Capacity Conditions

The Baseline plus proposed project traffic forecasts were developed by adding project-related traffic to the baseline traffic volumes. As noted above, **Table 6** summarizes the LOS results for the Baseline Plus Project weekday AM and PM peak hour conditions (i.e. the existing roadway network). **Figure 8** presents the resulting baseline plus project volumes at each of the project study intersections. Please note that the corresponding LOS analysis calculation sheets are presented in the appendix. As shown in **Table 6**, all of the study intersections would continue to have acceptable conditions (LOS D or better) during the weekday AM and PM peak hours with the exception of Intersection #6, which is forecast to operate at LOS F with addition of traffic from the proposed project. Under baseline plus project conditions the intersection would not meet the warrants for a traffic signal and therefore the addition of project traffic to this intersection would not be considered an operational impact according to the standards established by the City of Berkeley. Prior to construction of the identified improvements the project would mitigate the above-identified potential safety impacts by paying a proportionate share of the following construction costs. The intersection improvement measure proposed to maintain safety with the proposed project includes the following: Payment of a proportionate share of the cost to install rapid rectangular flashing beacons (RRFB's) for the existing Oxford Street crosswalk at Allston Way, meeting the City's requirements.

5.6 Cumulative Traffic Volumes

The Cumulative scenario evaluates the future buildout conditions in the area based on forecasts for the area from the Alameda County Transportation Commission's (ACTC) countywide travel demand model. **Figure 9** presents the resulting cumulative buildout volumes for the area,

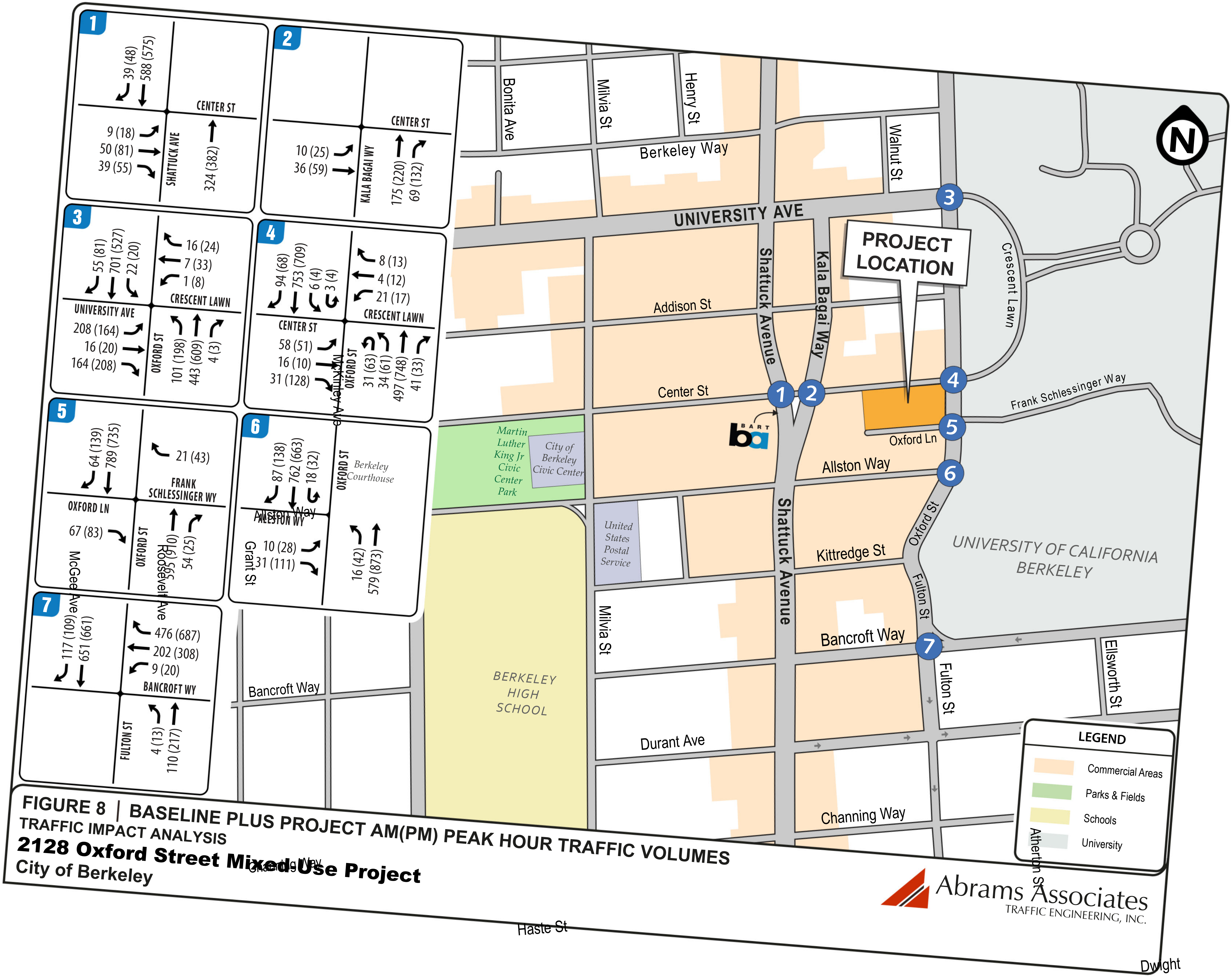

FIGURE 8 | BASELINE PLUS PROJECT AM(PM) PEAK HOUR TRAFFIC VOLUMES
TRAFFIC IMPACT ANALYSIS
2128 Oxford Street Mixed-Use Project
City of Berkeley

FIGURE 9 | CUMULATIVE AM(PM) PEAK HOUR TRAFFIC VOLUMES
TRAFFIC IMPACT ANALYSIS
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without traffic from the proposed project. Please note these forecasts have not been adjusted for potential effects of recent events (such an increase in working from home) and represent the worst-case forecasts that were developed based on pre-pandemic conditions (i.e. no reductions were taken to account for the effects of the pandemic).

5.7 Cumulative *Plus Project* Traffic Capacity Conditions

This scenario evaluates the existing conditions with the changes to traffic forecast with the planned development of the Chevron and Car Wash along with the two adjacent commercial properties. The resulting volumes with the addition of traffic from full development of the project site are presented in **Figure 10**. **Table 7** summarizes the LOS results for the Cumulative Plus Project weekday AM and PM peak hour conditions. Please note that the corresponding LOS analysis calculation sheets are presented in the *Traffic Analysis Appendix*. As shown in **Table 7** all project driveways would be forecast to continue to have acceptable conditions during the weekday AM and PM peak hours with the exception of Intersection #6, which is forecast to operate at LOS F regardless of whether or not the project is implemented. However, under cumulative plus project conditions the intersection is forecast to meet the warrants for a traffic signal and therefore the addition of project traffic to this intersection would be considered an operational impact according to the standards established by the City of Berkeley. Prior to construction of the identified improvements the project would mitigate the identified operational impact by paying a proportionate share of the construction costs to install a traffic signal.

TABLE 7
CUMULATIVE PLUS PROJECT INTERSECTION LEVEL OF SERVICE CONDITIONS

INTERSECTION		CONTROL	PEAK HOUR	CUMULATIVE		CUMULATIVE PLUS PROJECT	
				Delay	LOS	Delay	LOS
1	SHATTUCK AVENUE & CENTER STREET	Signalized	AM	16.8	B	16.8	B
			PM	20.1	C	20.2	C
2	SHATTUCK AVENUE & KALA BAGUI WAY	Signalized	AM	0.4	A	0.4	A
			PM	0.4	A	0.4	A
3	UNIVERSITY AVENUE & OXFORD STREET	Signalized	AM	15.0	B	15.7	B
			PM	24.0	C	27.4	C
4	OXFORD STREET & CENTER STREET	Signalized	AM	12.8	B	13.8	B
			PM	19.7	B	26.0	C
5	OXFORD STREET & OXFORD LANE	Side Street Stop	AM	14.1	B	16.6	C
			PM	14.0	B	18.2	C
6	OXFORD STREET & ALLSTON WAY	Side Street Stop	AM	26.1	D	29.1	D
			PM	**> 50.0**	**F**	**> 50.0**	**F**
7	BANCROFT WAY & FULTON STREET	Signalized	AM	28.2	C	29.5	C
			PM	36.6	D	39.3	D

SOURCE: Abrams Associates, 2023
NOTES: HCM LOS results are presented in terms of seconds per vehicle.

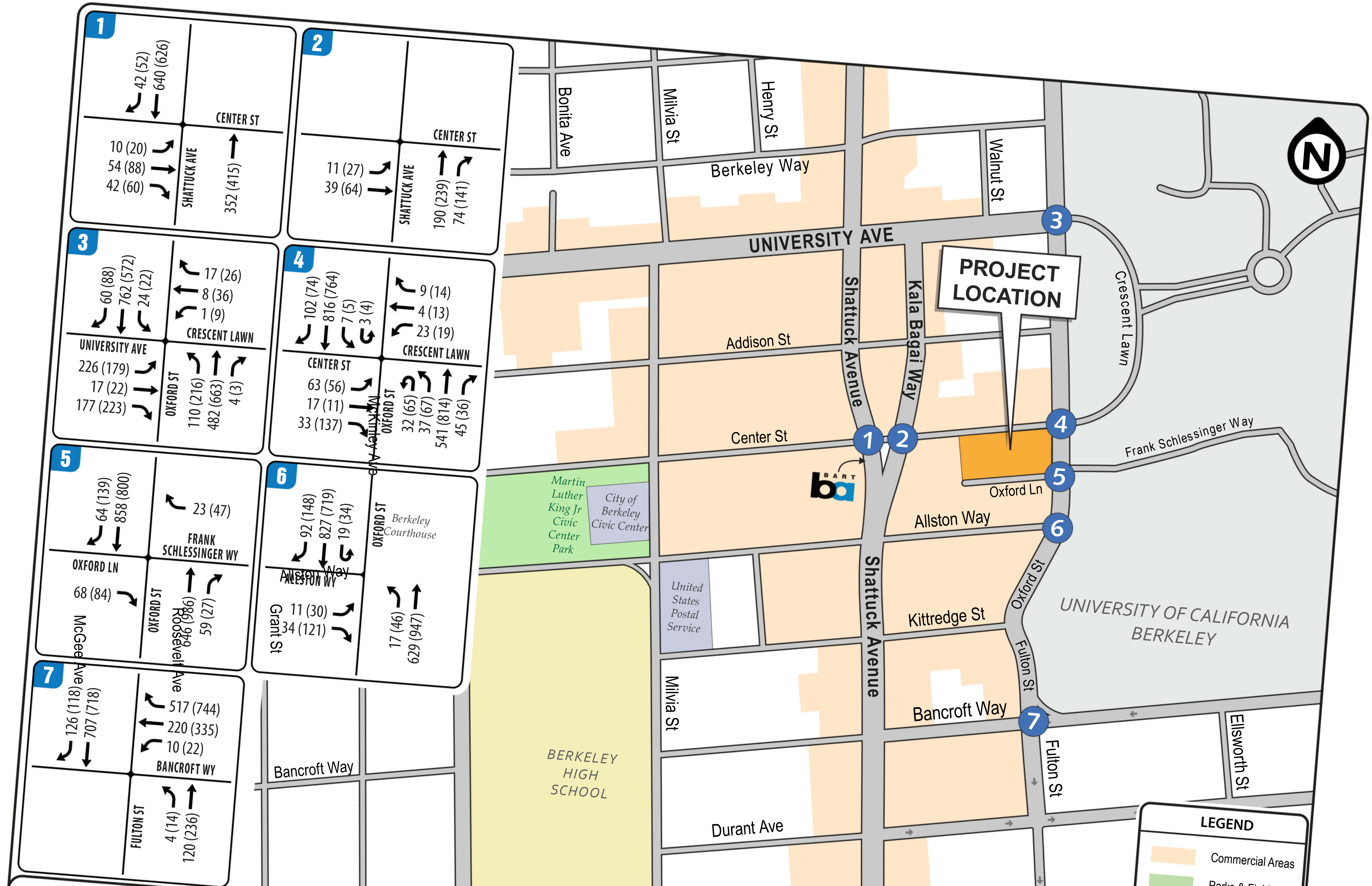

FIGURE 10 | CUMULATIVE PLUS PROJECT AM(PM) PEAK HOUR TRAFFIC VOLUMES
TRAFFIC IMPACT ANALYSIS
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5.8 Internal Circulation and Access

No site circulation or access issues have been identified that would cause any traffic safety issues or any unusual traffic congestion or delay. Accident records for surrounding streets within a block of the project site and for each of the study intersections are included in the technical appendix to this report. Oxford Lane currently serves parking for the existing tenant on the project site, which has approximately 57 parking spaces. Oxford Lane also provides access to the back of several other commercial and residential properties. Oxford Lane is approximately 10 feet wide and serves two-way traffic but no problems with safety or traffic operations have been documented or observed. The proposed project is not expected to change this condition as there may actually be a reduction in traffic due to the reduction in parking spaces on the site. The existing parking lot on the site has approximately 57 parking spaces and the proposed project would only have 45 parking spaces.

The improvement measure in Section 5.5. is intended to address potential U-turns at Allston Way with payment of a proportionate share of the construction costs to install rapid rectangular flashing beacons (RRFB's). In addition, Section 5.7 includes an improvement measure for the project to contribute a proportionate share of the construction costs to install a traffic signal at the intersection, meeting the City's requirements. The RRFB's would be an interim safety improvement that would be removed once the traffic signal is installed. It is assumed the future traffic signal would include a protected left turn phase to further improve safety with the high volume of U-turns. At the intersection of Oxford Street and Center Street it is our understanding that northbound Oxford Street U-turns would be addressed in the future as part of the Center Street Plaza project. Per City of Berkeley guidelines, the project will need to maintain a minimum five foot by five-foot sight distance triangle at the garage entrance/exit. It is expected the project will also be required to provide visual and/or audio warning devices that alert pedestrians when vehicles are exiting the driveway.

5.9 Parking

This section discusses the City of Berkeley's zoning and estimated parking demand for the project. Section 23.322.030 of the Berkeley Municipal Code specifies that no parking spaces are required for residential uses within commercial districts. For the commercial portion of the project the City's municipal code requires a minimum of 20 parking spaces and the project is proposing to provide 45 spaces, which includes 2 car share spaces. It should also be noted that that according to the City's bicycle parking standards the project would require 467 long term bicycle parking spaces and also 35 short term spaces. The project is proposing to provide 264 long-term bicycle parking spaces while also providing another 42 short-term bicycle parking spaces provided with bicycle racks and through expansion of the on-street bicycle corral.

Parking Demand in Berkeley - For this location on a major bus route the parking demand would be less than the typical ITE rate in the Parking Generation Manual. This is based on many of the same characteristics that are discussed in the trip generation section. The availability of transit, the use of bicycles, and the attractiveness of walking in a mixed-use environment clearly results in reduced vehicle trip generation and an associated reduction in the need for parking. Since Berkeley has numerous opportunities for public transportation and the apartment residents are not all expected to have personal vehicles, it is anticipated that a substantial portion of all travel will occur by walking, bicycling, and through the use of public transit. Please note in addition to being less than two blocks from a BART station there are bus stops near the site that include access to local routes as well as transbay and all-nighter bus routes.

Summary of Findings on Parking - Based on these the above factors, the residential parking could still meet the City's zoning requirements, subject to approval by the City. With an approved use permit the zoning could allow the project to proceed with the proposed 45 space parking garage. The following are considerations that may affect the parking demand and shortfall:

1) The availability of transit has been shown to result in a significant reduction in the demand for parking and the project is being required to provide one free monthly transit pass for each apartment unit and for each employee.[1] The Downtown Berkeley BART station is located less than two blocks from the site. This station is located on the Richmond-Fremont Line which connects to other destinations in the Bay Area, including San Francisco, at the MacArthur Station. There is also extensive bus transit service provided by Alameda-Contra Costa County (AC) Transit at the BART Station. Please note the nearest bus stops are less than a block from the site at Shattuck Avenue and Center Street. Therefore, for this project it is anticipated that a higher portion of travel will occur by walking and through the use of public transit.[2] As a result, it is also expected that some of the apartment residents will forego owning a car, or having an extra car, because of the close proximity to transit, downtown amenities, and UC Berkeley.[3]

2) The project is proposing to provide to provide 264 long-term bicycle parking spaces plus another 42 short-term bicycle parking spaces that would be provided on-street with bicycle racks and through expansion of the existing on-street bicycle corral.

3) There are numerous existing car sharing locations in the area and the project would provide three designated parking spaces for car share vehicles.

[1] *Evaluating the Impact of Transit Service on Parking Demand and Requirements*, Transportation Research Board, Washington D.C., 2010.
[2] *Trip and Parking Generation at Transit-Oriented Developments: Five US Case Studies*, University of Utah, Salt Lake City, UT, 2016.
[3] *Effects of TOD on Housing, Parking, and Travel*, Transportation Research Board, Washington D.C., 2010.

5.10 Pedestrian and Bicycle Conditions

The proposed project would not generate a significant increase in pedestrian traffic in the area (in comparison to the existing volumes) given the size of the proposed project. Based on ITE data and data from MTC's Bay Area Travel Survey for projects within 1/2 mile of a BART station during the peak commute hours the project would be forecast to generate approximately 114 transit trips, 40 bicycle trips and 232 pedestrian trips. In addition to the relatively low increase in vehicle trip generation, the proposed project would not be forecast to significantly impact or change the design of any existing pedestrian facilities and should not create any new safety problems in the area. California Highway Patrol accident records (SWITRS) for surrounding streets within a block of the project site and for each of the study intersections are included in the technical appendix to this report. A detailed review of pedestrian and bicycle collisions in the area was conducted to assist the City in the review of potential improvements.

The proposed project would not be forecast to significantly impact any existing bicycle facilities. The project will add some pedestrians and bicyclists who will utilize sidewalks and bicycle facilities in the area. Please note there are existing sidewalks and crosswalks along the route from the project to the BART station. In relation to the existing conditions, the proposed project would not cause substantial changes to the pedestrian or bicycle traffic in the area and would not substantially impact or require changes to the design of any existing bicycle or pedestrian facilities. However, the improvement measure identified in Section 5.5. is intended to address pedestrian safety concerns at Allston Way through payment of a proportionate share of the construction costs to install rapid rectangular flashing beacons (RRFB's).

With respect to planned pedestrian and bicycle facilities in the project area, the City's Pedestrian Plan has identified the nearby segment of University Avenue from San Pablo Avenue to Oxford Street as a priority street segment for improvements due to the high number of pedestrian accidents. At the study intersection of University Avenue at Oxford Street proposed improvements in the Pedestrian Plan include median refuges for pedestrians, curb extensions, and widening of the sidewalk at the existing bus stops. In the project study area the City's Bicycle Plan identifies a protected intersection at University Avenue and Oxford Street. Protected intersections typically require the use of bicycle signals to isolate bicycle movements from conflicting vehicle movements. Bicycle signal phases can be added to the traffic signals to isolate bicycle movements from conflicting vehicle movements. The Bicycle Plan also specifies that University Avenue, Oxford Street, Shattuck Avenue, should be studied for potential cycletracks and Addison Street should be studied for a potential bicycle boulevard.

5.11 Transit

The proposed project would not interfere with any existing bus routes and would not remove or relocate any existing bus stops. The proposed Project also would not conflict with any transit plans or goals of the City of Berkeley. Based on the analysis of intersection operations and roadway segment speeds the project is not forecast to cause a degradation of the level of service (or a substantial increase in delay) on any roadway segments currently being utilized by bus transit in the area and, as such, no adverse effects to transit are expected.

5.12 Vehicle Miles Traveled

The vehicle miles traveled (VMT) in an area is one performance measure that can be used to quantify potential changes in travel from a project. This letter presents the extent of the VMT-related transportation impacts forecast to be caused by the Project. VMT is a particularly useful metric for evaluating the impacts of growth on greenhouse gas (GHG) emissions because it can be used to estimate fuel consumption by motor vehicles. Increases in VMT cause proportional increases in greenhouse gas emissions and air pollution. The Office of Planning and Research (OPR) released their final guidelines in a Technical Advisory on Evaluating Transportation Impacts in CEQA, dated December 2018. This analysis is based on the City of Berkeley's adopted guidelines as set forth in a staff report to the planning commission on September 2, 2020.[1]

VMT is typically estimated using an area-wide travel demand model from a regional transportation agency that calculates VMT based on the number of vehicles multiplied by the typical distance traveled by each vehicle originating from or driving to a certain area. The volume of traffic and distance traveled depends on land use types, density, and location as well as the existing and planned future supporting transportation system, including availability of public transportation. A travel demand model attempts to represent this relationship when forecasting vehicle trips and VMT. This analysis uses the Alameda County Transportation Commission (ACTC) Travel Demand Model data on VMT per capita for various areas within the City of Berkeley. The Travel Demand Model divides areas within ACTC's jurisdiction into transportation analysis zones, or TAZs. TAZs are used in transportation planning models for transportation analysis and other planning purposes. The apartments and commercial space proposed to be built by the Project would be expected to have similar VMT as other developments in the same TAZ. The VMT per resident and per employee estimated by the ACTC Travel Model for the Project's TAZ would therefore be assumed represent the approximate VMT that would be generated by the Project as well.

As per Attachment 1 of the September 2, 2020 Planning Commission staff report, the proposed project is located in a transit priority area (TPA) and also is within an area with an average VMT per resident and per worker that is at least 15% below the respective Bay Area averages. OPR's 2018 Technical Advisory also states the following: "*Presumption of Less Than Significant Impact Near Transit Stations - Proposed CEQA Guideline Section 15064.3, subdivision (b)(1), states that lead agencies generally should presume that certain projects (including residential, retail, and office projects, as well as projects that are a mix of these uses) proposed within ½ mile of an existing major transit stop or an existing stop along a high quality transit corridor will have a less-than-significant impact on VMT*." However, the City of Berkeley VMT analysis

[1] *General Plan Amendment: Vehicle Miles Traveled (VMT) for Transportation Impact Analysis under the California Environmental Quality Act (CEQA)*, Planning Commission Staff Report, Planning and Development Department, City of Berkeley, September 2, 2020.

guidelines specify that the presumption of a less-than-significant VMT impact might not be appropriate if the project:

- Has a floor area ratio (FAR) of less than 0.75.
- Includes more than 200,000 square feet of office or commercial space.
- Includes more parking supply than the project's estimated demand
- Is inconsistent with the City's General Plan, an applicable Specific Plan, or an applicable Sustainable Communities Strategy (as determined by the City, with input from the MTC).
- Replaces affordable residential units with market-rate residential units.
- Has project-specific or location-specific information that indicates that the project will generate significant levels of VMT.

Subject to City approval, none of the above factors would apply to the proposed project. The project is located less than 500 feet from the Downtown Berkeley BART station and is located near bus stops for numerous bus lines at the intersection of Shattuck Avenue and Center Street. The project also meets the other screening criteria described above and therefore, subject to City approval, this project would be assumed to have a less than significant impact on VMT in the area.

6) SUMMARY OF IMPACTS AND IMPROVEMENT MEASURES

TR-1 The project would contribute to LOS operations exceeding the established standards at the following intersection:

Oxford Street at Allston Way (Intersection #6)

The addition of traffic from the proposed project would contribute to this intersection exceeding the established LOS standards in the plus project scenarios. The standards would be exceeded regardless of whether or not the proposed project is implemented. With payment of a proportionate share of the costs of the recommended improvement measure below, the development of the proposed project would reduce safety impacts at the above-mentioned intersection.

Improvement Measure #1

The improvements listed below are not currently included in the City's 5-year capital improvement program so funding has not yet been identified. Prior to construction of the identified improvements, the project would mitigate its potential operational and safety impacts and the addition of U-turn traffic by paying a proportionate share of the construction costs. The intersection improvement measures proposed to maintain adequate traffic operations and safety with the proposed project at this intersection include the following:

IM 1a *<u>Oxford Street at Allston Way</u> – Payment of a proportionate share of the cost to install rapid rectangular flashing beacons (RRFB's) for the existing Oxford Street crosswalk at Allston Way, meeting the City's requirements. This would be an interim safety improvement until a future traffic signal is installed.*

IM 1b *<u>Oxford Street at Allston Way</u> – Payment of a proportionate share of the cost to install a traffic signal, meeting the City's requirements. When the traffic signal is installed the RRFB's will be removed.*

TR-2 Demolition and construction activities associated with the proposed project would result in an increase in traffic to and from the site and would require an appropriate construction management plan developed and approved by the City of Berkeley, consistent with the already existing and broadly applicable standard conditions that apply to projects similar in nature.

The increase in traffic as a result of demolition and construction activities associated with the proposed project has been quantified assuming single phase construction period of 18 months.

Heavy Equipment

Heavy equipment transport to and from the site could cause traffic impacts in the vicinity of the project site during construction. However, each overweight/oversized load would be required to obtain all necessary permits, which would include conditions. Prior to issuance of grading and building permits, the project applicant would be required to submit and have approved a Traffic Control Plan.

The requirements within the Traffic Control Plan include, but are not limited to, the following: truck drivers would be notified of and required to use the most direct route between the site and the freeway, as determined by the City Traffic Engineering Department; all site ingress and egress would occur only at the main driveway to the project site and construction activities may require temporary traffic controls as determined by the City Engineer. Please note construction traffic will be directed to use University Avenue as the City has a goal of minimizing construction traffic on local streets. Specifically, designated travel routes for large vehicles would be monitored and controlled by flaggers for large construction vehicle ingress and egress. Any debris and mud caused by trucks would be monitored daily and may require instituting a street cleaning program. In addition, several loads of heavy equipment being hauled to and from the site each month would be short-term and temporary.

Employees

The weekday work is expected to begin around 7:00 AM and end around 4:00 PM. The construction worker arrival peak would occur between 6:30 AM and 7:30 AM, and the departure peak would occur between 4:00 PM and 5:00 PM. These peak hours are slightly before the citywide commute peaks. It should be noted that the trips generated during construction would be temporary

Based on past construction of similar projects, construction workers could require parking for up to 75 vehicles during the peak construction period. Additionally, deliveries, visits, and other activities may generate peak non-worker parking demand of 5 to 10 trucks and automobiles per day. Therefore, up to 85 vehicle parking spaces may be required during the peak construction period for the construction employees. It should be noted the developer and their construction team are required to provide off-street parking for their employees on the site, if possible. Furthermore, the Traffic Control Plan requires that if construction employee parking cannot be provided on the project site, then other provisions will need to be made for off-site parking, subject to approval of the City Traffic Engineering Department.

Construction Material Import

The project would also require the importation of construction material, including raw materials for the building pads, the buildings, the parking area, and landscaping. Based on past construction of similar projects, importing this material is estimated to require substantial amounts of truck traffic. Under the provisions of the Traffic Control Plan, if importation and exportation of material becomes a traffic nuisance, then the City Engineer may limit the hours the activities can take place.

Impacts of Construction on Pedestrians and Bicyclists

The project would most likely require temporary closures of sidewalks and/or vehicle lanes adjacent to the site for safety. This would require a detailed plan for detouring pedestrian and bicycle traffic. This plan will need to be reviewed and approved by the City Engineer. The analysis of traffic operations at the driveway indicates there would be no significant changes to the traffic volumes, delay, or safety on the study roadways with the addition of traffic from the proposed project. The City requires permission to close sidewalks and an acceptable traffic control plan for closures to be permitted. In general, the pedestrian and bicycle operations in the area would not be expected to change significantly during construction beyond the addition of truck traffic to the area.

Traffic Control Plan

The Traffic Control Plan would indicate how parking for construction workers would be provided during construction and ensure a safe flow of traffic in the project area during construction. This analysis assumed construction of the entire project in one phase to identify the potential worst-case traffic effects. Each phase will be subject to a Traffic Control Plan and oversight by the City Engineer and construction traffic is not forecast to exceed the post construction traffic conditions created by the proposed project. As a result, the potential construction traffic impacts have been adequately addressed through the project impact analysis. The goal of the conditional requirements of the City is to make construction impacts less than significant. There is some increase in traffic associated with all construction projects, however the required traffic management plan is intended to ensure the effects of construction are acceptable to the City. Therefore, the demolition and construction activities associated with the proposed project or its individual phases would be expected to result in a ***less-than-significant*** impact.

<u>Mitigation Measure(s)</u>
None required.

TR-3 Impacts related to site access and circulation.

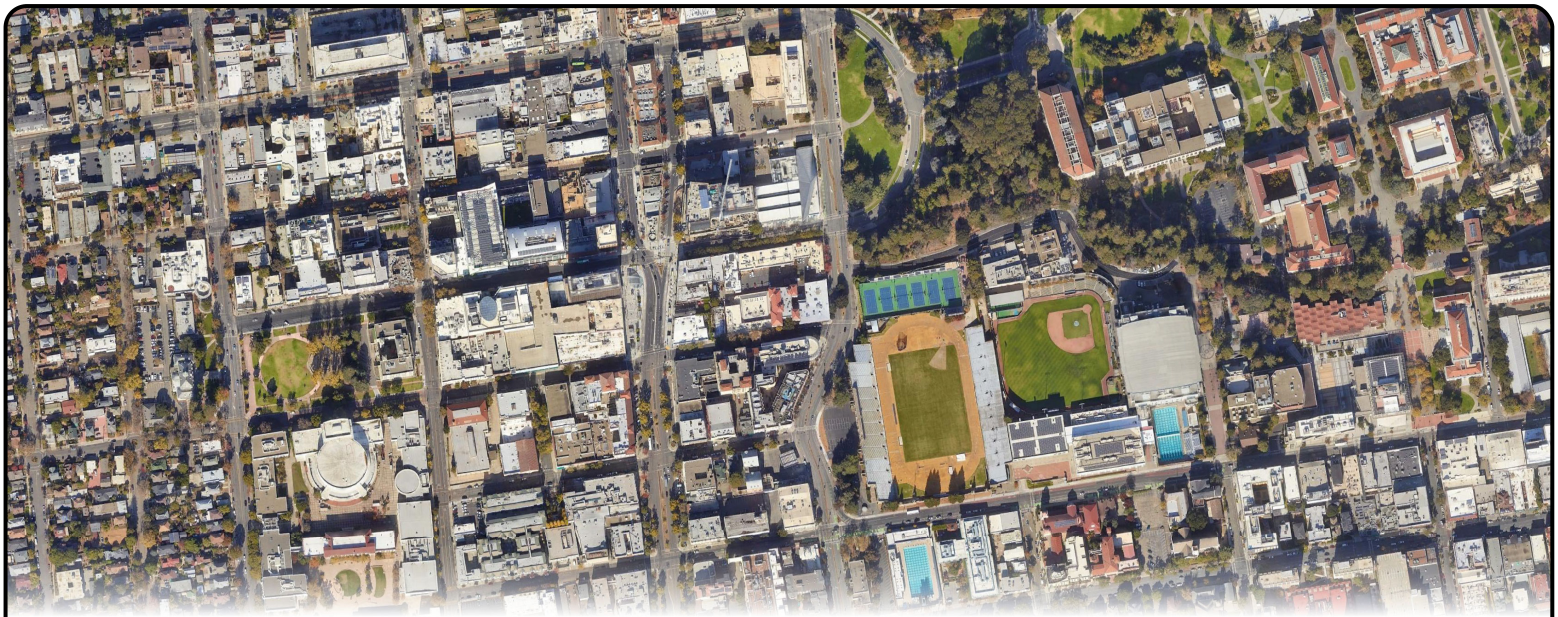
Based on a review of the proposed site plan it was determined that the internal garage circulation should function well and should not cause any safety or operational problems. Oxford Lane currently serves parking for the existing tenant on the project site, which has approximately 57 parking spaces. Oxford Lane also provides access to the back of several other commercial and residential properties. No problems with safety or traffic operations have been documented or observed on Oxford Lane. The proposed project is not expected to change this condition as there may actually be a reduction in traffic due to the reduction in parking spaces on the site. The existing parking lot on the site has approximately 57 parking spaces and the proposed project would only have 45 parking spaces. The project site design has been required to conform to City design standards and is not expected to create any significant impacts to pedestrians or bicyclists. Therefore, impacts related to site access and circulation would be ***less-than-significant***.

<u>Mitigation Measure(s)</u>
None required.

TR-4 Impacts regarding emergency vehicle access on and surrounding the proposed project site.

Sufficient emergency access is determined by factors such as number of access points, roadway width, and proximity to fire stations. The land use plan for the proposed project would be subject to approval of the fire department. All lane widths adjacent to the project would meet the minimum width that can accommodate an emergency vehicle; therefore, the width of the roadways would be adequate. Therefore, the development of the proposed project is expected to have ***less-than-significant*** impacts regarding emergency vehicle access.

<u>Mitigation Measure(s)</u>
None required.



Traffic Impact Analysis Technical Appendix

2128 Oxford Street Mixed-Use Project

City of Berkeley

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Abrams Associates
TRAFFIC ENGINEERING, INC.

May 4, 2023

Appendix
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CASE ID	COLLISION DATE	COLLISION TIME	PRIMARY RD	SECONDARY RD	DISTANCE	DIRECTION	INTERSECTION	WEATHER 1	TYPE OF COLLISION	COLLISION SEVERITY	NUMBER KILLED	NUMBER INJURED	PCF VIOLATION CATEGORY	MOTOR VEHICLE INVOLVED WITH	ALCOHOL INVOLVED
2022															
9487188	20220810	2121	OXFORD CIR	UNIVERSITY	0	0	Y	Clear	Broadside	Injury (Other Visible)	0	2	Automobile Right of Way	Other Motor Vehicle	0
9502078	20220924	1335	UNIVERSITY	OXFORD	0	0	Y	Clear	Sideswipe	Injury (Other Visible)	0	1	Improper Turning	Bicycle	0
9528799	20221006	1355	OXFORD	UNIVERSITY	0	0	Y	Clear	Rear End	Injury (Other Visible)	0	1	Unknown	Bicycle	0
9537404	20221102	943	OXFORD	UNIVERSITY AV	70	S	N	Clear	Sideswipe	Injury (Complaint of Pain)	0	1	Improper Passing	Other Motor Vehicle	0
9511553	20221005	1259	OXFORD	CENTER	0	0	Y	Clear	Vehicle/Ped	Injury (Complaint of Pain)	0	1	Pedestrian Right of Way	Pedestrian	0
9519139	20221230	1613	OXFORD	CENTER	0	0	Y	Raining	Broadside	Injury (Other Visible)	0	3	Traffic Signals and Signs	Other Motor Vehicle	0
9436084	20220317	1400	OXFORD	ALLSTON	0	0	Y	Clear	Vehicle/Ped	Injury (Other Visible)	0	1	Unknown	Pedestrian	0
9452161	20220428	1629	ALLSTON	OXFORD ST	100	N	N	Clear	Sideswipe	Property Damage Only	0	0	Other Improper Driving	Parked Motor Vehicle	0
9478013	20220614	945	OXFORD	ALLSTON WY	55	S	N	Clear	Broadside	Injury (Other Visible)	0	1	Improper Turning	Other Motor Vehicle	0
9528756	20221017	1300	OXFORD	ALLSTON WY	15	S	N	Clear	Vehicle/Ped	Injury (Other Visible)	0	1	Other Hazardous Violation	Motor Vehicle on othe	0
9418828	20220211	1918	KITTREDGE	OXFORD ST	59	W	N	Clear	Sideswipe	Property Damage Only	0	0	Improper Passing	Other Motor Vehicle	0
9452146	20220409	2057	KITTREDGE	OXFORD ST	0	0	Y	Not Stat	Broadside	Injury (Severe)	0	1	Traffic Signals and Signs	Other Motor Vehicle	0
9455429	20220523	57	OXFORD	KITTREDGE ST	70	N	N	Clear	Hit Object	Injury (Other Visible)	0	1	DUI	Fixed Object	Y
9528791	20221003	1136	BANCROFT	FULTON ST	297	E	N	Clear	Hit Object	Injury (Severe)	0	1	Unknown	Other Object	0
9455422	20220531	715	SHATTUCK	CENTER	0	0	Y	Clear	Broadside	Injury (Other Visible)	0	1	Traffic Signals and Signs	Other Motor Vehicle	0

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2022 Continued															
9487424	20220822	1551	SHATTUCK	CENTER ST	88	S	N	Clear	Sideswipe	Injury (Other Visible)	0	1	Improper Passing	Bicycle	0
9502073	20220927	1050	CENTER	SHATTUCK	0	0	Y	Clear	Other	Injury (Complaint of Pain)	0	1	Improper Turning	Non-Collision	0
2021															
9276743	20210619	2320	OXFORD	CENTER	0	0	Y	Clear	Broadside	Property Damage Only	0	0	Traffic Signals and Signs	Other Motor Vehicle	0
9364107	20211023	2033	OXFORD	CENTER AV	0	0	Y	Raining	Broadside	Property Damage Only	0	0	Automobile Right of Way	Other Motor Vehicle	0
9316820	20210731	424	OXFORD	ALLSTON WY	88	S	N	Clear	Hit Object	Injury (Other Visible)	0	1	DUI	Fixed Object	Y
9338828	20210810	1645	KITTREDGE	OXFORD ST	190	W	N	Clear	Sideswipe	Property Damage Only	0	0	Improper Passing	Other Motor Vehicle	0
9234473	20210112	1407	BANCROFT	FULTON	0	0	Y	Clear	Broadside	Injury (Other Visible)	0	1	Traffic Signals and Signs	Other Motor Vehicle	0
9317600	20210717	9	BANCROFT WY	FULTON ST	0	0	Y	Clear	Broadside	Injury (Other Visible)	0	1	DUI	Other Motor Vehicle	0
9338568	20210817	1750	BANCROFT	FULTON	0	0	Y	Clear	Rear End	Injury (Complaint of Pain)	0	1	Unsafe Starting or Backing	Other Motor Vehicle	0
9386467	20211105	2220	CENTER ST	SHATTUCK AV	0	0	Y	Clear	Sideswipe	Property Damage Only	0	0	DUI	Other Motor Vehicle	Y
2020															
9090326	20200226	1953	OXFORD	UNIVERSITY	0	0	Y	Clear	Other	Injury (Severe)	0	1	Lights	Bicycle	0
9188126	20201023	1350	ALLSTON WY	OXFORD ST	0	0	Y	Clear	Broadside	Injury (Other Visible)	0	2	Improper Turning	Other Motor Vehicle	0
9180574	20200125	1409	FULTON	BANCROFT	0	0	Y	Clear	Vehicle/Ped	Injury (Other Visible)	0	1	Pedestrian Right of Way	Pedestrian	0

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2019															
8830086	20190213	1800	OXFORD ST	UNIVERSITY	0	0	Y	Raining	Rear End	Property Damage Only	0	0	Unsafe Speed	Other Motor Vehicle	0
8971108	20190816	1734	OXFORD ST	UNIVERSITY AV	0	0	Y	Clear	Broadside	Injury (Other Visible)	0	1	Automobile Right of Way	Bicycle	0
9022846	20191111	1338	CENTER ST	OXFORD ST	230	W	N	Clear	Sideswipe	Property Damage Only	0	0	Improper Turning	Parked Motor Vehicle	0
8833053	20190208	942	BANCROFT	FULTON ST	90	E	N	Clear	Broadside	Injury (Other Visible)	0	1	Improper Turning	Bicycle	0
8874603	20190409	1430	BANCROFT	FULTON ST	0	0	Y	Clear	Vehicle/Pede	Injury (Other Visible)	0	1	Pedestrian Violation	Pedestrian	0
8905715	20190523	1740	FULTON	BANCROFT	0	0	Y	Clear	Other	Injury (Severe)	0	1	Unknown	Other Object	0
8965094	20190715	2218	BANCROFT	FULTON AV	0	0	Y	Clear	Broadside	Injury (Complaint of Pain)	0	2	Traffic Signals and Signs	Other Motor Vehicle	0
8863257	20190309	2154	SHATTUCK	CENTER	0	0	Y	Not Stat	Broadside	Property Damage Only	0	0	Traffic Signals and Signs	Other Motor Vehicle	0
8874479	20190402	2302	SHATTUCK AV	CENTER ST	0	0	Y	Raining	Rear End	Property Damage Only	0	0	DUI	Other Motor Vehicle	Y

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2018															
8689052	20180507	1457	UNIVERSITY	OXFORD ST	0	0	Y	Clear	Broadside	Injury (Other Visible)	0	1	Automobile Right of Way	Bicycle	0
8697745	20180619	1821	OXFORD ST	UNIVERSITY AV	0	0	Y	Clear	Sideswipe	Property Damage Only	0	0	Improper Turning	Other Motor Vehicle	0
8742983	20180928	1734	CENTER ST	OXFORD ST	201	W	N	Clear	Vehicle/Ped	Injury (Other Visible)	0	1	Wrong Side of Road	Pedestrian	0
8735026	20180710	1350	OXFORD ST	ALLSTON WY	30	N	N	Clear	Sideswipe	Property Damage Only	0	0	Improper Turning	Other Motor Vehicle	0
8792444	20181009	430	OXFORD ST	ALLSTON	0	0	Y	Clear	Hit Object	Property Damage Only	0	0	Unsafe Starting or Backing	Fixed Object	0
8734943	20180712	1939	KITTREDGE	OXFORD ST	0	0	-	Clear	Head On	Injury (Other Visible)	0	1	Pedestrian Right of Way	Pedestrian	0
8611802	20180125	2156	BANCROFT	FULTON ST	0	0	Y	Clear	Vehicle/Ped	Injury (Complaint of Pain)	0	1	Pedestrian Right of Way	Pedestrian	0
8775723	20181027	1524	BANCROFT WY	FULTON ST	0	0	-	Clear	Rear End	Injury (Other Visible)	0	1	Unsafe Speed	Motor Vehicle on othe	0
8614756	20180112	2300	CENTER ST	SHATTUCK AV	0	0	Y	Clear	Sideswipe	Injury (Severe)	0	1	Improper Turning	Bicycle	0
8643358	20180318	1212	CENTER	SHATTUCK	0	0	Y	Clear	Sideswipe	Property Damage Only	0	0	Other Hazardous Violation	Other Motor Vehicle	0
8698176	20180621	1526	CENTER ST	SHATTUCK AV	400	W	N	Clear	Sideswipe	Property Damage Only	0	0	Unsafe Speed	Parked Motor Vehicle	0
8743241	20180919	1300	CENTER	SHATTUCK	0	0	Y	Clear	Rear End	Property Damage Only	0	0	Unknown	Other Motor Vehicle	0
8774755	20181031	910	CENTER ST	SHATTUCK AV	334	W	N	Clear	Rear End	Injury (Severe)	0	1	Unsafe Speed	Parked Motor Vehicle	0

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2017															
8446894	20170610	2242	OXFORD ST	CENTER ST	150	S	N	Clear	Sideswipe	Property Damage Only	0	0	Automobile Right of Way	Parked Motor Vehicle	0
8447025	20170630	1020	CENTER ST	OXFORD ST	55	E	N	Clear	Rear End	Property Damage Only	0	0	Unsafe Starting or Backing	Parked Motor Vehicle	0
8375735	20170317	2243	ALLSTON	OXFORD ST	20	W	N	Not Stat	Rear End	Property Damage Only	0	0	Unsafe Starting or Backing	Other Motor Vehicle	0
8375460	20170307	1020	BANCROFT	FULTON ST	137	E	N	Clear	Sideswipe	Property Damage Only	0	0	Unsafe Speed	Parked Motor Vehicle	0
8477999	20170724	1837	BANCROFT	FULTON ST	20	E	N	Clear	Overturned	Injury (Other Visible)	0	1	Unsafe Speed	Fixed Object	0
8539444	20171107	1202	BANCROFT	FULTON	0	0	Y	Clear	Sideswipe	Injury (Complaint of Pain)	0	1	Improper Passing	Other Motor Vehicle	0
8552658	20171205	1459	FULTON	BANCROFT WY	0	0	N	Clear	Vehicle/Ped	Injury (Complaint of Pain)	0	1	Pedestrian Right of Way	Pedestrian	0
8374904	20170324	530	SHATTUCK AV	CENTER	0	0	Y	Raining	Sideswipe	Property Damage Only	0	0	Improper Turning	Other Motor Vehicle	0
8387796	20170329	2006	SHATTUCK AV	CENTER ST	0	0	Y	Clear	Broadside	Injury (Complaint of Pain)	0	2	Traffic Signals and Signs	Other Motor Vehicle	0
8446927	20170602	2315	SHATTUCK AV	CENTER ST	130	S	N	Clear	Other	Injury (Complaint of Pain)	0	1	Other Hazardous Violation	Bicycle	0
8597403	20170119	824	CENTER ST	SHATTUCK AV	196	E	N	Cloudy	Hit Object	Property Damage Only	0	0	Unsafe Starting or Backing	Parked Motor Vehicle	0

CASE ID	COLLISION DATE	COLLISION TIME	PRIMARY RD	SECONDARY RD	DISTANCE	DIRECTION	INTERSECTION	WEATHER 1	TYPE OF COLLISION	COLLISION SEVERITY	NUMBER KILLED	NUMBER INJURED	PCF VIOLATION CATEGORY	MOTOR VEHICLE INVOLVED WITH	ALCOHOL INVOLVED
2016															
8050056	20160423	2159	UNIVERSITY AV	OXFORD ST	0	0	Y	Clear	Vehicle/Ped	Injury (Complaint of Pain)	0	1	Pedestrian Right of Way	Pedestrian	0
8055296	20160404	1756	OXFORD ST	UNIVERSITY AV	77	S	N	Clear	Rear End	Property Damage Only	0	0	Unsafe Starting or Backing	Parked Motor Vehicle	0
8009360	20160117	1847	OXFORD ST	CENTER ST	0	0	Y	Raining	Broadside	Property Damage Only	0	0	DUI	Other Motor Vehicle	Y
8073835	20160516	1727	OXFORD ST	CENTER ST	0	0	Y	Clear	Broadside	Injury (Other Visible)	0	1	Automobile Right of Way	Bicycle	0
8050026	20160406	1430	OXFORD ST	ALLSTON WY	108	S	N	Clear	Other	Injury (Other Visible)	0	1	Unsafe Speed	Fixed Object	0
8169029	20160930	1604	OXFORD ST	ALLSTON WY	0	0	Y	Clear	Broadside	Injury (Complaint of Pain)	0	1	Wrong Side of Road	Bicycle	0
8012242	20160202	1658	FULTON ST	BANCROFT WY	0	0	Y	Cloudy	Rear End	Injury (Severe)	0	1	DUI	Bicycle	0
8037016	20160313	135	FULTON ST	BANCROFT WY	0	0	-	Raining	Head On	Injury (Complaint of Pain)	0	1	DUI	Fixed Object	Y
8037493	20160327	1334	FULTON ST	BANCROFT WY	0	0	Y	Clear	Rear End	Property Damage Only	0	0	Unsafe Speed	Other Motor Vehicle	0
8050022	20160410	1604	BANCROFT WY	FULTON ST	0	0	Y	Cloudy	Broadside	Injury (Complaint of Pain)	0	1	Traffic Signals and Signs	Other Motor Vehicle	0
8062988	20160821	1151	BANCROFT WY	FULTON	150	W	N	Clear	Sideswipe	Injury (Complaint of Pain)	0	1	Improper Turning	Bicycle	0
8143856	20160911	2017	BANCROFT WY	FULTON ST	0	0	Y	Clear	Rear End	Property Damage Only	0	0	Unsafe Starting or Backing	Motor Vehicle on othe	0
8319265	20161208	1445	FULTON ST	BANCROFT	0	0	Y	Cloudy	Rear End	Injury (Complaint of Pain)	0	1	Unsafe Speed	Other Motor Vehicle	0
8013985	20160211	2151	SHATTUCK SQ	CENTER ST	0	0	Y	Clear	Rear End	Property Damage Only	0	0	Unknown	Parked Motor Vehicle	0
8036901	20160324	1035	SHATTUCK AV	CENTER ST	0	0	Y	Clear	Sideswipe	Property Damage Only	0	0	Unsafe Speed	Parked Motor Vehicle	0

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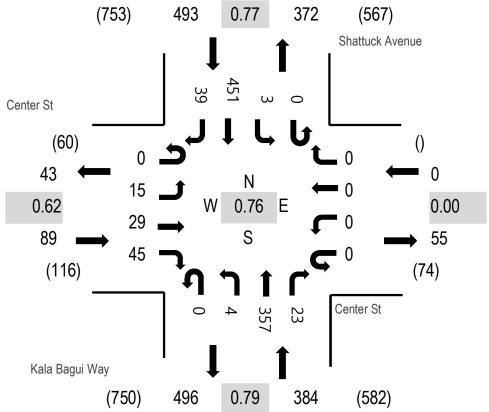
2016 continued															
8037485	20160326	1942	SHATTUCK AV	CENTER ST	0	0	Y	Clear	Sideswipe	Property Damage Only	0	0	Unsafe Lane Change	Other Motor Vehicle	0
8060768	20160423	1615	CENTER ST	SHATTUCK AV	250	E	N	Clear	Hit Object	Property Damage Only	0	0	Unsafe Starting or Backing	Parked Motor Vehicle	0
8103855	20160823	1219	SHATTUCK AV	CENTER ST	90	N	N	Clear	Other	Property Damage Only	0	0	Unsafe Starting or Backing	Parked Motor Vehicle	0
8163321	20160920	2223	SHATTUCK AV	CENTER ST	0	0	Y	Clear	Hit Object	Injury (Other Visible)	0	1	DUI	Bicycle	Y
8205093	20161007	1018	CENTER ST	SHATTUCK AV	80	E	N	Clear	Sideswipe	Property Damage Only	0	0	Improper Turning	Parked Motor Vehicle	0
8319923	20161219	1830	CENTER ST	SHATTUCK AV	20	W	N	Clear	Hit Object	Injury (Complaint of Pain)	0	1	Unsafe Speed	Parked Motor Vehicle	0

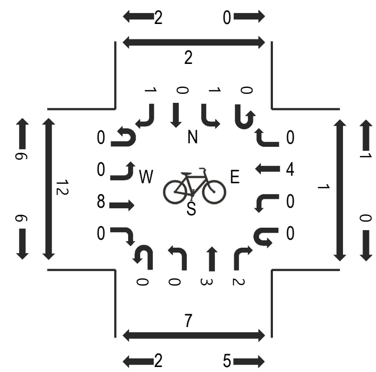
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 5 Kala Bagui Way & Center St AM
Date: Tuesday, January 25, 2022
Peak Hour: 08:00 AM - 09:00 AM
Peak 15-Minutes: 08:15 AM - 08:30 AM

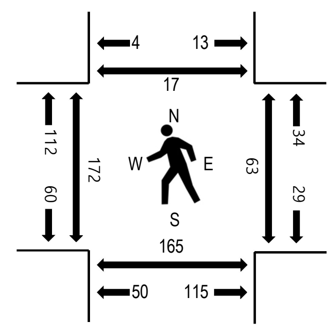
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	Center St Eastbound U-Turn	Left	Thru	Right	Center St Westbound U-Turn	Left	Thru	Right	Kala Bagui Way Northbound U-Turn	Left	Thru	Right	Shattuck Avenue Southbound U-Turn	Left	Thru	Right	Total	Rolling Hour	Pedestrian Crossings West	East	South	North
7:00 AM	0	5	0	2	0	0	0	0	0	0	32	5	0	0	40	1	85	485	14	1	7	2
7:15 AM	0	3	1	2	0	0	0	0	0	1	38	2	0	0	61	3	111	608	15	8	23	5
7:30 AM	0	4	2	1	0	0	0	0	0	1	42	3	0	0	63	3	119	816	24	9	24	0
7:45 AM	0	3	2	2	0	0	0	0	0	2	68	4	0	0	83	6	170	921	25	12	29	5
8:00 AM	0	2	2	6	0	0	0	0	0	1	74	3	0	0	112	8	208	966	32	17	26	5
8:15 AM	0	4	15	17	0	0	0	0	0	1	116	5	0	1	144	16	319		47	19	49	6
8:30 AM	0	3	8	11	0	0	0	0	0	0	96	8	0	0	93	5	224		48	8	42	3
8:45 AM	0	6	4	11	0	0	0	0	0	2	71	7	0	2	102	10	215		45	19	48	3

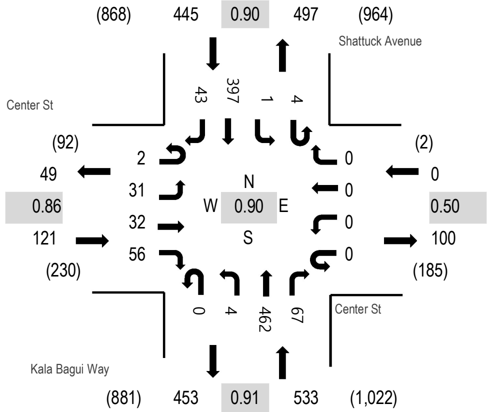
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound U-Turn	Left	Thru	Right	Westbound U-Turn	Left	Thru	Right	Northbound U-Turn	Left	Thru	Right	Southbound U-Turn	Left	Thru	Right	Total
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	1	1	0	0	4	0	6
Lights	0	15	28	45	0	0	0	0	0	4	315	21	0	3	413	35	879
Mediums	0	0	1	0	0	0	0	0	0	0	41	1	0	0	34	4	81
Total	0	15	29	45	0	0	0	0	0	4	357	23	0	3	451	39	966

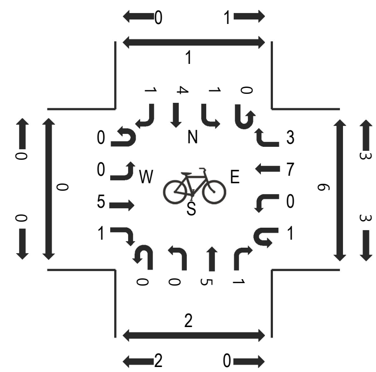
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 5 Kala Bagui Way & Center St PM
Date: Tuesday, January 25, 2022
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 04:30 PM - 04:45 PM

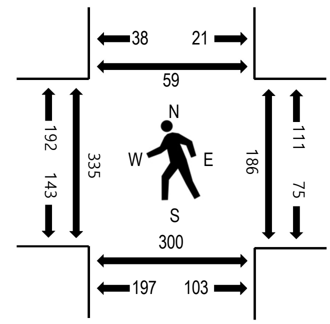
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	Center St Eastbound U-Turn	Left	Thru	Right	Center St Westbound U-Turn	Left	Thru	Right	Kala Bagui Way Northbound U-Turn	Left	Thru	Right	Shattuck Avenue Southbound U-Turn	Left	Thru	Right	Total	Rolling Hour	Pedestrian Crossings West	East	South	North
4:00 PM	0	5	12	7	0	0	1	0	0	1	109	17	0	0	104	6	262	1,051	98	56	86	6
4:15 PM	0	4	8	7	0	1	0	0	0	0	99	6	0	0	90	6	221	1,054	76	44	92	20
4:30 PM	2	7	12	14	0	0	0	0	0	2	126	19	0	0	109	13	304	1,099	68	61	104	22
4:45 PM	0	7	2	13	0	0	0	0	0	1	116	15	3	1	93	13	264	1,071	75	39	73	13
5:00 PM	0	10	8	14	0	0	0	0	0	0	102	19	1	0	102	9	265	1,071	97	40	61	12
5:15 PM	0	7	10	15	0	0	0	0	0	1	118	14	0	0	93	8	266		95	46	62	12
5:30 PM	1	11	7	9	0	0	0	0	0	0	110	14	0	1	111	12	276		98	49	67	16
5:45 PM	0	11	5	22	0	0	0	0	0	1	118	14	0	1	77	15	264		77	40	79	13

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound U-Turn	Left	Thru	Right	Westbound U-Turn	Left	Thru	Right	Northbound U-Turn	Left	Thru	Right	Southbound U-Turn	Left	Thru	Right	Total
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	2	31	30	56	0	0	0	0	0	4	434	66	3	1	382	42	1,051
Mediums	0	0	2	0	0	0	0	0	0	0	28	1	1	0	15	1	48
Total	2	31	32	56	0	0	0	0	0	4	462	67	4	1	397	43	1,099

Intersection No: 1
Location: Shattuck Avenue at Center Street
AM Start Time 7:00 AM
PM Start Time 4:00 PM
Date: Thursday, January 13, 2022
Collected By: Rick Folster

SHATTUCK AVENUE AT CENTER STREET INTERSECTION TURNING MOVEMENT SUMMARY

1	Shattuck Avenue NORTHBOUND			Shattuck Avenue SOUTHBOUND			Center Street EASTBOUND			Center Street WESTBOUND			AM
Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
7:00 AM		26			64	3	0	1	3				97
7:15 AM		28			89	8	3	2	3				133
7:30 AM		47			115	4	1	7	3				177
7:45 AM		71			131	13	4	9	12				240
8:00 AM		70			108	5	0	5	10				198
8:15 AM		50			95	8	2	6	5				166
8:30 AM		49			73	9	3	4	5				143
8:45 AM		51			65	5	2	5	4				132
Total	0	392	0	0	740	55	15	39	45	0	0	0	1286

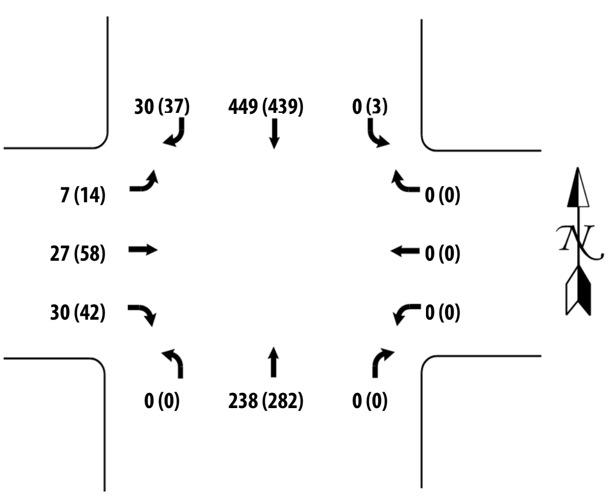
1	Shattuck Avenue NORTHBOUND			Shattuck Avenue SOUTHBOUND			Center Street EASTBOUND			Center Street WESTBOUND			PM
Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
4:00 PM		59		1	92	13	3	11	8				187
4:15 PM		71		0	98	9	3	15	9				205
4:30 PM		67		0	97	7	4	8	8				191
4:45 PM		63		0	96	9	7	8	13				196
5:00 PM		79		0	99	9	0	12	13				212
5:15 PM		78		0	105	8	6	12	12				221
5:30 PM		58		2	118	12	2	19	12				223
5:45 PM		67		1	117	8	6	15	5				219
Total	0	542	0	4	822	75	31	100	80	0	0	0	1654

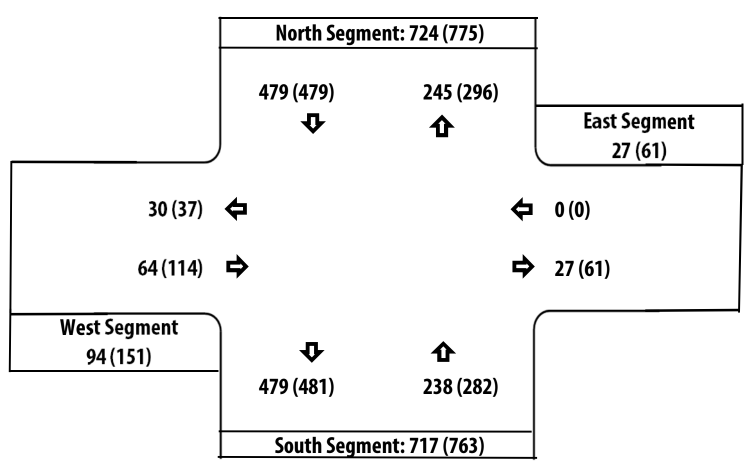
AM PEAK HOUR VOLUMES

1	Shattuck Avenue NORTHBOUND			Shattuck Avenue SOUTHBOUND			Center Street EASTBOUND			Center Street WESTBOUND			AM
Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
7:30 AM		47			115	4	1	7	3				177
7:45 AM		71			131	13	4	9	12				240
8:00 AM		70			108	5	0	5	10				198
8:15 AM		50			95	8	2	6	5				166
Total	0	238	0	0	449	30	7	27	30	0	0	0	781

PM PEAK HOUR VOLUMES

1	Shattuck Avenue NORTHBOUND			Shattuck Avenue SOUTHBOUND			Center Street EASTBOUND			Center Street WESTBOUND			PM
Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
5:00 PM		79		0	99	9	0	12	13				212
5:15 PM		78		0	105	8	6	12	12				221
5:30 PM		58		2	118	12	2	19	12				223
5:45 PM		67		1	117	8	6	15	5				219
Total	0	282	0	3	439	37	14	58	42	0	0	0	875





Intersection No: 2
Location: Kala Bagai Way at Center Street
AM Start Time 7:00 AM
PM Start Time 4:00 PM
Date: Thursday, January 13, 2022
Collected By: Rick Folster

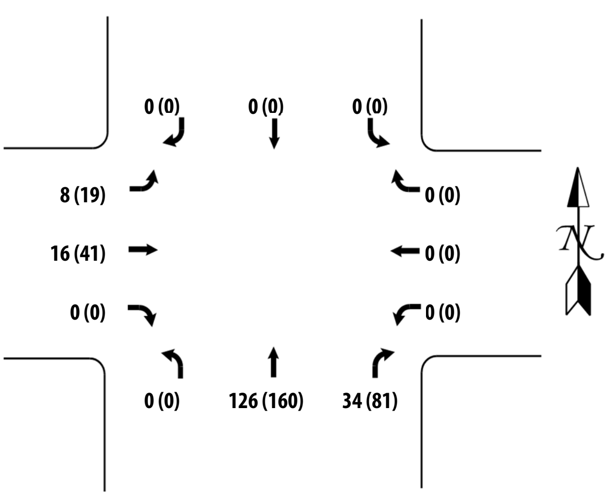
KALA BAGAI WAY AT CENTER STREET INTERSECTION TURNING MOVEMENT SUMMARY

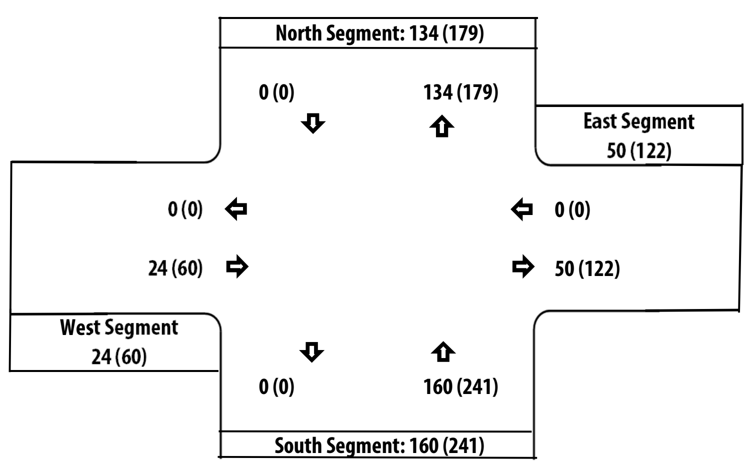
2	Shattuck Avenue			Kala Bagai Way			Center Street			Center Street			AM
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
7:00 AM		15	4				1	0					20
7:15 AM		31	10				0	1					42
7:30 AM		17	6				3	5					31
7:45 AM		40	8				2	7					57
8:00 AM		33	6				2	3					44
8:15 AM		18	9				2	5					34
8:30 AM		35	11				2	1					49
8:45 AM		28	2				0	5					35
Total	0	217	56	0	0	0	12	27	0	0	0	0	312

2	Shattuck Avenue			Kala Bagai Way			Center Street			Center Street			PM
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
4:00 PM		46	12				5	7					70
4:15 PM		44	11				1	13					69
4:30 PM		39	9				2	5					55
4:45 PM		33	14				4	5					56
5:00 PM		39	14				2	10					65
5:15 PM		51	19				3	9					82
5:30 PM		35	24				10	12					81
5:45 PM		35	24				4	10					73
Total	0	322	127	0	0	0	31	71	0	0	0	0	551

AM PEAK HOUR VOLUMES													
2	Shattuck Avenue			Kala Bagai Way			Center Street			Center Street			AM
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
7:45 AM		40	8				2	7					57
8:00 AM		33	6				2	3					44
8:15 AM		18	9				2	5					34
8:30 AM		35	11				2	1					49
Total	0	126	34	0	0	0	8	16	0	0	0	0	184

PM PEAK HOUR VOLUMES													
2	Shattuck Avenue			Kala Bagai Way			Center Street			Center Street			PM
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
5:00 PM		39	14				2	10					65
5:15 PM		51	19				3	9					82
5:30 PM		35	24				10	12					81
5:45 PM		35	24				4	10					73
Total	0	160	81	0	0	0	19	41	0	0	0	0	301





Intersection No: 3
Location: Oxford Street at University Avenue
AM Start Time 7:00 AM
PM Start Time 4:00 PM
Date: Thursday, January 20, 2022
Collected By: Rick Folster

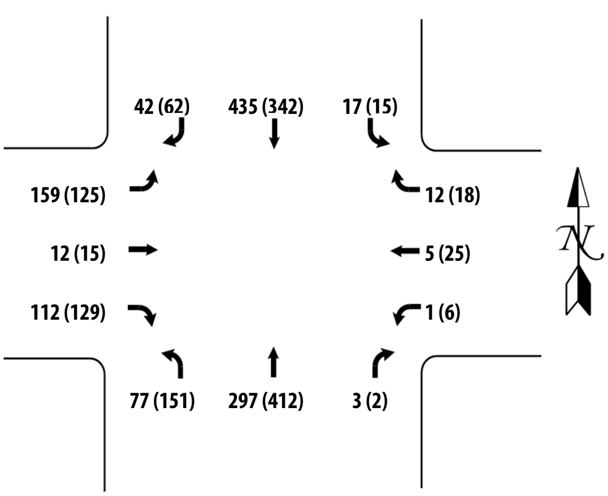
OXFORD STREET AT UNIVERSITY AVENUE INTERSECTION TURNING MOVEMENT SUMMARY

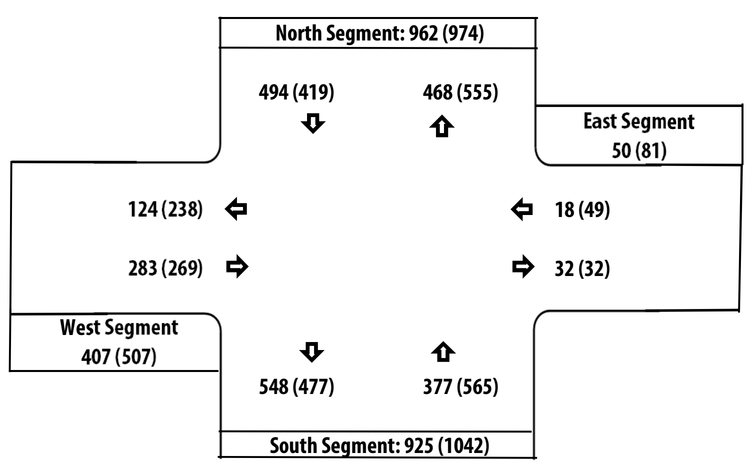
3	Oxford Street			Oxford Street			University Avenue			University Avenue			AM
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
7:00 AM	11	27	0	8	57	15	11	2	19	0	2	2	154
7:15 AM	18	41	2	2	86	12	16	0	21	0	2	5	205
7:30 AM	13	51	1	1	108	10	26	1	14	0	1	2	228
7:45 AM	26	78	0	3	142	12	49	1	23	1	2	3	340
8:00 AM	17	84	2	4	110	8	43	2	33	0	1	3	307
8:15 AM	11	68	1	6	98	12	30	5	22	0	1	4	258
8:30 AM	23	67	0	4	85	10	37	4	34	0	1	2	267
8:45 AM	13	30	0	3	30	5	32	2	24	0	2	1	142
Total	132	446	6	31	716	84	244	17	190	1	12	22	1901

3	Oxford Street			Oxford Street			University Avenue			University Avenue			PM
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
4:00 PM	43	104	0	5	76	13	20	7	24	4	9	6	311
4:15 PM	42	124	0	4	91	17	44	2	35	2	2	5	368
4:30 PM	37	108	1	1	77	11	20	4	30	0	7	2	298
4:45 PM	29	76	1	5	98	21	41	2	40	0	7	5	325
5:00 PM	20	94	1	1	70	20	29	1	26	0	3	4	269
5:15 PM	28	91	1	1	75	18	35	1	31	0	2	3	286
5:30 PM	25	74	1	0	65	10	22	1	45	1	4	3	251
5:45 PM	36	67	2	3	58	10	35	3	25	0	7	2	248
Total	260	738	7	20	610	120	246	21	256	7	41	30	2356

AM PEAK HOUR VOLUMES													
3	Oxford Street			Oxford Street			University Avenue			University Avenue			AM
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
7:45 AM	26	78	0	3	142	12	49	1	23	1	2	3	340
8:00 AM	17	84	2	4	110	8	43	2	33	0	1	3	307
8:15 AM	11	68	1	6	98	12	30	5	22	0	1	4	258
8:30 AM	23	67	0	4	85	10	37	4	34	0	1	2	267
Total	77	297	3	17	435	42	159	12	112	1	5	12	1172

PM PEAK HOUR VOLUMES													
3	Oxford Street			Oxford Street			University Avenue			University Avenue			PM
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
4:00 PM	43	104	0	5	76	13	20	7	24	4	9	6	311
4:15 PM	42	124	0	4	91	17	44	2	35	2	2	5	368
4:30 PM	37	108	1	1	77	11	20	4	30	0	7	2	298
4:45 PM	29	76	1	5	98	21	41	2	40	0	7	5	325
Total	151	412	2	15	342	62	125	15	129	6	25	18	1302





Intersection No: 4
Location: Oxford Street at Center Street
AM Start Time 7:00 AM
PM Start Time 4:15 PM
Date: Thursday, March 2, 2023
Collected By: Rick Folster

OXFORD STREET AT CENTER STREET INTERSECTION TURNING MOVEMENT SUMMARY

4	Oxford Street NORTHBOUND			Oxford Street SOUTHBOUND			Center Street EASTBOUND			Center Street WESTBOUND			AM
Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
7:00 AM	1	31	11	1	49	6	8	1	3	0	0	0	111
7:15 AM	4	51	3	1	89	11	5	0	1	6	1	1	173
7:30 AM	4	52	4	3	91	10	4	2	7	1	1	0	179
7:45 AM	4	64	9	1	134	21	10	2	3	3	0	1	252
8:00 AM	14	100	7	2	137	14	15	3	5	7	0	1	305
8:15 AM	11	90	8	2	125	19	15	3	3	3	2	3	284
8:30 AM	8	92	7	2	118	18	4	4	3	3	1	1	261
8:45 AM	7	83	6	1	100	13	7	3	4	7	1	2	234
Total	53	563	55	13	843	112	68	18	29	30	6	9	1799

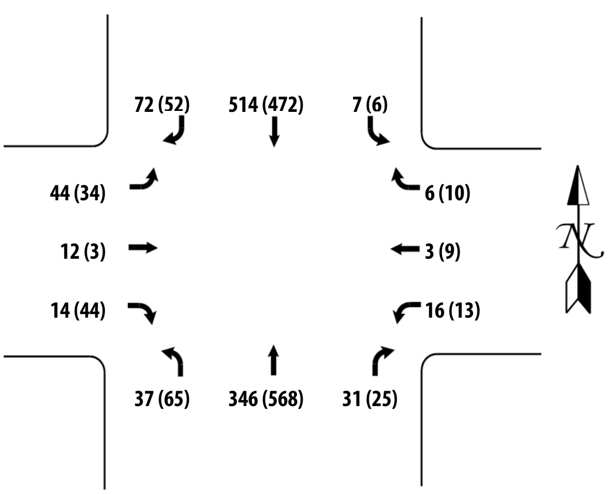
4	Oxford Street NORTHBOUND			Oxford Street SOUTHBOUND			Center Street EASTBOUND			Center Street WESTBOUND			PM
Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
4:15 PM	9	132	2	1	96	18	5	2	9	9	2	1	286
4:30 PM	12	124	7	1	129	11	13	1	8	3	4	0	313
4:45 PM	13	159	6	1	126	11	6	1	10	2	1	5	341
5:00 PM	16	159	6	3	111	14	5	0	10	4	3	3	334
5:15 PM	24	126	6	1	106	16	10	1	16	4	1	2	313
5:30 PM	14	111	6	1	124	10	12	3	15	12	2	2	312
5:45 PM	10	148	5	1	96	22	5	2	14	4	2	3	312
6:00 PM													
Total	98	959	38	9	788	102	56	10	82	38	15	16	2211

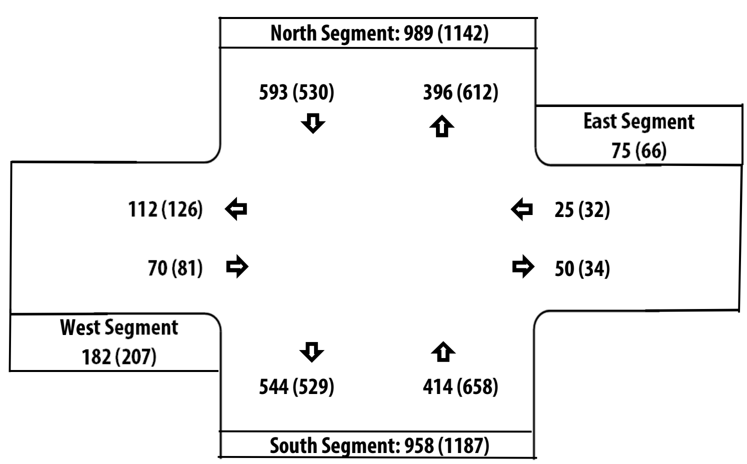
AM PEAK HOUR VOLUMES

4	Oxford Street NORTHBOUND			Oxford Street SOUTHBOUND			Center Street EASTBOUND			Center Street WESTBOUND			AM
Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
7:45 AM	4	64	9	1	134	21	10	2	3	3	0	1	252
8:00 AM	14	100	7	2	137	14	15	3	5	7	0	1	305
8:15 AM	11	90	8	2	125	19	15	3	3	3	2	3	284
8:30 AM	8	92	7	2	118	18	4	4	3	3	1	1	261
Total	37	346	31	7	514	72	44	12	14	16	3	6	1102

PM PEAK HOUR VOLUMES

4	Oxford Street NORTHBOUND			Oxford Street SOUTHBOUND			Center Street EASTBOUND			Center Street WESTBOUND			PM
Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
4:30 PM	12	124	7	1	129	11	13	1	8	3	4	0	313
4:45 PM	13	159	6	1	126	11	6	1	10	2	1	5	341
5:00 PM	16	159	6	3	111	14	5	0	10	4	3	3	334
5:15 PM	24	126	6	1	106	16	10	1	16	4	1	2	313
Total	65	568	25	6	472	52	34	3	44	13	9	10	1301





Intersection No: 4
Location: Oxford Street at Center Street
AM Start Time 7:00 AM
PM Start Time 4:00 PM
Date: Wednesday, December 8, 2021
Collected By: Rick Folster

OXFORD STREET AT CENTER STREET INTERSECTION TURNING MOVEMENT SUMMARY

4	Oxford Street			Oxford Street			Center Street			Center Street			AM
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
7:00 AM		84	5	3	97		1	2	4	4		1	201
7:15 AM		81	6	1	112		1	0	4	3		2	210
7:30 AM		85	10	1	135		2	2	7	5		1	248
7:45 AM		92	7	0	147		3	3	3	6		4	265
8:00 AM		102	13	3	129		1	4	6	4		2	264
8:15 AM		89	9	1	138		2	1	5	3		3	251
8:30 AM		90	11	2	127		3	0	6	2		1	242
8:45 AM		95	6	2	125		2	1	4	5		4	244
Total	0	718	67	13	1010	0	15	13	39	32	0	18	1925

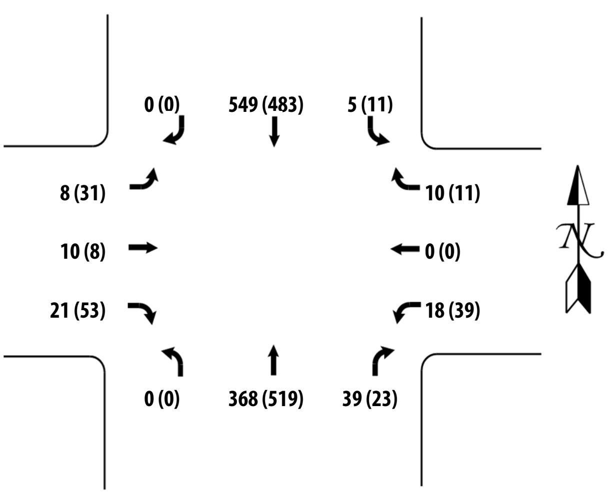
4	Oxford Street			Oxford Street			Center Street			Center Street			PM
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
4:00 PM		135	6	3	105		4	1	9	5		4	272
4:15 PM		130	8	6	117		9	2	10	7		3	292
4:30 PM		127	7	5	115		4	0	7	8		5	278
4:45 PM		136	9	4	121		8	1	9	6		3	297
5:00 PM		122	6	4	128		7	3	19	8		2	299
5:15 PM		134	2	0	118		10	2	11	15		3	295
5:30 PM		127	6	3	116		6	2	14	10		3	287
5:45 PM		121	5	2	111		5	2	12	11		4	273
Total	0	1032	49	27	931	0	53	13	91	70	0	27	2293

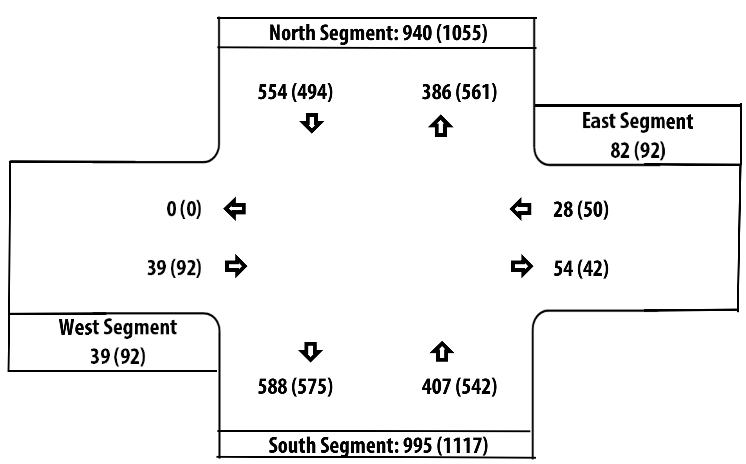
AM PEAK HOUR VOLUMES

4	Oxford Street			Oxford Street			Center Street			Center Street			AM
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
7:30 AM		85	10	1	135		2	2	7	5		1	248
7:45 AM		92	7	0	147		3	3	3	6		4	265
8:00 AM		102	13	3	129		1	4	6	4		2	264
8:15 AM		89	9	1	138		2	1	5	3		3	251
Total	0	368	39	5	549	0	8	10	21	18	0	10	1028

PM PEAK HOUR VOLUMES

4	Oxford Street			Oxford Street			Center Street			Center Street			PM
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
4:45 PM		136	9	4	121		8	1	9	6		3	297
5:00 PM		122	6	4	128		7	3	19	8		2	299
5:15 PM		134	2	0	118		10	2	11	15		3	295
5:30 PM		127	6	3	116		6	2	14	10		3	287
Total	0	519	23	11	483	0	31	8	53	39	0	11	1178





Intersection No: 5
Location: Oxford Street at Oxford Lane
AM Start Time 7:00 AM
PM Start Time 4:00 PM
Date: Thursday, December 9, 2021
Collected By: Jessica Fong

OXFORD STREET AT OXFORD LANE INTERSECTION TURNING MOVEMENT SUMMARY

5	Oxford Street			Oxford Street			Oxford Lane			Oxford Lane			AM
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
7:00 AM		80			122	1			3				206
7:15 AM		92			130	1			2				225
7:30 AM		90			142	0			0				232
7:45 AM		97			139	2			1				239
8:00 AM		115			163	0			2				280
8:15 AM		118			158	1			0				277
8:30 AM		107			142	1			2				252
8:45 AM		96			133	1			1				231
Total	0	795	0	0	1129	7	0	0	11	0	0	0	1942

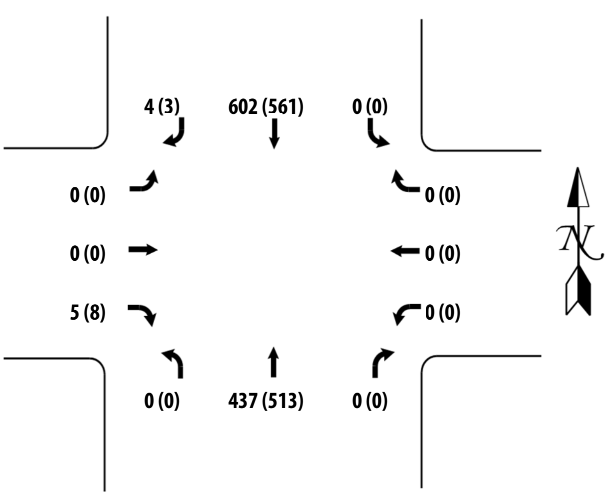
5	Oxford Street			Oxford Street			Oxford Lane			Oxford Lane			PM
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
4:00 PM		108			115	0			1				224
4:15 PM		119			130	1			0				250
4:30 PM		112			126	0			2				240
4:45 PM		126			134	1			2				263
5:00 PM		141			155	1			1				298
5:15 PM		129			143	0			2				274
5:30 PM		117			129	1			3				250
5:45 PM		122			127	1			1				251
Total	0	974	0	0	1059	5	0	0	12	0	0	0	2050

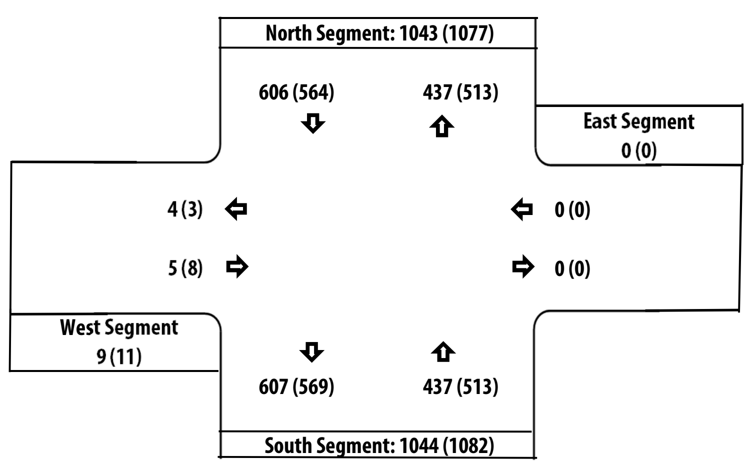
AM PEAK HOUR VOLUMES

5	Oxford Street			Oxford Street			Oxford Lane			Oxford Lane			AM
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
7:45 AM		97			139	2			1				239
8:00 AM		115			163	0			2				280
8:15 AM		118			158	1			0				277
8:30 AM		107			142	1			2				252
Total	0	437	0	0	602	4	0	0	5	0	0	0	1048

PM PEAK HOUR VOLUMES

5	Oxford Street			Oxford Street			Oxford Lane			Oxford Lane			PM
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
4:45 PM		126			134	1			2				263
5:00 PM		141			155	1			1				298
5:15 PM		129			143	0			2				274
5:30 PM		117			129	1			3				250
Total	0	513	0	0	561	3	0	0	8	0	0	0	1085





Intersection No: 6
Location: Oxford Street at Allston Way
AM Start Time 7:00 AM
PM Start Time 4:00 PM
Date: Thursday, December 9, 2021
Collected By: Rick Folster

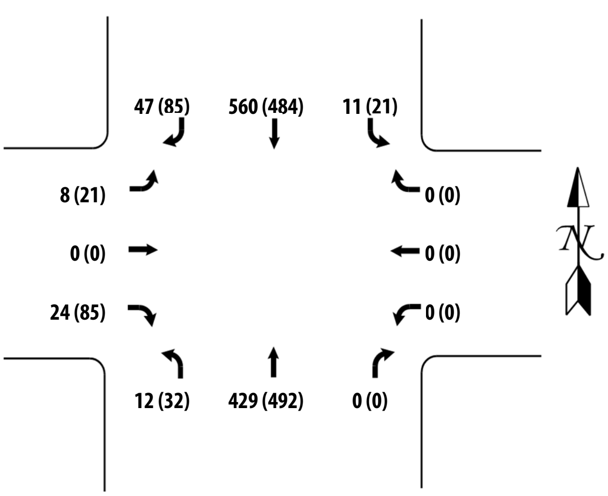
OXFORD STREET AT ALLSTON WAY INTERSECTION TURNING MOVEMENT SUMMARY

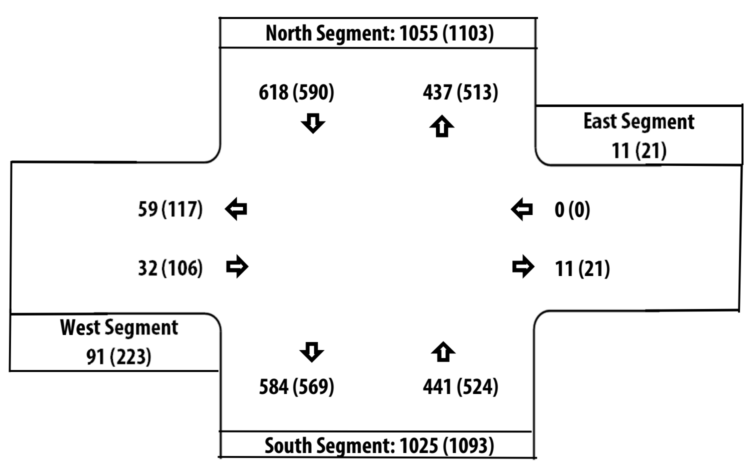
6	Oxford Street			Oxford Street			Allston Way			Allston Way			AM
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
7:00 AM	2	89		1	124	9	3		5				233
7:15 AM	1	87		2	122	11	2		6				231
7:30 AM	3	98		3	128	10	4		4				250
7:45 AM	4	93		1	147	14	2		6				267
8:00 AM	4	128		2	139	10	1		7				291
8:15 AM	1	101		5	143	11	3		5				269
8:30 AM	3	107		3	131	12	2		6				264
8:45 AM	5	101		4	125	11	4		7				257
Total	23	804	0	21	1059	88	21	0	46	0	0	0	2062

6	Oxford Street			Oxford Street			Allston Way			Allston Way			PM
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
4:00 PM	6	112		1	112	18	4		15				268
4:15 PM	8	119		3	120	16	5		16				287
4:30 PM	10	116		2	128	20	3		17				296
4:45 PM	7	126		7	127	25	9		21				322
5:00 PM	7	127		4	112	19	4		26				299
5:15 PM	8	123		8	117	21	5		21				303
5:30 PM	7	125		4	118	17	7		17				295
5:45 PM	8	119		6	108	16	8		18				283
Total	61	967	0	35	942	152	45	0	151	0	0	0	2353

AM PEAK HOUR VOLUMES													
6	Oxford Street			Oxford Street			Allston Way			Allston Way			AM
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
7:45 AM	4	93		1	147	14	2		6				267
8:00 AM	4	128		2	139	10	1		7				291
8:15 AM	1	101		5	143	11	3		5				269
8:30 AM	3	107		3	131	12	2		6				264
Total	12	429	0	11	560	47	8	0	24	0	0	0	1091

PM PEAK HOUR VOLUMES													
6	Oxford Street			Oxford Street			Allston Way			Allston Way			PM
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
4:30 PM	10	116		2	128	20	3		17				296
4:45 PM	7	126		7	127	25	9		21				322
5:00 PM	7	127		4	112	19	4		26				299
5:15 PM	8	123		8	117	21	5		21				303
Total	32	492	0	21	484	85	21	0	85	0	0	0	1220





Intersection No: 6
Location: Oxford Street at Allston Way
AM Start Time 7:00 AM
PM Start Time 4:00 PM
Date: Thursday, February 17, 2022
Collected By: Rick Folster

OXFORD STREET AT ALLSTON WAY INTERSECTION TURNING MOVEMENT SUMMARY

6	Oxford Street NORTHBOUND			Oxford Street SOUTHBOUND			Allston Way EASTBOUND			Allston Way WESTBOUND			AM
Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
7:00 AM	1	37		4	61	12	2		4				121
7:15 AM	4	38		3	57	6	0		3				111
7:30 AM	6	77		4	104	15	2		7				215
7:45 AM	4	79		2	128	21	2		3				239
8:00 AM	6	97		7	174	20	2		10				316
8:15 AM	5	120		5	138	20	4		2				294
8:30 AM	5	105		7	118	18	2		6				261
8:45 AM	5	95		9	114	24	5		5				257
Total	36	648	0	41	894	136	19	0	40	0	0	0	1814

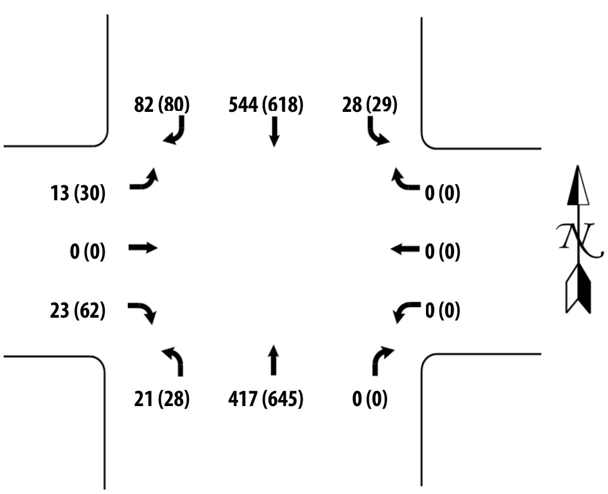
6	Oxford Street NORTHBOUND			Oxford Street SOUTHBOUND			Allston Way EASTBOUND			Allston Way WESTBOUND			PM
Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
4:00 PM	3	133		5	123	15	4		6				289
4:15 PM	5	136		9	129	16	3		16				314
4:30 PM	10	149		5	129	21	1		11				326
4:45 PM	4	185		12	155	16	5		11				388
5:00 PM	7	179		7	149	18	7		19				386
5:15 PM	9	141		4	155	18	7		16				350
5:30 PM	8	140		6	159	28	11		16				368
5:45 PM	6	136		5	157	22	5		32				363
Total	52	1199	0	53	1156	154	43	0	127	0	0	0	2784

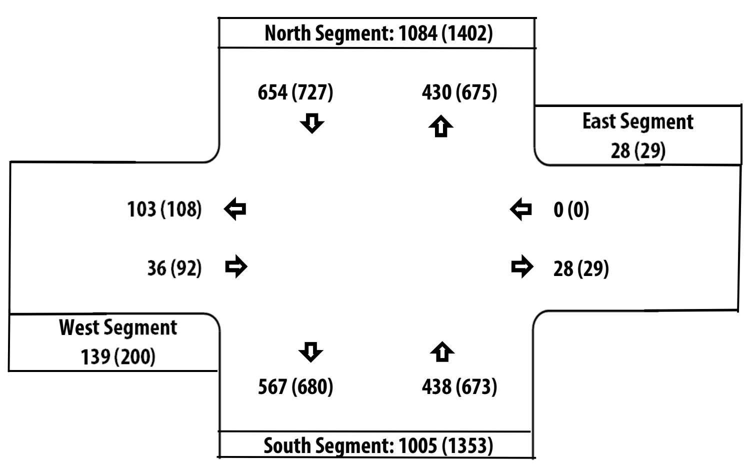
AM PEAK HOUR VOLUMES

6	Oxford Street NORTHBOUND			Oxford Street SOUTHBOUND			Allston Way EASTBOUND			Allston Way WESTBOUND			AM
Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
8:00 AM	6	97		7	174	20	2		10				316
8:15 AM	5	120		5	138	20	4		2				294
8:30 AM	5	105		7	118	18	2		6				261
8:45 AM	5	95		9	114	24	5		5				257
Total	21	417	0	28	544	82	13	0	23	0	0	0	1128

PM PEAK HOUR VOLUMES

6	Oxford Street NORTHBOUND			Oxford Street SOUTHBOUND			Allston Way EASTBOUND			Allston Way WESTBOUND			PM
Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
4:45 PM	4	185		12	155	16	5		11				388
5:00 PM	7	179		7	149	18	7		19				386
5:15 PM	9	141		4	155	18	7		16				350
5:30 PM	8	140		6	159	28	11		16				368
Total	28	645	0	29	618	80	30	0	62	0	0	0	1492





Intersection No: 7
Location: Fulton Street at Bancroft Way
AM Start Time 7:00 AM
PM Start Time 4:00 PM
Date: Wednesday, January 19, 2022
Collected By: Rick Folster

FULTON STREET AT BANCROFT WAY INTERSECTION TURNING MOVEMENT SUMMARY

7	Fulton Street NORTHBOUND			Oxford Street SOUTHBOUND			Bancroft Way EASTBOUND			Bancroft Way WESTBOUND			AM
Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
7:00 AM	0	13			72	9				2	14	27	137
7:15 AM	1	8			84	7				3	19	37	159
7:30 AM	3	19			104	8				3	28	56	221
7:45 AM	0	19			123	21				0	37	79	279
8:00 AM	2	32			129	37				1	42	91	334
8:15 AM	0	12			116	11				4	33	86	262
8:30 AM	1	21			96	12				2	42	94	268
8:45 AM	3	16			95	11				1	24	60	210
Total	10	140	0	0	819	116	0	0	0	16	239	530	1870

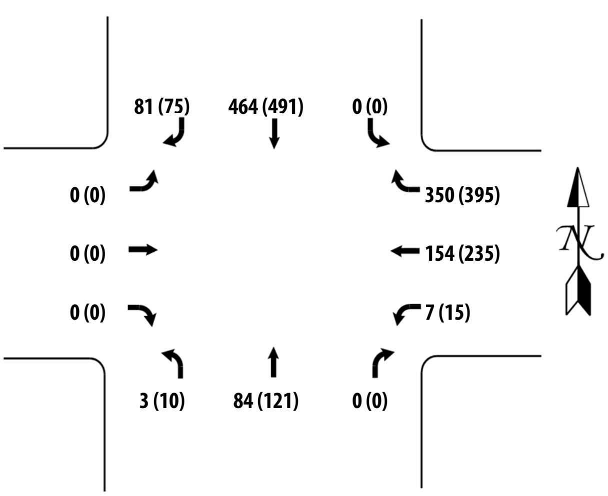
7	Fulton Street NORTHBOUND			Oxford Street SOUTHBOUND			Bancroft Way EASTBOUND			Bancroft Way WESTBOUND			PM
Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
4:00 PM	3	22			96	16				1	42	71	251
4:15 PM	3	26			115	17				7	57	92	317
4:30 PM	5	35			123	20				6	55	107	351
4:45 PM	1	28			128	17				1	57	93	325
5:00 PM	1	32			125	21				1	66	103	349
5:15 PM	0	21			109	14				6	58	96	304
5:30 PM	2	18			104	19				1	45	105	294
5:45 PM	0	12			88	15				3	56	74	248
Total	15	194	0	0	888	139	0	0	0	26	436	741	2439

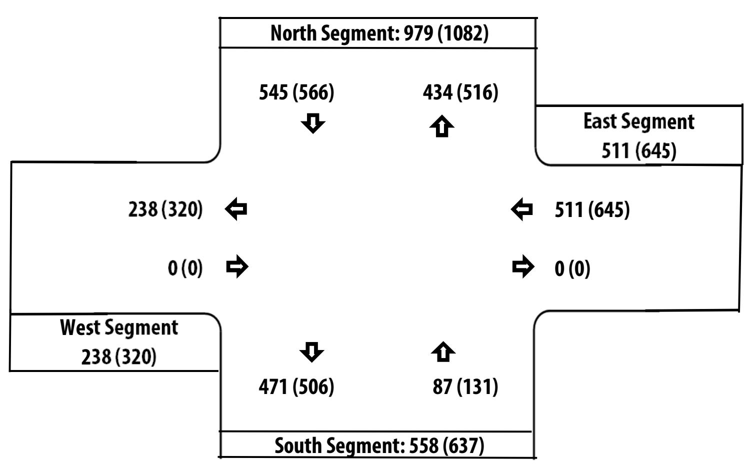
AM PEAK HOUR VOLUMES

7	Fulton Street NORTHBOUND			Oxford Street SOUTHBOUND			Bancroft Way EASTBOUND			Bancroft Way WESTBOUND			AM
Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
7:45 AM	0	19			123	21				0	37	79	279
8:00 AM	2	32			129	37				1	42	91	334
8:15 AM	0	12			116	11				4	33	86	262
8:30 AM	1	21			96	12				2	42	94	268
Total	3	84	0	0	464	81	0	0	0	7	154	350	1143

PM PEAK HOUR VOLUMES

7	Fulton Street NORTHBOUND			Oxford Street SOUTHBOUND			Bancroft Way EASTBOUND			Bancroft Way WESTBOUND			PM
Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
4:15 PM	3	26			115	17				7	57	92	317
4:30 PM	5	35			123	20				6	55	107	351
4:45 PM	1	28			128	17				1	57	93	325
5:00 PM	1	32			125	21				1	66	103	349
Total	10	121	0	0	491	75	0	0	0	15	235	395	1342





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	37	30	12	25	11	0	238	0	0	449	30
Future Volume (veh/h)	7	37	30	12	25	11	0	238	0	0	449	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.82		0.77	0.86		0.78	1.00		1.00	1.00		0.90
Parking Bus, Adj	1.00	1.00	0.86	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.88
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1670	1670	1670	1670	1670	1670	0	1670	0	0	1670	1670
Adj Flow Rate, veh/h	9	50	41	16	34	15	0	322	0	0	607	41
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Percent Heavy Veh, %	3	3	3	3	3	3	0	3	0	0	3	3
Cap, veh/h	51	199	151	125	244	99	0	1917	0	0	1697	114
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.00	0.60	0.00	0.00	0.60	0.60
Sat Flow, veh/h	57	622	471	272	759	309	0	3340	0	0	2892	189
Grp Volume(v), veh/h	100	0	0	65	0	0	0	322	0	0	342	306
Grp Sat Flow(s),veh/h/ln	1150	0	0	1340	0	0	0	1586	0	0	1586	1412
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.4	0.0	0.0	13.1	13.1
Cycle Q Clear(g_c), s	7.5	0.0	0.0	3.7	0.0	0.0	0.0	5.4	0.0	0.0	13.1	13.1
Prop In Lane	0.09		0.41	0.25		0.23	0.00		0.00	0.00		0.13
Lane Grp Cap(c), veh/h	402	0	0	467	0	0	0	1917	0	0	959	853
V/C Ratio(X)	0.25	0.00	0.00	0.14	0.00	0.00	0.00	0.17	0.00	0.00	0.36	0.36
Avail Cap(c_a), veh/h	402	0	0	467	0	0	0	1917	0	0	959	853
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	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	30.2	0.0	0.0	28.9	0.0	0.0	0.0	10.5	0.0	0.0	12.0	12.0
Incr Delay (d2), s/veh	1.5	0.0	0.0	0.6	0.0	0.0	0.0	0.2	0.0	0.0	1.0	1.2
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	2.3	0.0	0.0	1.4	0.0	0.0	0.0	1.9	0.0	0.0	4.8	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.7	0.0	0.0	29.6	0.0	0.0	0.0	10.7	0.0	0.0	13.0	13.2
LnGrp LOS	C	A	A	C	A	A	A	B	A	A	B	B
Approach Vol, veh/h		100			65			322			648	
Approach Delay, s/veh		31.7			29.6			10.7			13.1	
Approach LOS		C			C			B			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		77.0		43.0		77.0		43.0				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		72.5		38.5		72.5		38.5				
Max Q Clear Time (g_c+I1), s		7.4		9.5		15.1		5.7				
Green Ext Time (p_c), s		2.4		0.6		4.7		0.4				
Intersection Summary												
HCM 6th Ctrl Delay			15.0									
HCM 6th LOS			B									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	26	0	0	48	64	0	126	44	0	0	0
Future Volume (veh/h)	8	26	0	0	48	64	0	126	44	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	0.99		1.00	1.00		0.97	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	0.85	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1670	1670	0	0	1670	1670	0	1670	1670			
Adj Flow Rate, veh/h	10	32	0	0	59	79	0	156	54			
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81			
Percent Heavy Veh, %	3	3	0	0	3	3	0	3	3			
Cap, veh/h	364	1109	0	0	501	671	0	0	0			
Arrive On Green	0.93	0.93	0.00	0.00	0.93	0.93	0.00	0.00	0.00			
Sat Flow, veh/h	317	1191	0	0	538	721		0				
Grp Volume(v), veh/h	42	0	0	0	0	138		0.0				
Grp Sat Flow(s),veh/h/ln	1508	0	0	0	0	1259						
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.6						
Cycle Q Clear(g_c), s	0.1	0.0	0.0	0.0	0.0	0.6						
Prop In Lane	0.24		0.00	0.00		0.57						
Lane Grp Cap(c), veh/h	1472	0	0	0	0	1172						
V/C Ratio(X)	0.03	0.00	0.00	0.00	0.00	0.12						
Avail Cap(c_a), veh/h	1472	0	0	0	0	1172						
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00						
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00						
Uniform Delay (d), s/veh	0.2	0.0	0.0	0.0	0.0	0.2						
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.2						
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0						
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.0	0.1						
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.2	0.0	0.0	0.0	0.0	0.4						
LnGrp LOS	A	A	A	A	A	A						
Approach Vol, veh/h		42			138							
Approach Delay, s/veh		0.2			0.4							
Approach LOS		A			A							

Timer - Assigned Phs				4				8				
Phs Duration (G+Y+Rc), s				65.0				65.0				
Change Period (Y+Rc), s				4.5				4.5				
Max Green Setting (Gmax), s				60.5				60.5				
Max Q Clear Time (g_c+I1), s				2.1				2.6				
Green Ext Time (p_c), s				0.2				0.9				

Intersection Summary	
HCM 6th Ctrl Delay	0.3
HCM 6th LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	159	12	112	1	5	12	77	297	3	17	485	42
Future Volume (veh/h)	159	12	112	1	5	12	77	297	3	17	485	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.87		0.90	0.93		0.90	0.99		0.92	0.97		0.92
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	0.85	1.00	1.00	0.85
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670
Adj Flow Rate, veh/h	202	0	135	1	6	14	93	358	4	20	584	51
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	698	0	291	39	114	238	460	1952	22	647	1781	155
Arrive On Green	0.26	0.00	0.26	0.26	0.26	0.26	1.00	1.00	1.00	0.66	0.66	0.66
Sat Flow, veh/h	2163	0	1124	19	440	918	699	2962	33	882	2702	235
Grp Volume(v), veh/h	202	0	135	21	0	0	93	192	170	20	342	293
Grp Sat Flow(s),veh/h/ln	1082	0	1124	1378	0	0	699	1586	1409	882	1586	1351
Q Serve(g_s), s	6.8	0.0	11.1	0.0	0.0	0.0	2.6	0.0	0.0	0.9	10.3	10.4
Cycle Q Clear(g_c), s	8.0	0.0	11.1	1.3	0.0	0.0	13.0	0.0	0.0	0.9	10.3	10.4
Prop In Lane	1.00		1.00	0.05		0.67	1.00		0.02	1.00		0.17
Lane Grp Cap(c), veh/h	698	0	291	391	0	0	460	1046	928	647	1046	891
V/C Ratio(X)	0.29	0.00	0.46	0.05	0.00	0.00	0.20	0.18	0.18	0.03	0.33	0.33
Avail Cap(c_a), veh/h	698	0	291	391	0	0	460	1046	928	647	1046	891
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.0	0.0	34.3	30.7	0.0	0.0	0.9	0.0	0.0	6.5	8.1	8.2
Incr Delay (d2), s/veh	1.0	0.0	5.2	0.3	0.0	0.0	1.0	0.4	0.4	0.1	0.8	1.0
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	2.3	0.0	3.5	0.4	0.0	0.0	0.1	0.1	0.1	0.2	3.5	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.1	0.0	39.5	30.9	0.0	0.0	1.9	0.4	0.4	6.6	9.0	9.1
LnGrp LOS	C	A	D	C	A	A	A	A	A	A	A	A
Approach Vol, veh/h		337			21			455			655	
Approach Delay, s/veh		36.3			30.9			0.7			9.0	
Approach LOS		D			C			A			A	

Timer - Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		77.0		33.0		77.0		33.0
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		72.5		28.5		72.5		28.5
Max Q Clear Time (g_c+I1), s		15.0		13.1		12.4		3.3
Green Ext Time (p_c), s		3.2		1.3		4.7		0.1

Intersection Summary	
HCM 6th Ctrl Delay	13.0
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	12	14	16	3	6	37	346	31	7	544	72
Future Volume (veh/h)	44	12	14	16	3	6	37	346	31	7	544	72
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.72		0.69	0.75		0.69	1.00		0.93	1.00		0.93
Parking Bus, Adj	1.00	1.00	0.78	1.00	1.00	0.86	1.00	1.00	0.88	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670
Adj Flow Rate, veh/h	52	14	16	19	4	7	44	407	36	8	640	85
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	188	46	44	205	42	59	152	1512	133	72	1393	185
Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.10	0.55	0.55	0.09	1.00	1.00
Sat Flow, veh/h	477	163	155	537	148	208	1590	2750	241	1590	2787	369
Grp Volume(v), veh/h	82	0	0	30	0	0	44	234	209	8	364	361
Grp Sat Flow(s),veh/h/ln	796	0	0	893	0	0	1590	1586	1405	1590	1586	1569
Q Serve(g_s), s	6.2	0.0	0.0	0.0	0.0	0.0	2.8	8.5	8.7	0.5	0.0	0.0
Cycle Q Clear(g_c), s	8.4	0.0	0.0	2.2	0.0	0.0	2.8	8.5	8.7	0.5	0.0	0.0
Prop In Lane	0.63		0.20	0.63		0.23	1.00		0.17	1.00		0.24
Lane Grp Cap(c), veh/h	278	0	0	305	0	0	152	873	773	72	793	785
V/C Ratio(X)	0.30	0.00	0.00	0.10	0.00	0.00	0.29	0.27	0.27	0.11	0.46	0.46
Avail Cap(c_a), veh/h	278	0	0	305	0	0	152	873	773	72	793	785
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.1	0.0	0.0	29.1	0.0	0.0	46.3	13.1	13.1	48.0	0.0	0.0
Incr Delay (d2), s/veh	2.7	0.0	0.0	0.6	0.0	0.0	4.8	0.8	0.9	3.1	1.9	1.9
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	1.9	0.0	0.0	0.6	0.0	0.0	1.3	3.2	2.9	0.3	0.4	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.8	0.0	0.0	29.8	0.0	0.0	51.0	13.8	14.0	51.0	1.9	1.9
LnGrp LOS	C	A	A	C	A	A	D	B	B	D	A	A
Approach Vol, veh/h		82			30			487			733	
Approach Delay, s/veh		33.8			29.8			17.2			2.5	
Approach LOS		C			C			B			A	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.5	65.0		35.5	15.0	59.5		35.5
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.0	60.5		31.0	10.5	55.0		31.0
Max Q Clear Time (g_c+I1), s	2.5	10.7		10.4	4.8	2.0		4.2
Green Ext Time (p_c), s	0.0	3.0		0.5	0.0	5.4		0.1

Intersection Summary		
HCM 6th Ctrl Delay		10.4
HCM 6th LOS		B

Intersection						
Int Delay, s/veh	0.1					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	5	0	437	602	4
Future Vol, veh/h	0	5	0	437	602	4
Conflicting Peds, #/hr	0	54	0	0	0	54
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	6	0	486	669	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	445	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.96	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.33	-	-	-	-
Pot Cap-1 Maneuver	0	558	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	502	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.3	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	502	-	-
HCM Lane V/C Ratio	-	0.011	-	-
HCM Control Delay (s)	-	12.3	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0	-	-

Intersection							
Int Delay, s/veh	0.8						

Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Vol, veh/h	8	24	12	429	11	560	47
Future Vol, veh/h	8	24	12	429	11	560	47
Conflicting Peds, #/hr	62	62	5	0	0	0	62
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	-	None
Storage Length	0	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	0	-
Grade, %	0	-	-	0	-	0	-
Peak Hour Factor	90	90	90	90	92	90	90
Heavy Vehicles, %	3	3	3	3	3	3	3
Mvmt Flow	9	27	13	477	12	622	52

Major/Minor	Minor2		Major1		Major2		
Conflicting Flow All	1061	461	736	0	477	-	0
Stage 1	734	-	-	-	-	-	-
Stage 2	327	-	-	-	-	-	-
Critical Hdwy	6.86	6.96	4.16	-	6.46	-	-
Critical Hdwy Stg 1	5.86	-	-	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-	-	-
Follow-up Hdwy	3.53	3.33	2.23	-	2.53	-	-
Pot Cap-1 Maneuver	217	545	859	-	712	-	-
Stage 1	433	-	-	-	-	-	-
Stage 2	700	-	-	-	-	-	-
Platoon blocked, %				-		-	-
Mov Cap-1 Maneuver	183	483	808	-	712	-	-
Mov Cap-2 Maneuver	183	-	-	-	-	-	-
Stage 1	398	-	-	-	-	-	-
Stage 2	641	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	16.7	0.4	0.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	808	-	343	-	-
HCM Lane V/C Ratio	0.017	-	0.104	-	-
HCM Control Delay (s)	9.5	0.1	16.7	0.1	-
HCM Lane LOS	A	A	C	A	-
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	7	154	350	3	84	0	0	484	81
Future Volume (veh/h)	0	0	0	7	154	350	3	84	0	0	484	81
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.96
Parking Bus, Adj				1.00	1.00	0.94	1.00	1.00	1.00	1.00	1.00	0.88
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1670	1670	1670	1670	1670	0	0	1670	1670
Adj Flow Rate, veh/h				9	197	0	4	108	0	0	621	104
Peak Hour Factor				0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %				3	3	3	3	3	0	0	3	3
Cap, veh/h				62	1430		60	1365	0	0	1161	194
Arrive On Green				0.46	0.46	0.00	0.46	0.46	0.00	0.00	0.46	0.46
Sat Flow, veh/h				136	3114	1325	55	3048	0	0	2612	422
Grp Volume(v), veh/h				110	96	0	60	52	0	0	389	336
Grp Sat Flow(s),veh/h/ln				1663	1586	1325	1584	1444	0	0	1586	1364
Q Serve(g_s), s				4.2	3.8	0.0	0.0	2.2	0.0	0.0	19.3	19.4
Cycle Q Clear(g_c), s				4.2	3.8	0.0	2.2	2.2	0.0	0.0	19.3	19.4
Prop In Lane				0.08		1.00	0.07		0.00	0.00		0.31
Lane Grp Cap(c), veh/h				764	728		762	663	0	0	728	626
V/C Ratio(X)				0.14	0.13		0.08	0.08	0.00	0.00	0.53	0.54
Avail Cap(c_a), veh/h				764	728		762	663	0	0	728	626
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				17.2	17.1	0.0	16.7	16.7	0.0	0.0	21.3	21.4
Incr Delay (d2), s/veh				0.4	0.4	0.0	0.2	0.2	0.0	0.0	2.8	3.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				1.7	1.5	0.0	0.9	0.8	0.0	0.0	7.6	6.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				17.6	17.5	0.0	16.9	16.9	0.0	0.0	24.1	24.6
LnGrp LOS				B	B		B	B	A	A	C	C
Approach Vol, veh/h					206			112			725	
Approach Delay, s/veh					17.6			16.9			24.4	
Approach LOS					B			B			C	

Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		55.0				55.0		55.0				
Change Period (Y+Rc), s		4.5				4.5		4.5				
Max Green Setting (Gmax), s		50.5				50.5		50.5				
Max Q Clear Time (g_c+I1), s		4.2				21.4		6.2				
Green Ext Time (p_c), s		0.7				5.1		1.2				

Intersection Summary	
HCM 6th Ctrl Delay	22.2
HCM 6th LOS	C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	58	42	26	21	23	0	282	0	0	439	37
Future Volume (veh/h)	14	58	42	26	21	23	0	282	0	0	439	37
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.85		0.80	0.89		0.80	1.00		1.00	1.00		0.75
Parking Bus, Adj	1.00	1.00	0.86	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.88
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1670	1670	1670	1670	1670	1670	0	1670	0	0	1670	1670
Adj Flow Rate, veh/h	16	64	47	29	23	26	0	313	0	0	488	41
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	3	3	3	3	3	3	0	3	0	0	3	3
Cap, veh/h	75	250	171	208	159	163	0	1679	0	0	1431	119
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.00	0.53	0.00	0.00	0.53	0.53
Sat Flow, veh/h	104	631	432	421	402	412	0	3340	0	0	2788	225
Grp Volume(v), veh/h	127	0	0	78	0	0	0	313	0	0	284	245
Grp Sat Flow(s),veh/h/ln	1167	0	0	1235	0	0	0	1586	0	0	1586	1343
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.2	0.0	0.0	12.3	12.6
Cycle Q Clear(g_c), s	8.4	0.0	0.0	4.2	0.0	0.0	0.0	6.2	0.0	0.0	12.3	12.6
Prop In Lane	0.13		0.37	0.37		0.33	0.00		0.00	0.00		0.17
Lane Grp Cap(c), veh/h	496	0	0	530	0	0	0	1679	0	0	840	711
V/C Ratio(X)	0.26	0.00	0.00	0.15	0.00	0.00	0.00	0.19	0.00	0.00	0.34	0.34
Avail Cap(c_a), veh/h	496	0	0	530	0	0	0	1679	0	0	840	711
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	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	24.4	0.0	0.0	23.2	0.0	0.0	0.0	14.8	0.0	0.0	16.2	16.3
Incr Delay (d2), s/veh	1.2	0.0	0.0	0.6	0.0	0.0	0.0	0.2	0.0	0.0	1.1	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	2.6	0.0	0.0	1.5	0.0	0.0	0.0	2.3	0.0	0.0	4.7	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.7	0.0	0.0	23.7	0.0	0.0	0.0	15.0	0.0	0.0	17.3	17.6
LnGrp LOS	C	A	A	C	A	A	A	B	A	A	B	B
Approach Vol, veh/h		127			78			313			529	
Approach Delay, s/veh		25.7			23.7			15.0			17.4	
Approach LOS		C			C			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		68.0		52.0		68.0		52.0				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		63.5		47.5		63.5		47.5				
Max Q Clear Time (g_c+I1), s		8.2		10.4		14.6		6.2				
Green Ext Time (p_c), s		2.3		0.8		3.7		0.5				

Intersection Summary			
HCM 6th Ctrl Delay			18.2
HCM 6th LOS			B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	41	0	0	70	56	0	160	81	0	0	0
Future Volume (veh/h)	19	41	0	0	70	56	0	160	81	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	0.96		1.00	1.00		0.93	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	0.85	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1670	1670	0	0	1670	1670	0	1670	1670			
Adj Flow Rate, veh/h	21	46	0	0	78	62	0	178	90			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90			
Percent Heavy Veh, %	3	3	0	0	3	3	0	3	3			
Cap, veh/h	458	954	0	0	655	520	0	0	0			
Arrive On Green	0.93	0.93	0.00	0.00	0.93	0.93	0.00	0.00	0.00			
Sat Flow, veh/h	410	1031	0	0	708	562		0				
Grp Volume(v), veh/h	67	0	0	0	0	140		0.0				
Grp Sat Flow(s),veh/h/ln	1441	0	0	0	0	1270						
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.6						
Cycle Q Clear(g_c), s	0.2	0.0	0.0	0.0	0.0	0.6						
Prop In Lane	0.31		0.00	0.00		0.44						
Lane Grp Cap(c), veh/h	1412	0	0	0	0	1175						
V/C Ratio(X)	0.05	0.00	0.00	0.00	0.00	0.12						
Avail Cap(c_a), veh/h	1412	0	0	0	0	1175						
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00						
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00						
Uniform Delay (d), s/veh	0.2	0.0	0.0	0.0	0.0	0.2						
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.0	0.0	0.2						
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0						
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.0	0.1						
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.2	0.0	0.0	0.0	0.0	0.4						
LnGrp LOS	A	A	A	A	A	A						
Approach Vol, veh/h		67			140							
Approach Delay, s/veh		0.2			0.4							
Approach LOS		A			A							

Timer - Assigned Phs				4				8
Phs Duration (G+Y+Rc), s				60.0				60.0
Change Period (Y+Rc), s				4.5				4.5
Max Green Setting (Gmax), s				55.5				55.5
Max Q Clear Time (g_c+I1), s				2.2				2.6
Green Ext Time (p_c), s				0.4				0.9

Intersection Summary	
HCM 6th Ctrl Delay	0.3
HCM 6th LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	125	15	129	6	25	18	151	462	2	15	392	62
Future Volume (veh/h)	125	15	129	6	25	18	151	462	2	15	392	62
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.87		0.90	0.93		0.89	0.98		0.91	0.96		0.88
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	0.85	1.00	1.00	0.85
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670
Adj Flow Rate, veh/h	165	0	157	7	30	22	184	563	2	18	478	76
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	694	0	289	61	209	139	587	1971	7	357	999	157
Arrive On Green	0.26	0.00	0.26	0.26	0.26	0.26	0.43	1.00	1.00	0.40	0.40	0.40
Sat Flow, veh/h	2096	0	1115	94	807	536	1590	2991	11	724	2481	390
Grp Volume(v), veh/h	165	0	157	59	0	0	184	299	266	18	304	250
Grp Sat Flow(s),veh/h/ln	1048	0	1115	1436	0	0	1590	1586	1415	724	1586	1285
Q Serve(g_s), s	2.4	0.0	13.4	0.0	0.0	0.0	0.0	0.0	0.0	1.7	15.6	15.9
Cycle Q Clear(g_c), s	5.8	0.0	13.4	3.4	0.0	0.0	0.0	0.0	0.0	1.7	15.6	15.9
Prop In Lane	1.00		1.00	0.12		0.37	1.00		0.01	1.00		0.30
Lane Grp Cap(c), veh/h	694	0	289	409	0	0	587	1046	933	357	639	517
V/C Ratio(X)	0.24	0.00	0.54	0.14	0.00	0.00	0.31	0.29	0.29	0.05	0.48	0.48
Avail Cap(c_a), veh/h	694	0	289	409	0	0	587	1046	933	357	639	517
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.2	0.0	35.1	31.4	0.0	0.0	14.4	0.0	0.0	20.1	24.3	24.4
Incr Delay (d2), s/veh	0.8	0.0	7.2	0.7	0.0	0.0	1.4	0.7	0.8	0.3	2.5	3.2
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	1.8	0.0	4.2	1.3	0.0	0.0	2.5	0.2	0.2	0.3	6.2	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.0	0.0	42.3	32.2	0.0	0.0	15.8	0.7	0.8	20.4	26.8	27.6
LnGrp LOS	C	A	D	C	A	A	B	A	A	C	C	C
Approach Vol, veh/h		322			59			749			572	
Approach Delay, s/veh		37.5			32.2			4.4			26.9	
Approach LOS		D			C			A			C	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		77.0		33.0	28.2	48.8		33.0				
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s		72.5		28.5	23.7	44.3		28.5				
Max Q Clear Time (g_c+I1), s		2.0		15.4	2.0	17.9		5.4				
Green Ext Time (p_c), s		3.9		1.2	0.5	3.8		0.3				

Intersection Summary			
HCM 6th Ctrl Delay			19.2
HCM 6th LOS			B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	8	74	13	9	10	65	568	25	6	472	52
Future Volume (veh/h)	39	8	74	13	9	10	65	568	25	6	472	52
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.65		0.62	0.77		0.61	1.00		0.50	1.00		0.79
Parking Bus, Adj	1.00	1.00	0.78	1.00	1.00	0.86	1.00	1.00	0.88	1.00	1.00	0.98
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670
Adj Flow Rate, veh/h	43	9	82	14	10	11	72	631	28	7	524	58
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	97	24	122	128	80	74	152	1521	67	72	1382	152
Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.10	0.55	0.55	0.09	1.00	1.00
Sat Flow, veh/h	190	84	433	293	283	264	1590	2766	122	1590	2765	303
Grp Volume(v), veh/h	134	0	0	35	0	0	72	360	299	7	299	283
Grp Sat Flow(s),veh/h/ln	707	0	0	839	0	0	1590	1586	1301	1590	1586	1482
Q Serve(g_s), s	13.8	0.0	0.0	0.0	0.0	0.0	4.7	14.5	14.8	0.4	0.0	0.0
Cycle Q Clear(g_c), s	18.0	0.0	0.0	2.6	0.0	0.0	4.7	14.5	14.8	0.4	0.0	0.0
Prop In Lane	0.32		0.61	0.40		0.31	1.00		0.09	1.00		0.20
Lane Grp Cap(c), veh/h	242	0	0	282	0	0	152	873	716	72	793	741
V/C Ratio(X)	0.55	0.00	0.00	0.12	0.00	0.00	0.47	0.41	0.42	0.10	0.38	0.38
Avail Cap(c_a), veh/h	242	0	0	282	0	0	152	873	716	72	793	741
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.5	0.0	0.0	29.3	0.0	0.0	47.1	14.4	14.5	47.9	0.0	0.0
Incr Delay (d2), s/veh	8.8	0.0	0.0	0.9	0.0	0.0	10.3	1.4	1.8	2.7	1.4	1.5
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	3.7	0.0	0.0	0.8	0.0	0.0	2.3	5.4	4.6	0.2	0.3	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.3	0.0	0.0	30.2	0.0	0.0	57.4	15.8	16.3	50.6	1.4	1.5
LnGrp LOS	D	A	A	C	A	A	E	B	B	D	A	A
Approach Vol, veh/h		134			35			731			589	
Approach Delay, s/veh		43.3			30.2			20.1			2.0	
Approach LOS		D			C			C			A	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.5	65.0		35.5	15.0	59.5		35.5
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.0	60.5		31.0	10.5	55.0		31.0
Max Q Clear Time (g_c+I1), s	2.4	16.8		20.0	6.7	2.0		4.6
Green Ext Time (p_c), s	0.0	4.9		0.7	0.0	4.2		0.2

Intersection Summary			
HCM 6th Ctrl Delay			15.3
HCM 6th LOS			B

Intersection						
Int Delay, s/veh	0.1					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	8	0	658	561	3
Future Vol, veh/h	0	8	0	658	561	3
Conflicting Peds, #/hr	0	54	0	0	0	68
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	9	0	731	623	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	435	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.96	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.33	-	-	-	-
Pot Cap-1 Maneuver	0	566	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	502	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.3	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	502	-	-
HCM Lane V/C Ratio	-	0.018	-	-
HCM Control Delay (s)	-	12.3	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.1	-	-

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Vol, veh/h	21	85	32	637	21	484	85
Future Vol, veh/h	21	85	32	637	21	484	85
Conflicting Peds, #/hr	63	0	94	0	0	0	94
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	-	None
Storage Length	0	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	0	-
Grade, %	0	-	-	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3	3
Mvmt Flow	23	94	36	708	23	538	94

Major/Minor	Minor2		Major1		Major2		
Conflicting Flow All	1214	410	726	0	708	-	0
Stage 1	725	-	-	-	-	-	-
Stage 2	489	-	-	-	-	-	-
Critical Hdwy	6.86	6.96	4.16	-	6.46	-	-
Critical Hdwy Stg 1	5.86	-	-	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-	-	-
Follow-up Hdwy	3.53	3.33	2.23	-	2.53	-	-
Pot Cap-1 Maneuver	173	588	866	-	507	-	-
Stage 1	438	-	-	-	-	-	-
Stage 2	579	-	-	-	-	-	-
Platoon blocked, %				-		-	-
Mov Cap-1 Maneuver	123	535	788	-	507	-	-
Mov Cap-2 Maneuver	123	-	-	-	-	-	-
Stage 1	369	-	-	-	-	-	-
Stage 2	490	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	22.5	0.8	0.8
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	788	-	322	-	-
HCM Lane V/C Ratio	0.045	-	0.366	-	-
HCM Control Delay (s)	9.8	0.3	22.5	0.4	-
HCM Lane LOS	A	A	C	A	-
HCM 95th %tile Q(veh)	0.1	-	1.6	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	15	235	495	10	166	0	0	491	75
Future Volume (veh/h)	0	0	0	15	235	495	10	166	0	0	491	75
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	0.99		1.00	1.00		0.89
Parking Bus, Adj				1.00	1.00	0.94	1.00	1.00	1.00	1.00	1.00	0.88
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1670	1670	1670	1670	1670	0	0	1670	1670
Adj Flow Rate, veh/h				16	255	0	11	180	0	0	534	82
Peak Hour Factor				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	0	0	3	3
Cap, veh/h				104	1741		65	944	0	0	887	135
Arrive On Green				0.57	0.57	0.00	0.35	0.35	0.00	0.00	0.35	0.35
Sat Flow, veh/h				183	3064	1325	82	2773	0	0	2618	386
Grp Volume(v), veh/h				145	126	0	97	94	0	0	333	283
Grp Sat Flow(s),veh/h/ln				1661	1586	1325	1335	1444	0	0	1586	1335
Q Serve(g_s), s				4.5	4.1	0.0	0.4	5.0	0.0	0.0	19.0	19.3
Cycle Q Clear(g_c), s				4.5	4.1	0.0	19.6	5.0	0.0	0.0	19.0	19.3
Prop In Lane				0.11		1.00	0.11		0.00	0.00		0.29
Lane Grp Cap(c), veh/h				944	901		504	505	0	0	555	467
V/C Ratio(X)				0.15	0.14		0.19	0.19	0.00	0.00	0.60	0.61
Avail Cap(c_a), veh/h				944	901		504	505	0	0	555	467
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				11.2	11.1	0.0	24.8	24.9	0.0	0.0	29.4	29.5
Incr Delay (d2), s/veh				0.3	0.3	0.0	0.8	0.8	0.0	0.0	4.7	5.7
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				1.7	1.5	0.0	1.9	1.8	0.0	0.0	7.9	6.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				11.6	11.5	0.0	25.7	25.7	0.0	0.0	34.1	35.2
LnGrp LOS				B	B		C	C	A	A	C	D
Approach Vol, veh/h					271			191			616	
Approach Delay, s/veh					11.5			25.7			34.6	
Approach LOS					B			C			C	

Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		43.0				43.0		67.0				
Change Period (Y+Rc), s		4.5				4.5		4.5				
Max Green Setting (Gmax), s		38.5				38.5		62.5				
Max Q Clear Time (g_c+I1), s		21.6				21.3		6.5				
Green Ext Time (p_c), s		0.9				3.6		1.7				

Intersection Summary		
HCM 6th Ctrl Delay		27.2
HCM 6th LOS		C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	39	30	12	25	11	0	250	0	0	449	30
Future Volume (veh/h)	7	39	30	12	25	11	0	250	0	0	449	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.82		0.77	0.86		0.78	1.00		1.00	1.00		0.90
Parking Bus, Adj	1.00	1.00	0.86	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.88
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1670	1670	1670	1670	1670	1670	0	1670	0	0	1670	1670
Adj Flow Rate, veh/h	9	53	41	16	34	15	0	338	0	0	607	41
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Percent Heavy Veh, %	3	3	3	3	3	3	0	3	0	0	3	3
Cap, veh/h	50	206	148	125	244	99	0	1917	0	0	1697	114
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.00	0.60	0.00	0.00	0.60	0.60
Sat Flow, veh/h	54	642	461	272	760	310	0	3340	0	0	2892	189
Grp Volume(v), veh/h	103	0	0	65	0	0	0	338	0	0	342	306
Grp Sat Flow(s),veh/h/ln	1157	0	0	1342	0	0	0	1586	0	0	1586	1412
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.7	0.0	0.0	13.1	13.1
Cycle Q Clear(g_c), s	7.7	0.0	0.0	3.7	0.0	0.0	0.0	5.7	0.0	0.0	13.1	13.1
Prop In Lane	0.09		0.40	0.25		0.23	0.00		0.00	0.00		0.13
Lane Grp Cap(c), veh/h	404	0	0	468	0	0	0	1917	0	0	959	853
V/C Ratio(X)	0.26	0.00	0.00	0.14	0.00	0.00	0.00	0.18	0.00	0.00	0.36	0.36
Avail Cap(c_a), veh/h	404	0	0	468	0	0	0	1917	0	0	959	853
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	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	30.3	0.0	0.0	28.9	0.0	0.0	0.0	10.5	0.0	0.0	12.0	12.0
Incr Delay (d2), s/veh	1.5	0.0	0.0	0.6	0.0	0.0	0.0	0.2	0.0	0.0	1.0	1.2
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	2.4	0.0	0.0	1.4	0.0	0.0	0.0	2.0	0.0	0.0	4.8	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.8	0.0	0.0	29.6	0.0	0.0	0.0	10.7	0.0	0.0	13.0	13.2
LnGrp LOS	C	A	A	C	A	A	A	B	A	A	B	B
Approach Vol, veh/h		103			65			338			648	
Approach Delay, s/veh		31.8			29.6			10.7			13.1	
Approach LOS		C			C			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		77.0		43.0		77.0		43.0				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		72.5		38.5		72.5		38.5				
Max Q Clear Time (g_c+I1), s		7.7		9.7		15.1		5.7				
Green Ext Time (p_c), s		2.5		0.6		4.7		0.4				

Intersection Summary			
HCM 6th Ctrl Delay			15.0
HCM 6th LOS			B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	28	0	0	48	64	0	136	55	0	0	0
Future Volume (veh/h)	8	28	0	0	48	64	0	136	55	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	0.99		1.00	1.00		0.97	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	0.85	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1670	1670	0	0	1670	1670	0	1670	1670			
Adj Flow Rate, veh/h	10	35	0	0	59	79	0	168	68			
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81			
Percent Heavy Veh, %	3	3	0	0	3	3	0	3	3			
Cap, veh/h	342	1140	0	0	501	671	0	0	0			
Arrive On Green	0.93	0.93	0.00	0.00	0.93	0.93	0.00	0.00	0.00			
Sat Flow, veh/h	295	1225	0	0	538	721		0				
Grp Volume(v), veh/h	45	0	0	0	0	138		0.0				
Grp Sat Flow(s),veh/h/ln	1519	0	0	0	0	1259						
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.6						
Cycle Q Clear(g_c), s	0.1	0.0	0.0	0.0	0.0	0.6						
Prop In Lane	0.22		0.00	0.00		0.57						
Lane Grp Cap(c), veh/h	1482	0	0	0	0	1172						
V/C Ratio(X)	0.03	0.00	0.00	0.00	0.00	0.12						
Avail Cap(c_a), veh/h	1482	0	0	0	0	1172						
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00						
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00						
Uniform Delay (d), s/veh	0.2	0.0	0.0	0.0	0.0	0.2						
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.2						
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0						
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.0	0.1						
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.2	0.0	0.0	0.0	0.0	0.4						
LnGrp LOS	A	A	A	A	A	A						
Approach Vol, veh/h		45			138							
Approach Delay, s/veh		0.2			0.4							
Approach LOS		A			A							

Timer - Assigned Phs	4	8
Phs Duration (G+Y+Rc), s	65.0	65.0
Change Period (Y+Rc), s	4.5	4.5
Max Green Setting (Gmax), s	60.5	60.5
Max Q Clear Time (g_c+I1), s	2.1	2.6
Green Ext Time (p_c), s	0.2	0.9

Intersection Summary	
HCM 6th Ctrl Delay	0.3
HCM 6th LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	159	12	129	1	5	12	77	301	3	17	491	42
Future Volume (veh/h)	159	12	129	1	5	12	77	301	3	17	491	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.87		0.90	0.93		0.90	0.99		0.92	0.97		0.92
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	0.85	1.00	1.00	0.85
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670
Adj Flow Rate, veh/h	202	0	155	1	6	14	93	363	4	20	592	51
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	698	0	291	39	114	238	456	1953	21	644	1784	153
Arrive On Green	0.26	0.00	0.26	0.26	0.26	0.26	1.00	1.00	1.00	0.66	0.66	0.66
Sat Flow, veh/h	2163	0	1124	19	440	918	694	2963	33	878	2706	232
Grp Volume(v), veh/h	202	0	155	21	0	0	93	194	173	20	346	297
Grp Sat Flow(s),veh/h/ln	1082	0	1124	1377	0	0	694	1586	1409	878	1586	1352
Q Serve(g_s), s	6.8	0.0	13.0	0.0	0.0	0.0	2.7	0.0	0.0	0.9	10.5	10.5
Cycle Q Clear(g_c), s	8.0	0.0	13.0	1.3	0.0	0.0	13.2	0.0	0.0	0.9	10.5	10.5
Prop In Lane	1.00		1.00	0.05		0.67	1.00		0.02	1.00		0.17
Lane Grp Cap(c), veh/h	698	0	291	391	0	0	456	1046	929	644	1046	891
V/C Ratio(X)	0.29	0.00	0.53	0.05	0.00	0.00	0.20	0.19	0.19	0.03	0.33	0.33
Avail Cap(c_a), veh/h	698	0	291	391	0	0	456	1046	929	644	1046	891
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.0	0.0	35.0	30.7	0.0	0.0	1.0	0.0	0.0	6.5	8.2	8.2
Incr Delay (d2), s/veh	1.0	0.0	6.8	0.3	0.0	0.0	1.0	0.4	0.4	0.1	0.9	1.0
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	2.3	0.0	4.1	0.4	0.0	0.0	0.1	0.1	0.1	0.2	3.6	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.1	0.0	41.8	30.9	0.0	0.0	2.0	0.4	0.4	6.6	9.0	9.2
LnGrp LOS	C	A	D	C	A	A	A	A	A	A	A	A
Approach Vol, veh/h		357			21			460			663	
Approach Delay, s/veh		37.5			30.9			0.7			9.0	
Approach LOS		D			C			A			A	

Timer - Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		77.0		33.0		77.0		33.0
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		72.5		28.5		72.5		28.5
Max Q Clear Time (g_c+I1), s		15.2		15.0		12.5		3.3
Green Ext Time (p_c), s		3.3		1.3		4.8		0.1

Intersection Summary			
HCM 6th Ctrl Delay			13.6
HCM 6th LOS			B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	12	27	16	3	6	54	350	31	7	584	72
Future Volume (veh/h)	44	12	27	16	3	6	54	350	31	7	584	72
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.72		0.69	0.77		0.69	1.00		0.93	1.00		0.93
Parking Bus, Adj	1.00	1.00	0.78	1.00	1.00	0.86	1.00	1.00	0.88	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670
Adj Flow Rate, veh/h	52	14	32	19	4	7	64	412	36	8	687	85
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	160	41	73	201	41	57	152	1514	131	72	1407	174
Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.10	0.55	0.55	0.09	1.00	1.00
Sat Flow, veh/h	389	145	259	522	145	203	1590	2753	239	1590	2814	348
Grp Volume(v), veh/h	98	0	0	30	0	0	64	236	212	8	387	385
Grp Sat Flow(s),veh/h/ln	793	0	0	870	0	0	1590	1586	1405	1590	1586	1575
Q Serve(g_s), s	8.1	0.0	0.0	0.0	0.0	0.0	4.2	8.7	8.8	0.5	0.0	0.0
Cycle Q Clear(g_c), s	10.5	0.0	0.0	2.4	0.0	0.0	4.2	8.7	8.8	0.5	0.0	0.0
Prop In Lane	0.53		0.33	0.63		0.23	1.00		0.17	1.00		0.22
Lane Grp Cap(c), veh/h	274	0	0	299	0	0	152	873	773	72	793	788
V/C Ratio(X)	0.36	0.00	0.00	0.10	0.00	0.00	0.42	0.27	0.27	0.11	0.49	0.49
Avail Cap(c_a), veh/h	274	0	0	299	0	0	152	873	773	72	793	788
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.9	0.0	0.0	29.1	0.0	0.0	46.9	13.1	13.1	48.0	0.0	0.0
Incr Delay (d2), s/veh	3.6	0.0	0.0	0.7	0.0	0.0	8.4	0.8	0.9	3.1	2.1	2.2
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	2.4	0.0	0.0	0.6	0.0	0.0	2.0	3.2	2.9	0.3	0.5	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.5	0.0	0.0	29.8	0.0	0.0	55.3	13.8	14.0	51.0	2.1	2.2
LnGrp LOS	D	A	A	C	A	A	E	B	B	D	A	A
Approach Vol, veh/h		98			30			512			780	
Approach Delay, s/veh		35.5			29.8			19.1			2.7	
Approach LOS		D			C			B			A	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.5	65.0		35.5	15.0	59.5		35.5
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.0	60.5		31.0	10.5	55.0		31.0
Max Q Clear Time (g_c+I1), s	2.5	10.8		12.5	6.2	2.0		4.4
Green Ext Time (p_c), s	0.0	3.0		0.6	0.0	5.9		0.1

Intersection Summary			
HCM 6th Ctrl Delay			11.4
HCM 6th LOS			B

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	65	0	460	602	63
Future Vol, veh/h	0	65	0	460	602	63
Conflicting Peds, #/hr	0	54	0	0	0	54
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	72	0	511	669	70

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	478	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.96	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.33	-	-	-	-
Pot Cap-1 Maneuver	0	531	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	478	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.9	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	478	-	-
HCM Lane V/C Ratio	-	0.151	-	-
HCM Control Delay (s)	-	13.9	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.5	-	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Vol, veh/h	8	24	12	446	15	588	72
Future Vol, veh/h	8	24	12	446	15	588	72
Conflicting Peds, #/hr	62	62	5	0	0	0	62
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	-	None
Storage Length	0	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	0	-
Grade, %	0	-	-	0	-	0	-
Peak Hour Factor	90	90	90	90	92	90	90
Heavy Vehicles, %	3	3	3	3	3	3	3
Mvmt Flow	9	27	13	496	16	653	80

Major/Minor	Minor2		Major1		Major2		
Conflicting Flow All	1123	491	795	0	496	-	0
Stage 1	787	-	-	-	-	-	-
Stage 2	336	-	-	-	-	-	-
Critical Hdwy	6.86	6.96	4.16	-	6.46	-	-
Critical Hdwy Stg 1	5.86	-	-	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-	-	-
Follow-up Hdwy	3.53	3.33	2.23	-	2.53	-	-
Pot Cap-1 Maneuver	198	521	816	-	692	-	-
Stage 1	406	-	-	-	-	-	-
Stage 2	693	-	-	-	-	-	-
Platoon blocked, %				-		-	-
Mov Cap-1 Maneuver	165	461	768	-	692	-	-
Mov Cap-2 Maneuver	165	-	-	-	-	-	-
Stage 1	373	-	-	-	-	-	-
Stage 2	626	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17.7	0.4	0.4
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	768	-	318	-	-
HCM Lane V/C Ratio	0.017	-	0.112	-	-
HCM Control Delay (s)	9.8	0.1	17.7	0.2	-
HCM Lane LOS	A	A	C	A	-
HCM 95th %tile Q(veh)	0.1	-	0.4	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	7	154	367	3	84	0	0	501	92
Future Volume (veh/h)	0	0	0	7	154	367	3	84	0	0	501	92
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.96
Parking Bus, Adj				1.00	1.00	0.94	1.00	1.00	1.00	1.00	1.00	0.88
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1670	1670	1670	1670	1670	0	0	1670	1670
Adj Flow Rate, veh/h				9	197	0	4	108	0	0	642	118
Peak Hour Factor				0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %				3	3	3	3	3	0	0	3	3
Cap, veh/h				62	1430		60	1363	0	0	1142	209
Arrive On Green				0.46	0.46	0.00	0.46	0.46	0.00	0.00	0.46	0.46
Sat Flow, veh/h				136	3114	1325	55	3044	0	0	2570	456
Grp Volume(v), veh/h				110	96	0	60	52	0	0	409	351
Grp Sat Flow(s),veh/h/ln				1663	1586	1325	1579	1444	0	0	1586	1356
Q Serve(g_s), s				4.2	3.8	0.0	0.0	2.2	0.0	0.0	20.7	20.8
Cycle Q Clear(g_c), s				4.2	3.8	0.0	2.2	2.2	0.0	0.0	20.7	20.8
Prop In Lane				0.08		1.00	0.07		0.00	0.00		0.34
Lane Grp Cap(c), veh/h				764	728		760	663	0	0	728	623
V/C Ratio(X)				0.14	0.13		0.08	0.08	0.00	0.00	0.56	0.56
Avail Cap(c_a), veh/h				764	728		760	663	0	0	728	623
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				17.2	17.1	0.0	16.7	16.7	0.0	0.0	21.7	21.7
Incr Delay (d2), s/veh				0.4	0.4	0.0	0.2	0.2	0.0	0.0	3.1	3.7
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				1.7	1.5	0.0	0.9	0.8	0.0	0.0	8.1	7.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				17.6	17.5	0.0	16.9	16.9	0.0	0.0	24.8	25.4
LnGrp LOS				B	B		B	B	A	A	C	C
Approach Vol, veh/h					206			112			760	
Approach Delay, s/veh					17.6			16.9			25.1	
Approach LOS					B			B			C	

Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		55.0				55.0		55.0				
Change Period (Y+Rc), s		4.5				4.5		4.5				
Max Green Setting (Gmax), s		50.5				50.5		50.5				
Max Q Clear Time (g_c+I1), s		4.2				22.8		6.2				
Green Ext Time (p_c), s		0.7				5.4		1.2				

Intersection Summary			
HCM 6th Ctrl Delay			22.8
HCM 6th LOS			C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	63	42	26	21	23	0	295	0	0	439	37
Future Volume (veh/h)	14	63	42	26	21	23	0	295	0	0	439	37
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.85		0.80	0.89		0.80	1.00		1.00	1.00		0.75
Parking Bus, Adj	1.00	1.00	0.86	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.88
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1670	1670	1670	1670	1670	1670	0	1670	0	0	1670	1670
Adj Flow Rate, veh/h	16	70	47	29	23	26	0	328	0	0	488	41
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	3	3	3	3	3	3	0	3	0	0	3	3
Cap, veh/h	73	263	165	207	159	162	0	1679	0	0	1431	119
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.00	0.53	0.00	0.00	0.53	0.53
Sat Flow, veh/h	98	663	416	419	401	410	0	3340	0	0	2788	225
Grp Volume(v), veh/h	133	0	0	78	0	0	0	328	0	0	284	245
Grp Sat Flow(s),veh/h/ln	1178	0	0	1231	0	0	0	1586	0	0	1586	1343
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.5	0.0	0.0	12.3	12.6
Cycle Q Clear(g_c), s	8.8	0.0	0.0	4.2	0.0	0.0	0.0	6.5	0.0	0.0	12.3	12.6
Prop In Lane	0.12		0.35	0.37		0.33	0.00		0.00	0.00		0.17
Lane Grp Cap(c), veh/h	500	0	0	528	0	0	0	1679	0	0	840	711
V/C Ratio(X)	0.27	0.00	0.00	0.15	0.00	0.00	0.00	0.20	0.00	0.00	0.34	0.34
Avail Cap(c_a), veh/h	500	0	0	528	0	0	0	1679	0	0	840	711
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	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	24.6	0.0	0.0	23.2	0.0	0.0	0.0	14.8	0.0	0.0	16.2	16.3
Incr Delay (d2), s/veh	1.3	0.0	0.0	0.6	0.0	0.0	0.0	0.3	0.0	0.0	1.1	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	2.8	0.0	0.0	1.5	0.0	0.0	0.0	2.4	0.0	0.0	4.7	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.9	0.0	0.0	23.7	0.0	0.0	0.0	15.1	0.0	0.0	17.3	17.6
LnGrp LOS	C	A	A	C	A	A	A	B	A	A	B	B
Approach Vol, veh/h		133			78			328			529	
Approach Delay, s/veh		25.9			23.7			15.1			17.4	
Approach LOS		C			C			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		68.0		52.0		68.0		52.0				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		63.5		47.5		63.5		47.5				
Max Q Clear Time (g_c+I1), s		8.5		10.8		14.6		6.2				
Green Ext Time (p_c), s		2.4		0.9		3.7		0.5				

Intersection Summary	
HCM 6th Ctrl Delay	18.2
HCM 6th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	46	0	0	70	56	0	170	107	0	0	0
Future Volume (veh/h)	19	46	0	0	70	56	0	170	107	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	0.96		1.00	1.00		0.93	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	0.85	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1670	1670	0	0	1670	1670	0	1670	1670			
Adj Flow Rate, veh/h	21	51	0	0	78	62	0	189	119			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90			
Percent Heavy Veh, %	3	3	0	0	3	3	0	3	3			
Cap, veh/h	431	994	0	0	655	520	0	0	0			
Arrive On Green	0.93	0.93	0.00	0.00	0.93	0.93	0.00	0.00	0.00			
Sat Flow, veh/h	382	1075	0	0	708	562		0				
Grp Volume(v), veh/h	72	0	0	0	0	140		0.0				
Grp Sat Flow(s),veh/h/ln	1457	0	0	0	0	1270						
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.6						
Cycle Q Clear(g_c), s	0.2	0.0	0.0	0.0	0.0	0.6						
Prop In Lane	0.29		0.00	0.00		0.44						
Lane Grp Cap(c), veh/h	1425	0	0	0	0	1175						
V/C Ratio(X)	0.05	0.00	0.00	0.00	0.00	0.12						
Avail Cap(c_a), veh/h	1425	0	0	0	0	1175						
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00						
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00						
Uniform Delay (d), s/veh	0.2	0.0	0.0	0.0	0.0	0.2						
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.0	0.0	0.2						
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0						
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.0	0.1						
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.2	0.0	0.0	0.0	0.0	0.4						
LnGrp LOS	A	A	A	A	A	A						
Approach Vol, veh/h		72			140							
Approach Delay, s/veh		0.2			0.4							
Approach LOS		A			A							

Timer - Assigned Phs				4				8				
Phs Duration (G+Y+Rc), s				60.0				60.0				
Change Period (Y+Rc), s				4.5				4.5				
Max Green Setting (Gmax), s				55.5				55.5				
Max Q Clear Time (g_c+I1), s				2.2				2.6				
Green Ext Time (p_c), s				0.4				0.9				

Intersection Summary		
HCM 6th Ctrl Delay		0.3
HCM 6th LOS		A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	125	15	168	6	25	18	151	466	2	15	405	62
Future Volume (veh/h)	125	15	168	6	25	18	151	466	2	15	405	62
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.87		0.90	0.93		0.89	0.98		0.91	0.96		0.88
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	0.85	1.00	1.00	0.85
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670
Adj Flow Rate, veh/h	165	0	205	7	30	22	184	568	2	18	494	76
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	694	0	289	61	208	138	582	1971	7	356	1005	153
Arrive On Green	0.26	0.00	0.26	0.26	0.26	0.26	0.43	1.00	1.00	0.40	0.40	0.40
Sat Flow, veh/h	2096	0	1115	93	805	534	1590	2991	11	721	2495	380
Grp Volume(v), veh/h	165	0	205	59	0	0	184	301	269	18	312	258
Grp Sat Flow(s),veh/h/ln	1048	0	1115	1431	0	0	1590	1586	1415	721	1586	1288
Q Serve(g_s), s	2.4	0.0	18.4	0.0	0.0	0.0	0.0	0.0	0.0	1.7	16.1	16.4
Cycle Q Clear(g_c), s	5.8	0.0	18.4	3.4	0.0	0.0	0.0	0.0	0.0	1.7	16.1	16.4
Prop In Lane	1.00		1.00	0.12		0.37	1.00		0.01	1.00		0.29
Lane Grp Cap(c), veh/h	694	0	289	407	0	0	582	1046	933	356	639	519
V/C Ratio(X)	0.24	0.00	0.71	0.14	0.00	0.00	0.32	0.29	0.29	0.05	0.49	0.50
Avail Cap(c_a), veh/h	694	0	289	407	0	0	582	1046	933	356	639	519
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.2	0.0	37.0	31.4	0.0	0.0	14.7	0.0	0.0	20.1	24.4	24.5
Incr Delay (d2), s/veh	0.8	0.0	13.8	0.7	0.0	0.0	1.4	0.7	0.8	0.3	2.7	3.4
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	1.8	0.0	6.1	1.3	0.0	0.0	2.5	0.2	0.2	0.3	6.4	5.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.0	0.0	50.8	32.2	0.0	0.0	16.1	0.7	0.8	20.4	27.1	27.9
LnGrp LOS	C	A	D	C	A	A	B	A	A	C	C	C
Approach Vol, veh/h		370			59			754			588	
Approach Delay, s/veh		42.8			32.2			4.5			27.2	
Approach LOS		D			C			A			C	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		77.0		33.0	28.2	48.8		33.0				
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s		72.5		28.5	23.7	44.3		28.5				
Max Q Clear Time (g_c+I1), s		2.0		20.4	2.0	18.4		5.4				
Green Ext Time (p_c), s		3.9		1.0	0.5	3.9		0.3				

Intersection Summary			
HCM 6th Ctrl Delay			21.0
HCM 6th LOS			C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	8	105	13	9	10	104	572	25	6	563	52
Future Volume (veh/h)	39	8	105	13	9	10	104	572	25	6	563	52
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.65		0.62	0.81		0.61	1.00		0.50	1.00		0.79
Parking Bus, Adj	1.00	1.00	0.78	1.00	1.00	0.86	1.00	1.00	0.88	1.00	1.00	0.98
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670
Adj Flow Rate, veh/h	43	9	117	14	10	11	116	636	28	7	626	58
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	81	21	138	118	72	66	152	1522	67	72	1414	131
Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.10	0.55	0.55	0.09	1.00	1.00
Sat Flow, veh/h	142	76	490	255	255	234	1590	2768	121	1590	2828	261
Grp Volume(v), veh/h	169	0	0	35	0	0	116	363	301	7	350	334
Grp Sat Flow(s),veh/h/ln	707	0	0	744	0	0	1590	1586	1303	1590	1586	1503
Q Serve(g_s), s	18.8	0.0	0.0	0.0	0.0	0.0	7.8	14.7	14.9	0.4	0.0	0.0
Cycle Q Clear(g_c), s	24.6	0.0	0.0	2.6	0.0	0.0	7.8	14.7	14.9	0.4	0.0	0.0
Prop In Lane	0.25		0.69	0.40		0.31	1.00		0.09	1.00		0.17
Lane Grp Cap(c), veh/h	240	0	0	255	0	0	152	873	716	72	793	751
V/C Ratio(X)	0.70	0.00	0.00	0.14	0.00	0.00	0.76	0.42	0.42	0.10	0.44	0.44
Avail Cap(c_a), veh/h	240	0	0	255	0	0	152	873	716	72	793	751
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.9	0.0	0.0	29.3	0.0	0.0	48.5	14.4	14.5	47.9	0.0	0.0
Incr Delay (d2), s/veh	15.9	0.0	0.0	1.1	0.0	0.0	29.9	1.5	1.8	2.7	1.8	1.9
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	5.3	0.0	0.0	0.8	0.0	0.0	4.4	5.5	4.6	0.2	0.4	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.7	0.0	0.0	30.4	0.0	0.0	78.5	15.9	16.3	50.6	1.8	1.9
LnGrp LOS	D	A	A	C	A	A	E	B	B	D	A	A
Approach Vol, veh/h		169			35			780			691	
Approach Delay, s/veh		52.7			30.4			25.4			2.3	
Approach LOS		D			C			C			A	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.5	65.0		35.5	15.0	59.5		35.5
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.0	60.5		31.0	10.5	55.0		31.0
Max Q Clear Time (g_c+I1), s	2.4	16.9		26.6	9.8	2.0		4.6
Green Ext Time (p_c), s	0.0	4.9		0.5	0.0	5.1		0.2

Intersection Summary			
HCM 6th Ctrl Delay			18.7
HCM 6th LOS			B

Intersection						
Int Delay, s/veh	0.8					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	81	0	706	561	138
Future Vol, veh/h	0	81	0	706	561	138
Conflicting Peds, #/hr	0	54	0	0	0	68
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	90	0	784	623	153

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	510	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.96	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.33	-	-	-	-
Pot Cap-1 Maneuver	0	506	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	449	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	449	-	-
HCM Lane V/C Ratio	-	0.2	-	-
HCM Control Delay (s)	-	15	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	0.7	-	-

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Vol, veh/h	21	85	32	676	25	513	112
Future Vol, veh/h	21	85	32	676	25	513	112
Conflicting Peds, #/hr	63	0	94	0	0	0	94
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	-	None
Storage Length	0	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	0	-
Grade, %	0	-	-	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3	3
Mvmt Flow	23	94	36	751	28	570	124

Major/Minor	Minor2		Major1		Major2		
Conflicting Flow All	1293	441	788	0	751	-	0
Stage 1	782	-	-	-	-	-	-
Stage 2	511	-	-	-	-	-	-
Critical Hdwy	6.86	6.96	4.16	-	6.46	-	-
Critical Hdwy Stg 1	5.86	-	-	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-	-	-
Follow-up Hdwy	3.53	3.33	2.23	-	2.53	-	-
Pot Cap-1 Maneuver	153	561	821	-	476	-	-
Stage 1	409	-	-	-	-	-	-
Stage 2	564	-	-	-	-	-	-
Platoon blocked, %				-		-	-
Mov Cap-1 Maneuver	105	511	748	-	476	-	-
Mov Cap-2 Maneuver	105	-	-	-	-	-	-
Stage 1	341	-	-	-	-	-	-
Stage 2	463	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	25.8	0.8	1
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	748	-	289	-	-
HCM Lane V/C Ratio	0.048	-	0.408	-	-
HCM Control Delay (s)	10.1	0.4	25.8	0.6	-
HCM Lane LOS	B	A	D	A	-
HCM 95th %tile Q(veh)	0.1	-	1.9	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	15	235	534	10	166	0	0	509	86
Future Volume (veh/h)	0	0	0	15	235	534	10	166	0	0	509	86
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	0.99		1.00	1.00		0.89
Parking Bus, Adj				1.00	1.00	0.94	1.00	1.00	1.00	1.00	1.00	0.88
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1670	1670	1670	1670	1670	0	0	1670	1670
Adj Flow Rate, veh/h				16	255	0	11	180	0	0	553	93
Peak Hour Factor				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	0	0	3	3
Cap, veh/h				104	1741		63	924	0	0	873	146
Arrive On Green				0.57	0.57	0.00	0.35	0.35	0.00	0.00	0.35	0.35
Sat Flow, veh/h				183	3064	1325	77	2717	0	0	2578	417
Grp Volume(v), veh/h				145	126	0	96	95	0	0	350	296
Grp Sat Flow(s),veh/h/ln				1661	1586	1325	1275	1444	0	0	1586	1325
Q Serve(g_s), s				4.5	4.1	0.0	0.5	5.1	0.0	0.0	20.3	20.5
Cycle Q Clear(g_c), s				4.5	4.1	0.0	21.0	5.1	0.0	0.0	20.3	20.5
Prop In Lane				0.11		1.00	0.11		0.00	0.00		0.31
Lane Grp Cap(c), veh/h				944	901		483	505	0	0	555	464
V/C Ratio(X)				0.15	0.14		0.20	0.19	0.00	0.00	0.63	0.64
Avail Cap(c_a), veh/h				944	901		483	505	0	0	555	464
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				11.2	11.1	0.0	24.9	24.9	0.0	0.0	29.8	29.9
Incr Delay (d2), s/veh				0.3	0.3	0.0	0.9	0.8	0.0	0.0	5.4	6.6
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				1.7	1.5	0.0	1.8	1.8	0.0	0.0	8.5	7.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				11.6	11.5	0.0	25.8	25.7	0.0	0.0	35.2	36.5
LnGrp LOS				B	B		C	C	A	A	D	D
Approach Vol, veh/h					271			191			646	
Approach Delay, s/veh					11.5			25.7			35.8	
Approach LOS					B			C			D	
Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		43.0				43.0		67.0				
Change Period (Y+Rc), s		4.5				4.5		4.5				
Max Green Setting (Gmax), s		38.5				38.5		62.5				
Max Q Clear Time (g_c+I1), s		23.0				22.5		6.5				
Green Ext Time (p_c), s		0.9				3.7		1.7				

Intersection Summary		
HCM 6th Ctrl Delay		28.1
HCM 6th LOS		C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	48	39	16	33	14	0	312	0	0	588	39
Future Volume (veh/h)	9	48	39	16	33	14	0	312	0	0	588	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.83		0.77	0.88		0.78	1.00		1.00	1.00		0.90
Parking Bus, Adj	1.00	1.00	0.86	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.88
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1670	1670	1670	1670	1670	1670	0	1670	0	0	1670	1670
Adj Flow Rate, veh/h	12	65	53	22	45	19	0	422	0	0	795	53
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Percent Heavy Veh, %	3	3	3	3	3	3	0	3	0	0	3	3
Cap, veh/h	52	200	150	130	246	96	0	1917	0	0	1698	113
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.00	0.60	0.00	0.00	0.60	0.60
Sat Flow, veh/h	59	622	469	289	766	299	0	3340	0	0	2895	187
Grp Volume(v), veh/h	130	0	0	86	0	0	0	422	0	0	449	399
Grp Sat Flow(s),veh/h/ln	1150	0	0	1354	0	0	0	1586	0	0	1586	1412
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.3	0.0	0.0	18.7	18.7
Cycle Q Clear(g_c), s	10.1	0.0	0.0	5.0	0.0	0.0	0.0	7.3	0.0	0.0	18.7	18.7
Prop In Lane	0.09		0.41	0.26		0.22	0.00		0.00	0.00		0.13
Lane Grp Cap(c), veh/h	402	0	0	472	0	0	0	1917	0	0	959	853
V/C Ratio(X)	0.32	0.00	0.00	0.18	0.00	0.00	0.00	0.22	0.00	0.00	0.47	0.47
Avail Cap(c_a), veh/h	402	0	0	472	0	0	0	1917	0	0	959	853
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	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	31.1	0.0	0.0	29.4	0.0	0.0	0.0	10.8	0.0	0.0	13.1	13.1
Incr Delay (d2), s/veh	2.1	0.0	0.0	0.8	0.0	0.0	0.0	0.3	0.0	0.0	1.6	1.8
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	3.1	0.0	0.0	1.9	0.0	0.0	0.0	2.6	0.0	0.0	6.9	6.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.2	0.0	0.0	30.2	0.0	0.0	0.0	11.1	0.0	0.0	14.7	15.0
LnGrp LOS	C	A	A	C	A	A	A	B	A	A	B	B
Approach Vol, veh/h		130			86			422			848	
Approach Delay, s/veh		33.2			30.2			11.1			14.8	
Approach LOS		C			C			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		77.0		43.0		77.0		43.0				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		72.5		38.5		72.5		38.5				
Max Q Clear Time (g_c+I1), s		9.3		12.1		20.7		7.0				
Green Ext Time (p_c), s		3.2		0.8		6.6		0.5				

Intersection Summary			
HCM 6th Ctrl Delay			16.3
HCM 6th LOS			B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	34	0	0	63	84	0	165	58	0	0	0
Future Volume (veh/h)	10	34	0	0	63	84	0	165	58	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	0.99		1.00	1.00		0.97	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	0.85	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1670	1670	0	0	1670	1670	0	1670	1670			
Adj Flow Rate, veh/h	12	42	0	0	78	104	0	204	72			
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81			
Percent Heavy Veh, %	3	3	0	0	3	3	0	3	3			
Cap, veh/h	339	1128	0	0	502	670	0	0	0			
Arrive On Green	0.93	0.93	0.00	0.00	0.93	0.93	0.00	0.00	0.00			
Sat Flow, veh/h	291	1212	0	0	540	720		0				
Grp Volume(v), veh/h	54	0	0	0	0	182		0.0				
Grp Sat Flow(s),veh/h/ln	1504	0	0	0	0	1260						
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.8						
Cycle Q Clear(g_c), s	0.2	0.0	0.0	0.0	0.0	0.8						
Prop In Lane	0.22		0.00	0.00		0.57						
Lane Grp Cap(c), veh/h	1467	0	0	0	0	1172						
V/C Ratio(X)	0.04	0.00	0.00	0.00	0.00	0.16						
Avail Cap(c_a), veh/h	1467	0	0	0	0	1172						
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00						
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00						
Uniform Delay (d), s/veh	0.2	0.0	0.0	0.0	0.0	0.2						
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.3						
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0						
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.0	0.1						
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.2	0.0	0.0	0.0	0.0	0.5						
LnGrp LOS	A	A	A	A	A	A						
Approach Vol, veh/h		54			182							
Approach Delay, s/veh		0.2			0.5							
Approach LOS		A			A							

Timer - Assigned Phs	1	2	3	4	5	6	7	8
				4				8
Phs Duration (G+Y+Rc), s				65.0				65.0
Change Period (Y+Rc), s				4.5				4.5
Max Green Setting (Gmax), s				60.5				60.5
Max Q Clear Time (g_c+I1), s				2.2				2.8
Green Ext Time (p_c), s				0.3				1.3

Intersection Summary	
HCM 6th Ctrl Delay	0.4
HCM 6th LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	208	16	147	1	7	16	101	439	4	22	695	55
Future Volume (veh/h)	208	16	147	1	7	16	101	439	4	22	695	55
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.87		0.90	0.94		0.90	0.99		0.92	0.98		0.92
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	0.85	1.00	1.00	0.85
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670
Adj Flow Rate, veh/h	265	0	177	1	8	19	122	529	5	27	837	66
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	699	0	291	37	112	242	344	1957	18	565	1798	142
Arrive On Green	0.26	0.00	0.26	0.26	0.26	0.26	1.00	1.00	1.00	0.66	0.66	0.66
Sat Flow, veh/h	2156	0	1124	11	431	934	548	2969	28	758	2728	215
Grp Volume(v), veh/h	265	0	177	28	0	0	122	283	251	27	487	416
Grp Sat Flow(s),veh/h/ln	1078	0	1124	1377	0	0	548	1586	1410	758	1586	1357
Q Serve(g_s), s	9.2	0.0	15.2	0.0	0.0	0.0	8.5	0.0	0.0	1.4	16.6	16.6
Cycle Q Clear(g_c), s	10.9	0.0	15.2	1.7	0.0	0.0	25.1	0.0	0.0	1.4	16.6	16.6
Prop In Lane	1.00		1.00	0.04		0.68	1.00		0.02	1.00		0.16
Lane Grp Cap(c), veh/h	699	0	291	391	0	0	344	1046	929	565	1046	894
V/C Ratio(X)	0.38	0.00	0.61	0.07	0.00	0.00	0.35	0.27	0.27	0.05	0.47	0.47
Avail Cap(c_a), veh/h	699	0	291	391	0	0	344	1046	929	565	1046	894
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.1	0.0	35.8	30.8	0.0	0.0	2.9	0.0	0.0	6.6	9.2	9.2
Incr Delay (d2), s/veh	1.6	0.0	9.1	0.4	0.0	0.0	2.8	0.6	0.7	0.2	1.5	1.7
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	3.1	0.0	4.9	0.6	0.0	0.0	0.8	0.2	0.2	0.2	5.7	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.6	0.0	45.0	31.2	0.0	0.0	5.7	0.6	0.7	6.8	10.7	11.0
LnGrp LOS	D	A	D	C	A	A	A	A	A	A	B	B
Approach Vol, veh/h		442			28			656			930	
Approach Delay, s/veh		39.4			31.2			1.6			10.7	
Approach LOS		D			C			A			B	

Timer - Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		77.0		33.0		77.0		33.0
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		72.5		28.5		72.5		28.5
Max Q Clear Time (g_c+I1), s		27.1		17.2		18.6		3.7
Green Ext Time (p_c), s		5.4		1.6		7.6		0.1

Intersection Summary	
HCM 6th Ctrl Delay	14.2
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	58	16	18	21	4	8	48	493	41	9	713	94
Future Volume (veh/h)	58	16	18	21	4	8	48	493	41	9	713	94
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.72		0.69	0.77		0.69	1.00		0.93	1.00		0.93
Parking Bus, Adj	1.00	1.00	0.78	1.00	1.00	0.86	1.00	1.00	0.88	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670
Adj Flow Rate, veh/h	68	19	21	25	5	9	56	580	48	11	839	111
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	189	48	44	206	40	58	152	1522	126	72	1394	184
Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.10	0.55	0.55	0.09	1.00	1.00
Sat Flow, veh/h	481	169	157	541	142	205	1590	2766	228	1590	2787	369
Grp Volume(v), veh/h	108	0	0	39	0	0	56	332	296	11	478	472
Grp Sat Flow(s),veh/h/ln	807	0	0	888	0	0	1590	1586	1408	1590	1586	1569
Q Serve(g_s), s	8.2	0.0	0.0	0.0	0.0	0.0	3.6	13.1	13.2	0.7	0.0	0.0
Cycle Q Clear(g_c), s	11.4	0.0	0.0	3.2	0.0	0.0	3.6	13.1	13.2	0.7	0.0	0.0
Prop In Lane	0.63		0.19	0.64		0.23	1.00		0.16	1.00		0.23
Lane Grp Cap(c), veh/h	281	0	0	304	0	0	152	873	775	72	793	785
V/C Ratio(X)	0.38	0.00	0.00	0.13	0.00	0.00	0.37	0.38	0.38	0.15	0.60	0.60
Avail Cap(c_a), veh/h	281	0	0	304	0	0	152	873	775	72	793	785
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.1	0.0	0.0	29.4	0.0	0.0	46.6	14.1	14.1	48.0	0.0	0.0
Incr Delay (d2), s/veh	3.9	0.0	0.0	0.9	0.0	0.0	6.8	1.3	1.4	4.4	3.4	3.4
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	2.7	0.0	0.0	0.8	0.0	0.0	1.7	4.9	4.4	0.4	0.7	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.1	0.0	0.0	30.3	0.0	0.0	53.4	15.3	15.5	52.5	3.4	3.4
LnGrp LOS	D	A	A	C	A	A	D	B	B	D	A	A
Approach Vol, veh/h		108			39			684			961	
Approach Delay, s/veh		36.1			30.3			18.5			3.9	
Approach LOS		D			C			B			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.5	65.0		35.5	15.0	59.5		35.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	60.5		31.0	10.5	55.0		31.0				
Max Q Clear Time (g_c+I1), s	2.7	15.2		13.4	5.6	2.0		5.2				
Green Ext Time (p_c), s	0.0	4.4		0.6	0.0	7.9		0.2				
Intersection Summary												
HCM 6th Ctrl Delay			12.0									
HCM 6th LOS			B									

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	7	0	572	789	5
Future Vol, veh/h	0	7	0	572	789	5
Conflicting Peds, #/hr	0	54	0	0	0	54
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	8	0	636	877	6

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	550	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.96	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.33	-	-	-	-
Pot Cap-1 Maneuver	0	476	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	428	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.6	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	428	-	-
HCM Lane V/C Ratio	-	0.018	-	-
HCM Control Delay (s)	-	13.6	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.1	-	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Vol, veh/h	10	31	16	562	14	734	62
Future Vol, veh/h	10	31	16	562	14	734	62
Conflicting Peds, #/hr	62	62	5	0	0	0	62
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	-	None
Storage Length	0	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	0	-
Grade, %	0	-	-	0	-	0	-
Peak Hour Factor	90	90	90	90	92	90	90
Heavy Vehicles, %	3	3	3	3	3	3	3
Mvmt Flow	11	34	18	624	15	816	69

Major/Minor	Minor2		Major1		Major2		
Conflicting Flow All	1353	567	947	0	624	-	0
Stage 1	943	-	-	-	-	-	-
Stage 2	410	-	-	-	-	-	-
Critical Hdwy	6.86	6.96	4.16	-	6.46	-	-
Critical Hdwy Stg 1	5.86	-	-	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-	-	-
Follow-up Hdwy	3.53	3.33	2.23	-	2.53	-	-
Pot Cap-1 Maneuver	140	464	714	-	574	-	-
Stage 1	337	-	-	-	-	-	-
Stage 2	635	-	-	-	-	-	-
Platoon blocked, %				-		-	-
Mov Cap-1 Maneuver	113	411	672	-	574	-	-
Mov Cap-2 Maneuver	113	-	-	-	-	-	-
Stage 1	304	-	-	-	-	-	-
Stage 2	566	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	22.6	0.5	0.5
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	672	-	250	-	-
HCM Lane V/C Ratio	0.026	-	0.182	-	-
HCM Control Delay (s)	10.5	0.2	22.6	0.3	-
HCM Lane LOS	B	A	C	A	-
HCM 95th %tile Q(veh)	0.1	-	0.7	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	9	202	459	4	110	0	0	634	106
Future Volume (veh/h)	0	0	0	9	202	459	4	110	0	0	634	106
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.96
Parking Bus, Adj				1.00	1.00	0.94	1.00	1.00	1.00	1.00	1.00	0.88
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1670	1670	1670	1670	1670	0	0	1670	1670
Adj Flow Rate, veh/h				12	259	0	5	141	0	0	813	136
Peak Hour Factor				0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %				3	3	3	3	3	0	0	3	3
Cap, veh/h				63	1429		55	1289	0	0	1160	194
Arrive On Green				0.46	0.46	0.00	0.46	0.46	0.00	0.00	0.46	0.46
Sat Flow, veh/h				137	3112	1325	43	2884	0	0	2611	423
Grp Volume(v), veh/h				145	126	0	75	71	0	0	510	439
Grp Sat Flow(s),veh/h/ln				1663	1586	1325	1407	1444	0	0	1586	1364
Q Serve(g_s), s				5.7	5.1	0.0	0.3	3.1	0.0	0.0	28.2	28.2
Cycle Q Clear(g_c), s				5.7	5.1	0.0	28.5	3.1	0.0	0.0	28.2	28.2
Prop In Lane				0.08		1.00	0.07		0.00	0.00		0.31
Lane Grp Cap(c), veh/h				764	728		681	663	0	0	728	626
V/C Ratio(X)				0.19	0.17		0.11	0.11	0.00	0.00	0.70	0.70
Avail Cap(c_a), veh/h				764	728		681	663	0	0	728	626
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				17.6	17.5	0.0	17.0	16.9	0.0	0.0	23.7	23.7
Incr Delay (d2), s/veh				0.6	0.5	0.0	0.3	0.3	0.0	0.0	5.6	6.4
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.3	2.0	0.0	1.1	1.1	0.0	0.0	11.4	9.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				18.2	18.0	0.0	17.3	17.3	0.0	0.0	29.3	30.1
LnGrp LOS				B	B		B	B	A	A	C	C
Approach Vol, veh/h					271			146			949	
Approach Delay, s/veh					18.1			17.3			29.7	
Approach LOS					B			B			C	

Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		55.0				55.0		55.0				
Change Period (Y+Rc), s		4.5				4.5		4.5				
Max Green Setting (Gmax), s		50.5				50.5		50.5				
Max Q Clear Time (g_c+I1), s		30.5				30.2		7.7				
Green Ext Time (p_c), s		0.7				6.4		1.7				

Intersection Summary			
HCM 6th Ctrl Delay			26.1
HCM 6th LOS			C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	76	55	34	28	30	0	369	0	0	575	48
Future Volume (veh/h)	18	76	55	34	28	30	0	369	0	0	575	48
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.87		0.80	0.91		0.80	1.00		1.00	1.00		0.75
Parking Bus, Adj	1.00	1.00	0.86	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.88
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1670	1670	1670	1670	1670	1670	0	1670	0	0	1670	1670
Adj Flow Rate, veh/h	20	84	61	38	31	33	0	410	0	0	639	53
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	3	3	3	3	3	3	0	3	0	0	3	3
Cap, veh/h	73	253	171	204	160	154	0	1679	0	0	1432	118
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.00	0.53	0.00	0.00	0.53	0.53
Sat Flow, veh/h	99	639	433	410	404	390	0	3340	0	0	2790	224
Grp Volume(v), veh/h	165	0	0	102	0	0	0	410	0	0	373	319
Grp Sat Flow(s),veh/h/ln	1170	0	0	1204	0	0	0	1586	0	0	1586	1344
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.4	0.0	0.0	17.4	17.6
Cycle Q Clear(g_c), s	11.3	0.0	0.0	6.1	0.0	0.0	0.0	8.4	0.0	0.0	17.4	17.6
Prop In Lane	0.12		0.37	0.37		0.32	0.00		0.00	0.00		0.17
Lane Grp Cap(c), veh/h	497	0	0	518	0	0	0	1679	0	0	840	711
V/C Ratio(X)	0.33	0.00	0.00	0.20	0.00	0.00	0.00	0.24	0.00	0.00	0.44	0.45
Avail Cap(c_a), veh/h	497	0	0	518	0	0	0	1679	0	0	840	711
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	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	25.3	0.0	0.0	23.6	0.0	0.0	0.0	15.3	0.0	0.0	17.4	17.4
Incr Delay (d2), s/veh	1.8	0.0	0.0	0.9	0.0	0.0	0.0	0.3	0.0	0.0	1.7	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	3.5	0.0	0.0	2.0	0.0	0.0	0.0	3.1	0.0	0.0	6.6	5.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.1	0.0	0.0	24.5	0.0	0.0	0.0	15.6	0.0	0.0	19.1	19.5
LnGrp LOS	C	A	A	C	A	A	A	B	A	A	B	B
Approach Vol, veh/h		165			102			410			692	
Approach Delay, s/veh		27.1			24.5			15.6			19.3	
Approach LOS		C			C			B			B	

Timer - Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		68.0		52.0		68.0		52.0
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		63.5		47.5		63.5		47.5
Max Q Clear Time (g_c+I1), s		10.4		13.3		19.6		8.1
Green Ext Time (p_c), s		3.1		1.1		5.1		0.7

Intersection Summary	
HCM 6th Ctrl Delay	19.5
HCM 6th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	54	0	0	92	73	0	210	106	0	0	0
Future Volume (veh/h)	25	54	0	0	92	73	0	210	106	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	0.96		1.00	1.00		0.93	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	0.85	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1670	1670	0	0	1670	1670	0	1670	1670			
Adj Flow Rate, veh/h	28	60	0	0	102	81	0	233	118			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90			
Percent Heavy Veh, %	3	3	0	0	3	3	0	3	3			
Cap, veh/h	458	932	0	0	655	520	0	0	0			
Arrive On Green	0.93	0.93	0.00	0.00	0.93	0.93	0.00	0.00	0.00			
Sat Flow, veh/h	410	1008	0	0	708	562		0				
Grp Volume(v), veh/h	88	0	0	0	0	183		0.0				
Grp Sat Flow(s),veh/h/ln	1418	0	0	0	0	1270						
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.8						
Cycle Q Clear(g_c), s	0.3	0.0	0.0	0.0	0.0	0.8						
Prop In Lane	0.32		0.00	0.00		0.44						
Lane Grp Cap(c), veh/h	1391	0	0	0	0	1175						
V/C Ratio(X)	0.06	0.00	0.00	0.00	0.00	0.16						
Avail Cap(c_a), veh/h	1391	0	0	0	0	1175						
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00						
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00						
Uniform Delay (d), s/veh	0.2	0.0	0.0	0.0	0.0	0.2						
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.0	0.0	0.3						
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0						
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.0	0.1						
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.3	0.0	0.0	0.0	0.0	0.5						
LnGrp LOS	A	A	A	A	A	A						
Approach Vol, veh/h		88			183							
Approach Delay, s/veh		0.3			0.5							
Approach LOS		A			A							

Timer - Assigned Phs				4				8				
Phs Duration (G+Y+Rc), s				60.0				60.0				
Change Period (Y+Rc), s				4.5				4.5				
Max Green Setting (Gmax), s				55.5				55.5				
Max Q Clear Time (g_c+I1), s				2.3				2.8				
Green Ext Time (p_c), s				0.5				1.3				

Intersection Summary				
HCM 6th Ctrl Delay			0.4	
HCM 6th LOS			A	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	164	20	169	8	33	24	198	605	3	20	514	81
Future Volume (veh/h)	164	20	169	8	33	24	198	605	3	20	514	81
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.87		0.90	0.93		0.89	0.99		0.91	0.97		0.88
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	0.85	1.00	1.00	0.85
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670
Adj Flow Rate, veh/h	217	0	206	10	40	29	241	738	4	24	627	99
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	681	0	289	63	208	136	525	1966	11	315	999	157
Arrive On Green	0.26	0.00	0.26	0.26	0.26	0.26	0.43	1.00	1.00	0.40	0.40	0.40
Sat Flow, veh/h	2080	0	1115	103	801	524	1590	2984	16	620	2481	390
Grp Volume(v), veh/h	217	0	206	79	0	0	241	392	350	24	400	326
Grp Sat Flow(s),veh/h/ln	1040	0	1115	1428	0	0	1590	1586	1413	620	1586	1285
Q Serve(g_s), s	4.3	0.0	18.5	0.0	0.0	0.0	0.0	0.0	0.0	2.6	22.2	22.3
Cycle Q Clear(g_c), s	8.8	0.0	18.5	4.6	0.0	0.0	0.0	0.0	0.0	2.6	22.2	22.3
Prop In Lane	1.00		1.00	0.13		0.37	1.00		0.01	1.00		0.30
Lane Grp Cap(c), veh/h	681	0	289	407	0	0	525	1046	931	315	639	517
V/C Ratio(X)	0.32	0.00	0.71	0.19	0.00	0.00	0.46	0.38	0.38	0.08	0.63	0.63
Avail Cap(c_a), veh/h	681	0	289	407	0	0	525	1046	931	315	639	517
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.4	0.0	37.0	31.9	0.0	0.0	19.7	0.0	0.0	20.4	26.2	26.3
Incr Delay (d2), s/veh	1.2	0.0	14.0	1.1	0.0	0.0	2.9	1.0	1.2	0.5	4.6	5.7
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	2.5	0.0	6.1	1.8	0.0	0.0	4.1	0.3	0.3	0.4	9.0	7.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.6	0.0	51.0	32.9	0.0	0.0	22.6	1.0	1.2	20.9	30.8	32.0
LnGrp LOS	C	A	D	C	A	A	C	A	A	C	C	C
Approach Vol, veh/h		423			79			983			750	
Approach Delay, s/veh		42.6			32.9			6.4			31.0	
Approach LOS		D			C			A			C	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		77.0		33.0	28.2	48.8		33.0				
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s		72.5		28.5	23.7	44.3		28.5				
Max Q Clear Time (g_c+I1), s		2.0		20.5	2.0	24.3		6.6				
Green Ext Time (p_c), s		5.5		1.2	0.7	4.9		0.4				

Intersection Summary			
HCM 6th Ctrl Delay			22.4
HCM 6th LOS			C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	10	97	17	12	13	85	744	33	8	618	68
Future Volume (veh/h)	51	10	97	17	12	13	85	744	33	8	618	68
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.66		0.62	0.82		0.61	1.00		0.50	1.00		0.79
Parking Bus, Adj	1.00	1.00	0.78	1.00	1.00	0.86	1.00	1.00	0.88	1.00	1.00	0.98
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670
Adj Flow Rate, veh/h	57	11	108	19	13	14	94	827	37	9	687	76
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	98	23	122	125	74	67	152	1519	68	72	1381	152
Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.10	0.55	0.55	0.09	1.00	1.00
Sat Flow, veh/h	193	81	434	278	262	236	1590	2762	123	1590	2763	305
Grp Volume(v), veh/h	176	0	0	46	0	0	94	475	389	9	394	369
Grp Sat Flow(s),veh/h/ln	707	0	0	776	0	0	1590	1586	1299	1590	1586	1481
Q Serve(g_s), s	21.8	0.0	0.0	0.0	0.0	0.0	6.3	21.1	21.2	0.6	0.0	0.0
Cycle Q Clear(g_c), s	26.0	0.0	0.0	3.7	0.0	0.0	6.3	21.1	21.2	0.6	0.0	0.0
Prop In Lane	0.32		0.61	0.41		0.30	1.00		0.10	1.00		0.21
Lane Grp Cap(c), veh/h	243	0	0	265	0	0	152	873	715	72	793	741
V/C Ratio(X)	0.73	0.00	0.00	0.17	0.00	0.00	0.62	0.54	0.54	0.12	0.50	0.50
Avail Cap(c_a), veh/h	243	0	0	265	0	0	152	873	715	72	793	741
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.3	0.0	0.0	29.6	0.0	0.0	47.8	15.9	15.9	48.0	0.0	0.0
Incr Delay (d2), s/veh	17.2	0.0	0.0	1.4	0.0	0.0	17.5	2.4	3.0	3.5	2.2	2.4
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	5.6	0.0	0.0	1.0	0.0	0.0	3.2	7.9	6.6	0.3	0.5	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.6	0.0	0.0	31.0	0.0	0.0	65.3	18.3	18.9	51.5	2.2	2.4
LnGrp LOS	D	A	A	C	A	A	E	B	B	D	A	A
Approach Vol, veh/h		176			46			958			772	
Approach Delay, s/veh		54.6			31.0			23.2			2.9	
Approach LOS		D			C			C			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.5	65.0		35.5	15.0	59.5		35.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	60.5		31.0	10.5	55.0		31.0				
Max Q Clear Time (g_c+I1), s	2.6	23.2		28.0	8.3	2.0		5.7				
Green Ext Time (p_c), s	0.0	6.8		0.3	0.0	5.9		0.2				
Intersection Summary												
HCM 6th Ctrl Delay			18.2									
HCM 6th LOS			B									

Intersection						
Int Delay, s/veh	0.1					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	10	0	862	735	4
Future Vol, veh/h	0	10	0	862	735	4
Conflicting Peds, #/hr	0	54	0	0	0	68
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	11	0	958	817	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	533	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.96	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.33	-	-	-	-
Pot Cap-1 Maneuver	0	489	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	434	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.5	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	434	-	-
HCM Lane V/C Ratio	-	0.026	-	-
HCM Control Delay (s)	-	13.5	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.1	-	-

Intersection							
Int Delay, s/veh	6.3						

Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Vol, veh/h	28	111	42	834	28	634	111
Future Vol, veh/h	28	111	42	834	28	634	111
Conflicting Peds, #/hr	63	0	94	0	0	0	94
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	-	None
Storage Length	0	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	0	-
Grade, %	0	-	-	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3	3
Mvmt Flow	31	123	47	927	31	704	123

Major/Minor	Minor2		Major1		Major2		
Conflicting Flow All	1543	508	921	0	927	-	0
Stage 1	922	-	-	-	-	-	-
Stage 2	621	-	-	-	-	-	-
Critical Hdwy	6.86	6.96	4.16	-	6.46	-	-
Critical Hdwy Stg 1	5.86	-	-	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-	-	-
Follow-up Hdwy	3.53	3.33	2.23	-	2.53	-	-
Pot Cap-1 Maneuver	105	507	731	-	367	-	-
Stage 1	345	-	-	-	-	-	-
Stage 2	496	-	-	-	-	-	-
Platoon blocked, %				-		-	-
Mov Cap-1 Maneuver	62	462	666	-	367	-	-
Mov Cap-2 Maneuver	62	-	-	-	-	-	-
Stage 1	268	-	-	-	-	-	-
Stage 2	379	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	65.2	1.2	1.6
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	666	-	201	-	-
HCM Lane V/C Ratio	0.07	-	0.768	-	-
HCM Control Delay (s)	10.8	0.7	65.2	1.3	-
HCM Lane LOS	B	A	F	A	-
HCM 95th %tile Q(veh)	0.2	-	5.2	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	20	308	648	13	217	0	0	643	98
Future Volume (veh/h)	0	0	0	20	308	648	13	217	0	0	643	98
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.89
Parking Bus, Adj				1.00	1.00	0.94	1.00	1.00	1.00	1.00	1.00	0.88
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1670	1670	1670	1670	1670	0	0	1670	1670
Adj Flow Rate, veh/h				22	335	0	14	236	0	0	699	107
Peak Hour Factor				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	0	0	3	3
Cap, veh/h				109	1736		53	835	0	0	887	136
Arrive On Green				0.57	0.57	0.00	0.35	0.35	0.00	0.00	0.35	0.35
Sat Flow, veh/h				191	3056	1325	48	2461	0	0	2617	387
Grp Volume(v), veh/h				191	166	0	118	132	0	0	437	369
Grp Sat Flow(s),veh/h/ln				1660	1586	1325	989	1444	0	0	1586	1335
Q Serve(g_s), s				6.2	5.5	0.0	1.3	7.2	0.0	0.0	27.2	27.3
Cycle Q Clear(g_c), s				6.2	5.5	0.0	28.6	7.2	0.0	0.0	27.2	27.3
Prop In Lane				0.12		1.00	0.12		0.00	0.00		0.29
Lane Grp Cap(c), veh/h				943	901		383	505	0	0	555	467
V/C Ratio(X)				0.20	0.18		0.31	0.26	0.00	0.00	0.79	0.79
Avail Cap(c_a), veh/h				943	901		383	505	0	0	555	467
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				11.6	11.5	0.0	25.9	25.6	0.0	0.0	32.1	32.1
Incr Delay (d2), s/veh				0.5	0.4	0.0	2.1	1.3	0.0	0.0	10.8	12.7
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.4	2.0	0.0	2.4	2.6	0.0	0.0	11.9	10.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				12.1	11.9	0.0	28.0	26.8	0.0	0.0	42.9	44.8
LnGrp LOS				B	B		C	C	A	A	D	D
Approach Vol, veh/h					357			250			806	
Approach Delay, s/veh					12.0			27.4			43.8	
Approach LOS					B			C			D	

Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		43.0				43.0		67.0				
Change Period (Y+Rc), s		4.5				4.5		4.5				
Max Green Setting (Gmax), s		38.5				38.5		62.5				
Max Q Clear Time (g_c+I1), s		30.6				29.3		8.2				
Green Ext Time (p_c), s		0.8				3.5		2.3				

Intersection Summary			
HCM 6th Ctrl Delay			32.8
HCM 6th LOS			C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	50	39	16	33	14	0	324	0	0	588	39
Future Volume (veh/h)	9	50	39	16	33	14	0	324	0	0	588	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.83		0.77	0.88		0.78	1.00		1.00	1.00		0.90
Parking Bus, Adj	1.00	1.00	0.86	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.88
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1670	1670	1670	1670	1670	1670	0	1670	0	0	1670	1670
Adj Flow Rate, veh/h	12	68	53	22	45	19	0	438	0	0	795	53
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Percent Heavy Veh, %	3	3	3	3	3	3	0	3	0	0	3	3
Cap, veh/h	51	205	148	130	246	96	0	1917	0	0	1698	113
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.00	0.60	0.00	0.00	0.60	0.60
Sat Flow, veh/h	57	638	460	288	765	299	0	3340	0	0	2895	187
Grp Volume(v), veh/h	133	0	0	86	0	0	0	438	0	0	449	399
Grp Sat Flow(s),veh/h/ln	1155	0	0	1353	0	0	0	1586	0	0	1586	1412
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.6	0.0	0.0	18.7	18.7
Cycle Q Clear(g_c), s	10.3	0.0	0.0	5.0	0.0	0.0	0.0	7.6	0.0	0.0	18.7	18.7
Prop In Lane	0.09		0.40	0.26		0.22	0.00		0.00	0.00		0.13
Lane Grp Cap(c), veh/h	403	0	0	472	0	0	0	1917	0	0	959	853
V/C Ratio(X)	0.33	0.00	0.00	0.18	0.00	0.00	0.00	0.23	0.00	0.00	0.47	0.47
Avail Cap(c_a), veh/h	403	0	0	472	0	0	0	1917	0	0	959	853
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	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	31.2	0.0	0.0	29.4	0.0	0.0	0.0	10.9	0.0	0.0	13.1	13.1
Incr Delay (d2), s/veh	2.2	0.0	0.0	0.8	0.0	0.0	0.0	0.3	0.0	0.0	1.6	1.8
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	3.2	0.0	0.0	1.9	0.0	0.0	0.0	2.7	0.0	0.0	6.9	6.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.3	0.0	0.0	30.2	0.0	0.0	0.0	11.2	0.0	0.0	14.7	15.0
LnGrp LOS	C	A	A	C	A	A	A	B	A	A	B	B
Approach Vol, veh/h		133			86			438			848	
Approach Delay, s/veh		33.3			30.2			11.2			14.8	
Approach LOS		C			C			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		77.0		43.0		77.0		43.0				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		72.5		38.5		72.5		38.5				
Max Q Clear Time (g_c+I1), s		9.6		12.3		20.7		7.0				
Green Ext Time (p_c), s		3.3		0.8		6.6		0.5				

Intersection Summary			
HCM 6th Ctrl Delay			16.3
HCM 6th LOS			B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	36	0	0	63	84	0	175	69	0	0	0
Future Volume (veh/h)	10	36	0	0	63	84	0	175	69	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	0.99		1.00	1.00		0.97	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	0.85	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1670	1670	0	0	1670	1670	0	1670	1670			
Adj Flow Rate, veh/h	12	44	0	0	78	104	0	216	85			
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81			
Percent Heavy Veh, %	3	3	0	0	3	3	0	3	3			
Cap, veh/h	328	1145	0	0	502	670	0	0	0			
Arrive On Green	0.93	0.93	0.00	0.00	0.93	0.93	0.00	0.00	0.00			
Sat Flow, veh/h	280	1230	0	0	540	720		0				
Grp Volume(v), veh/h	56	0	0	0	0	182		0.0				
Grp Sat Flow(s),veh/h/ln	1510	0	0	0	0	1260						
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.8						
Cycle Q Clear(g_c), s	0.2	0.0	0.0	0.0	0.0	0.8						
Prop In Lane	0.21		0.00	0.00		0.57						
Lane Grp Cap(c), veh/h	1473	0	0	0	0	1172						
V/C Ratio(X)	0.04	0.00	0.00	0.00	0.00	0.16						
Avail Cap(c_a), veh/h	1473	0	0	0	0	1172						
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00						
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00						
Uniform Delay (d), s/veh	0.2	0.0	0.0	0.0	0.0	0.2						
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.3						
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0						
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.0	0.1						
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.2	0.0	0.0	0.0	0.0	0.5						
LnGrp LOS	A	A	A	A	A	A						
Approach Vol, veh/h		56			182							
Approach Delay, s/veh		0.2			0.5							
Approach LOS		A			A							

Timer - Assigned Phs				4				8				
Phs Duration (G+Y+Rc), s				65.0				65.0				
Change Period (Y+Rc), s				4.5				4.5				
Max Green Setting (Gmax), s				60.5				60.5				
Max Q Clear Time (g_c+I1), s				2.2				2.8				
Green Ext Time (p_c), s				0.3				1.3				

Intersection Summary			
HCM 6th Ctrl Delay			0.4
HCM 6th LOS			A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	208	16	164	1	7	16	101	443	4	22	701	55
Future Volume (veh/h)	208	16	164	1	7	16	101	443	4	22	701	55
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.87		0.90	0.94		0.90	1.00		0.92	0.98		0.92
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	0.85	1.00	1.00	0.85
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670
Adj Flow Rate, veh/h	265	0	198	1	8	19	122	534	5	27	845	66
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	699	0	291	37	112	242	341	1957	18	563	1800	141
Arrive On Green	0.26	0.00	0.26	0.26	0.26	0.26	1.00	1.00	1.00	0.66	0.66	0.66
Sat Flow, veh/h	2156	0	1124	11	431	934	544	2969	28	755	2731	213
Grp Volume(v), veh/h	265	0	198	28	0	0	122	285	254	27	491	420
Grp Sat Flow(s),veh/h/ln	1078	0	1124	1377	0	0	544	1586	1410	755	1586	1357
Q Serve(g_s), s	9.2	0.0	17.4	0.0	0.0	0.0	8.7	0.0	0.0	1.4	16.8	16.8
Cycle Q Clear(g_c), s	10.9	0.0	17.4	1.7	0.0	0.0	25.5	0.0	0.0	1.4	16.8	16.8
Prop In Lane	1.00		1.00	0.04		0.68	1.00		0.02	1.00		0.16
Lane Grp Cap(c), veh/h	699	0	291	391	0	0	341	1046	929	563	1046	895
V/C Ratio(X)	0.38	0.00	0.68	0.07	0.00	0.00	0.36	0.27	0.27	0.05	0.47	0.47
Avail Cap(c_a), veh/h	699	0	291	391	0	0	341	1046	929	563	1046	895
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.1	0.0	36.7	30.8	0.0	0.0	3.0	0.0	0.0	6.6	9.3	9.3
Incr Delay (d2), s/veh	1.6	0.0	12.1	0.4	0.0	0.0	2.9	0.6	0.7	0.2	1.5	1.8
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	8.1	0.0	5.7	0.6	0.0	0.0	0.8	0.2	0.2	0.2	5.8	5.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.6	0.0	48.8	31.2	0.0	0.0	5.9	0.6	0.7	6.8	10.8	11.0
LnGrp LOS	D	A	D	C	A	A	A	A	A	A	B	B
Approach Vol, veh/h		463			28			661			938	
Approach Delay, s/veh		41.2			31.2			1.6			10.8	
Approach LOS		D			C			A			B	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	77.0	33.0	77.0	33.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	72.5	28.5	72.5	28.5
Max Q Clear Time (g_c+I1), s	27.5	19.4	18.8	3.7
Green Ext Time (p_c), s	5.5	1.5	7.7	0.1

Intersection Summary	
HCM 6th Ctrl Delay	14.9
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	58	16	31	21	4	8	65	497	41	9	753	94
Future Volume (veh/h)	58	16	31	21	4	8	65	497	41	9	753	94
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.72		0.69	0.78		0.69	1.00		0.93	1.00		0.93
Parking Bus, Adj	1.00	1.00	0.78	1.00	1.00	0.86	1.00	1.00	0.88	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670
Adj Flow Rate, veh/h	68	19	36	25	5	9	76	585	48	11	886	111
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	168	44	67	202	39	56	152	1523	125	72	1404	176
Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.10	0.55	0.55	0.09	1.00	1.00
Sat Flow, veh/h	415	156	236	525	139	199	1590	2769	227	1590	2809	352
Grp Volume(v), veh/h	123	0	0	39	0	0	76	334	299	11	500	497
Grp Sat Flow(s),veh/h/ln	807	0	0	863	0	0	1590	1586	1409	1590	1586	1574
Q Serve(g_s), s	10.1	0.0	0.0	0.0	0.0	0.0	5.0	13.2	13.3	0.7	0.0	0.0
Cycle Q Clear(g_c), s	13.4	0.0	0.0	3.3	0.0	0.0	5.0	13.2	13.3	0.7	0.0	0.0
Prop In Lane	0.55		0.29	0.64		0.23	1.00		0.16	1.00		0.22
Lane Grp Cap(c), veh/h	278	0	0	297	0	0	152	873	775	72	793	787
V/C Ratio(X)	0.44	0.00	0.00	0.13	0.00	0.00	0.50	0.38	0.39	0.15	0.63	0.63
Avail Cap(c_a), veh/h	278	0	0	297	0	0	152	873	775	72	793	787
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.8	0.0	0.0	29.4	0.0	0.0	47.3	14.1	14.1	48.0	0.0	0.0
Incr Delay (d2), s/veh	5.0	0.0	0.0	0.9	0.0	0.0	11.3	1.3	1.4	4.4	3.8	3.8
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	3.1	0.0	0.0	0.8	0.0	0.0	2.5	4.9	4.4	0.4	0.8	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.9	0.0	0.0	30.4	0.0	0.0	58.6	15.4	15.6	52.5	3.8	3.8
LnGrp LOS	D	A	A	C	A	A	E	B	B	D	A	A
Approach Vol, veh/h		123			39			709			1008	
Approach Delay, s/veh		37.9			30.4			20.1			4.3	
Approach LOS		D			C			C			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.5	65.0		35.5	15.0	59.5		35.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	60.5		31.0	10.5	55.0		31.0				
Max Q Clear Time (g_c+I1), s	2.7	15.3		15.4	7.0	2.0		5.3				
Green Ext Time (p_c), s	0.0	4.5		0.7	0.0	8.5		0.2				
Intersection Summary												
HCM 6th Ctrl Delay			13.0									
HCM 6th LOS			B									

Intersection						
Int Delay, s/veh	0.7					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↱		↑↑	↑↱	
Traffic Vol, veh/h	0	67	0	595	789	64
Future Vol, veh/h	0	67	0	595	789	64
Conflicting Peds, #/hr	0	54	0	0	0	54
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	74	0	661	877	71

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	582	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.96	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.33	-	-	-	-
Pot Cap-1 Maneuver	0	454	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	409	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.8	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	409	-	-
HCM Lane V/C Ratio	-	0.182	-	-
HCM Control Delay (s)	-	15.8	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	0.7	-	-

Intersection							
Int Delay, s/veh	1.2						

Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Vol, veh/h	10	31	16	579	18	762	87
Future Vol, veh/h	10	31	16	579	18	762	87
Conflicting Peds, #/hr	62	62	5	0	0	0	62
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	-	None
Storage Length	0	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	0	-
Grade, %	0	-	-	0	-	0	-
Peak Hour Factor	90	90	90	90	92	90	90
Heavy Vehicles, %	3	3	3	3	3	3	3
Mvmt Flow	11	34	18	643	20	847	97

Major/Minor	Minor2		Major1		Major2		
Conflicting Flow All	1418	596	1006	0	643	-	0
Stage 1	998	-	-	-	-	-	-
Stage 2	420	-	-	-	-	-	-
Critical Hdwy	6.86	6.96	4.16	-	6.46	-	-
Critical Hdwy Stg 1	5.86	-	-	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-	-	-
Follow-up Hdwy	3.53	3.33	2.23	-	2.53	-	-
Pot Cap-1 Maneuver	127	444	678	-	558	-	-
Stage 1	315	-	-	-	-	-	-
Stage 2	628	-	-	-	-	-	-
Platoon blocked, %				-		-	-
Mov Cap-1 Maneuver	99	393	638	-	558	-	-
Mov Cap-2 Maneuver	99	-	-	-	-	-	-
Stage 1	284	-	-	-	-	-	-
Stage 2	545	-	-	-	-	-	-

Approach	EB		NB		SB		
HCM Control Delay, s	24.7		0.5		0.6		
HCM LOS	C						

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	638	-	228	-	-
HCM Lane V/C Ratio	0.028	-	0.2	-	-
HCM Control Delay (s)	10.8	0.2	24.7	0.4	-
HCM Lane LOS	B	A	C	A	-
HCM 95th %tile Q(veh)	0.1	-	0.7	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	9	202	476	4	110	0	0	651	117
Future Volume (veh/h)	0	0	0	9	202	476	4	110	0	0	651	117
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.96
Parking Bus, Adj				1.00	1.00	0.94	1.00	1.00	1.00	1.00	1.00	0.88
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1670	1670	1670	1670	1670	0	0	1670	1670
Adj Flow Rate, veh/h				12	259	0	5	141	0	0	835	150
Peak Hour Factor				0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %				3	3	3	3	3	0	0	3	3
Cap, veh/h				63	1429		53	1262	0	0	1146	206
Arrive On Green				0.46	0.46	0.00	0.46	0.46	0.00	0.00	0.46	0.46
Sat Flow, veh/h				137	3112	1325	40	2825	0	0	2579	448
Grp Volume(v), veh/h				145	126	0	74	72	0	0	531	454
Grp Sat Flow(s),veh/h/ln				1663	1586	1325	1345	1444	0	0	1586	1358
Q Serve(g_s), s				5.7	5.1	0.0	0.4	3.1	0.0	0.0	29.9	29.9
Cycle Q Clear(g_c), s				5.7	5.1	0.0	30.3	3.1	0.0	0.0	29.9	29.9
Prop In Lane				0.08		1.00	0.07		0.00	0.00		0.33
Lane Grp Cap(c), veh/h				764	728		653	663	0	0	728	623
V/C Ratio(X)				0.19	0.17		0.11	0.11	0.00	0.00	0.73	0.73
Avail Cap(c_a), veh/h				764	728		653	663	0	0	728	623
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				17.6	17.5	0.0	17.1	16.9	0.0	0.0	24.2	24.2
Incr Delay (d2), s/veh				0.6	0.5	0.0	0.4	0.3	0.0	0.0	6.3	7.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.3	2.0	0.0	1.1	1.1	0.0	0.0	12.1	10.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				18.2	18.0	0.0	17.4	17.3	0.0	0.0	30.5	31.5
LnGrp LOS				B	B		B	B	A	A	C	C
Approach Vol, veh/h					271			146			985	
Approach Delay, s/veh					18.1			17.4			31.0	
Approach LOS					B			B			C	

Timer - Assigned Phs	2	6	8
Phs Duration (G+Y+Rc), s	55.0	55.0	55.0
Change Period (Y+Rc), s	4.5	4.5	4.5
Max Green Setting (Gmax), s	50.5	50.5	50.5
Max Q Clear Time (g_c+I1), s	32.3	31.9	7.7
Green Ext Time (p_c), s	0.7	6.5	1.7

Intersection Summary	
HCM 6th Ctrl Delay	27.1
HCM 6th LOS	C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	81	55	34	28	30	0	382	0	0	575	48
Future Volume (veh/h)	18	81	55	34	28	30	0	382	0	0	575	48
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.87		0.80	0.91		0.80	1.00		1.00	1.00		0.75
Parking Bus, Adj	1.00	1.00	0.86	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.88
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1670	1670	1670	1670	1670	1670	0	1670	0	0	1670	1670
Adj Flow Rate, veh/h	20	90	61	38	31	33	0	424	0	0	639	53
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	3	3	3	3	3	3	0	3	0	0	3	3
Cap, veh/h	71	263	166	203	159	153	0	1679	0	0	1432	118
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.00	0.53	0.00	0.00	0.53	0.53
Sat Flow, veh/h	95	664	420	408	402	388	0	3340	0	0	2790	224
Grp Volume(v), veh/h	171	0	0	102	0	0	0	424	0	0	373	319
Grp Sat Flow(s),veh/h/ln	1179	0	0	1198	0	0	0	1586	0	0	1586	1344
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.7	0.0	0.0	17.4	17.6
Cycle Q Clear(g_c), s	11.7	0.0	0.0	6.2	0.0	0.0	0.0	8.7	0.0	0.0	17.4	17.6
Prop In Lane	0.12		0.36	0.37		0.32	0.00		0.00	0.00		0.17
Lane Grp Cap(c), veh/h	500	0	0	515	0	0	0	1679	0	0	840	711
V/C Ratio(X)	0.34	0.00	0.00	0.20	0.00	0.00	0.00	0.25	0.00	0.00	0.44	0.45
Avail Cap(c_a), veh/h	500	0	0	515	0	0	0	1679	0	0	840	711
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	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	25.4	0.0	0.0	23.6	0.0	0.0	0.0	15.4	0.0	0.0	17.4	17.4
Incr Delay (d2), s/veh	1.9	0.0	0.0	0.9	0.0	0.0	0.0	0.4	0.0	0.0	1.7	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	3.7	0.0	0.0	2.0	0.0	0.0	0.0	3.2	0.0	0.0	6.6	5.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.3	0.0	0.0	24.5	0.0	0.0	0.0	15.7	0.0	0.0	19.1	19.5
LnGrp LOS	C	A	A	C	A	A	A	B	A	A	B	B
Approach Vol, veh/h		171			102			424			692	
Approach Delay, s/veh		27.3			24.5			15.7			19.3	
Approach LOS		C			C			B			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		68.0		52.0		68.0		52.0				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		63.5		47.5		63.5		47.5				
Max Q Clear Time (g_c+I1), s		10.7		13.7		19.6		8.2				
Green Ext Time (p_c), s		3.2		1.2		5.1		0.7				
Intersection Summary												
HCM 6th Ctrl Delay			19.6									
HCM 6th LOS			B									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	59	0	0	92	73	0	220	132	0	0	0
Future Volume (veh/h)	25	59	0	0	92	73	0	220	132	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	0.96		1.00	1.00		0.93	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	0.85	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1670	1670	0	0	1670	1670	0	1670	1670			
Adj Flow Rate, veh/h	28	66	0	0	102	81	0	244	147			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90			
Percent Heavy Veh, %	3	3	0	0	3	3	0	3	3			
Cap, veh/h	434	970	0	0	655	520	0	0	0			
Arrive On Green	0.93	0.93	0.00	0.00	0.93	0.93	0.00	0.00	0.00			
Sat Flow, veh/h	385	1049	0	0	708	562		0				
Grp Volume(v), veh/h	94	0	0	0	0	183		0.0				
Grp Sat Flow(s),veh/h/ln	1433	0	0	0	0	1270						
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.8						
Cycle Q Clear(g_c), s	0.3	0.0	0.0	0.0	0.0	0.8						
Prop In Lane	0.30		0.00	0.00		0.44						
Lane Grp Cap(c), veh/h	1404	0	0	0	0	1175						
V/C Ratio(X)	0.07	0.00	0.00	0.00	0.00	0.16						
Avail Cap(c_a), veh/h	1404	0	0	0	0	1175						
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00						
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00						
Uniform Delay (d), s/veh	0.2	0.0	0.0	0.0	0.0	0.2						
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.0	0.0	0.3						
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0						
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.0	0.1						
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.3	0.0	0.0	0.0	0.0	0.5						
LnGrp LOS	A	A	A	A	A	A						
Approach Vol, veh/h		94			183							
Approach Delay, s/veh		0.3			0.5							
Approach LOS		A			A							

Timer - Assigned Phs				4				8				
Phs Duration (G+Y+Rc), s				60.0				60.0				
Change Period (Y+Rc), s				4.5				4.5				
Max Green Setting (Gmax), s				55.5				55.5				
Max Q Clear Time (g_c+I1), s				2.3				2.8				
Green Ext Time (p_c), s				0.6				1.3				

Intersection Summary			
HCM 6th Ctrl Delay			0.4
HCM 6th LOS			A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	164	20	208	8	33	24	198	609	3	20	527	81
Future Volume (veh/h)	164	20	208	8	33	24	198	609	3	20	527	81
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.87		0.90	0.94		0.89	0.99		0.91	0.97		0.88
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	0.85	1.00	1.00	0.85
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670
Adj Flow Rate, veh/h	217	0	254	10	40	29	241	743	4	24	643	99
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	681	0	289	63	207	135	520	1967	11	314	1003	154
Arrive On Green	0.26	0.00	0.26	0.26	0.26	0.26	0.43	1.00	1.00	0.40	0.40	0.40
Sat Flow, veh/h	2080	0	1115	102	798	522	1590	2984	16	617	2492	382
Grp Volume(v), veh/h	217	0	254	79	0	0	241	395	352	24	409	333
Grp Sat Flow(s),veh/h/ln	1040	0	1115	1422	0	0	1590	1586	1413	617	1586	1287
Q Serve(g_s), s	4.3	0.0	24.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	22.8	23.0
Cycle Q Clear(g_c), s	8.8	0.0	24.0	4.6	0.0	0.0	0.0	0.0	0.0	2.7	22.8	23.0
Prop In Lane	1.00		1.00	0.13		0.37	1.00		0.01	1.00		0.30
Lane Grp Cap(c), veh/h	681	0	289	405	0	0	520	1046	932	314	639	518
V/C Ratio(X)	0.32	0.00	0.88	0.19	0.00	0.00	0.46	0.38	0.38	0.08	0.64	0.64
Avail Cap(c_a), veh/h	681	0	289	405	0	0	520	1046	932	314	639	518
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.4	0.0	39.1	31.9	0.0	0.0	20.1	0.0	0.0	20.4	26.4	26.5
Incr Delay (d2), s/veh	1.2	0.0	29.4	1.1	0.0	0.0	3.0	1.0	1.2	0.5	4.9	6.0
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	2.5	0.0	8.9	1.8	0.0	0.0	4.1	0.3	0.3	0.4	9.3	7.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.6	0.0	68.5	33.0	0.0	0.0	23.0	1.0	1.2	20.9	31.3	32.5
LnGrp LOS	C	A	E	C	A	A	C	A	A	C	C	C
Approach Vol, veh/h		471			79			988			766	
Approach Delay, s/veh		52.9			33.0			6.4			31.5	
Approach LOS		D			C			A			C	

Timer - Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		77.0		33.0	28.2	48.8		33.0
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s		72.5		28.5	23.7	44.3		28.5
Max Q Clear Time (g_c+I1), s		2.0		26.0	2.0	25.0		6.6
Green Ext Time (p_c), s		5.5		0.6	0.7	4.9		0.4

Intersection Summary	
HCM 6th Ctrl Delay	25.2
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	10	128	17	12	13	124	748	33	8	709	68
Future Volume (veh/h)	51	10	128	17	12	13	124	748	33	8	709	68
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.66		0.62	1.00		0.61	1.00		0.50	1.00		0.79
Parking Bus, Adj	1.00	1.00	0.78	1.00	1.00	0.86	1.00	1.00	0.88	1.00	1.00	0.98
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670
Adj Flow Rate, veh/h	57	11	142	19	13	14	138	831	37	9	788	76
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	85	21	135	123	73	65	152	1520	68	72	1406	136
Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.10	0.55	0.55	0.09	1.00	1.00
Sat Flow, veh/h	154	75	478	272	257	232	1590	2763	123	1590	2813	271
Grp Volume(v), veh/h	210	0	0	46	0	0	138	477	391	9	444	420
Grp Sat Flow(s),veh/h/ln	707	0	0	761	0	0	1590	1586	1300	1590	1586	1498
Q Serve(g_s), s	25.7	0.0	0.0	0.0	0.0	0.0	9.5	21.3	21.3	0.6	0.0	0.0
Cycle Q Clear(g_c), s	31.0	0.0	0.0	3.7	0.0	0.0	9.5	21.3	21.3	0.6	0.0	0.0
Prop In Lane	0.27		0.68	0.41		0.30	1.00		0.09	1.00		0.18
Lane Grp Cap(c), veh/h	241	0	0	261	0	0	152	873	715	72	793	749
V/C Ratio(X)	0.87	0.00	0.00	0.18	0.00	0.00	0.91	0.55	0.55	0.12	0.56	0.56
Avail Cap(c_a), veh/h	241	0	0	261	0	0	152	873	715	72	793	749
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.9	0.0	0.0	29.6	0.0	0.0	49.3	15.9	15.9	48.0	0.0	0.0
Incr Delay (d2), s/veh	32.5	0.0	0.0	1.5	0.0	0.0	52.1	2.5	3.0	3.5	2.8	3.0
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	7.9	0.0	0.0	1.0	0.0	0.0	5.9	8.0	6.7	0.3	0.6	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.4	0.0	0.0	31.1	0.0	0.0	101.4	18.4	18.9	51.5	2.8	3.0
LnGrp LOS	E	A	A	C	A	A	F	B	B	D	A	A
Approach Vol, veh/h		210			46			1006			873	
Approach Delay, s/veh		72.4			31.1			30.0			3.4	
Approach LOS		E			C			C			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.5	65.0		35.5	15.0	59.5		35.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	60.5		31.0	10.5	55.0		31.0				
Max Q Clear Time (g_c+I1), s	2.6	23.3		33.0	11.5	2.0		5.7				
Green Ext Time (p_c), s	0.0	6.9		0.0	0.0	6.9		0.2				
Intersection Summary												
HCM 6th Ctrl Delay			23.3									
HCM 6th LOS			C									

Intersection						
Int Delay, s/veh	0.8					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	83	0	910	735	139
Future Vol, veh/h	0	83	0	910	735	139
Conflicting Peds, #/hr	0	54	0	0	0	68
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	92	0	1011	817	154

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	608	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.96	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.33	-	-	-	-
Pot Cap-1 Maneuver	0	436	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	387	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17.2	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	387	-	-
HCM Lane V/C Ratio	-	0.238	-	-
HCM Control Delay (s)	-	17.2	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	0.9	-	-

Intersection							
Int Delay, s/veh	8.5						

Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Vol, veh/h	28	111	42	873	32	663	138
Future Vol, veh/h	28	111	42	873	32	663	138
Conflicting Peds, #/hr	63	0	94	0	0	0	94
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	-	None
Storage Length	0	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	0	-
Grade, %	0	-	-	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3	3
Mvmt Flow	31	123	47	970	36	737	153

Major/Minor	Minor2		Major1		Major2		
Conflicting Flow All	1622	539	984	0	970	-	0
Stage 1	980	-	-	-	-	-	-
Stage 2	642	-	-	-	-	-	-
Critical Hdwy	6.86	6.96	4.16	-	6.46	-	-
Critical Hdwy Stg 1	5.86	-	-	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-	-	-
Follow-up Hdwy	3.53	3.33	2.23	-	2.53	-	-
Pot Cap-1 Maneuver	93	484	692	-	344	-	-
Stage 1	322	-	-	-	-	-	-
Stage 2	483	-	-	-	-	-	-
Platoon blocked, %				-		-	-
Mov Cap-1 Maneuver	51	441	630	-	344	-	-
Mov Cap-2 Maneuver	51	-	-	-	-	-	-
Stage 1	246	-	-	-	-	-	-
Stage 2	346	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	94.8	1.3	2.1
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	630	-	174	-	-
HCM Lane V/C Ratio	0.074	-	0.888	-	-
HCM Control Delay (s)	11.2	0.8	94.8	1.8	-
HCM Lane LOS	B	A	F	A	-
HCM 95th %tile Q(veh)	0.2	-	6.5	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	20	308	687	13	217	0	0	661	109
Future Volume (veh/h)	0	0	0	20	308	687	13	217	0	0	661	109
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.89
Parking Bus, Adj				1.00	1.00	0.94	1.00	1.00	1.00	1.00	1.00	0.88
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1670	1670	1670	1670	1670	0	0	1670	1670
Adj Flow Rate, veh/h				22	335	0	14	236	0	0	718	118
Peak Hour Factor				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	0	0	3	3
Cap, veh/h				109	1736		51	813	0	0	876	144
Arrive On Green				0.57	0.57	0.00	0.35	0.35	0.00	0.00	0.35	0.35
Sat Flow, veh/h				191	3056	1325	42	2400	0	0	2586	411
Grp Volume(v), veh/h				191	166	0	116	134	0	0	455	381
Grp Sat Flow(s),veh/h/ln				1660	1586	1325	922	1444	0	0	1586	1327
Q Serve(g_s), s				6.2	5.5	0.0	1.4	7.3	0.0	0.0	28.7	28.8
Cycle Q Clear(g_c), s				6.2	5.5	0.0	30.2	7.3	0.0	0.0	28.7	28.8
Prop In Lane				0.12		1.00	0.12		0.00	0.00		0.31
Lane Grp Cap(c), veh/h				943	901		359	505	0	0	555	464
V/C Ratio(X)				0.20	0.18		0.32	0.27	0.00	0.00	0.82	0.82
Avail Cap(c_a), veh/h				943	901		359	505	0	0	555	464
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				11.6	11.5	0.0	26.2	25.6	0.0	0.0	32.6	32.6
Incr Delay (d2), s/veh				0.5	0.4	0.0	2.4	1.3	0.0	0.0	12.7	15.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.4	2.0	0.0	2.3	2.7	0.0	0.0	12.8	11.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				12.1	11.9	0.0	28.5	26.9	0.0	0.0	45.3	47.6
LnGrp LOS				B	B		C	C	A	A	D	D
Approach Vol, veh/h					357			250			836	
Approach Delay, s/veh					12.0			27.7			46.3	
Approach LOS					B			C			D	

Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		43.0				43.0		67.0				
Change Period (Y+Rc), s		4.5				4.5		4.5				
Max Green Setting (Gmax), s		38.5				38.5		62.5				
Max Q Clear Time (g_c+I1), s		32.2				30.8		8.2				
Green Ext Time (p_c), s		0.7				3.2		2.3				

Intersection Summary			
HCM 6th Ctrl Delay			34.6
HCM 6th LOS			C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	52	42	17	36	15	0	340	0	0	640	42
Future Volume (veh/h)	10	52	42	17	36	15	0	340	0	0	640	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.84		0.77	0.88		0.78	1.00		1.00	1.00		0.90
Parking Bus, Adj	1.00	1.00	0.86	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.88
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1670	1670	1670	1670	1670	1670	0	1670	0	0	1670	1670
Adj Flow Rate, veh/h	14	70	57	23	49	20	0	459	0	0	865	57
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Percent Heavy Veh, %	3	3	3	3	3	3	0	3	0	0	3	3
Cap, veh/h	54	198	149	128	250	95	0	1917	0	0	1700	112
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.00	0.60	0.00	0.00	0.60	0.60
Sat Flow, veh/h	66	618	464	281	780	295	0	3340	0	0	2897	185
Grp Volume(v), veh/h	141	0	0	92	0	0	0	459	0	0	488	434
Grp Sat Flow(s),veh/h/ln	1148	0	0	1355	0	0	0	1586	0	0	1586	1413
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.0	0.0	0.0	21.1	21.1
Cycle Q Clear(g_c), s	11.0	0.0	0.0	5.3	0.0	0.0	0.0	8.0	0.0	0.0	21.1	21.1
Prop In Lane	0.10		0.40	0.25		0.22	0.00		0.00	0.00		0.13
Lane Grp Cap(c), veh/h	401	0	0	472	0	0	0	1917	0	0	959	853
V/C Ratio(X)	0.35	0.00	0.00	0.19	0.00	0.00	0.00	0.24	0.00	0.00	0.51	0.51
Avail Cap(c_a), veh/h	401	0	0	472	0	0	0	1917	0	0	959	853
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	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	31.4	0.0	0.0	29.5	0.0	0.0	0.0	11.0	0.0	0.0	13.6	13.6
Incr Delay (d2), s/veh	2.4	0.0	0.0	0.9	0.0	0.0	0.0	0.3	0.0	0.0	1.9	2.2
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	3.4	0.0	0.0	2.1	0.0	0.0	0.0	2.8	0.0	0.0	7.8	7.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.8	0.0	0.0	30.4	0.0	0.0	0.0	11.3	0.0	0.0	15.5	15.7
LnGrp LOS	C	A	A	C	A	A	A	B	A	A	B	B
Approach Vol, veh/h		141			92			459			922	
Approach Delay, s/veh		33.8			30.4			11.3			15.6	
Approach LOS		C			C			B			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		77.0		43.0		77.0		43.0				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		72.5		38.5		72.5		38.5				
Max Q Clear Time (g_c+I1), s		10.0		13.0		23.1		7.3				
Green Ext Time (p_c), s		3.5		0.9		7.4		0.5				

Intersection Summary		
HCM 6th Ctrl Delay		16.8
HCM 6th LOS		B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	37	0	0	69	91	0	180	63	0	0	0
Future Volume (veh/h)	11	37	0	0	69	91	0	180	63	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	0.99		1.00	1.00		0.97	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	0.85	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1670	1670	0	0	1670	1670	0	1670	1670			
Adj Flow Rate, veh/h	14	46	0	0	85	112	0	222	78			
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81			
Percent Heavy Veh, %	3	3	0	0	3	3	0	3	3			
Cap, veh/h	352	1102	0	0	506	667	0	0	0			
Arrive On Green	0.93	0.93	0.00	0.00	0.93	0.93	0.00	0.00	0.00			
Sat Flow, veh/h	305	1184	0	0	544	716		0				
Grp Volume(v), veh/h	60	0	0	0	0	197		0.0				
Grp Sat Flow(s),veh/h/ln	1489	0	0	0	0	1260						
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.8						
Cycle Q Clear(g_c), s	0.2	0.0	0.0	0.0	0.0	0.8						
Prop In Lane	0.23		0.00	0.00		0.57						
Lane Grp Cap(c), veh/h	1454	0	0	0	0	1173						
V/C Ratio(X)	0.04	0.00	0.00	0.00	0.00	0.17						
Avail Cap(c_a), veh/h	1454	0	0	0	0	1173						
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00						
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00						
Uniform Delay (d), s/veh	0.2	0.0	0.0	0.0	0.0	0.2						
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.0	0.0	0.3						
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0						
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.0	0.1						
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.2	0.0	0.0	0.0	0.0	0.5						
LnGrp LOS	A	A	A	A	A	A						
Approach Vol, veh/h		60			197							
Approach Delay, s/veh		0.2			0.5							
Approach LOS		A			A							

Timer - Assigned Phs				4				8
Phs Duration (G+Y+Rc), s				65.0				65.0
Change Period (Y+Rc), s				4.5				4.5
Max Green Setting (Gmax), s				60.5				60.5
Max Q Clear Time (g_c+I1), s				2.2				2.8
Green Ext Time (p_c), s				0.4				1.4

Intersection Summary	
HCM 6th Ctrl Delay	0.4
HCM 6th LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	226	17	160	1	8	17	110	478	4	24	756	60
Future Volume (veh/h)	226	17	160	1	8	17	110	478	4	24	756	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.87		0.90	0.94		0.90	1.00		0.92	0.98		0.92
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	0.85	1.00	1.00	0.85
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670
Adj Flow Rate, veh/h	286	0	193	1	10	20	133	576	5	29	911	72
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	699	0	291	36	125	232	314	1958	17	545	1798	142
Arrive On Green	0.26	0.00	0.26	0.26	0.26	0.26	1.00	1.00	1.00	0.66	0.66	0.66
Sat Flow, veh/h	2152	0	1124	9	484	896	509	2971	26	727	2728	216
Grp Volume(v), veh/h	286	0	193	31	0	0	133	307	274	29	530	453
Grp Sat Flow(s),veh/h/ln	1076	0	1124	1390	0	0	509	1586	1411	727	1586	1357
Q Serve(g_s), s	10.0	0.0	16.9	0.0	0.0	0.0	12.3	0.0	0.0	1.6	18.8	18.8
Cycle Q Clear(g_c), s	11.9	0.0	16.9	1.9	0.0	0.0	31.1	0.0	0.0	1.6	18.8	18.8
Prop In Lane	1.00		1.00	0.03		0.65	1.00		0.02	1.00		0.16
Lane Grp Cap(c), veh/h	699	0	291	394	0	0	314	1046	930	545	1046	894
V/C Ratio(X)	0.41	0.00	0.66	0.08	0.00	0.00	0.42	0.29	0.29	0.05	0.51	0.51
Avail Cap(c_a), veh/h	699	0	291	394	0	0	314	1046	930	545	1046	894
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.4	0.0	36.5	30.9	0.0	0.0	4.0	0.0	0.0	6.7	9.6	9.6
Incr Delay (d2), s/veh	1.8	0.0	11.3	0.4	0.0	0.0	4.1	0.7	0.8	0.2	1.8	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	3.4	0.0	5.5	0.7	0.0	0.0	1.1	0.2	0.2	0.3	6.5	5.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.2	0.0	47.8	31.3	0.0	0.0	8.2	0.7	0.8	6.8	11.4	11.6
LnGrp LOS	D	A	D	C	A	A	A	A	A	A	B	B
Approach Vol, veh/h		479			31			714			1012	
Approach Delay, s/veh		40.8			31.3			2.1			11.4	
Approach LOS		D			C			A			B	

Timer - Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		77.0		33.0		77.0		33.0
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		72.5		28.5		72.5		28.5
Max Q Clear Time (g_c+I1), s		33.1		18.9		20.8		3.9
Green Ext Time (p_c), s		6.2		1.6		8.6		0.1

Intersection Summary	
HCM 6th Ctrl Delay	15.0
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	17	20	23	4	9	52	537	45	10	776	102
Future Volume (veh/h)	63	17	20	23	4	9	52	537	45	10	776	102
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.73		0.69	0.78		0.69	1.00		0.93	1.00		0.93
Parking Bus, Adj	1.00	1.00	0.78	1.00	1.00	0.86	1.00	1.00	0.88	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670
Adj Flow Rate, veh/h	74	20	24	27	5	11	61	632	53	12	913	120
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	189	46	46	202	37	64	152	1520	127	72	1395	183
Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.10	0.55	0.55	0.09	1.00	1.00
Sat Flow, veh/h	480	165	165	529	133	227	1590	2763	231	1590	2790	367
Grp Volume(v), veh/h	118	0	0	43	0	0	61	362	323	12	519	514
Grp Sat Flow(s),veh/h/ln	809	0	0	889	0	0	1590	1586	1407	1590	1586	1570
Q Serve(g_s), s	9.1	0.0	0.0	0.0	0.0	0.0	4.0	14.7	14.7	0.8	0.0	0.0
Cycle Q Clear(g_c), s	12.6	0.0	0.0	3.5	0.0	0.0	4.0	14.7	14.7	0.8	0.0	0.0
Prop In Lane	0.63		0.20	0.63		0.26	1.00		0.16	1.00		0.23
Lane Grp Cap(c), veh/h	281	0	0	304	0	0	152	873	774	72	793	785
V/C Ratio(X)	0.42	0.00	0.00	0.14	0.00	0.00	0.40	0.42	0.42	0.17	0.65	0.65
Avail Cap(c_a), veh/h	281	0	0	304	0	0	152	873	774	72	793	785
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.5	0.0	0.0	29.5	0.0	0.0	46.8	14.4	14.5	48.1	0.0	0.0
Incr Delay (d2), s/veh	4.5	0.0	0.0	1.0	0.0	0.0	7.7	1.5	1.7	4.9	4.2	4.2
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	3.0	0.0	0.0	0.9	0.0	0.0	1.9	5.4	4.9	0.4	0.9	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.1	0.0	0.0	30.5	0.0	0.0	54.5	15.9	16.1	53.0	4.2	4.2
LnGrp LOS	D	A	A	C	A	A	D	B	B	D	A	A
Approach Vol, veh/h		118			43			746			1045	
Approach Delay, s/veh		37.1			30.5			19.1			4.8	
Approach LOS		D			C			B			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.5	65.0		35.5	15.0	59.5		35.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	60.5		31.0	10.5	55.0		31.0				
Max Q Clear Time (g_c+I1), s	2.8	16.7		14.6	6.0	2.0		5.5				
Green Ext Time (p_c), s	0.0	4.9		0.6	0.0	9.0		0.2				
Intersection Summary												
HCM 6th Ctrl Delay			12.8									
HCM 6th LOS			B									

Intersection						
Int Delay, s/veh	0.1					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	8	0	623	858	5
Future Vol, veh/h	0	8	0	623	858	5
Conflicting Peds, #/hr	0	54	0	0	0	54
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	9	0	692	953	6

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	588	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.96	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.33	-	-	-	-
Pot Cap-1 Maneuver	0	450	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	405	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.1	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	405	-	-
HCM Lane V/C Ratio	-	0.022	-	-
HCM Control Delay (s)	-	14.1	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.1	-	-

Intersection							
Int Delay, s/veh	1.3						

Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Vol, veh/h	11	34	17	612	15	799	67
Future Vol, veh/h	11	34	17	612	15	799	67
Conflicting Peds, #/hr	62	62	5	0	0	0	62
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	-	None
Storage Length	0	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	0	-
Grade, %	0	-	-	0	-	0	-
Peak Hour Factor	90	90	90	90	92	90	90
Heavy Vehicles, %	3	3	3	3	3	3	3
Mvmt Flow	12	38	19	680	16	888	74

Major/Minor	Minor2		Major1		Major2		
Conflicting Flow All	1459	605	1024	0	680	-	0
Stage 1	1019	-	-	-	-	-	-
Stage 2	440	-	-	-	-	-	-
Critical Hdwy	6.86	6.96	4.16	-	6.46	-	-
Critical Hdwy Stg 1	5.86	-	-	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-	-	-
Follow-up Hdwy	3.53	3.33	2.23	-	2.53	-	-
Pot Cap-1 Maneuver	119	438	668	-	528	-	-
Stage 1	307	-	-	-	-	-	-
Stage 2	613	-	-	-	-	-	-
Platoon blocked, %				-		-	-
Mov Cap-1 Maneuver	94	388	629	-	528	-	-
Mov Cap-2 Maneuver	94	-	-	-	-	-	-
Stage 1	275	-	-	-	-	-	-
Stage 2	539	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	26.1	0.6	0.6
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	629	-	220	-	-
HCM Lane V/C Ratio	0.03	-	0.227	-	-
HCM Control Delay (s)	10.9	0.3	26.1	0.4	-
HCM Lane LOS	B	A	D	A	-
HCM 95th %tile Q(veh)	0.1	-	0.8	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	10	220	500	4	120	0	0	690	115
Future Volume (veh/h)	0	0	0	10	220	500	4	120	0	0	690	115
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.96
Parking Bus, Adj				1.00	1.00	0.94	1.00	1.00	1.00	1.00	1.00	0.88
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1670	1670	1670	1670	1670	0	0	1670	1670
Adj Flow Rate, veh/h				13	282	0	5	154	0	0	885	147
Peak Hour Factor				0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %				3	3	3	3	3	0	0	3	3
Cap, veh/h				63	1429		50	1258	0	0	1162	193
Arrive On Green				0.46	0.46	0.00	0.46	0.46	0.00	0.00	0.46	0.46
Sat Flow, veh/h				137	3113	1325	33	2815	0	0	2614	420
Grp Volume(v), veh/h				158	137	0	80	79	0	0	555	477
Grp Sat Flow(s),veh/h/ln				1663	1586	1325	1329	1444	0	0	1586	1364
Q Serve(g_s), s				6.2	5.6	0.0	0.5	3.4	0.0	0.0	32.0	32.0
Cycle Q Clear(g_c), s				6.2	5.6	0.0	32.5	3.4	0.0	0.0	32.0	32.0
Prop In Lane				0.08		1.00	0.06		0.00	0.00		0.31
Lane Grp Cap(c), veh/h				764	728		645	663	0	0	728	626
V/C Ratio(X)				0.21	0.19		0.12	0.12	0.00	0.00	0.76	0.76
Avail Cap(c_a), veh/h				764	728		645	663	0	0	728	626
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				17.8	17.6	0.0	17.2	17.0	0.0	0.0	24.7	24.7
Incr Delay (d2), s/veh				0.6	0.6	0.0	0.4	0.4	0.0	0.0	7.4	8.5
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.5	2.2	0.0	1.2	1.2	0.0	0.0	13.1	11.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				18.4	18.2	0.0	17.6	17.4	0.0	0.0	32.1	33.3
LnGrp LOS				B	B		B	B	A	A	C	C
Approach Vol, veh/h					295			159			1032	
Approach Delay, s/veh					18.3			17.5			32.7	
Approach LOS					B			B			C	

Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		55.0				55.0		55.0				
Change Period (Y+Rc), s		4.5				4.5		4.5				
Max Green Setting (Gmax), s		50.5				50.5		50.5				
Max Q Clear Time (g_c+I1), s		34.5				34.0		8.2				
Green Ext Time (p_c), s		0.7				6.5		1.8				

Intersection Summary		
HCM 6th Ctrl Delay		28.2
HCM 6th LOS		C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	83	60	37	30	33	0	402	0	0	626	52
Future Volume (veh/h)	20	83	60	37	30	33	0	402	0	0	626	52
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.87		0.80	0.92		0.80	1.00		1.00	1.00		0.75
Parking Bus, Adj	1.00	1.00	0.86	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.88
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1670	1670	1670	1670	1670	1670	0	1670	0	0	1670	1670
Adj Flow Rate, veh/h	22	92	67	41	33	37	0	447	0	0	696	58
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	3	3	3	3	3	3	0	3	0	0	3	3
Cap, veh/h	73	252	171	199	155	156	0	1679	0	0	1431	119
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.00	0.53	0.00	0.00	0.53	0.53
Sat Flow, veh/h	99	638	433	400	391	395	0	3340	0	0	2788	225
Grp Volume(v), veh/h	181	0	0	111	0	0	0	447	0	0	408	346
Grp Sat Flow(s),veh/h/ln	1170	0	0	1186	0	0	0	1586	0	0	1586	1343
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.3	0.0	0.0	19.5	19.6
Cycle Q Clear(g_c), s	12.6	0.0	0.0	7.1	0.0	0.0	0.0	9.3	0.0	0.0	19.5	19.6
Prop In Lane	0.12		0.37	0.37		0.33	0.00		0.00	0.00		0.17
Lane Grp Cap(c), veh/h	497	0	0	511	0	0	0	1679	0	0	840	711
V/C Ratio(X)	0.36	0.00	0.00	0.22	0.00	0.00	0.00	0.27	0.00	0.00	0.49	0.49
Avail Cap(c_a), veh/h	497	0	0	511	0	0	0	1679	0	0	840	711
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	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	25.7	0.0	0.0	23.9	0.0	0.0	0.0	15.5	0.0	0.0	17.9	17.9
Incr Delay (d2), s/veh	2.1	0.0	0.0	1.0	0.0	0.0	0.0	0.4	0.0	0.0	2.0	2.4
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	3.9	0.0	0.0	2.2	0.0	0.0	0.0	3.4	0.0	0.0	7.5	6.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.8	0.0	0.0	24.8	0.0	0.0	0.0	15.9	0.0	0.0	19.9	20.3
LnGrp LOS	C	A	A	C	A	A	A	B	A	A	B	C
Approach Vol, veh/h		181			111			447			754	
Approach Delay, s/veh		27.8			24.8			15.9			20.1	
Approach LOS		C			C			B			C	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		68.0		52.0		68.0		52.0				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		63.5		47.5		63.5		47.5				
Max Q Clear Time (g_c+I1), s		11.3		14.6		21.6		9.1				
Green Ext Time (p_c), s		3.4		1.2		5.7		0.8				

Intersection Summary			
HCM 6th Ctrl Delay			20.1
HCM 6th LOS			C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	59	0	0	100	79	0	229	115	0	0	0
Future Volume (veh/h)	27	59	0	0	100	79	0	229	115	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	0.97		1.00	1.00		0.93	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	0.85	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1670	1670	0	0	1670	1670	0	1670	1670			
Adj Flow Rate, veh/h	30	66	0	0	111	88	0	254	128			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90			
Percent Heavy Veh, %	3	3	0	0	3	3	0	3	3			
Cap, veh/h	449	938	0	0	655	520	0	0	0			
Arrive On Green	0.93	0.93	0.00	0.00	0.93	0.93	0.00	0.00	0.00			
Sat Flow, veh/h	401	1014	0	0	709	562		0				
Grp Volume(v), veh/h	96	0	0	0	0	199		0.0				
Grp Sat Flow(s),veh/h/ln	1415	0	0	0	0	1270						
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.8						
Cycle Q Clear(g_c), s	0.3	0.0	0.0	0.0	0.0	0.8						
Prop In Lane	0.31		0.00	0.00		0.44						
Lane Grp Cap(c), veh/h	1387	0	0	0	0	1175						
V/C Ratio(X)	0.07	0.00	0.00	0.00	0.00	0.17						
Avail Cap(c_a), veh/h	1387	0	0	0	0	1175						
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00						
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00						
Uniform Delay (d), s/veh	0.2	0.0	0.0	0.0	0.0	0.2						
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.0	0.0	0.3						
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0						
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.0	0.1						
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.3	0.0	0.0	0.0	0.0	0.5						
LnGrp LOS	A	A	A	A	A	A						
Approach Vol, veh/h		96			199							
Approach Delay, s/veh		0.3			0.5							
Approach LOS		A			A							

Timer - Assigned Phs				4				8				
Phs Duration (G+Y+Rc), s				60.0				60.0				
Change Period (Y+Rc), s				4.5				4.5				
Max Green Setting (Gmax), s				55.5				55.5				
Max Q Clear Time (g_c+I1), s				2.3				2.8				
Green Ext Time (p_c), s				0.6				1.4				

Intersection Summary			
HCM 6th Ctrl Delay			0.4
HCM 6th LOS			A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	179	22	184	9	36	26	216	659	3	22	559	88
Future Volume (veh/h)	179	22	184	9	36	26	216	659	3	22	559	88
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.88		0.90	0.93		0.89	1.00		0.91	0.97		0.88
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	0.85	1.00	1.00	0.85
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670
Adj Flow Rate, veh/h	237	0	224	11	44	32	263	804	4	27	682	107
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	671	0	289	63	207	136	505	1968	10	301	1000	157
Arrive On Green	0.26	0.00	0.26	0.26	0.26	0.26	0.43	1.00	1.00	0.40	0.40	0.40
Sat Flow, veh/h	2073	0	1115	102	799	524	1590	2985	15	585	2483	389
Grp Volume(v), veh/h	237	0	224	87	0	0	263	427	381	27	435	354
Grp Sat Flow(s),veh/h/ln	1036	0	1115	1425	0	0	1590	1586	1414	585	1586	1285
Q Serve(g_s), s	5.3	0.0	20.5	0.0	0.0	0.0	0.0	0.0	0.0	3.2	24.8	25.0
Cycle Q Clear(g_c), s	10.3	0.0	20.5	5.0	0.0	0.0	0.0	0.0	0.0	3.2	24.8	25.0
Prop In Lane	1.00		1.00	0.13		0.37	1.00		0.01	1.00		0.30
Lane Grp Cap(c), veh/h	671	0	289	406	0	0	505	1046	932	301	639	518
V/C Ratio(X)	0.35	0.00	0.78	0.21	0.00	0.00	0.52	0.41	0.41	0.09	0.68	0.68
Avail Cap(c_a), veh/h	671	0	289	406	0	0	505	1046	932	301	639	518
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.0	0.0	37.8	32.1	0.0	0.0	21.4	0.0	0.0	20.6	27.0	27.1
Incr Delay (d2), s/veh	1.5	0.0	18.2	1.2	0.0	0.0	3.8	1.2	1.3	0.6	5.8	7.2
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	2.8	0.0	7.0	2.0	0.0	0.0	4.6	0.3	0.3	0.5	10.2	8.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.4	0.0	56.0	33.3	0.0	0.0	25.2	1.2	1.3	21.2	32.8	34.2
LnGrp LOS	D	A	E	C	A	A	C	A	A	C	C	C
Approach Vol, veh/h		461			87			1071			816	
Approach Delay, s/veh		45.4			33.3			7.1			33.0	
Approach LOS		D			C			A			C	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		77.0		33.0	28.2	48.8		33.0				
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s		72.5		28.5	23.7	44.3		28.5				
Max Q Clear Time (g_c+I1), s		2.0		22.5	2.0	27.0		7.0				
Green Ext Time (p_c), s		6.1		1.1	0.7	5.1		0.4				

Intersection Summary			
HCM 6th Ctrl Delay			24.0
HCM 6th LOS			C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	11	106	19	13	14	93	810	36	9	673	74
Future Volume (veh/h)	56	11	106	19	13	14	93	810	36	9	673	74
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.67		0.62	0.83		0.61	1.00		0.50	1.00		0.79
Parking Bus, Adj	1.00	1.00	0.78	1.00	1.00	0.86	1.00	1.00	0.88	1.00	1.00	0.98
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670
Adj Flow Rate, veh/h	62	12	118	21	14	16	103	900	40	10	748	82
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	98	23	123	122	70	67	152	1520	68	72	1383	151
Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.10	0.55	0.55	0.09	1.00	1.00
Sat Flow, veh/h	193	81	437	269	250	237	1590	2764	123	1590	2766	303
Grp Volume(v), veh/h	192	0	0	51	0	0	103	517	423	10	429	401
Grp Sat Flow(s),veh/h/ln	711	0	0	756	0	0	1590	1586	1300	1590	1586	1482
Q Serve(g_s), s	24.8	0.0	0.0	0.0	0.0	0.0	6.9	23.9	23.9	0.6	0.0	0.0
Cycle Q Clear(g_c), s	29.2	0.0	0.0	4.4	0.0	0.0	6.9	23.9	23.9	0.6	0.0	0.0
Prop In Lane	0.32		0.61	0.41		0.31	1.00		0.09	1.00		0.20
Lane Grp Cap(c), veh/h	244	0	0	259	0	0	152	873	715	72	793	741
V/C Ratio(X)	0.79	0.00	0.00	0.20	0.00	0.00	0.68	0.59	0.59	0.14	0.54	0.54
Avail Cap(c_a), veh/h	244	0	0	259	0	0	152	873	715	72	793	741
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.4	0.0	0.0	29.8	0.0	0.0	48.1	16.5	16.5	48.0	0.0	0.0
Incr Delay (d2), s/veh	22.3	0.0	0.0	1.7	0.0	0.0	21.7	2.9	3.6	4.0	2.6	2.8
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	6.5	0.0	0.0	1.1	0.0	0.0	3.6	9.0	7.5	0.3	0.6	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.7	0.0	0.0	31.5	0.0	0.0	69.9	19.5	20.1	52.0	2.6	2.8
LnGrp LOS	E	A	A	C	A	A	E	B	C	D	A	A
Approach Vol, veh/h		192			51			1043			840	
Approach Delay, s/veh		60.7			31.5			24.7			3.3	
Approach LOS		E			C			C			A	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.5	65.0		35.5	15.0	59.5		35.5
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.0	60.5		31.0	10.5	55.0		31.0
Max Q Clear Time (g_c+I1), s	2.6	25.9		31.2	8.9	2.0		6.4
Green Ext Time (p_c), s	0.0	7.6		0.0	0.0	6.6		0.3

Intersection Summary			
HCM 6th Ctrl Delay			19.7
HCM 6th LOS			B

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	11	0	938	800	4
Future Vol, veh/h	0	11	0	938	800	4
Conflicting Peds, #/hr	0	54	0	0	0	68
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	12	0	1042	889	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	569	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.96	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.33	-	-	-	-
Pot Cap-1 Maneuver	0	463	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	411	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	411	-	-
HCM Lane V/C Ratio	-	0.03	-	-
HCM Control Delay (s)	-	14	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.1	-	-

Intersection	
Int Delay, s/veh	12.1

Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Vol, veh/h	30	121	46	908	30	690	121
Future Vol, veh/h	30	121	46	908	30	690	121
Conflicting Peds, #/hr	63	0	94	0	0	0	94
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	-	None
Storage Length	0	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	0	-
Grade, %	0	-	-	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3	3
Mvmt Flow	33	134	51	1009	33	767	134

Major/Minor	Minor2		Major1		Major2		
Conflicting Flow All	1664	545	995	0	1009	-	0
Stage 1	994	-	-	-	-	-	-
Stage 2	670	-	-	-	-	-	-
Critical Hdwy	6.86	6.96	4.16	-	6.46	-	-
Critical Hdwy Stg 1	5.86	-	-	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-	-	-
Follow-up Hdwy	3.53	3.33	2.23	-	2.53	-	-
Pot Cap-1 Maneuver	87	480	685	-	325	-	-
Stage 1	317	-	-	-	-	-	-
Stage 2	467	-	-	-	-	-	-
Platoon blocked, %				-		-	-
Mov Cap-1 Maneuver	46	437	624	-	325	-	-
Mov Cap-2 Maneuver	46	-	-	-	-	-	-
Stage 1	235	-	-	-	-	-	-
Stage 2	336	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	135	1.5	2.1
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	624	-	163	-	-
HCM Lane V/C Ratio	0.082	-	1.029	-	-
HCM Control Delay (s)	11.3	1	135	1.8	-
HCM Lane LOS	B	A	F	A	-
HCM 95th %tile Q(veh)	0.3	-	8.2	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	22	335	705	14	236	0	0	700	107
Future Volume (veh/h)	0	0	0	22	335	705	14	236	0	0	700	107
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.89
Parking Bus, Adj				1.00	1.00	0.94	1.00	1.00	1.00	1.00	1.00	0.88
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1670	1670	1670	1670	1670	0	0	1670	1670
Adj Flow Rate, veh/h				24	364	0	15	257	0	0	761	116
Peak Hour Factor				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	0	0	3	3
Cap, veh/h				109	1736		48	793	0	0	887	135
Arrive On Green				0.57	0.57	0.00	0.35	0.35	0.00	0.00	0.35	0.35
Sat Flow, veh/h				192	3055	1325	33	2341	0	0	2619	386
Grp Volume(v), veh/h				208	180	0	125	147	0	0	476	401
Grp Sat Flow(s),veh/h/ln				1660	1586	1325	855	1444	0	0	1586	1335
Q Serve(g_s), s				6.8	6.1	0.0	1.8	8.1	0.0	0.0	30.7	30.7
Cycle Q Clear(g_c), s				6.8	6.1	0.0	32.4	8.1	0.0	0.0	30.7	30.7
Prop In Lane				0.12		1.00	0.12		0.00	0.00		0.29
Lane Grp Cap(c), veh/h				943	901		336	505	0	0	555	467
V/C Ratio(X)				0.22	0.20		0.37	0.29	0.00	0.00	0.86	0.86
Avail Cap(c_a), veh/h				943	901		336	505	0	0	555	467
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				11.7	11.6	0.0	26.6	25.9	0.0	0.0	33.2	33.2
Incr Delay (d2), s/veh				0.5	0.5	0.0	3.1	1.5	0.0	0.0	15.7	18.1
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.6	2.2	0.0	2.6	3.0	0.0	0.0	13.9	12.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				12.3	12.1	0.0	29.7	27.3	0.0	0.0	48.9	51.4
LnGrp LOS				B	B		C	C	A	A	D	D
Approach Vol, veh/h					388			272			877	
Approach Delay, s/veh					12.2			28.4			50.0	
Approach LOS					B			C			D	

Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		43.0				43.0		67.0				
Change Period (Y+Rc), s		4.5				4.5		4.5				
Max Green Setting (Gmax), s		38.5				38.5		62.5				
Max Q Clear Time (g_c+I1), s		34.4				32.7		8.8				
Green Ext Time (p_c), s		0.6				2.8		2.5				

Intersection Summary	
HCM 6th Ctrl Delay	36.6
HCM 6th LOS	D

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	54	42	17	36	15	0	352	0	0	640	42
Future Volume (veh/h)	10	54	42	17	36	15	0	352	0	0	640	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.84		0.77	0.88		0.78	1.00		1.00	1.00		0.90
Parking Bus, Adj	1.00	1.00	0.86	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.88
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1670	1670	1670	1670	1670	1670	0	1670	0	0	1670	1670
Adj Flow Rate, veh/h	14	73	57	23	49	20	0	476	0	0	865	57
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Percent Heavy Veh, %	3	3	3	3	3	3	0	3	0	0	3	3
Cap, veh/h	53	203	146	127	250	94	0	1917	0	0	1700	112
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.00	0.60	0.00	0.00	0.60	0.60
Sat Flow, veh/h	64	632	456	280	779	294	0	3340	0	0	2897	185
Grp Volume(v), veh/h	144	0	0	92	0	0	0	476	0	0	488	434
Grp Sat Flow(s),veh/h/ln	1153	0	0	1353	0	0	0	1586	0	0	1586	1413
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.4	0.0	0.0	21.1	21.1
Cycle Q Clear(g_c), s	11.2	0.0	0.0	5.3	0.0	0.0	0.0	8.4	0.0	0.0	21.1	21.1
Prop In Lane	0.10		0.40	0.25		0.22	0.00		0.00	0.00		0.13
Lane Grp Cap(c), veh/h	403	0	0	472	0	0	0	1917	0	0	959	853
V/C Ratio(X)	0.36	0.00	0.00	0.20	0.00	0.00	0.00	0.25	0.00	0.00	0.51	0.51
Avail Cap(c_a), veh/h	403	0	0	472	0	0	0	1917	0	0	959	853
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	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	31.5	0.0	0.0	29.5	0.0	0.0	0.0	11.1	0.0	0.0	13.6	13.6
Incr Delay (d2), s/veh	2.5	0.0	0.0	0.9	0.0	0.0	0.0	0.3	0.0	0.0	1.9	2.2
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	3.5	0.0	0.0	2.1	0.0	0.0	0.0	3.0	0.0	0.0	7.8	7.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.0	0.0	0.0	30.4	0.0	0.0	0.0	11.4	0.0	0.0	15.5	15.7
LnGrp LOS	C	A	A	C	A	A	A	B	A	A	B	B
Approach Vol, veh/h		144			92			476			922	
Approach Delay, s/veh		34.0			30.4			11.4			15.6	
Approach LOS		C			C			B			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		77.0		43.0		77.0		43.0				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		72.5		38.5		72.5		38.5				
Max Q Clear Time (g_c+I1), s		10.4		13.2		23.1		7.3				
Green Ext Time (p_c), s		3.7		0.9		7.4		0.5				
Intersection Summary												
HCM 6th Ctrl Delay			16.8									
HCM 6th LOS			B									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	39	0	0	69	91	0	190	74	0	0	0
Future Volume (veh/h)	11	39	0	0	69	91	0	190	74	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	0.99		1.00	1.00		0.97	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	0.85	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1670	1670	0	0	1670	1670	0	1670	1670			
Adj Flow Rate, veh/h	14	48	0	0	85	112	0	235	91			
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81			
Percent Heavy Veh, %	3	3	0	0	3	3	0	3	3			
Cap, veh/h	342	1117	0	0	506	667	0	0	0			
Arrive On Green	0.93	0.93	0.00	0.00	0.93	0.93	0.00	0.00	0.00			
Sat Flow, veh/h	295	1200	0	0	544	716		0				
Grp Volume(v), veh/h	62	0	0	0	0	197		0.0				
Grp Sat Flow(s),veh/h/ln	1495	0	0	0	0	1260						
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.8						
Cycle Q Clear(g_c), s	0.2	0.0	0.0	0.0	0.0	0.8						
Prop In Lane	0.23		0.00	0.00		0.57						
Lane Grp Cap(c), veh/h	1460	0	0	0	0	1173						
V/C Ratio(X)	0.04	0.00	0.00	0.00	0.00	0.17						
Avail Cap(c_a), veh/h	1460	0	0	0	0	1173						
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00						
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00						
Uniform Delay (d), s/veh	0.2	0.0	0.0	0.0	0.0	0.2						
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.0	0.0	0.3						
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0						
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.0	0.1						
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.2	0.0	0.0	0.0	0.0	0.5						
LnGrp LOS	A	A	A	A	A	A						
Approach Vol, veh/h		62			197							
Approach Delay, s/veh		0.2			0.5							
Approach LOS		A			A							

Timer - Assigned Phs				4				8				
Phs Duration (G+Y+Rc), s				65.0				65.0				
Change Period (Y+Rc), s				4.5				4.5				
Max Green Setting (Gmax), s				60.5				60.5				
Max Q Clear Time (g_c+I1), s				2.2				2.8				
Green Ext Time (p_c), s				0.4				1.4				

Intersection Summary		
HCM 6th Ctrl Delay		0.4
HCM 6th LOS		A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	226	17	177	1	8	17	110	482	4	24	762	60
Future Volume (veh/h)	226	17	177	1	8	17	110	482	4	24	762	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.87		0.90	0.94		0.90	1.00		0.92	0.98		0.92
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	0.85	1.00	1.00	0.85
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670
Adj Flow Rate, veh/h	286	0	213	1	10	20	133	581	5	29	918	72
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	699	0	291	36	125	232	312	1959	17	542	1799	141
Arrive On Green	0.26	0.00	0.26	0.26	0.26	0.26	1.00	1.00	1.00	0.66	0.66	0.66
Sat Flow, veh/h	2152	0	1124	9	484	896	506	2972	26	724	2730	214
Grp Volume(v), veh/h	286	0	213	31	0	0	133	310	276	29	534	456
Grp Sat Flow(s),veh/h/ln	1076	0	1124	1389	0	0	506	1586	1411	724	1586	1357
Q Serve(g_s), s	10.0	0.0	19.1	0.0	0.0	0.0	12.6	0.0	0.0	1.6	19.0	19.0
Cycle Q Clear(g_c), s	11.9	0.0	19.1	1.9	0.0	0.0	31.6	0.0	0.0	1.6	19.0	19.0
Prop In Lane	1.00		1.00	0.03		0.65	1.00		0.02	1.00		0.16
Lane Grp Cap(c), veh/h	699	0	291	394	0	0	312	1046	930	542	1046	894
V/C Ratio(X)	0.41	0.00	0.73	0.08	0.00	0.00	0.43	0.30	0.30	0.05	0.51	0.51
Avail Cap(c_a), veh/h	699	0	291	394	0	0	312	1046	930	542	1046	894
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.4	0.0	37.3	30.9	0.0	0.0	4.1	0.0	0.0	6.7	9.6	9.6
Incr Delay (d2), s/veh	1.8	0.0	15.0	0.4	0.0	0.0	4.2	0.7	0.8	0.2	1.8	2.1
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	3.4	0.0	6.4	0.7	0.0	0.0	1.2	0.2	0.2	0.3	6.6	5.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.2	0.0	52.2	31.3	0.0	0.0	8.4	0.7	0.8	6.8	11.4	11.7
LnGrp LOS	D	A	D	C	A	A	A	A	A	A	B	B
Approach Vol, veh/h		499			31			719			1019	
Approach Delay, s/veh		43.0			31.3			2.2			11.4	
Approach LOS		D			C			A			B	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	77.0	33.0	77.0	33.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	72.5	28.5	72.5	28.5
Max Q Clear Time (g_c+I1), s	33.6	21.1	21.0	3.9
Green Ext Time (p_c), s	6.2	1.4	8.7	0.1

Intersection Summary	
HCM 6th Ctrl Delay	15.7
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	17	33	23	4	9	69	541	45	10	816	102
Future Volume (veh/h)	63	17	33	23	4	9	69	541	45	10	816	102
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.73		0.69	0.79		0.69	1.00		0.93	1.00		0.93
Parking Bus, Adj	1.00	1.00	0.78	1.00	1.00	0.86	1.00	1.00	0.88	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670
Adj Flow Rate, veh/h	74	20	39	27	5	11	81	636	53	12	960	120
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	169	43	67	198	37	62	152	1520	126	72	1405	176
Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.10	0.55	0.55	0.09	1.00	1.00
Sat Flow, veh/h	420	153	238	513	130	221	1590	2764	230	1590	2810	351
Grp Volume(v), veh/h	133	0	0	43	0	0	81	364	325	12	542	538
Grp Sat Flow(s),veh/h/ln	810	0	0	863	0	0	1590	1586	1408	1590	1586	1574
Q Serve(g_s), s	11.0	0.0	0.0	0.0	0.0	0.0	5.3	14.8	14.8	0.8	0.0	0.0
Cycle Q Clear(g_c), s	14.7	0.0	0.0	3.7	0.0	0.0	5.3	14.8	14.8	0.8	0.0	0.0
Prop In Lane	0.56		0.29	0.63		0.26	1.00		0.16	1.00		0.22
Lane Grp Cap(c), veh/h	279	0	0	297	0	0	152	873	774	72	793	787
V/C Ratio(X)	0.48	0.00	0.00	0.14	0.00	0.00	0.53	0.42	0.42	0.17	0.68	0.68
Avail Cap(c_a), veh/h	279	0	0	297	0	0	152	873	774	72	793	787
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.2	0.0	0.0	29.6	0.0	0.0	47.4	14.5	14.5	48.1	0.0	0.0
Incr Delay (d2), s/veh	5.7	0.0	0.0	1.0	0.0	0.0	12.8	1.5	1.7	4.9	4.7	4.8
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	3.4	0.0	0.0	0.9	0.0	0.0	2.6	5.5	4.9	0.4	1.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.0	0.0	0.0	30.6	0.0	0.0	60.2	15.9	16.1	53.0	4.7	4.8
LnGrp LOS	D	A	A	C	A	A	E	B	B	D	A	A
Approach Vol, veh/h		133			43			770			1092	
Approach Delay, s/veh		39.0			30.6			20.7			5.3	
Approach LOS		D			C			C			A	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.5	65.0		35.5	15.0	59.5		35.5
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.0	60.5		31.0	10.5	55.0		31.0
Max Q Clear Time (g_c+I1), s	2.8	16.8		16.7	7.3	2.0		5.7
Green Ext Time (p_c), s	0.0	5.0		0.7	0.0	9.6		0.2

Intersection Summary		
HCM 6th Ctrl Delay		13.8
HCM 6th LOS		B

Intersection						
Int Delay, s/veh	0.7					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	68	0	646	858	64
Future Vol, veh/h	0	68	0	646	858	64
Conflicting Peds, #/hr	0	54	0	0	0	54
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	76	0	718	953	71

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	620	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.96	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.33	-	-	-	-
Pot Cap-1 Maneuver	0	428	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	385	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	16.6	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	385	-	-
HCM Lane V/C Ratio	-	0.196	-	-
HCM Control Delay (s)	-	16.6	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	0.7	-	-

Intersection							
Int Delay, s/veh	1.5						

Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Vol, veh/h	11	34	17	629	19	827	92
Future Vol, veh/h	11	34	17	629	19	827	92
Conflicting Peds, #/hr	62	62	5	0	0	0	62
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	-	None
Storage Length	0	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	0	-
Grade, %	0	-	-	0	-	0	-
Peak Hour Factor	90	90	90	90	92	90	90
Heavy Vehicles, %	3	3	3	3	3	3	3
Mvmt Flow	12	38	19	699	21	919	102

Major/Minor	Minor2		Major1		Major2		
Conflicting Flow All	1524	635	1083	0	699	-	0
Stage 1	1074	-	-	-	-	-	-
Stage 2	450	-	-	-	-	-	-
Critical Hdwy	6.86	6.96	4.16	-	6.46	-	-
Critical Hdwy Stg 1	5.86	-	-	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-	-	-
Follow-up Hdwy	3.53	3.33	2.23	-	2.53	-	-
Pot Cap-1 Maneuver	108	419	634	-	514	-	-
Stage 1	287	-	-	-	-	-	-
Stage 2	606	-	-	-	-	-	-
Platoon blocked, %				-		-	-
Mov Cap-1 Maneuver	82	371	597	-	514	-	-
Mov Cap-2 Maneuver	82	-	-	-	-	-	-
Stage 1	256	-	-	-	-	-	-
Stage 2	515	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	29.1	0.6	0.8
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	597	-	199	-	-
HCM Lane V/C Ratio	0.032	-	0.251	-	-
HCM Control Delay (s)	11.2	0.3	29.1	0.6	-
HCM Lane LOS	B	A	D	A	-
HCM 95th %tile Q(veh)	0.1	-	1	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	10	220	517	4	120	0	0	707	126
Future Volume (veh/h)	0	0	0	10	220	517	4	120	0	0	707	126
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.96
Parking Bus, Adj				1.00	1.00	0.94	1.00	1.00	1.00	1.00	1.00	0.88
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1670	1670	1670	1670	1670	0	0	1670	1670
Adj Flow Rate, veh/h				13	282	0	5	154	0	0	906	162
Peak Hour Factor				0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %				3	3	3	3	3	0	0	3	3
Cap, veh/h				63	1429		49	1228	0	0	1147	205
Arrive On Green				0.46	0.46	0.00	0.46	0.46	0.00	0.00	0.46	0.46
Sat Flow, veh/h				137	3113	1325	30	2751	0	0	2582	447
Grp Volume(v), veh/h				158	137	0	79	80	0	0	575	493
Grp Sat Flow(s),veh/h/ln				1663	1586	1325	1262	1444	0	0	1586	1358
Q Serve(g_s), s				6.2	5.6	0.0	0.6	3.5	0.0	0.0	33.8	33.9
Cycle Q Clear(g_c), s				6.2	5.6	0.0	34.5	3.5	0.0	0.0	33.8	33.9
Prop In Lane				0.08		1.00	0.06		0.00	0.00		0.33
Lane Grp Cap(c), veh/h				764	728		614	663	0	0	728	624
V/C Ratio(X)				0.21	0.19		0.13	0.12	0.00	0.00	0.79	0.79
Avail Cap(c_a), veh/h				764	728		614	663	0	0	728	624
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				17.8	17.6	0.0	17.4	17.0	0.0	0.0	25.2	25.3
Incr Delay (d2), s/veh				0.6	0.6	0.0	0.4	0.4	0.0	0.0	8.5	9.8
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.5	2.2	0.0	1.2	1.2	0.0	0.0	14.0	12.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				18.4	18.2	0.0	17.8	17.4	0.0	0.0	33.8	35.1
LnGrp LOS				B	B		B	B	A	A	C	D
Approach Vol, veh/h					295			159			1068	
Approach Delay, s/veh					18.3			17.6			34.4	
Approach LOS					B			B			C	
Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		55.0				55.0		55.0				
Change Period (Y+Rc), s		4.5				4.5		4.5				
Max Green Setting (Gmax), s		50.5				50.5		50.5				
Max Q Clear Time (g_c+I1), s		36.5				35.9		8.2				
Green Ext Time (p_c), s		0.7				6.3		1.8				

Intersection Summary			
HCM 6th Ctrl Delay			29.5
HCM 6th LOS			C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	88	60	37	30	33	0	415	0	0	626	52
Future Volume (veh/h)	20	88	60	37	30	33	0	415	0	0	626	52
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.87		0.80	0.92		0.80	1.00		1.00	1.00		0.75
Parking Bus, Adj	1.00	1.00	0.86	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.88
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1670	1670	1670	1670	1670	1670	0	1670	0	0	1670	1670
Adj Flow Rate, veh/h	22	98	67	41	33	37	0	461	0	0	696	58
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	3	3	3	3	3	3	0	3	0	0	3	3
Cap, veh/h	71	261	167	198	154	156	0	1679	0	0	1431	119
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.00	0.53	0.00	0.00	0.53	0.53
Sat Flow, veh/h	95	660	422	397	389	393	0	3340	0	0	2788	225
Grp Volume(v), veh/h	187	0	0	111	0	0	0	461	0	0	408	346
Grp Sat Flow(s),veh/h/ln	1178	0	0	1179	0	0	0	1586	0	0	1586	1343
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.6	0.0	0.0	19.5	19.6
Cycle Q Clear(g_c), s	13.0	0.0	0.0	7.2	0.0	0.0	0.0	9.6	0.0	0.0	19.5	19.6
Prop In Lane	0.12		0.36	0.37		0.33	0.00		0.00	0.00		0.17
Lane Grp Cap(c), veh/h	500	0	0	508	0	0	0	1679	0	0	840	711
V/C Ratio(X)	0.37	0.00	0.00	0.22	0.00	0.00	0.00	0.27	0.00	0.00	0.49	0.49
Avail Cap(c_a), veh/h	500	0	0	508	0	0	0	1679	0	0	840	711
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	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	25.8	0.0	0.0	23.9	0.0	0.0	0.0	15.6	0.0	0.0	17.9	17.9
Incr Delay (d2), s/veh	2.1	0.0	0.0	1.0	0.0	0.0	0.0	0.4	0.0	0.0	2.0	2.4
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	4.1	0.0	0.0	2.2	0.0	0.0	0.0	3.5	0.0	0.0	7.5	6.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.0	0.0	0.0	24.9	0.0	0.0	0.0	16.0	0.0	0.0	19.9	20.3
LnGrp LOS	C	A	A	C	A	A	A	B	A	A	B	C
Approach Vol, veh/h		187			111			461			754	
Approach Delay, s/veh		28.0			24.9			16.0			20.1	
Approach LOS		C			C			B			C	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		68.0		52.0		68.0		52.0				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		63.5		47.5		63.5		47.5				
Max Q Clear Time (g_c+I1), s		11.6		15.0		21.6		9.2				
Green Ext Time (p_c), s		3.5		1.3		5.7		0.8				

Intersection Summary			
HCM 6th Ctrl Delay			20.2
HCM 6th LOS			C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	64	0	0	100	79	0	239	141	0	0	0
Future Volume (veh/h)	27	64	0	0	100	79	0	239	141	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	0.97		1.00	1.00		0.93	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	0.85	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1670	1670	0	0	1670	1670	0	1670	1670			
Adj Flow Rate, veh/h	30	71	0	0	111	88	0	266	157			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90			
Percent Heavy Veh, %	3	3	0	0	3	3	0	3	3			
Cap, veh/h	431	967	0	0	655	520	0	0	0			
Arrive On Green	0.93	0.93	0.00	0.00	0.93	0.93	0.00	0.00	0.00			
Sat Flow, veh/h	382	1045	0	0	709	562		0				
Grp Volume(v), veh/h	101	0	0	0	0	199		0.0				
Grp Sat Flow(s),veh/h/ln	1427	0	0	0	0	1270						
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.8						
Cycle Q Clear(g_c), s	0.3	0.0	0.0	0.0	0.0	0.8						
Prop In Lane	0.30		0.00	0.00		0.44						
Lane Grp Cap(c), veh/h	1398	0	0	0	0	1175						
V/C Ratio(X)	0.07	0.00	0.00	0.00	0.00	0.17						
Avail Cap(c_a), veh/h	1398	0	0	0	0	1175						
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00						
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00						
Uniform Delay (d), s/veh	0.2	0.0	0.0	0.0	0.0	0.2						
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.0	0.0	0.3						
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0						
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.0	0.1						
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.3	0.0	0.0	0.0	0.0	0.5						
LnGrp LOS	A	A	A	A	A	A						
Approach Vol, veh/h		101			199							
Approach Delay, s/veh		0.3			0.5							
Approach LOS		A			A							

Timer - Assigned Phs				4				8				
Phs Duration (G+Y+Rc), s				60.0				60.0				
Change Period (Y+Rc), s				4.5				4.5				
Max Green Setting (Gmax), s				55.5				55.5				
Max Q Clear Time (g_c+I1), s				2.3				2.8				
Green Ext Time (p_c), s				0.6				1.4				

Intersection Summary				
HCM 6th Ctrl Delay			0.4	
HCM 6th LOS			A	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	179	22	223	9	36	26	216	663	3	22	572	88
Future Volume (veh/h)	179	22	223	9	36	26	216	663	3	22	572	88
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.88		0.90	0.94		0.89	1.00		0.91	0.97		0.88
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	0.85	1.00	1.00	0.85
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670
Adj Flow Rate, veh/h	237	0	272	11	44	32	263	809	4	27	698	107
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	671	0	289	63	206	135	500	1968	10	300	1004	154
Arrive On Green	0.26	0.00	0.26	0.26	0.26	0.26	0.43	1.00	1.00	0.40	0.40	0.40
Sat Flow, veh/h	2073	0	1115	101	796	522	1590	2985	15	582	2493	381
Grp Volume(v), veh/h	237	0	272	87	0	0	263	430	383	27	444	361
Grp Sat Flow(s),veh/h/ln	1036	0	1115	1419	0	0	1590	1586	1414	582	1586	1288
Q Serve(g_s), s	5.3	0.0	26.3	0.0	0.0	0.0	0.0	0.0	0.0	3.2	25.5	25.6
Cycle Q Clear(g_c), s	10.3	0.0	26.3	5.0	0.0	0.0	0.0	0.0	0.0	3.2	25.5	25.6
Prop In Lane	1.00		1.00	0.13		0.37	1.00		0.01	1.00		0.30
Lane Grp Cap(c), veh/h	671	0	289	405	0	0	500	1046	932	300	639	519
V/C Ratio(X)	0.35	0.00	0.94	0.22	0.00	0.00	0.53	0.41	0.41	0.09	0.69	0.70
Avail Cap(c_a), veh/h	671	0	289	405	0	0	500	1046	932	300	639	519
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.0	0.0	39.9	32.1	0.0	0.0	21.7	0.0	0.0	20.6	27.2	27.3
Incr Delay (d2), s/veh	1.5	0.0	39.8	1.2	0.0	0.0	3.9	1.2	1.3	0.6	6.1	7.5
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	2.8	0.0	10.3	2.0	0.0	0.0	4.6	0.3	0.3	0.5	10.5	8.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.4	0.0	79.8	33.3	0.0	0.0	25.6	1.2	1.3	21.2	33.4	34.8
LnGrp LOS	D	A	E	C	A	A	C	A	A	C	C	C
Approach Vol, veh/h		509			87			1076			832	
Approach Delay, s/veh		59.1			33.3			7.2			33.6	
Approach LOS		E			C			A			C	

Timer - Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		77.0		33.0	28.2	48.8		33.0
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s		72.5		28.5	23.7	44.3		28.5
Max Q Clear Time (g_c+I1), s		2.0		28.3	2.0	27.6		7.0
Green Ext Time (p_c), s		6.2		0.1	0.7	5.1		0.4

Intersection Summary			
HCM 6th Ctrl Delay			27.4
HCM 6th LOS			C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	11	137	19	13	14	132	814	36	9	764	74
Future Volume (veh/h)	56	11	137	19	13	14	132	814	36	9	764	74
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.66		0.62	1.00		0.61	1.00		0.50	1.00		0.79
Parking Bus, Adj	1.00	1.00	0.78	1.00	1.00	0.86	1.00	1.00	0.88	1.00	1.00	0.98
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670
Adj Flow Rate, veh/h	62	12	152	21	14	16	147	904	40	10	849	82
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	86	21	134	123	71	68	152	1521	67	72	1406	136
Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.10	0.55	0.55	0.09	1.00	1.00
Sat Flow, veh/h	157	75	476	273	252	240	1590	2765	122	1590	2812	272
Grp Volume(v), veh/h	226	0	0	51	0	0	147	519	425	10	479	452
Grp Sat Flow(s),veh/h/ln	708	0	0	765	0	0	1590	1586	1301	1590	1586	1497
Q Serve(g_s), s	25.7	0.0	0.0	0.0	0.0	0.0	10.1	24.0	24.0	0.6	0.0	0.0
Cycle Q Clear(g_c), s	31.0	0.0	0.0	4.3	0.0	0.0	10.1	24.0	24.0	0.6	0.0	0.0
Prop In Lane	0.27		0.67	0.41		0.31	1.00		0.09	1.00		0.18
Lane Grp Cap(c), veh/h	241	0	0	262	0	0	152	873	715	72	793	749
V/C Ratio(X)	0.94	0.00	0.00	0.19	0.00	0.00	0.97	0.59	0.59	0.14	0.60	0.60
Avail Cap(c_a), veh/h	241	0	0	262	0	0	152	873	715	72	793	749
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.0	0.0	0.0	29.8	0.0	0.0	49.6	16.5	16.5	48.0	0.0	0.0
Incr Delay (d2), s/veh	43.7	0.0	0.0	1.7	0.0	0.0	65.1	3.0	3.6	4.0	3.4	3.6
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	9.2	0.0	0.0	1.1	0.0	0.0	6.8	9.1	7.6	0.3	0.7	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	84.6	0.0	0.0	31.4	0.0	0.0	114.7	19.5	20.2	52.0	3.4	3.6
LnGrp LOS	F	A	A	C	A	A	F	B	C	D	A	A
Approach Vol, veh/h		226			51			1091			941	
Approach Delay, s/veh		84.6			31.4			32.6			4.0	
Approach LOS		F			C			C			A	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.5	65.0		35.5	15.0	59.5		35.5
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.0	60.5		31.0	10.5	55.0		31.0
Max Q Clear Time (g_c+I1), s	2.6	26.0		33.0	12.1	2.0		6.3
Green Ext Time (p_c), s	0.0	7.6		0.0	0.0	7.7		0.2

Intersection Summary			
HCM 6th Ctrl Delay			26.0
HCM 6th LOS			C

Intersection						
Int Delay, s/veh	0.8					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	84	0	986	800	139
Future Vol, veh/h	0	84	0	986	800	139
Conflicting Peds, #/hr	0	54	0	0	0	68
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	93	0	1096	889	154

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	644	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.96	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.33	-	-	-	-
Pot Cap-1 Maneuver	0	413	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	366	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.2	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	366	-	-
HCM Lane V/C Ratio	-	0.255	-	-
HCM Control Delay (s)	-	18.2	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	1	-	-

Intersection	
Int Delay, s/veh	18.6

Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Vol, veh/h	30	121	46	947	34	719	148
Future Vol, veh/h	30	121	46	947	34	719	148
Conflicting Peds, #/hr	63	0	94	0	0	0	94
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	-	None
Storage Length	0	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	0	-
Grade, %	0	-	-	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3	3
Mvmt Flow	33	134	51	1052	38	799	164

Major/Minor	Minor2		Major1		Major2		
Conflicting Flow All	1742	576	1057	0	1052	-	0
Stage 1	1051	-	-	-	-	-	-
Stage 2	691	-	-	-	-	-	-
Critical Hdwy	6.86	6.96	4.16	-	6.46	-	-
Critical Hdwy Stg 1	5.86	-	-	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-	-	-
Follow-up Hdwy	3.53	3.33	2.23	-	2.53	-	-
Pot Cap-1 Maneuver	77	458	649	-	305	-	-
Stage 1	295	-	-	-	-	-	-
Stage 2	456	-	-	-	-	-	-
Platoon blocked, %				-		-	-
Mov Cap-1 Maneuver	36	417	591	-	305	-	-
Mov Cap-2 Maneuver	36	-	-	-	-	-	-
Stage 1	213	-	-	-	-	-	-
Stage 2	299	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	224.1	1.6	2.8
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	591	-	134	-	-
HCM Lane V/C Ratio	0.086	-	1.252	-	-
HCM Control Delay (s)	11.7	1.1	224.1	2.6	-
HCM Lane LOS	B	A	F	A	-
HCM 95th %tile Q(veh)	0.3	-	10.3	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	22	335	744	14	236	0	0	718	118
Future Volume (veh/h)	0	0	0	22	335	744	14	236	0	0	718	118
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.89
Parking Bus, Adj				1.00	1.00	0.94	1.00	1.00	1.00	1.00	1.00	0.88
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1670	1670	1670	1670	1670	0	0	1670	1670
Adj Flow Rate, veh/h				24	364	0	15	257	0	0	780	128
Peak Hour Factor				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	0	0	3	3
Cap, veh/h				109	1736		46	770	0	0	876	144
Arrive On Green				0.57	0.57	0.00	0.35	0.35	0.00	0.00	0.35	0.35
Sat Flow, veh/h				192	3055	1325	26	2276	0	0	2586	411
Grp Volume(v), veh/h				208	180	0	122	150	0	0	494	414
Grp Sat Flow(s),veh/h/ln				1660	1586	1325	782	1444	0	0	1586	1327
Q Serve(g_s), s				6.8	6.1	0.0	1.9	8.3	0.0	0.0	32.4	32.4
Cycle Q Clear(g_c), s				6.8	6.1	0.0	34.3	8.3	0.0	0.0	32.4	32.4
Prop In Lane				0.12		1.00	0.12		0.00	0.00		0.31
Lane Grp Cap(c), veh/h				943	901		311	505	0	0	555	464
V/C Ratio(X)				0.22	0.20		0.39	0.30	0.00	0.00	0.89	0.89
Avail Cap(c_a), veh/h				943	901		311	505	0	0	555	464
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				11.7	11.6	0.0	26.9	25.9	0.0	0.0	33.8	33.8
Incr Delay (d2), s/veh				0.5	0.5	0.0	3.7	1.5	0.0	0.0	19.0	21.9
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.6	2.2	0.0	2.6	3.0	0.0	0.0	15.1	13.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				12.3	12.1	0.0	30.6	27.4	0.0	0.0	52.8	55.6
LnGrp LOS				B	B		C	C	A	A	D	E
Approach Vol, veh/h					388			272			908	
Approach Delay, s/veh					12.2			28.9			54.1	
Approach LOS					B			C			D	
Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		43.0				43.0		67.0				
Change Period (Y+Rc), s		4.5				4.5		4.5				
Max Green Setting (Gmax), s		38.5				38.5		62.5				
Max Q Clear Time (g_c+I1), s		36.3				34.4		8.8				
Green Ext Time (p_c), s		0.3				2.2		2.5				
Intersection Summary												
HCM 6th Ctrl Delay			39.3									
HCM 6th LOS			D									

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.